

PROGRESS REPORT 2021

Vol.1

VARIETAL IMPROVEMENT

All India Coordinated Rice Improvement Project

ICAR – Indian Institute of Rice Research

Rajendranagar, Hyderabad-500030, T.S., India;

ICAR – National Rice Research Institute

Cuttack-753 006, Odisha., India

&

ICAR – Indian Agricultural Research Institute

Pusa, New Delhi-110 012, India

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PREFACE

ICAR-Indian Institute of Rice Research (IIRR) is a premier rice research institute in India. ICAR-IIRR through “All India Coordinated Rice Improvement Project (AICRIP)” coordinates the multi-disciplinary and multi-location testing of varietal improvement, crop protection and crop management technologies across diverse ecosystems for increasing and stabilizing rice production in India. ICAR-IIRR, ICAR-NRRI and ICAR-IARI being the nodal agencies facilitates collective planning, supply and exchange of improved germplasm and experimental material, for evaluation, trial conducting and monitoring, data collection, compilation, analysis and documentation. ICAR-IIRR, ICAR-NRRI and ICAR-IARI have monitored the conduct of trials at some of the funded and voluntary centres in their respective ecologies both in virtual and physically. More than 300 scientists at 45 funded cooperating research centres and about 73 voluntary centres affiliated to various State Agricultural Universities, State Departments of Agriculture, ICAR Institutions and private sector organizations carried out the planned activities of Breeding, Entomology, Pathology, Agronomy, Soil Science and Plant Physiology disciplines.

The results of 43 breeding and 4 hybrid trials conducted at various locations across the country during *Kharif*, 2021 are presented in this volume. Developing varieties/hybrids with biotic/abiotic stress tolerance and desirable quality that are suitable for the diverse ecologies is a challenging task for the rice breeder which is pursued with utmost perseverance. Determined efforts are being made to usher in green revolution to eastern India by testing and validating suitable varietal technologies for the prevalent fragile ecosystems like rainfed uplands, lowlands, semi-deep and deep water ecologies. Varieties for different soil stresses and cold tolerance for high altitude areas under upland and irrigated conditions is also being addressed. Conventional and molecular breeding approaches are being utilized to break the stagnated yield barrier in the irrigated ecology which contributes >60% of total rice production. Efforts are also underway towards developing rice hybrids with higher heterosis levels among various duration groups, and medium slender grain type hybrids to satisfy the needs of discerning south Indian farmers and consumers. Another priority area is the development of export quality basmati and indigenous short grain aromatic varieties with essential quality characters to meet the preference of both export and domestic markets. Further, Near Isogenic Lines (NILs) developed with resistance to biotic (blast, bacterial blight and gall midge) and abiotic (drought and submergence) stresses are under testing. While emphasis on boro rice improvement continues, efforts to identify material suitable for newly emerging challenges like limited water situation are also being addressed through aerobic trials. Additionally, on pilot basis, trials have been initiated on “New Plant Type (NPT)” and “Nutrient Use Efficiency (NUE) – Nitrogen and Phosphorous”. Breeder seed production of 305 rice varieties was organized at 49 locations as per the DAC indents. ICAR-IIRR also evaluated 59 candidate varieties, 65 Farmers Varieties and 2 extant varieties (VCKs) for DUS testing. Additionally, the strong partnership with IRRI, Philippines provides access to global elite rice germplasm with the exchange of breeding lines through “The International Network for Genetic Evaluation of Rice (INGER)”. Delayed monsoon has been a regular phenomenon owing to climate change therefore; efforts are being made to identify suitable varieties for late sown conditions.

I greatly appreciate the efforts of the principal investigator, scientists, technical, administrative, project and field staff in the Plant Breeding team of this Institute and all the cooperating scientists from both funded and voluntary centres for bringing out this volume.



(R.M. Sundaram)
Director

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SUMMARY

All India Coordinated Rice Improvement Project (AICRIP) conducts and coordinates multidisciplinary and multi-location evaluation of elite cultures, crop management and crop protection technologies in different agro-climatic zones of the country to enhance rice production. ICAR-Indian Institute of Rice Research (IIRR) under Irrigated ecology, ICAR-National Rice Research Institute (NRRI) under rainfed ecology and ICAR-Indian Agricultural Research Institute (IARI) of basmati, coordinate and conduct these trials. A total of 48 trials (44 varietal trials and 4 hybrid rice trials) were conducted in 944 experiments (810 varietal and 134 hybrid rice) at 123 locations (45 funded, 78 voluntary centres) in 28 states and 2 union Territories across seven zones of the country during 2021 which is the 57th year of AICRIP testing. Hybrid rice experiments were conducted by 10 private seed companies. The 48 trials were constituted with 1492 entries (1392 varietal and 100 hybrid rice) including 189 checks. The overall data receipt was 81.9% of which 88.76% and 73.10% data was received from funded and voluntary centres respectively. The Rice AICRIP testing program is structured into a three-tier system of Initial Variety Trial, Advance Variety Trial-1 and Advance Variety Trial-2 so as to identify the best yielding lines across zones in rice growing ecologies. The primary research objective in the unfavourable rainfed lowland is to develop long duration and submergence/drought tolerant high yielding varieties. Major emphasis was laid on identifying the best lines combining high yield with superior grain quality, resistance to diseases and insect pests in irrigated ecology following conventional and heterosis breeding methods.

The MAS products with introgressed genes/QTLs conferring tolerance/ resistance to drought, submergence, salinity, BLB and blast are verified and validated in trials on Near Isogenic Lines. Improvement in grain quality along with high yield potential was focussed in Basmati and Aromatic short grain trials. Alkaline and inland saline as well as coastal saline tolerant variety trials are evaluated to identify the stress tolerant elite cultures. In view of the growing water scarcity, Aerobic trials were constituted to identify appropriate genotypes for aerobic method of rice cultivation. Separate NPT trial was conducted to evaluate the yield performance of entries derived from *indica*/tropical *japonica* crosses with ideal plant type traits including strong culm, more grain number with low unproductive tillers. The genetic improvement of rice genotypes with tolerance to low phosphorus and nitrogen was addressed to minimize usage of nitrogenous and phosphatic fertilizers thereby reducing cost of rice production.

LIST OF COORDINATED TRIALS, KHARIF 2021

Varietal Trials				Hybrid Trials
Ecosystem	AVT 2	AVT 1	IVT	IHRT
Rainfed Upland- DS		AVT 1-E DS	IVT-E-DS	
Rainfed shallow lowland		AVT 1-RSL	IVT-RSL	
Semi-deep water			IVT-SDW	
Deep water			IVT-DW	
Early - TP	AVT 2-E TP	AVT 1-E TP	IVT-E TP	IHRT-E
Mid Early		AVT 1-IME	IVT-IME	IHRT-ME
Medium		AVT1-IM	IVT-IM	IHRT-M
Late		AVT1-Late	IVT-Late	
Boro		AVT 1-Boro	IVT-Boro	
Basmati		AVT 1-BT	IVT-BT	
Aromatic short grain			IVT-ASG	
Saline alkaline		AVT 1-AL & ISTVT	IVT-AL & ISTVT	
			IVT-CSTVT	
Hills		AVT1-E (H)	IVT-E(H)	
		AVT1-M (H)	IVT-M(H)	
			IVT-U(H)	
Japonica			IVT-J	
Aerobic		AVT1-Aerobic	IVT-Aerobic	
Medium Slender Grain		AVT 1-MS	IVT-MS	IHRT-MS
Bio-fortification		AVT 1-Biofort	IVT-Biofort	
Near Isogenic Lines (CS)		AVT 1-NIL (CS)		
Near Isogenic lines (Drt)		AVT 1-NIL (Drt)		
Near Isogenic lines (Sub)		AVT1-NIL (Sub)		
Near Isogenic Lines (Bl, BLB)		AVT 1-NIL (Bl & BLB)		
Near Isogenic lines (Herb)		AVT 1-NIL (Herb)		
Low Phosphorus Tolerance		AVT 1-LPT	IVT-LPT	
Low Nitrogen Tolerance			IVT-LNT	

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Particulars of Zones, States and test Locations

Region / State	Locations	
	Funded	Voluntary
ZONE I – HILLY AREAS		
North Western Hills		
Jammu & Kashmir	Khudwani (1)	Rajouri, Wadura, Pombay (3)
Himachal Pradesh	Malan (1)	Palampur, Dhaulakhan, Sundernagar, Bajaura (4)
Uttarakhand		Almora, Bageshwar, (2)
North Eastern Hills		
Manipur	Wangbal (1)	Imphal-CAU (1)
Nagaland	Kohima (1)	
Sikkim		Gangtok (1)
Meghalaya	Upper Shillong (1)	ICAR-Umiam, CAU-Umiam (2)
West Bengal		Kalimpong (1)
Southern Hills		
Karnataka	Ponnampet (1)	Sirsi (1)
ZONE II – NORTHERN		
New Delhi		IARI- New Delhi (1)
Uttarakhand	Pantnagar (1)	
Punjab	Ludhiana (1)	Gurdaspur, Kapurthala, Rauni (3)
Haryana	Kaul (1)	Karnal (CSSRI), Palwal, Jind, Anjanitel, Kurukshetra, Panipat (6)
Uttar Pradesh	Nagina, Kanpur (2)	
Jammu & Kashmir	Chatha (R.S. Pura) (1)	
Rajasthan	Kota (1)	Banswara (1)
ZONE III – EASTERN		
Orissa	Jeypore, Chiplima (2)	Bhubaneswar, NRRI (Cuttack), Ranital (3)
Bihar	Bikramganj (Patna), Pusa (2)	Patna- ICAR, Sabour(2)
Jharkhand	Ranchi (1)	Hazaribagh (1)
West Bengal	Bankura, Chinsurah (2)	Canning, Pundibari, Chakdha, Hathwara (4)
Uttar Pradesh	Masodha ,Ghaghraghat, Varanasi (3)	Lucknow, BEDF-Modipuram, Gautam Budha Nagar, SVPUAT, Meerut (4)
ZONE IV – NORTH EASTERN		
Assam	Titabar (1)	Gerua, Karimganj, Shillongani (3)
Manipur	Wangbal (1)	Lamphalpat, (1)
Tripura	Arundhutinagar (1)	Lembucherra (1)
ZONE V – CENTRAL		
Madhya Pradesh	Rewa (1)	Waraseoni, Jabalpur (2)
Chhattisgarh	Raipur, Jagadapur (2)	Bilaspur, Ambikapur (2)
Maharashtra	Sakoli (1)	Sindewahi (1)
ZONE VI - WESTERN		
Maharashtra	Karjat, Tuljapur (2)	Panvel, Radhanagari, Shirgaon, Phondaghat, Vadagaon, Parbhani, Palghar (7),
Gujarat	Nawagam, Navsari (2)	Derol, Vyra, Danti, Dabhoi, (4)
Goa		Goa (1)
ZONE VII - SOUTHERN		
Andaman & Nicobar		Port Blair (1)
Andhra Pradesh	Maruteru (1)	Ragolu, Bapatla, Machilipatnam, Nellore, (4)
Telangana	Rajendranagar, Warangal (2)	IIRR, Jagtial, Kunaram, Rudrur, Kampasagar (5)
Tamil Nadu	Aduthurai, Coimbatore (2)	Trichy, Annamalainagar, Tirur, (3)
Kerala	Moncompu, Pattambi (2)	Vyttila (1)
Karnataka	Mandya, Mugad, Ponnampet, Brahmavar, Gangavati (5)	Sirsi, Malagi, Kumta (3)
Puducherry	Kurumbapet (1)	Karaikal (1)
Total locations	45	79

IRRIGATED ECOSYSTEM

AVT 2- E TP

Advance Variety Trial-2 Early Transplanted (AVT 2- E TP) was constituted with nine test entries including one hybrid entry in 3rd year of testing along with four checks and evaluated at 41 locations. Based on three years performance of test entries, **IET 28343 (KNM 6965)** found promising in Zone II (Haryana) and Zone V (Maharashtra); **IET26790 (MTU 1273)** is found promising in Zone V (Chhattisgarh) and Zone VI (Maharashtra and Gujarat); **IET 28356 (KNM 7037)** is found promising for state of Odisha in the Zone III; **IET 28354 (CR 4073-1339-3-5-1-1-3)** is found promising in Zone III for the state of Odisha and Bihar as well as in Zone IV for the state of Assam; **IET 28332 (KNM 7048)** is found promising in Zone III (Bihar and West Bengal), Zone V (Maharashtra and Chhattisgarh) and Zone VI (Gujarat); and **IET 28329 (RCPR 60-IR 97073-26-1-1-3)** found promising in Zone III for the state of Bihar and in Zone V for the Chhattisgarh. Whereas, three test entries namely IET 28366 (MTU 1312 (MTUAST 2-5-29-5)), IET 28115 (US-317) and IET 28358 (RP 5599-212-56-3-1) are discontinued due to inconsistency.

AVT 1- E TP

Advance Variety Trial-1 Early Transplanted (AVT 1- E TP) was constituted with seventeen test entries including hybrid entries in 2nd year of testing along with four checks and evaluated at 45 locations.

Based on the superior performance, the following entries are promoted zone wise to AVT2-E TP.

- **Overall:** IET 28959, IET 28960, IET 28953, IET 28950, IET 29140 and IET 29142 were found promising over the best check and promoted to AVT-2-ETP
- **Zone II:** IET Nos.28959 and 28950
- **Zone III:** IET Nos. 28960, 28950, 28954, 28956, 28123, 28959, 28953, 28964, 29140, 29189 and 29177
- **Zone IV:** IET Nos. 29197, 29140, 29142, and 29189
- **Zone V:** IET Nos. 28959, 28956, 28950, 28954, 29140, 29142 and 29177
- **Zone VI:** IET Nos. 29142 and 28953
- **Zone VII:** None of the entries were found promising with yield gain over the best check

IVT-E-TP

Initial variety trial - Early Transplanted (IVT - E TP) was constituted with 61 test entries and 3 checks and evaluated at 45 locations.

Based on the superior performance, the following entries are promoted zone wise to AVT-1-E-TP.

- **Overall basis:** IET 29940, 29939 and 29951
- **Zone II:** IET No. IET 29964, 29946, 29983 and 29939

- **Zone III:** IET No. 29940, 29992, 29969, 29939, 29958, 29947, 29957, 29943 and 29946
- **Zone V:** IET No. 29975
- **Zone VII:** IET No. 29940

Depending on the duration, the following entries are shifted to IVT-IME:

- **On Overall basis:** IET No. 29976 (95), 29947 (93) and 29952 (95)
- **Zone II:** IET No. 29952 (98) and 29951 (93)
- **Zone III:** IET No. 29976 (95), 29960 (94), 29948 (96), 29990 (94), 29950 (93), and 29952 (93)

AVT 2 & 1-IME

AVT 1-IME consisted of 37 test entries and 4 checks: Gontra Bidhan-3 (National check), PR 113 in Northern, Lalat in Eastern & North Eastern, Karjat-7 in Western and MTU 1010 in Central and Southern zones as Zonal checks, US 312 (Hybrid check) and a local check and tested in 45 locations

Only one entry IET 28396 was in 3rd year of testing. Owing to its inconsistent yield performance it is discontinued.

36 entries are in 2nd year of testing. 4 hybrids and 12 varietal entries got promoted to third year of testing viz.,

Over all IET 28979 and IET 28982

Zone III: IET 28979 and IET 28982

Zone IV: IET 28236, 28506, 28128, 29212, 29217, 29235, 28982, 29233 and 29238

Zone V: IET 28979

Zone VI: IET 28982, 28128, 28979, 28353, 29246, 28506, 29235 and 29236

IVT-IME

Initial Varietal Trial – Irrigated Mid Early (IVT-IME) was constituted with 61 test entries and three and tested in 45 locations.

Seven entries are recommended for promotion to Advanced Varietal Trials - Irrigated mid-early.

Overall: IET 29188

Zone III: IET29808, IET29188, IET29822, IET29304, IET29807, IET29770, and IET29820.

Entries shifted to other trials

IVT-IME to IVT-IM: IET29805

IVT-IME to IVT-ETP: IET29775

AVT 2 & 1-IM

Entries in the third year of testing in AVT1-IM trial

- IET 28160 is considered promising for the states of Haryana, Odisha, Chhattisgarh and Karnataka.
- IET 28171 is considered promising for the state of Telangana only.
- IET 27900 is considered promising for the state of Tamil Nadu only.

Entries in the second year of testing in AVT1-IM trial

27 entries are in second year of testing and out of which 16 entries (9 hybrids and 7 varietal entries) viz., IETs 28997, 29000, 29268, 28489, 29009, 29301, 29002, 29014, 29006, 29290, 29256, 29008, 29001, 29004, 29284 and 29257 are promoted to third year of testing.

IVT-IM

The trial is constituted with 61 test entries and tested across 45 locations in six zones (II, III, IV, V, VI, VII)

Overall : IETs 29825, 29855, 29860, 29870 and 29877

Zone III: IETs - 29860, 29837, 29859, 29870, 29834, 29855, 29825, 29869, 29878, 29843, 29875, 29845, 29857, 29831, 29287(R), 29873, 29850, 29861, 29826, 29879, 29865, 29868, 28523(R), 29833

Zone V: IETs 29877, 29825 and 29855

AVT 1 LATE

AVT 1-L consisted of 14 test entries and 4 checks and tested in 35 locations

Six entries (IET 28538, IET 28497, IET 28508, IET 28509, IET 28501 and IET 28544) were in third year of testing.

IET 28508 was found promising in the states of Chhattisgarh and Maharashtra

Five entries viz., IET 28538, IET 28497, IET 28501 and IET 28544 are discontinued.

IVT-L

Of 56 varietal and 4 hybrid test entries evaluated in IVT-L across 5 zones (III, IV, V, VI and VII), promotions to AVT-1-Lis as listed below.

- **Overall basis:** NIL
- **Zone III:** NIL
- **Zone V:** NIL
- **Zone VI:** NIL
- **Zone VII:** IET Nos. 29891 and 29935

BORO**ADVANCED VARIETY TRIAL 1 – BORO**

In AVT-1 Boro trial 9 test entries (5 test entries and 4 hybrids) and five checks were evaluated in 2nd year at 12 locations. The following entries were promoted to AVT-2-Boro.

- Overall mean: IET 28840 and IET 28848 (Hybrid).
- Zone III: IET 28840 and IET 28849 (Hybrid).
- Zone IV: IET 28840 and IET 28848 (Hybrid).

IVT BORO

IVT Boro trial constituted with 51 test entries including three hybrid entries and four checks was evaluated at seven locations in Zone III and Zone IV during Kharif 2020-21.

Based on the performance of entries these were promoted zone wise as given below

Over all IET 29624 and 29630

Zone III: IETs 29599, 29601, 29605, 29621, 29624, 29630, 29632, 29611 and 29615

Zone IV: IET 29630

HYBRID RICE

During Kharif 2021, totally 81 hybrids were evaluated in four hybrid rice trials viz., IHRT-E, IHRT-ME, IHRT-M, IHRT-MS, in different locations representing North, East, Northeast, Central, West and South zones of the country. Hybrids with significant yield advantage over the varietal check and the hybrid checks (CD @5%) are identified as promising. Details of the top three ranking hybrids in each of the trials are given below.

Promising hybrids identified in different hybrid rice trials (2021)

Name of the Hybrid	IET No.	DFP	Promising in
IHRT-E			
UPLRH-180842	29690	91	Overall
UPLRH-181325	29694	90	Overall
HRI-214	29689	88	Overall
IHRT-ME			
PHI 21105	29736	92	Overall
PHI 21104	29734	97	Overall
RNC-0457	29738	96	Overall
IHRT-M			
HRI-211	29743	100	Overall
HRI-209	29741	97	Overall
PHI-20108	29753	97	Overall
IHRT-MS			
CRHR-154	29763	103	Zone III

List of public sector institute nominated hybrids (2021)

S.No.	Public sector	Number of hybrids nominated
1	ICAR-IIRR, Hyderabad	7
2	ICAR-NRRI, Cuttack	4
3	IGKV, Raipur	3
4	JNKV, Jabalpur	2
5	ZARS, Mandya	2
6	TNAU, Coimbatore	1
7	RRC PJTSAU, R Nagar	1
	Total	20

AEROBIC**AVT-1**

In AVT 1 -AEROB of 25 test entries and four checks (NC, ZC, HC and LC) were evaluated across 27 locations in the second year of testing. The following entries are promoted zone wise to AVT-2 for third year of testing.

- *Overall* - IET 29412, IET 29411, IET 29415, IET 29409, IET 29424
- *Zone II* -IET 29412, IET 29436, IET29424, IET 29423, IET 29409, IET 29396, IET 29415, IET 29411, IET 29430, IET 29422
- *Zone III* -IET 29411, IET 29394, IET 29415, IET 29410
- *Zone IV* – IET 29411
- *Zone V* – None
- *Zone VI* – IET 29411, IET 29415, IET 29409, IET 29436, IET 29421, IET 29424, IET 29405
- *Zone VII* – IET 29421

IVT-AEROB

In IVT-AEROB of 60 test entries and four checks (NC, ZC, HC and LC) were evaluated across 27 locations in the first year of testing. A total of 25 entries were promoted to AVT1-Aerob.

Overall: IET's 30020, 30005, 30022, 30008, 30052, 30013, 30006, 30032, 30004, 30000, 30041, 30034, 30001, 30038, 30045, 30023, 30028

- *Zone II*: IET's 30020, 30005, 30022, 30008, 30013, 30004, 30000, 30045, 30035, 30003, 30027, 30051
- *Zone V*: IET's 30022, 30008, 30006, 30000, 30001, 30045, 30023, 30035, 30003, 30051, 30024, 30029, 30037
- *Zone VI*: IET's 30005, 30022, 30008, 30052, 30006, 30004, 30034, 30021

MEDIUM SLENDER GRAIN TRIALS

AVT-2-MS

Based on consistent yield performance during 3 years of testing (2019 to 2021) the following two entries were identified as promising for different states and zones.

- IET 28730 is promising for Telangana in zone 7.
- IET 28757 is promising for Chhattisgarh in zone 5, Odisha in zone 3 and Gujarat in zone 6.

Two entries *ie*, IET 28746 and IET 28754 were discontinued due to inconsistent yield performance across the years.

AVT- 1-MS

A set of 36 entries (Four in 3rd year and 26 in 2nd year of testing) and 6 checks were evaluated in 42 locations across 6 zones (Zone II, III, IV, V, VI and VII). The following entries were promoted to AVT-2- MS.

- Overall mean IET 29536
- Zone III IET 29492
- Zone V IET 29536
- Zone VI IET 29017 and 29523
- Zone VII IET 29536 and 29539

IVT-MS:

A set of 60 test entries were evaluated in 42 locations across 5 zones (Zone III, IV, V, VI and VII) and the following entries were promoted to 2nd year of testing (AVT-1 MS).

- Overall IET 30078, IET 30072, IET 30116, IET 30106, IET 30083 and IET 30107
- Zone III IET 30102, 30075, 30109, 30071, 30088 and 30107
- Zone V IET 30097, 30108, 30093, 30101
- Zone VI IET 30071, 30116, 30066, 30084, 30078, and 30107
- Zone VII IET 30106, 30072, 30078, 30083 and 30116

BIOFORTIFICATION

AVT 1Biofort

Only two entries got promoted to AVT-II for third year of testing

- Zone II – IET 27984
- Zone IV – IET 28694

IVT – BIOFORT:

Eleven entries had required Zinc content (24 ppm) but none of the entries exhibit yield advantage over best varietal check. Whereas, none of the entries had required iron content (10 ppm). **Hence none of the entries have been promoted to AVT 1 – Biofort.**

HILLS

AVT-1-E (H)

A total of 11 test entries were evaluated in AVT-1-E (H) at 13 locations across high, medium and low elevations. Among the test entries in second of year of testing, **IET 28884** (low northern elevation), **IET 28883** (northern low and medium elevations) and **IET 28890** (southern medium elevation) recorded required yield advantage over best check and hence promoted to third year of testing.

Among the test entries in third year of testing, **IET 28196** (TRC KS-1512-B-B-1-12-1) found promising for Jammu & Kashmir under northern medium elevation. But during 2019 it has shown only 6.7% yield advantage over BVC in a single location tested (it had to be >10%) hence, the entry may be re-tested for one more year. **IET 28206** (HPR 3106) is found promising for the states of Himachal Pradesh and Uttarakhand under northern medium elevation. But during 2019 in Uttarakhand and 2020 and 2021 in Himachal Pradesh it has shown 8, 5, 6 percentage yield advantage over BVC in a single location tested (it had to be >10%) hence, the entry may be re-tested for one more year. While, **IET 28200** (TRC BN-1311-B-B-43-11-1) is found promising for Uttarakhand under medium northern and Himachal Pradesh under low northern elevations respectively.

IVT-E (H)

The trial was constituted with 24 test entries in the first of testing and evaluated at 13 locations across high, medium and low elevations. Among the test entries, 13 entries namely, **IETs 29636, 29633, 28887, 29641, 29639, 29635, 28897, 29640, 28880, 28896, 29638, 28893 and 28884** recorded required yield advantage over the best check at different elevations and hence promoted to second year of testing.

AVT-1-M (H)

AVT1-M (H) trial comprised of 10 test entries (**IET 26594**, third year of testing) evaluated at 14 locations across high, medium and low elevations. Among 9 entries in second year of testing, two entries each under medium southern elevation (**IETs 28222** and **28907**) and high elevation (**IET 28224** and **IET 28217**) recorded required yield advantage over the best check and hence promoted to third year of testing. The test entry **IET 26594** in third year of testing was discontinued due to inconsistent performance.

IVT-M (H)

Under IVT-M (H) trial, 32 test entries in first year of testing were evaluated at 18 locations across high, medium and low elevations. Among the test entries, two entries (**IET 29656** and **IET 29654**) under medium northern elevation and five entries (**IETs 28913, 28914, 28915, 28906** and **28909**) under high elevation hills recorded required yield advantage over the best check and promoted to second year of testing.

IVT-U (H)

IVT-U (H) consisting of 14 test entries (**IET 28230** in third year of testing and 13 entries in first year of testing) was evaluated at 9 locations across high, medium and low elevations. Among the entries in first year of testing, none of the entries recorded superior yield over best check hence none is promoted.

IET 28230 (TRC PSM-1720-B-B-5-1) in third year of testing was found promising for low northern elevation hills of Himachal Pradesh and Manipur.

JAPONICA

IVT-J

Four entries are tested in 12 locations and only one entry IET 30306 (Hitomebore) promoted to AVT1-Japonica-

SALINE ALKALINE TRIALS

Alkaline and Inland Saline tolerant variety trials

AVT1-AL & ISTVT: AVT-2

Five entries are in third year of testing and three entries are found promising.

- IET 27823 (CSR MAGIC 157) is found promising in Haryana state.
- IET 28606 (CSRM1-7) is found promising in Haryana state.
- IET 28608 (CSR 449S-13) is found promising in Haryana state.

AVT-1

Nine entries are tested in second year of testing and the entries that are promoted to third year of testing in AL& ISTVT is listed below

1. Alkalinity

- Overall: IET Nos. 29356, 29354, 29361 and 29366
- Zone II: IET Nos. 29356, 29354, 29361, 29365, 29366, 29360, 29358 and 29353
Zone III: IET 29366
- Zone VII: IET 29361 and 29358

2. Inland Salinity

- Overall: IET 29356
- Zone II: IET Nos. 29356, 29365, 29354, 29366 and 29361

(1) IVT- AL & ISTVT

Among the 20 entries including two hybrid entries the following entries recorded the required yield advantage over the best check and were promoted to second year of testing in AL& ISTVT

1. Alkalinity

- Zone II: IET Nos. 30165, 30162 and 30178

2. Inland Salinity

- Overall Inland Salinity: IET 30180
- Zone II under Inland Salinity: IET nos. 30164, 30165, 30176 and 30174

(3) Coastal Saline tolerant variety trial

IVT-CSTVT

Among the 31 test entries, 3 entries (IET nos.27851, 27847 & 27051) were in the final year of testing and the remaining 28 entries are in first year of testing

Entries in final year of testing

- IET 27851(CR 3903-161-1-3-2): *Exhibited inconsistency in performance*
- IET 27847 (IIRRH 115): Promising in AP for two years, one year each in Gujarat and Odisha.
- IET 27051(CR 2851-S-1-B-4-1- 4-1-1): could not register the required yield superiority over the best check either in zone or in states. Hence not found promising

Entries promoted to second year of testing in CSTVT

Overall: IET 30200

Zone VI: IET 30200, 30201& 30207.

(4) AVT1- NIL-CS

AVT1- NIL-CS constituted with two NILs namely IET 28010 and IET 28008 in the genetic background of MTU 1010. Based on four years' performance, IET 28008 and IET 28010 failed to exhibit significant yield superiority in the trait verification trials and in yield trials in IME over the recurrent parent for the introgressed trait of coastal salinity tolerance across the states as well as in RP notified state. Hence 28010 and IET 28008 are promoted for third year of testing.

AVT 1 NIL IME and IM

Advance Variety Trial 1-Near Isogenic Lines (Yield Trial-IME and IM duration) consisted of 29 NILs along with 8 recurrent parents (MTU 1010, ADT 46, Pusa 46, Naveen, NLR 34449, IR 64, MTU 1121 and Krishna Hamsa) in various zones was conducted.

Performance of NILs of MTU 1010

There are eight NILs in the back ground of MTU 1010 viz., IETs 28010, 28008, 28066, 28065, 30276, 30277, 30278 and 30279. But none of these entries show resistance reaction for the traits introgressed, hence dropped. IET 28010 and IET 28008 were introgressed with

QTL for low Phosphorous tolerance and these two NILs IET 28010 and IET 28008 were found promising for Low phosphorous tolerance.

NILs in the background of PUSA 44

Two NILs IET 28018 and IET 28017 introgressed with drought QTLs were developed in the background of PUSA 44 and were tested in the second year of testing in Zone III at two locations. These two entries have shown on par yield performance under normal condition compared to Recurrent parent PUSA 44. Data on drought tolerance in this season is not available. But these two entries already tested for last years for drought, hence recommended for testing in agronomy trial during Kharif 2022.

NILs in the background of Naveen

Six NILs IET 30280, IET 30281, 30282, 29203, IET 30283 and IET 30284 were developed in the background of recurrent parent Naveen. Two NILs IET 30280 and IET 30283 of Naveen are developed for Bacterial leaf blight resistance. Both the NILs showed susceptible reaction and were dropped. Two NILs IET 30282 and IET 29203 of Naveen were developed for BPH resistance. Both the entries showed resistance reaction to BPH under glass house condition However due poor quality parameters these lines were dropped. Two NILs IET 30281 and IET 30284 were developed for Herbicide tolerance. Both the entries confirmed the trait herbicide tolerance in 3 locations due to poor grain quality parameters dropped.

NILs in the background of NLR 34449

Two NILs IET 30285 and IET 30286 were developed for bacterial leaf blight resistance in the back ground of NLR 34449. The disease reaction showed that both the entries were susceptible to bacterial leaf blight. Therefore, both the entries were discontinued.

NILs in the background of IR 64

One NIL IET 29548 was developed for tolerance to low soil Phosphorous by introgression Pup 1 QTL. But the entry did not show superior performance in comparison with recurrent parent IR 64. Therefore, the entry IE T29548 was dropped.

NILs in the background of Krishna Hamsa

Four NILs IET 30287 (BB+Drought), IET 30288 (Drought), IET 30289 (BB), IET 30290 (BL+BB) were developed for different abiotic and biotic stresses in the back ground of Krishna Hamsa. The test entry IET 30287 showed susceptible reaction to bacterial leaf blight (6.6 score) and for drought tolerance (-55.16%) in comparison to recurrent parent Krishna Hamsa, hence dropped. This entry was not found promising (-60.78) for drought tolerance in comparison to recurrent parent Krishna Hamsa, hence dropped. The entry IET 30289 is dropped due to susceptibility for bacterial blight and not promising for drought tolerance. The entry IET 30290 showed susceptible reaction to bacterial leaf blight (7.5 score) and blast (5.6), hence dropped.

NILs in the background of MTU 1121

Three NILs IET 28818, IET 30253 and IET 30254 were developed in the background of MTU 1121 for Low Phosphorous tolerance and one entry IET 30261 for Low Nitrogen tolerance. The entry IET 28818 showed significantly higher yield than recurrent parent at IIRR (6.58 t/ha), in Zone VII (5.42) and also over all (5.15) under P 50%, hence found promising for low Phosphorous tolerance. The entry 30254 did not show significant yield advantage over the recurrent parent under low P stress condition (0% and 50% P), hence

dropped. The entry IET 30261 found superior to recurrent parent at N 50%, hence found promising for low Nitrogen condition and promoted to second year of testing.

AVT-NIL-LATE

Advance Variety Trial 1- NIL (Yield Late) was constituted with 18 NILs (Near Isogenic lines) and four recurrent parents (Swarna, Improved Samba Mahsuri, Samba Mahsuri and WGL-14).

Among the five NILs of Swarna, IET 30291 is dropped due to susceptibility for bacterial blight, below par yield with RP, low HRR (44.1) and high AC (25.52) with low GC (22), while IET 30292 is dropped due to susceptible reaction to blast and bacterial blight. IET 30293 is dropped due to below par yield and low AC (15.40) with high GC (53), IET 30294 is dropped due to high AC (27.72) and susceptible reaction to bacterial blight. The test entry IET 30295 is below par yield with recurrent parent hence dropped.

Among five NILs of Improved Samba Mahsuri, variety DRR Dhan 62 possessing the gene combinations of *xa5+xa13+Xa21* and *Pi2+Pi54* in the background of Samba Mahsuri is released by CVRC, hence test entries IET 30296 (*Xa21+xa13+Pi2*), IET 30297 (*Xa21+xa13+Pi54*), IET 29209 (*Xa21+Pi54*) were not considered for analysis. Further, variety DRR Dhan 60 possessing the gene combinations of *xa5+xa13+Xa21* and *Pup1* QTL is released by CVRC, hence the NIL test entry IET 30246 (*Pup1* QTL) is not considered for analysis. Another NIL entry IET 30263 is dropped due to yield inferiority under low N stress condition, susceptibility to bacterial blight disease and low HRR (45.3).

Among the three NILs of Samba Mashuri, IET 30299 dropped due to low HRR (49.7), IET 30300 is dropped due to low HRR (50.6), while IET 29209 (*Xa21+Pi54*) is not considered for analysis as Variety DRR Dhan 62 possessing the gene combinations of *xa5+xa13+Xa21* and *Pi2+Pi54* is released by CVRC,

Among the five NILs of WGL-14, IET 30301 is dropped due to susceptible to drought stress and high AC (25.54) with low GC (33), IET 30301 is dropped due to susceptible to drought stress and low HRR (52.3), The test entry IET 30303 is dropped due to low HRR (34.7), IET 30303 is dropped due to low HRR (39.8), and IET 30305 is dropped due to susceptible reaction to blast disease and low HRR (52.7).

PHOSPHORUS AND NITROGEN

AVT 1 LPT

AVT 1 LPT trial was constituted with 6 test entries (IETs 28816, 28818, 27641, 28066 R, 28065 R, 28821 R) and two positive checks (Swarna and Rasi), two negative checks (Improved Samba Mahsuri, BPT 5204) and two Recurrent parents (MTU 1121 and MTU 1010). Three NIL entries IETs 28818, 28066, 28065 for Low Phosphorous Tolerance are discussed separately in AVT 1 NIL IME and IM trial. At P 0 levels, the entries IET 28821 (29.16%), IET 27641 (26.2%) and IET 28818 (20.5%) were found to be superior over best check on over all mean basis. At P 50 % levels, the entries IET 28816 (29%), IET 28818 (12%), IET 27641 (13%) and IET 28066 (10%) were found to be promising for low phosphorous on over all mean basis. The entry IET 28821 is promoted to third year of testing.

IVT LPT

IVT LPT trial was constituted with 36 test entries, two positive checks (Swarna and Rasi), two susceptible checks (Improved Samba Mahsuri, BPT 5204) and two Recurrent parents (MTU 1121 and IR 64). Among the test entries, 3 entries IET 29548 (IR 64+Pup1), IET 30253 (MTU 1121 + Pup1), IET 30254 (MTU 1121+ Pup 1) are NILs for Low Phosphorous Tolerance by introgressing Pup 1 QTL. Hence these entries are discussed separately in AVT 1 NIL IME and IM trial. At P 0 levels, fifteen entries viz., IET 29549, 29546, 30230, 29560, 29558, 30233, 30235, 30240, 30241, 30242, 30244, 30245, 30247, 30252 and 30254 are promoted to second year of testing.

IVT LNT

IVT Low Nitrogen Tolerance trial was constituted with 36 test entries, four positive checks (Varadhan, Tella Hamsa, Swarna and Rasi), two susceptible checks (Improved Samba Mahsuri, BPT 5204). Only one entry IET 28084 was in third year of testing and remaining 35 entries are in first year of testing. Among the test entries, 14 entries viz., IETs 29573, 29576, 29577, 29564, 28084, 29579, 29584, 29581, 29574, 29578, 30261, 30269, 30270 and 30273 yielded significantly higher than best check under N 50%. Among these, IET 28084 was in third of testing and found tolerant to lower levels of nitrogen application. Remaining 13 entries are promoted to second year of testing.

RAINFED UPLAND

During *Kharif* 2021 rainfed upland trials were conducted in 11 locations distributed in Zone III, Zone V, Zone VI and Zone VII. A total of 66 test entries were evaluated along with suitable checks in two trials namely AVT-1- EDS (21 test entries) and IVT-EDS (45 test entries).

AVT 1- E DS:

Among 21 test entries 3 entries were in the 3rd year of testing and 5 were NIL entries. Trials were conducted in 11 locations distributed in Zone III, V, VI and VII.

- Based on three year testing IET 27523 is found promising for Jharkhand
- IET 30437 and 30438 (NIL –HT cultivars) are promoted for Odisha for 2nd year of testing
- IET 29036, 29038, 29039, 29047, 29052 and 29060 are repeated.
- NILs entries IET 28834 (RP-Anjali) and IET 28835 (RP-Anjali) are also repeated in AVT-1

IVT E DS:

Among 45 entries (including 1 hybrid) tested in 13 locations in 4 Zones (Zone III, V, VI, VII) the following entries are promoted.

- Overall basis: Nil
- Zone III: IET 30334, IET 30351, IET 30328, IET 30332, IET 30330, and IET 30336, which performed well under both drought and normal conditions, are promoted

RAINFED LOWLAND ECOSYSTEM

During *Kharif* 2021 rainfed lowland trials were evaluated under three ecologies namely rainfed shallow lowland (RSL), semi deep water (SDW) and deep water (DW) ecology. A total of 130 test entries were evaluated along with suitable checks in five trials namely AVT1-RSL (22 test entries), IVT-RSL (53 test entries), AVT 1-SDW (15 test entries), IVT-SDW (35 test entries) and IVT-DW (5 test entries).

AVT-1-RSL

In IVT-RSL, 22 test entries evaluated across 13 locations. The following entries are found promising.

- Overall basis: Nil
- Zone III: Nil
- Zone VII: IET 27538 is be repeated
- NIL entries:
 - IET 30409 and IET 30410 are promoted to 2nd year of testing.
 - IET 29031, IET 29032 and IET 29026 have RP – Varshadhan and shifted to AVT-2-SDW

IVT-RSL

In IVT-RSL, 53 test entries evaluated across 12 locations. The following entries are found promising.

- Overall basis: Nil
- Zone III: Nil
- Zone IV: IET 30367 and IET 30356 are promoted for 2nd year testing.

AVT 1-SDW

A total 15 test entries were tested over 9 locations in Zone III and Zone VII. Among these 5 entries are in 3rd year of testing.

- IET 28299 is found promising for zone III
- Overall and Zone III basis: IET 29121 and IET29122 are promoted for 3rd year of testing
- Repeat: IET 28296 in AVT-2
- Shift: IET 28313 to AVT-2 RSL

IVT-SDW

In IVT-SDW, out of 35 test entries evaluated in 9 locations across two zones (Zones III, VII) the following entries are promoted.

- Overall basis: IET 30414 is promoted to 2nd year of testing.
 - Zone III: Nil
 - Zone VII: Nil
 - *Shifted: IET 30423 is shifted to IVT-RSL.*
- **IVT-DW:** Five test entries are tested in 3 locations. The trial is repeated.

BASMATI TRIAL

Advanced Varietal Trial- Basmati (AVT-BT) was constituted of 12 entries including seven varietal test entries; one hybrid entry; five checks namely, Pusa Basmati-1 (Yield Check), Pusa Basmati 1121 (Yield and Quality Check), Taraori Basmati (Quality Check), Pusa RH10 (Hybrid Check) and local check; and two near isogenic lines for trait verification. Out of 12 entries tested, 5 entries were in third year of testing and 2 entries were in second year of testing and remaining 5 entries were checks.

Based on three years of evaluation, the entry IET28589 was found promising. Although, remaining six entries were superior to the best varietal check, but were poor in cooking quality and/or showing segregation for flowering.

The two NILs of Pusa Basmati 1 carrying *qDTY1.1* for drought tolerance, namely, IET28787 and IET 28788 were found superior to yield under two years of testing in previous years were verified for the trait during Kharif 2021. These lines were found promising.

Initial Variety Trial – Basmati (IVT-BT) was constituted of 19 entries including 13 varietal entries, one hybrid entry and five checks namely, Pusa Basmati-1 (Yield Check), Pusa Basmati 1121 (Yield & Quality Check), Taraori Basmati (Quality Check), Pusa RH10 (Hybrid Check) and local check.

Although 2 varietal entries out yielded the best varietal check and one hybrid entry out yielded the best varietal as well as hybrid check, these entries could not meet the minimum standards the grain and cooking quality for Basmati rice. Therefore, none of the entries were promoted from IVT-BT to AVT-BT.

PROGRESS REPORT

KHARIF 2021

VARIETAL IMPROVEMENT

AICRIP

IRRIGATED TRIALS

ICAR-IIRR, Hyderabad

IRRIGATED TRIALS

With the introduction of high yielding varieties there has been remarkable progress in production and productivity of rice in the irrigated areas which account for almost 60% of rice production in the country. However, the production and productivity gains achieved in this ecology need to be sustained under the scenario of decreasing land, labour and water and it is also required to be insulated against the biotic stresses, while simultaneously improving the grain quality. Since the demand for food especially rice is still expected to increase with the ever escalating population in the years to come, it is necessary to break the yield barrier through conventional methods using diverse germplasm base, ideotype breeding and exploitation of hybrid vigour. In addition, with the advent of biotechnological tools, marker-assisted breeding for incorporating the target traits has become quite feasible in varietal improvement programmes. In view of the existing concerns and opportunities available, there is a need to identify high yielding genotypes suitable for the vast, highly productive and very important irrigated ecology.

ICAR-Indian Institute of Rice Research (ICAR-IIRR) conducts and coordinates multidisciplinary and multi-location evaluation of elite cultures, crop management and crop protection technologies in different agro-climatic zones of the country under All India Coordinated Rice Improvement Project (AICRIP) to enhance rice production. A total of 37 trials (33 varietal trials and 4 hybrid rice trials) were conducted in 845 experiments (711 varietal and 134 hybrid rice) at 115 locations (42 funded, 73 voluntary centres) in 28 states and 2 union Territories across seven zones of the country during 2021 which is the 57th year of AICRIP testing. Hybrid rice experiments were also conducted by 10 private seed companies. The 37 trials were constituted with 1203 entries (1103 varietal and 100 hybrid rice) including 145 checks. The overall data receipt was 79.0% of which 86.2% and 69.8% data was received from funded and voluntary centres respectively. The chapter outlines the results obtained trial wise which are discussed below.

ADVANCE VARIETY TRIAL 2-EARLY – TRANSPLANTED (AVT 2- E TP)

Locations: 45

Test Entries: 09

Checks: CO-51 (National); PR 124 (Northern), Narendra 97 (Eastern), Luit (North Eastern), Sahbhagidhan (Central & Western), MTU 1153 (Southern)- Zonal; US 314 (Hybrid) and local check **Table:1.1**

Advance Variety Trial-2 Early Transplanted (AVT 2- E TP) was constituted with nine test entries including one hybrid entry in 3rd year of testing and four checks namely, CO-51 (National check), PR 124 (Northern), Narendra 97 (Eastern), Luit (North Eastern), Sahbhagidhan (Central & Western), MTU 1153 (Southern) Zonal Checks, US 314 (Hybrid check) and Local check. The trial was sent to 45 locations; however, data was not received

from four centres namely Sabour, Hazaribag, Aduthurai (crop failed) and Kurumbapet. Data from six centres namely Patna (3684 Kg/ha), Hatwara (3.23% CV), Masodha (3695 Kg/ha), Rudrur (0.88% CV), Brahmavar (3639 Kg/ha), Gangavathi (4.83 % CV) not considered for analysis due to either low CV (< 5%) or low experimental mean grain yield (< 4000 Kg/ha). The data from remaining 35 centres was considered for analysis and assessing the performance of test entries across zones. Overall experimental mean yield ranged from 4307 Kg/ha (IET 28366) to 5821 Kg/ha (IET 28332); days to 50% flowering from 84 (National check) to 99 (IET 28366). The data pertaining to yield, days to 50% flowering, plant height, number of panicles/m² and quality are presented in the tables 1.2, 1.3, 1.4, 1.5 and 1.6. The performance of test entries is discussed zonal wise.

Zone II

Data from three centres (Ludhiana, Kaul and Kota) was considered for analysis. The experimental mean yield ranged from 2155 Kg/ha (IET 28366) to 8219 Kg/ha (IET 28332); days to 50% flowering from 82 (National check) to 114 (IET 28366).

Among the checks, Local check recorded highest grain yield of 6612 Kg/ha. Among the test entries **IETs 28343, 28332 and 28329** recorded required yield advantage over the best check.

Performance of superior test entries in Zone II of AVT2-E-TP during Kharif2021

Zone II (3)			
Rank	IET No/ Designation / Cross Combination	GY/ DFF/ GT	% yield increase BVC
1	IET 28332	8219 88	24
2	IET 28343	7762 89	17
3	IET 28329	7410 88	12
	National Check (NC)	5367 82	
	Zonal Check (ZC)	-	
	Hybrid Check (HC)	6703 86	
	Local Check (LC)	6612 88	

Bold & Italics: Best check & over the best check; GY: Grain Yield (kg/ha); DFF: Days to 50% flowering; GT: Grain Type; BVC: Best Varietal Check.

Zone III

Data from seven centres (Cuttak, Jeypore, Bikramganj, Patna, Ranchi, Chinsurah and Varanasi) was considered for analysis. The experimental mean yield ranged from 3681 Kg/ha (Zonal check) to 5987 Kg/ha (28332); days to 50% flowering from 81 (Zonal check) to 99 (IET 28366).

Among the checks, National check (Co-51) recorded highest grain yield of 4654Kg/ha. Among the test entries IETs 28332, 26790, 28354, 28329, 28356 and 28343 recorded required yield advantage over the best check. Whereas, IET 28115 hybrid is not superior over the hybrid check.

Performance of superior test entries in Zone III of AVT2-E-TP during Kharif 2021

Zone III (7)			
Rank	IET No/ Designation / Cross Combination	GY/ DFF/ GT	% Yield increase BVC
1	IET 28332	5987 87	29
2	IET 26790	5547 87	19
3	IET 28354	5347 88	15
4	IET 28329	5254 88	13
6	IET 28356	5194 89	12
8	IET 28343	4899 87	5
	National Check (NC)	4654 82	
	Zonal Check (ZC)	3681 81	
	Hybrid Check (HC)	5247 85	
	Local Check (LC)	4402 87	

Zone IV

Data from three centres (Titabar, Arundhutinagar, Lembucherra) was considered for analysis. The experimental mean yield ranged from 2758 Kg/ha (IET 28329) to 6759 Kg/ha (IET 28343); days to 50% flowering from 78 (Zonal check) to 94 (IET 28356).

Among the checks, Zonal check recorded highest grain yield of 5917 Kg/ha. Among the test entries IETs 28343, 28354 and 26790 recorded required yield advantage over the best check.

Performance of superior test entries in Zone IV of AVT2-E-TP during Kharif 2021

Zone IV (3)			
Rank	IET No/ Designation / Cross Combination	GY/ DFF/ GT	% yield increase BVC
1	IET 28343	6759 84	14
2	IET 28354	6591 86	11
3	IET 26790	6293 81	6
	National Check (NC)	5298 80	
	Zonal Check (ZC)	5917 78	
	Hybrid Check (HC)	5589 81	
	Local Check (LC)	5182 83	

Zone V

Data from six centres (Rewa, Raipur, Jagdalpur, Bilaspur, Sakoli and Sindewahi) was considered for analysis. The experimental mean yield ranged from 3949 Kg/ha (IET 28366) to 5739 Kg/ha (IET 28332); days to 50% flowering from 89 (National check) to 102 (IET 28366).

Among the checks, National check recorded highest grain yield of 4489 Kg/ha. Among the test entries **IETs 28332, 28343, 28354, 28329 and 26790** recorded required yield advantage over the best check.

Performance of superior test entries in Zone V of AVT2-E-TP during kharif 2021

Zone V (6)			
Rank	IET No/ Designation / Cross Combination	GY/ DFF/ GT	% Yield increase BVC
1	IET 28332	5739 90	28
2	IET 28343	5396 93	20
3	IET 28354	5298 94	18
5	IET 28329	5090 92	13
6	IET 26790	4908 91	9
	National Check (NC)	4489 89	
	Zonal Check (ZC)	4042 92	
	Hybrid Check (HC)	5170 91	
	Local Check (LC)	4171 91	

Zone VI

Data from seven centres (Karjat, Shirgaon, Vadagaon, Radhanagari, Nawagam, Dabhoi, Vyara) was considered for analysis. The experimental mean yield ranged from 3698 Kg/ha (IET 28366) to 5324 Kg/ha (IET 26790); days to 50% flowering from 84 (National check) to 108 (IET 28366).

Among the checks, Local check recorded highest grain yield of 4763 Kg/ha. Among the test entries **IETs 26790, 28332 and 28343** recorded required yield advantage over the best check.

Performance of superior test entries in Zone VI of AVT2-E-TP during Kharif 2021

Zone VI(7)			
Rank	IET No/ Designation / Cross Combination	GY/ DFF/ GT	% yield increase BVC
1	IET 26790	5324 88	12
3	IET 28332	5163 89	8
5	IET 28343	5039 89	6
	National Check (NC)	4054 84	
	Zonal Check (ZC)	4686 89	
	Hybrid Check (HC)	5201 89	
	Local Check (LC)	4763 90	

Zone VII

Data from nine centres (Maruteru, Kampasagar, Kunaram, Warangal, Jagtial, Coimbatore, Moncompu, Pattambi and Mandya) was considered for analysis. The experimental mean yield ranged from 4883 Kg/ha (IET 26790) to 5996 Kg/ha (Zonal check); days to 50% flowering from 85 (National check) to 93 (IET 28366). Among the checks, Zonal check ranked first with grain yield of 5996 Kg/ha. None of the test entries recorded superior yield over the best check.

Description of test entries and grain quality parameters

IET 28343 (KNM 6965) derived from cross MTU 1010 / KNM 118 possess long slender grain type. The test entry recorded required yield advantage over the best check in Zone II (17%), III (5%), IV (14%), V (20%), VI (6%). The entry recorded HRR (70.6), ASV (3.0), AC (22.29), and GC (68) as desirable grain quality parameters.

IET 26790 (MTU 1273) derived from cross MTU 1010 / FL478 // *3 MTU 1010 possess long slender grain type. The test entry recorded required yield advantage over the best check in Zone III (19%), IV (6%), V (9%), VI (12%). The entry recorded HRR (72.1%), ASV (3.0), AC (22.90), and GC (55) as desirable grain quality parameters.

IET 28356 (KNM 7037) derived from cross KNM 606 / KNM 118 possess long slender grain type. The test entry recorded required yield advantage over the best check in Zone III (12%). The entry recorded HRR (70.4%), ASV (3.0), AC (22.52), and GC (62) as desirable grain quality parameters.

IET 28366 (MTU 1312 (MTUAST 2-5-29-5)) derived from cross (MTU 1010 / MTU 1081) // *2 MTU 1010 possess long slender grain type. The test entry did not record required yield advantage over the best check in any of the zones tested. The entry recorded HRR (70.8%), ASV (4.0), AC (23.02), and GC (96) as desirable grain quality parameters.

IET 28354 (CR 4073-1339-3-5-1-1-3) derived from cross IET 22296 / RR 2-6 possess medium slender grain type. The test entry recorded required yield advantage over the best check in Zone III (15%), IV (11%), V (18%). The entry recorded HRR (69.6%), ASV (4.0), AC (24.31), and GC (22) as desirable grain quality parameters.

IET 28332 KNM 7048 (KPS 3219 / KNM 118) derived from cross KPS 3219 / KNM 118 possess long bold grain type. The test entry recorded required yield advantage over the best check in Zone II (24%), III (29%), V (28%), VI (8%). The entry recorded HRR (78.1%), ASV (3.0), AC (22.29), and GC (67) as desirable grain quality parameters.

IET 28115 (US-317) hybrid test entry possess long bold grain type. The test entry did not record required yield advantage over the best check in any of the zones tested. The entry recorded HRR (68.4%), ASV (3.0), AC (22.88), and GC (61) as desirable grain quality parameters.

IET 28358 (RP 5599-212-56-3-1) derived from cross MTU 1010 / KMR 3 possess long slender grain type. The test entry did not record required yield advantage over the best check in any of the zones tested. The entry recorded HRR (70.9), ASV (40), AC (22.96), and GC (57) as desirable grain quality parameters.

IET 28329 (RCPR 60-IR 97073-26-1-1-3) derived from cross IR10L146 / IR10L137 possess long slender grain type. The test entry recorded required yield advantage over the best check in Zone II (12%), III (13%), V (13%). The entry recorded HRR (71.9%), ASV (5.0), AC (26.78), and GC (66) as desirable grain quality parameters.

Three-years performance of test entries in early transplanted trial

A total of nine test entries completed three years of testing in early transplanted trial. The performance these nine test entries are discussed below.

IET 28343 (KNM 6965)

IET 28343 (KNM 6965) derived cross MTU 1010 / KNM 118 possess long slender grain type. The entry showed consistence yield superiority over the best check in Zone III (all three years), Zone V (all three years), Zone II (1st and 3rd year) and Zone VI (2nd and 3rd year). In Zone III, the entry showed consistence yield superiority for the state of Bihar (2nd and 3rd years); Zone V for the state of Maharashtra (1st and 3rd year) and Chhattisgarh (2nd and 3rd year); Zone II for the state of Haryana (1st and 3rd year). However, the entry did not show consistence yield superiority in any states of Zone VI. Based on three years of performance, **IET 28343 (KNM 6965) found promising in Zone II (Haryana) and Zone V (Maharashtra).**

Three-year performance of IET 28343 (KNM 6965) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone		State	
		Zone (no. of locations)	% BC	State (no. of locations)	% BC
IET 28343 KNM 6965 MTU 1010 / KNM 118	2019	Z II (2)	7	HA (1)	26
		Z III (7)	13	-	-
		Z V (3)	10	MA1 (2)	16
		Z VII (7)	7	TE (1)	25
	KA (2)			6	
	2020	Z III (5)	11	BI (1)	23
				WB(2)	19
		Z IV (1)	29	AS (1)	29
		Z V (6)	10	CH (3)	19
	2021	Z VI (5)	10	GUJ (2)	8
				Z II (3)	17	HA (1)	30
		Z III (7)	5	RJ (1)	18
				BI (2)	8
		Z IV (3)	14	AS (1)	28
				TR (2)	7
		Z V (6)	20	MP (1)	15
				CH (3)	26
MA1(2)	8				
Z VI(7)	6	MA2 (4)	14		

IET 26790 (MTU 1273)

IET 26790 (MTU 1273) derived from MTU 1010 / FL478 // *3 MTU 1010 possess long slender grain type and was tested for four years. The test entry recorded consistence superior performance over the best check in Zone V (3rd and 4th year) and Zone VI (1st, 2nd and 4th year). State wise, it showed consistence superior performance for the state of Gujarat (1st, 2nd year, and 4th year) and Maharashtra (2nd, and 4th year) in Zone VI; for the state of Chhattisgarh (3rd and 4th year) in Zone V. based on the four-year performance, **IET 26790 (MTU 1273) is found promising in Zone V (Chhattisgarh) and Zone VI (Maharashtra and Gujarat).**

Four-year performance of IET 26790 (MTU 1273) in early transplanted trial during 2017, 2018, 2020 and 2021

IET No/ Designation	Year	Zone		State	
		Zone (no. of locations)	% BC	State (no. of locations)	% BC
IET 26790 MTU 1273 MTU 1010 / FL478 // *3 MTU 1010	2017	Z II (2)	6	BI (3)	
		Z VI (5)	8	GU (2)	24
	2018	Z II (2)	21	HA (1)	27
		Z VI	17	MA (4)	17
	GU (2)			9	
	2020	Z III (5)	10	OD (2)	7
				BI (1)	21
				WB (2)	6
		Z V (6)	13	CH (3)	8
	2021	Z VI	12	MA1(2)	25
				Z IV (4)	6	AS (1)	17
Z V (6)		9	CH (3)	21	
Z VI (7)		12	MA (6)	20	
			GU (3)	13	

IET 28356 (KNM 7037)

IET 28356 (KNM 7037) derived from cross KNM 606 / KNM 118 possess long slender grain type. The entry showed consistence performance of yield superiority over the best check in Zone III in the first and third year of testing. The entry also showed yield superiority over best check in the state of Odisha in the year 1st and 3rd year. Based on three year of performance, **IET 28356 (KNM 7037) is found promising for state of Odisha in the Zone III.**

Three-year performance of IET 28356 (KNM 7037) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone		State	
		Zone (no. of locations)	% BC	State (no. of locations)	% BC
IET 28356 KNM 7037 KNM 606 / KNM 118	2019	Z III(7)	7	OD (2)	28
				UP 1(1)	22
	2020	Z V(6)	10	CH (3)	10
				MA 1(2)	12
	2021	Z III (7)	12	OD (2)	14
				WB (1)	22

IET 28366 (MTU 1312)

IET 28366 (MTU 1312 (MTUAST 2-5-29-5)) derived from (MTU 1010 / MTU 1081) // *2 MTU 1010 possess long slender grain type. The test entry did record yield superiority in any of zones tested during second and third year of testing, hence, IET 28366 (MTU 1312 (MTUAST 2-5-29-5)) is discontinued.

Three-year performance of IET 28366 (MTU 1312) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone		State		
		Zone (no. of locations)	% BC	State (no. of locations)	% BC	
IET 28366 MTU 1312 (MTU AST 2-5-29-5) (MTU 1010 / MTU 1081) // *2 MTU 1010	2019	Z (2)	7	-	-	
		Z VI (4)	6	MA II (3)	8	
		Z VII (7)	5	-	-	
	2020	-	-	-	-	
	2021	-	-	-	-	-

IET 28354 (CR 4073-1339-3-5-1-1-3)

IET 28354 (CR 4073-1339-3-5-1-1-3) derived from cross IET 22296 / RR 2-6 possess medium slender grain type. The entry showed consistence performance of yield superiority over the best check in Zone III (all three years) and Zone IV (2nd and 3rd year). In Zone III, the entry showed consistence yield superior for the state Odisha (all three years) and Bihar (2nd and 3rd year) whereas in Zone IV, it consistently performed in the state of Assam (2nd and 3rd year). Based on three-year performance, **IET 28354 (CR 4073-1339-3-5-1-1-3) is found promising in Zone III for the state of Odisha and Bihar as well as in Zone IV for the state of Assam.**

Three-year performance of IET 28354 (CR 4073-1339-3-5-1-1-3) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone		State	
		Zone (no. of locations)	% BC	State (no. of locations)	% BC
IET 28354 CR 4073-1339-3-5-1-1-3 IET 22296 / RR 2-6	2019	Z III (7)	49	OD (2)	51
		Z VI (4)	40	MA (3)	38
	2020	Z III (5)	14	OD (2)	15
				BI(1)	32
	2021	Z IV (1)	29	AS (1)	29
		Z III (7)	15	OD (2)	15
				BI (2)	5
				JH (1)	7
				WB (1)	17
		Z IV (3)	11	AS (1)	17
			TR (2)	6	
	Z V (6)	28	CH (3)	36	

IET 28332 (KNM 7048)

IET 28332 (KNM 7048) derived from cross KPS 3219 / KNM 118 possess long slender grain type. The test entry recorded consistence yield superiority over the best check in the Zone V (all three year), Zone III (2nd and 3rd year) and Zone VI (2nd and 3rd year). State wise, the entry recorded consistence yield superiority over the best check in Maharashtra (all three years) and Chhattisgarh (2nd and 3rd year) in Zone V; Bihar and West Bengal during 2nd and 3rd year in Zone III; Gujarat during 2nd and 3rd year in Zone VI. Based on three-year performance of test entries, **IET 28332 (KNM 7048) is found promising in Zone III (Bihar and West Bengal), Zone V (Maharashtra and Chhattisgarh) and Zone VI (Gujarat).**

Three-year performance of IET 28332 (KNM 7048) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone		State	
		Zone (no. of locations)	% BC	State (no. of locations)	% BC
IET 28332 KNM 7048 KPS 3219 / KNM 118	2019	Z V (3)	13	MA1 (2)	19
		Z VII (7)	9	KA (2)	12
				TE (1)	16
	2020	Z III (5)	12	BI (1)	21
				WB (2)	23
		Z V (6)	14	CH (3)	15
				MA1 (2)	22
	2021	Z VI (5)	8	GU (2)	6
		Z II (3)	24	PU (1)	30
				HA (1)	48
				RJ (1)	11
		Z III (7)	29	OD (2)	19
				BI (2)	31
				JH (1)	18
				WB (1)	21
		Z V (6)	28	MP (1)	29
				CH (3)	36
		MA1 (2)	10		
Z VI (7)	8	MA2 (4)	9		
		GU (3)	8		

IET 28115 (US 317)

IET 28115 (US317) is hybrid test entry possess long bold grain type. Although the test entry recorded superior grain yield over the best check in Zone III, IV during 1st, 2nd years of testing, and in 3rd year in any zones it is failed to record superiority. Hence due to inconsistent yield superiority in any of zones tested in the third year, the entry **IET 28115 (US-317) is discontinued.**

Three-year performance of IET 28115 (Hybrid) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone			State		
		Zone (no. of locations)	% BVC	%HC	State (no. of locations)	% BC	%HC
IET 28115 US-317 (Hybrid)	2019	Z III (6)	28	12	JH (1) WB (1)	16 19	27 32
		Z IV (2)	12	6	TP(2)	12	6
	2020	Z V (6)	10	5	MP (1)	19	49
	2021	-	-	-	-	-	-

IET 28358 (RP 5599-212-56-3-1)

IET 28358 (RP 5599-212-56-3-1) derived from cross MTU 1010/KMR 3 possess long slender grain type. The test entry recorded yield superiority over the best check in Zone II and Zone III in the first year of testing. Whereas it showed superior performance in Zone IV in the second year of testing. However, the entry failed to showed yield superiority in the third year of testing in any of the zones tested. Hence, **IET 28358 (RP 5599-212-56-3-1) is discontinued due to inconsistency.**

Three-year performance of IET 28358 (RP 5599-212-56-3-1) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone		State	
		Zone (no. of locations)	% BC	State (no. of locations)	% BC
IET 28358 RP 5599-212-56-3-1 MTU 1010 / KMR 3	2019	Z II (2)	8	-	-
		Z III (7)	7	OD (2)	14
				BI (2)	12
	2020	Z IV (1)	28	UP (1)	18
				AS (1)	28
2021	-	-	-	-	

IET 28329 (RCPR 60-IR 97073-26-1-1-3)

IET 28329 (RCPR 60-IR 97073-26-1-1-3) derived cross IR10L146/IR10L137 from possess long slender grain type. The test entry showed consistence yield superiority over the best check in Zone III (1st and 3rd year) as well as Zone V (2nd and 3rd year). In Zone III, the entry showed consistence superiority for the state of Bihar (1st and 3rd year) while in Zone V the entry recorded consistence superiority for the state of Chhattisgarh. Based on three year of performance, **IET 28329 (RCPR 60-IR 97073-26-1-1-3) found promising in Zone III for the state of Bihar and in Zone V for the Chhattisgarh.**

Three-year performance of IET 28329 (RCPR 60-IR 97073-26-1-1-3) in early transplanted trial during 2019, 2020 and 2021

IET No/ Designation	Year	Zone		State	
		Zone (no. of locations)	% BC	State (no. of locations)	% BC
IET 28329 RCPR 60-IR 97073-26-1-1-3 IR10L146 / IR10L137	2019	Z III (7)	9	OD (2)	8
				BI (2)	6
				UP(1)	20
	2020	Z VII (7)	10	KE (1)	25
				TE(1)	28
				CH (3)	13
	2021	Z V (6)	10	MA1 (2)	5
				HA (1)	26
		Z II (3)	12	RA (1)	19
				Z III (7)	13
Z V (6)	13	CH (3)	15		

**ADVANCED VARIETY TRIAL1- EARLY TRANSPLANTED
(AVT1-E TP)****Locations: 45****Test Entries: 17**

Checks: CO-51 (National); PR 124 (Northern), Narendra 97 (Eastern), Luit (North Eastern), Sahbhagidhan (Central & Western), MTU 1153 (Southern)- Zonal; US 314 (Hybrid) and local check

Advance variety trial - Early Transplanted (AVT-1- E- TP) was constituted with 17 test entries and 4 checks namely CO-51 (National check), PR 124 (Northern), Narendra 97 (Eastern), Luit (North Eastern), Sahbhagidhan (Central & Western), MTU 1153 (Southern) as Zonal checks, US 314 (Hybrid check) and a local check. The trial was sent to 45 locations however data was not received from two locations namely Hazaribag and Aduthurai. Data from eight centers was excluded from analysis viz., Patna-ICAR, Hathwara, Masodha, Rewa, Jagadapur, Rudrur and Jagtial due to either due to low (<5%) / high CV (20%) or low mean experimental yield (<4000 Kg/ha).

Among the centres from which data is included in analysis, location-wise mean grain yield ranged from 4040 kg/ha (Pantnagar) to 7695 kg/ha (Gangavathi) while CV ranged from 5.27% (Coimbatore) to 17% (Pantnagar). Overall mean grain yield of the entries ranged from 4483 kg/ha (CO 51) to 5692 kg/ha (IET 28959); days to 50% flowering from 84 days (IET 28952) to 95 days (IET 29189 and 28124).

Performance of the entries on overall mean basis

Among the varietal checks, local check was the highest yielder (4822 Kg/ha) followed by zonal check (4811 Kg/ha) and National check (4483 kg/ha). The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 1.8, 1.9,

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1.10, 1.11 and 1.12 respectively. Hybrid checks (HC) was the best check (5203 kg/ha) on overall mean basis and four hybrids IET 28959 (PHI-20101), IET 28960 (RRX-848), IET 28953 (YPH-4009) and IET 28950 (HRI 207) recorded required yield advantage of more than 5% over the HC and 10% over BVC. Among Varietal checks local check (LC) was the best check (4822 kg/ha) on overall mean basis and 2 varietal entries IET 29140 (BRR 2176), and IET 29142 (JGL 35085) recorded required yield advantage of more than 5% over the BC.

The performance of the top 6 entries in overall mean is tabulated and described in detail as below

Overall performance of the entries based on yield in Advanced variety trial - Early Transplanted (AVT-1- E- TP) Kharif 2021

Rank	IET No/ Designation/ Cross Combination	GY/ FD/ GT	Yield adv. Over NC//HC/ /ZC//LC	Zone		Promotion / shift
				Rank/ Yield	% BC	
1	IET 28959 (PHI-20101) Hybrid	5692/91/LS	26.97 9.40 18.31 18.04	Z II-1 Z III-7 Z V-2	12.3 15.19 18.9	Promoted to AVT2 ETP
2	IET 28960 (RRX-848) Hybrid	5677/90/LS	26.63 9.11 18.00 17.73	Z III-1	30.25	Promoted to AVT2 ETP
3	IET 28953 (YPH-4009) Hybrid	5575/91/SB	24.36 7.15 15.88 15.62	Z III-9	11.32	Dropped due to AC=26.04, GC=22, ASV=4
4	IET 28950 (HRI 207) Hybrid	5572/89/SB	24.29 7.09 15.82 15.55	Z III-3	21.82	Promoted to AVT2 ETP
5	IET 29140 (BRR 2176) IR 97443-11-2-1-1-1- 1-B/HUR-1304	5190/88/MS	15.77 -0.25 7.88 7.63	Z III-2 Z IV-7 Z V-4 Z VI-7	28.41 17.2 18.3 -	Promoted to AVT2 ETP
6	IET 29142 (JGL 35085) (JGL20171/NLR344 49)/JGL20171	5073/89/LB	13.16 -2.50 5.45 5.21	Z II-9 Z IV-9 Z VI-5	15.6 9.21	Promoted to AVT2 ETP
	CO-51 (NC)	4483/86				
	US 314 (HC)	5203/88				
	Zonal check (ZC)	4811/87				
	Local check (LC)	4822/89				

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; LC- Local Check; GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type; BC- Best Check

Zonal performance of the entries**Northern Zone (Zone II)**

The trial was evaluated at four locations viz., Pantnagar (Uttarakhand), Ludhiana (Punjab), Kaul (Haryana) and Kota (Rajasthan) covering four states of Northern Zone. Experimental mean yield at the locations ranged from 4040 kg/ha (Pantnagar) to 6537 kg/ha (Kota, Jeypore) and CV% from 5.71 (Varanasi) to 18.32 (Cuttack). Zonal mean yield of the entries varied from 4449 kg/ha (IET 28124) to 6590kg/ha (IET 28959); days to 50% flowering ranged from 86 days (IET 28952) to 102 days (IET 29177); plant height ranged from 105.33 cm (ZC) to 125.93cm (IET 28962) and panicles per square meter ranged from 211 (IET 28124) to 289(IET 29193). In Zone II, hybrid check was the best check followed by Zonal check which yielded 5866 and 5574kg/ha respectively. Hybrid entries namely IET 28959 and IET 28950 recorded superior yield performance over the best checks, and promoted to 3rd year of testing in AVT-2-E TP (Zone II).

Performance of the entries AVT-1- E- TP, Zone II, Kharif 2021

Rank	IET No / Designation / Cross Combination	GY/ FD/ GT/ % BC	State Rank / (Yield (Kg/ha) / % BC
1	IET 28959 (PHI-20101) Hybrid	6590/91/LS 12.3%	Uttarakhand-1 / (5569) / 35% Punjab-2 / (6086) / 18% Haryana-3 / (7856) /11% Rajasthan -10 / (6847)
2	IET 28950 (HRI 207) Hybrid	6258/92/SB 6.68%	Uttarakhand / 4 (4693) Punjab-4 / (5718) Haryana-5 / (7283) Rajasthan -1 / (7338)
	CO-51 (NC)	5195/91	
	US 314 (HC)	6258/91	
	Zonal check (ZC) PR 124	5574/94	
	Local check (LC)	4720/90	

Eastern Zone (Zone III)

The trial was evaluated at 10 locations viz., Cuttack and, Jeypore (Odisha), Bikramganj, Sabour, Patna (Bihar) and Ranchi (Jharkhand), Chinsurah, Hathwara (west Bengal), Masodha, Varanasi (UP) in Eastern Zone. Data from Patna, Hathwara and Masodha was not considered for analysis due to low/high CV%. Experimental mean yield at the locations ranged from 4106 kg/ha (Jeypore) to 5833 kg/ha (Bikramganj) and CV% from 5.67 (Bikramganj) to 14.94 (Ranchi). Mean yield of the entries ranged from 3895 kg/ha (IET 29197) to 5993 kg/ha (IET 28960); days to 50% flowering ranged from 85 days (IET 28952) to 97 days (IET 28124); plant height ranged from 99.56 cm (IET 29140) to 121.37 cm (IET 28124) and panicles per square meter ranged from 192 (IET 28952) to 277 (IET 28953).

Eight hybrid entries namely IET Nos. 28960, 28950, 28954, 28956, 28123, 28959, 28953 and 28964, recorded superior yield performance over the best checks, Hybrid check and local check (4601 and 4431 kg/ha) varietal entries 29140, 29189 and 29177 performed

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over the best check (>5%) and promoted to 3rd year of testing in AVT-2-ETP (Zone III). However, IET 29189 and 29177 showed FD of >92 days.

Performance of the entries AVT-1- E- TP, Zone III, Kharif 2021

Rank	IET No / Designation / Cross Combination	GY/ FD/ GT/ % BC	State Rank / Yield (Kg/ha) /% BC
1	IET 28960 (RRX-848) Hybrid	5993/90/LS/ 30.3%	Orissa-3(5420)40% Bihar-3(6274)25% Jharkhand -7(4803) West Bengal-1(6923)37% Uttar Pradesh-3(6841) 63%
2	IET 29140 (BRR2176) IR 97443-11-2-1-1-1-B / HUR-1304	5690/88/MS/28.4%	Orissa-5(5096)32% Bihar-4(6144)22% Jharkhand -(4485) West Bengal-4(6121)21% Uttar Pradesh-4(6743)61%
3	IET 28950 (HRI 207) Hybrid	5605/90/SB/21.8%	Orissa-4(5158)33% Bihar-2(6322)26% Jharkhand -1(5961) West Bengal-(5185) Uttar Pradesh-(5128)22%
4	IET 28954 (Kaveri-7299) Hybrid	5561/91/LB/20.9%	Orissa-4(5541)43% Bihar-5(6016)20% Jharkhand -10(4601) West Bengal-2(6398)26% Uttar Pradesh-(4817)
5	IET 28956 (JKRH-1601) Hybrid	5492/87/LB/19%	Orissa-6(5027)30% Bihar-8(5535) Jharkhand -5(4977) West Bengal-(5242) Uttar Pradesh-2(7105)69%
4	IET 28123 (IIRH-130) Hybrid	5387/91/MS/ 17.1%	Orissa-1(5638)46% Bihar-(5406) Jharkhand -2(5295) West Bengal-(5022) Uttar Pradesh-10 (5302) 26%
6	IET 28959 (PHI-20101) Hybrid	5300/90/LS/ 15.2%	Bihar-1(6397)27% Jharkhand -10(4601) West Bengal-10(5405) Uttar Pradesh-1(7415) 77%
7	IET 29189 (RTN2012-5-1-3-13) Selection from HRTMS- 05Kh12	5266/95/LS/18%	Orissa-9(4560)18% Bihar-7(5578)11% Jharkhand -3(5179) West Bengal-6(5527) Uttar Pradesh-6(5884)14%
8	IET 28953 (YPH-4009) Hybrid	5122/85/SB/11.3%	Orissa-7(4901)27 Bihar-6(5961)18 Jharkhand -(3935) West Bengal-7(5470) Uttar Pradesh-(4278)

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Rank	IET No / Designation / Cross Combination	GY/ FD/ GT/ % BC	State Rank / Yield (Kg/ha) /% BC
9	IET 28964 (VNR227) Hybrid	5112/89/LB/11.1%	Orissa-10(4468)16% Bihar-(5297) Jharkhand -4659) West Bengal-8(5446) Uttar Pradesh-5(6153) 47%
10	IET 29177 (ORJ 1317) (RP5530-23-1) RP Bio226/ IRG48960/MTU1081	4683/93/LS/ 5.69%	Orissa-(3205) Bihar-10(5457)25 Jharkhand -8(4745) West Bengal-(5096) Uttar Pradesh-7(5616)
	CO-51 (NC)	3684/86	
	US 314 (HC)	4601/90	
	Zonal check (ZC) Narendra 97	2901/82	
	Local check (LC)	4431/90	

North Eastern Zone (Zone IV)

The trial was evaluated at 3 locations viz., Titabar, Arundhutinagar and Lembucherra and the data from Lembucherra was not considered for analysis due to high CV (41.34%). Experimental mean yield at the locations ranged from 4259 kg/ha (Arundhutinagar) to 4899 kg/ha (Titabar) and CV% ranged from 5.83 (Titabar) to 5.39 (Arundhutinagar). Mean yield of the entries ranged from 3905 kg/ha (IET 29177) to 5291 kg/ha (IET 28950); days to 50% flowering ranged from 77 days (IET 28952 & 28954) to 94 days (IET 28124); plant height ranged from 101.80 cm (IET 28950) to 121.87 cm (IET 28124) and panicles per square meter ranged from 244 (IET 28124) to 347 (IET 29140). Hybrid check was the top performing genotype in the zone with 5432Kg/ha therefore no hybrid entry was promoted in this zone. Entries namely IET No. 29197, 29140, 29142, and 29189 recorded superior yield performances (>5%) over the best varietal check, i.e., National check (4039Kg/ha) and promoted to next year of testing.

Performance of the entries AVT-1- E- TP, Zone IV, Kharif 2021

Rank	IET No/ Designation/ Cross Combination	GY/ FD/ GT/% BC	State Rank/ Yield (Kg/ha) /% BC
1	IET 29197 (ORJ 1349 (TP30457))	4919/83/LB/22%	Assam-8(5015) Tripura-3(4822)
2	IET 29140 (BRR 2176) IR 97443-11-2-1-1-1-1-B/HUR-1304	4734/86/MS/17.2%	Assam-9(4902) Tripura-(4565)12%
3	IET 29142 (JGL 35085) (JGL 20171/NLR 34449)/ JGL20171	4667/88/LB/15.6%	Assam-(4788) Tripura-(4546)11%
4	IET 29189 (RTN 2012-5-1-3-13) Selection from HRTMS-05Kh12	4630/89LS/14.6%	Assam-(4562) Tripura-(4698)15%
	CO-51 (NC)	4039/80	
	US 314 (HC)	5432/93	
	Zonal check (ZC) Luit	4011/78	
	Local check (LC)	3942/90	

Central Zone (Zone V)

The trial was evaluated at six locations viz., Rewa (MP), Raipur, Bilaspur and Jagadapur (Chhattisgarh), Sakoli and Sindewahi (Maharashtra) in Central Zone the data from Rewa and Jagadapur was not considered for analysis due to Low experimental mean. Experimental mean yield at the locations ranged from 4069 kg/ha (Sindewahi) to 6205 kg/ha (Bilaspur) and CV% ranged from 7.86 (Sakoli) to 14.26 (Raipur). Mean yield of the entries ranged from 4099 kg/ha (IET 28952) to 5788 kg/ha (IET 28959); days to 50% flowering ranged from 83 days (IET 28952) to 98 days (IET 29177); plant height ranged from 109.76 cm (IET 28954) to 137.65 cm (IET 29189) and panicles per square meter ranged from 182 (IET 29142) to 265 (IET 29140). Hybrid entries namely IET No. 28959, 28956, 28950 and 28954 and varietal entries viz., IET No. 29140, 29142 and 29177, recorded superior yield performance over the respective best checks, hybrid check and zonal check (4869 and 4464 Kg/ha) and promoted to next year. However, IET 29177 showed a FD of 98 days in this zone.

Performance of the entries AVT-1- E- TP, Zone V, Kharif 2021

Rank	IET No/ Designation/ Cross Combination	GY/ FD/ GT/% BC	State Rank/Yield (Kg/ha) /% BC
1	IET 28959 (PHI-20101) Hybrid	5788/ 87/ LS/ 18.9%	Madhya pradesh-7(3733) Chhattisgarh-2(6536) 22% Maharashtra- 2 (5040) 15%
2	IET 28956 (JKRH-1601) Hybrid	5468/87/LB/12.3%	Madhya Pradesh-(2756) Chhattisgarh-1(6885) 28% Maharashtra- 2 (5468) 12%
3	IET 28950 (HRI 207) Hybrid	5340 /91/SB/9.67%	Madhya pradesh-3(4796) Chhattisgarh-3(6264) 17% Maharashtra- 3 (5340) 12%
4	IET 29140 (BRR 2176) IR 97443-11-2-1-1-1-B /HUR-1304	5279 /85/MS/18.3%	Madhya pradesh-5(4210) Chhattisgarh-(5434) Maharashtra- 4(5279) 18%
5	IET 28954 (Kaveri-7299) Hybrid	5272 /85/LB/8.28%	Madhya pradesh-6(3754) Chhattisgarh-4(5987) Maharashtra- 5(5272)
6	IET 29177 (ORJ 1317) (RP 5530-23-1) RP Bio226/ IRG48960// MTU 1081	5088 /98/LS/14%	Madhya Pradesh-(1194) Chhattisgarh-(5506) Maharashtra- 7 (5088) 14%
7	IET 29142 (JGL 35085) (JGL 20171/NLR 34449) /JGL 20171	4686 /85/LB/4.97%	Madhya Pradesh-(3644) Chhattisgarh-(5081) Maharashtra- (4686)
	CO-51 (NC)	3974/86	
	US 314 (HC)	4869/88	
	Zonal check (ZC) Sahbhagidhan	4464/86	
	Local check (LC)	4252/92	

Western Zone (Zone VI)

The trial was evaluated at seven locations viz., Karjat, Shirgaon, Vadagaon, Radhanagari (Maharashtra), Nawagam, Dabhoi and Vyara (Gujarat). The data from Rudrur and Jagtial was not considered for analysis due to Low CV and due to Low experimental mean respectively. Experimental mean yield at the locations ranged from 4216 kg/ha (Radhanagari) to 5754 Kg/ha (Dabhoi) and CV% ranged from 9.03 (Radhanagari) to 14.06 (Shirgaon). Mean yield of the entries ranged from 4155 kg/ha (IET 29189) to 5698 kg/ha (IET 28953); days to 50% flowering ranged from 84 days (IET 28952) to 95 days (IET 28124 & 29189); plant height ranged from 95.70 cm (IET 28964) to 114.37 cm (IET 28124) and panicles per square meter ranged from 222 (IET 28960) to 246(IET 28959). Entries namely IET 29142 and IET 28953, recorded superior yield performance over the best checks, hybrid check (5427kg/ha)/ zonal check (4678 kg/ha) hence promoted in this zone to 3rd year of testing. However, both the entries showed a FD of >92 days.

Performance of the entries AVT-1- E- TP, Zone VI, Kharif 2021

Rank	IET No/ Designation/ Cross Combination	GY/ FD/ GT/% BC	State Rank/Yield (Kg/ha) / % BC
1	IET 28953 (YPH-4009) Hybrid	5698/93/SB/4.99%	Maharashtra-1(5399) Gujarat-2(5698)
2	IET 29142 (JGL 35085) (JGL 20171/NLR 34449)/ JGL 20171	5109/95/LB/9.21%	Maharashtra-5(4726) Gujarat-4 (5109)
	CO-51 (NC)	4258/87	
	US 314 (HC)	5427/89	
	Zonal check (ZC) Sahbhagidhan	4678/91	
	Local check (LC)	4498/90	

Southern Zone (Zone VII)

The trial was evaluated at thirteen locations viz., Maruteru, Rudrur, Kampasagar, Kunaram, Warangal, Jagtial (Telangana), Coimbatore, (TN), Moncompu and Pattambi (Kerala), and Mandya, Brahmavar, Gangavati (Karnataka), Kurumbapet (Puducherry). Experimental mean yield at the locations ranged from 4247 kg/ha (Brahmavar) to 7695 Kg/ha (Gangavathi) and CV% ranged from 5.21 (Coimbatore) to 14.16 (Kampasagar). Mean yield of the entries ranged from 4668 kg/ha (IET 28124) to 5692 kg/ha (IET 28959); 84 days (IET 28952) to 95 days (IET 28124 & 29189); plant height ranged from 102.43 cm (IET 28954) to 117.86 cm (IET 28124) and panicles per square meter ranged from 239 (IET 28124) to 291 (IET 29193). Among the checks zonal check was the top yielder (6234 Kg/ha) followed by hybrid check (5290 Kg/ha), then local check (5683 Kg/ha) and national check (5141 Kg/ha). None of the entries out yielded the best check (ZC) with > 5% yield gain and hence no entries promoted in this zone to 3rd year of testing.

Yield advantage percentage of the promising entries on the basis of zone wise and overall mean and promotion/shift on the basis of flowering duration is summarized as below.

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Performance of promising entries based on yield Early Transplanted (AVT1-ETP) Kharif 2021

IET No.	ZII			ZIII			ZIV			ZV			ZVI			ZVII			OVERALL			Remarks	QC
	%BVC	%HC	DFP	%BC	%HC	DFP	%BC	%HC	DFP	%BC	%HC	DFP	%BC	%HC	DFP	%BC	%HC	DFP	%BC	%HC	DFP		
Hybrid entries																							
28959	18.2	12.3	91	19.6	15.2	90			92	29.7	18.9	87			94			91	18	9.4	91	Promoted to AVT2 E TP	Promoted
28960			92	35.3	30.3	90			86			92			92			90	17.7	9.11	90	Promoted to AVT2 E TP	Promoted
28953			92	15.6	11.3	91			85			93	21.8	4.99	93			89	15.6	7.15	91	Promoted to AVT2 E TP	Dropped due to AC=26.04, GC=22, ASV=4
28950	12.3	6.68	92	26.5	21.8	90			85	19.6	9.67	91			91			86	15.6	7.09	89	Promoted to AVT2 E TP	Promoted
28956			92	23.9	19	91			87	22.5	12.3	87			92			88			90	Promoted to AVT2 E TP in Zone III, V	Promoted
28954			89	25.5	20.9	89			77	18.1	8.28	85			89			85			87	Promoted to AVT2 E TP in Zone III, V	Promoted
28123			96	21.6	17.1	91			88			90			93			88			91	Promoted to AVT2 E TP in Zone III	Dropped due to AC=26.10, GC=22, ASV=4
28964			90	15.4	11.1	89			85			87			91			89			89	Promoted to AVT2 E TP in Zone III	Promoted
US 314(HC)			91			90			93			88			89			84			88		
Varietal entries																							
29140			93	28.4		88	17.2		86	18.3		85			91			86	7.63		88	Promoted to AVT2 E TP	Promoted
29142			92			90	15.6		88	4.97		85	9.21		95			87	5.21		89	Promoted to AVT2 E TP	Promoted
29177			102	5.69		93			83	14		98			95			91			94	Promoted to AVT2 E TP in Zone III, V	Promoted FD>92 days
29189			98	18.8		95	14.6		89			99			94			92			95	Promoted to AVT2 E TP in Zone III, IV	Dropped due to AC=28.04, GC=22, ASV=4
29197							22		83													Promoted to AVT2 E TP in Zone IV	Promoted
Local check(LC)			90			90			90			92			90			86			89		
Zonal Check(ZC)			94			82			78			86			91			89			87		
CO51(NC)			91			86			80			86			87			84			86		

INITIAL VARIETY TRIAL - EARLY TRANSPLANTED (IVT – E TP)

Locations:		Test Entries: 61
Sent	45	
Received	36	
Analysed	27	
Checks:	CO-51 (National); PR 124 (Northern), Narendra 97 (Eastern), Luit (North Eastern), Sahbhagidhan (Central & Western), MTU 1153 (Southern)- Zonal; and local check.	Table:1.13

Initial variety trial - Early Transplanted (IVT - E TP) was constituted with 61 test entries and 3 checks: CO-51 as National check, PR 124- Northern, Narendra 97-Eastern, Luit- North Eastern, Sahbhagidhan- Central & western, MTU 1153- Southern as Zonal checks and a local check. The trial was sent to **45** locations however data was not received from nine locations namely, Masodha, Hazaribag, Titabar, Arundhutinagar, Radhanagari, Kunaram, Aduthurai, Brahmavar and Kurumbapet. **Thirty six locations** have sent data among which data from **nine** centers was excluded from analysis namely Pantnagar (LSM (Low Experimental Mean) <4000 Kg/ha)), Ludhiana (LSM), Sabour (LSM), Ranchi (LSM), Lembucherra (High CV :>20)), Rewa (LSM & High CV), Shirgaon (LSM) and Pattambi (High CV). Overall mean yield of the entries ranged from 3728 kg/ha (IET 29986) to 5751 kg/ha (IET 29940); days to 50% flowering from 80 days (IET 29954) to 100 days (IET 29972). Among the checks, local check was the highest yielder (5200 Kg/ha) followed by national check (4961 Kg/ha) and zonal check (4784 kg/ha). The data pertaining to yield, days to 50% flowering, plant height and panicles/m² are presented in tables 1.14 and 1.15 respectively.

Performance of the entries on overall mean basis

Local check was the superior check (5200 kg/ha) among the checks. Six entries: IET 29940, 29976, 29947, 29952, 29939 and 29951 showed significant superiority over the best check. Among them, IET 29939, 29940 and 29951 were promoted to AVT- 1 E- TP, while IET 29976, 29947 and 29952 were shifted to IVT-IME.

IET 29940 ranked first on overall basis with 5751 kg/ha mean yield, 91 days to 50% flowering. It recorded significant yield superiority over national, zonal and local check (Best check) respectively.

IET 29939 ranked fifth on overall basis with 5501 kg/ha mean yield, 89 days to 50% flowering. It recorded significant yield superiority over national, zonal and local check (Best check) respectively.

IET 29951 ranked sixth on overall basis with 5415 kg/ha mean yield, 90 days to 50% flowering. It recorded significant yield superiority over national, zonal and local check (Best check) respectively.

Overall performance of significant entries in IVT - E TP, Kharif 2021

Rank	IET No/Designation/ Cross Combination	GY/DFP/ GT	Remarks
1	29940 CRU-BCKV-22-35 (14-N22/35-13-4-5-2) N22/IET 25701	5751* 91 MS	Promoted to AVT-1-E-TP
2	29976 ORJ 1313 (RP-5530-B-31-1 RP Bio 226/IRGC 48960//MTU 1081	5691* 95 MB	Shift to IVT-IME
3	29947 NLR 3684 NLR 34449/NLR 33359	5573* 93 MS	Shift to IVT-IME
4	29952 TRC GBPT 206-B-B-33-1 Gomati/BPT 5204	5530* 95 LS	Shift to IVT-IME
5	29939 CR-4060-1318-5-2-2-2-1-5-3-4 IET 22729/Browngora	5501* 89 LB	Promoted to AVT-1-E-TP
6	29951 RTN 1403-7-1-1-2-4 RTN-1/HRTMS-55	5415* 90 LS	Promoted to AVT-1-E-TP
	National Check (NC)	4961 85	
	Zonal Check (ZC)	4784 89	
	Local check - Best check	5200 88	
	CD (at 5% level of significance)	197	

Bold & Italics: Best check & over the best check; NC-National Check; ZC-Zonal Check; HC-Hybrid Check; LC-Local Check; GY: Grain Yield; DFF: Days to 50% flowering; GT: GrainType; BCV: Best Varietal Check.

Performance of the entries in Zones:

Zone II: National Check was the superior check (5846 kg/ha) among the checks. Six entries, viz., IET 29964, 29952, 29946, 29983, 29951 and 29939 showed significant superiority over the best check. Among them IET 29964, 29946, 29983 and 29939 were promoted to AVT- 1 E- TP, while IET 29952 and 29951 were shifted to IVT-IME.

Mean performance of entries across Zone II in IVT-E-TP, Kharif, 2021

S No.	IET No.	Zone II (3L)		Remarks
		G. Yield (kg/ha)	DFF	
1	29964	6963 *	92	Promoted to AVT-1-E
2	29952	6938 *	98	Shift to IVT-IME
3	29946	6635 *	93	Promoted to AVT-1-E
4	29983	6610 *	91	Promoted to AVT-1-E
5	29951	6539 *	93	Shift to IVT-IME
6	29939	6497 *	92	Promoted to AVT-1-E
	National check (NC) (BC)	5846	90	
	Zonal check (ZC)	5229	95	
	Local Check (LC)	4606	91	
	CD (at 5% level of significance)	546		

Zone III: Local Check was the superior check (4957 kg/ha) among the checks. Fifteen entries: IET 29940, 29992, 29969, 29939, 29958, 29976, 29947, 29960, 29948, 29990, 29950, 29957, 29952, 29943 and 29946 showed significant superiority over the best check. Among them, IET 29940, 29992, 29969, 29939, 29958, 29947, 29957, 29943 and 29946 were promoted to AVT- 1 E- TP, while IET 29976, 29960, 29948, 29990, 29950, and 29952 were shifted to IVT-IME.

Mean performance of entries across Zone III in IVT-E-TP Kharif, 2021

S No.	IET No.	Zone III (8L)		Remarks
		G. Yield (kg/ha)	DFF	
1	29940	6084 *	88	Promoted to AVT-1-E
2	29992	6068 *	90	Promoted to AVT-1-E
3	29969	5966 *	89	Promoted to AVT-1-E
4	29939	5872 *	88	Promoted to AVT-1-E
5	29958	5723 *	89	Promoted to AVT-1-E
6	29976	5627 *	95	Shift to IVT-IME
7	29947	5613 *	91	Promoted to AVT-1-E
8	29960	5551 *	94	Shift to IVT-IME
9	29948	5520 *	96	Shift to IVT-IME
10	29990	5506 *	94	Shift to IVT-IME
11	29950	5501 *	93	Shift to IVT-IME
12	29957	5490 *	89	Promoted to AVT-1-E
13	29952	5481 *	93	Shift to IVT-IME
14	29943	5440 *	88	Promoted to AVT-1-E
15	29946	5413 *	88	Promoted to AVT-1-E
	National check (NC)	4708	87	
	Zonal check (ZC)	4313	89	
	Local Check (LC)	4957	87	
	CD (at 5% level of significance)	442		

Zone V: Local Check was the superior check (4745 kg/ha) among the checks. One entry: IET 29975 showed significant superiority over the best check, which was promoted to AVT- 1 E- TP.

Mean performance of entries across Zone V in IVT-E-TP Kharif, 2021

S No.	IET No.	Zone V (4L)		Remarks
		G. Yield (kg/ha)	DFF	
1	29975	5849 *	91	Promoted to AVT-1-E
	National check (NC)	4707	88	
	Zonal check (ZC)	3622	92	
	Local Check (LC)	4745	90	
	CD (at 5% level of significance)	615		

Zone VII: Local Check was the superior check (6675 kg/ha) among the checks. One entry: IET 29940 showed significant superiority over the best check, which was promoted to AVT- 1 E- TP.

Mean performance of entries across Zone VII in IVT-E-TP Kharif, 2021

S No.	IET No.	Zone VII (7L)		Remarks
		G. Yield (kg/ha)	DFP	
1	29940	7133 *	92	Promoted to AVT-1-E
	National check (NC)	5597	83	
	Zonal check (ZC)	5913	88	
	Local Check (LC)	6675	88	
	CD (at 5% level of significance)	403		

Four entries (IET No. IET 29964, 29946, 29983 and 29939) in Zone II, nine entries (IET No. 29940, 29992, 29969, 29939, 29958, 29947, 29957, 29943 and 29946) in Zone III, one entry (IET No. 29975) from Zone V, one entry (IET No. 29940) from Zone VII; and three entries (IET 29940, 29939 and 29951) in overall mean were promoted to AVT-1-E-TP.

Depending on the duration, the following entries are shifted to IVT-IME:

On Overall basis: IET No. 29976 (95), 29947 (93) and 29952 (95)

Zone II: IET No. 29952 (98) and 29951 (93)

Zone III: IET No. 29976 (95), 29960 (94), 29948 (96), 29990 (94), 29950 (93), and 29952 (93)

Table No. 1.1: Composition of entries in Advance Variety Trial 2–Early Transplanted (AVT 2E-TP), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
3rd year of testing:				
3201	28343	KNM 6965	MTU 1010 / KNM 118	LS
3202	26790	MTU 1273	MTU 1010 / FL478 // *3 MTU 1010	LS
3203	Local Check			
3204	28356	KNM 7037	KNM 606 / KNM 118	LS
3205	28366	MTU 1312 (MTUAST 2-5-29-5)	(MTU 1010 / MTU 1081) // *2 MTU 1010	LS
3206	PR 124-Northern, Narendra 97-Eastern, Luit -North Eastern, Sahbhagidhan- Central & Western, MTU 1153-Southern-- ZC			
3207	28354	CR 4073-1339-3-5-1-1-3	IET 22296 / RR 2-6	MS
3208	28332	KNM 7048	KPS 3219 / KNM 118	LB
3209	28115	<i>US-317 (Hybrid)</i>	-	LB
3210	CO-51 (NC)			
3211	US 314 (HC)			
3212	28358	RP 5599-212-56-3-1	MTU 1010 / KMR 3	LS
3213	28329	RCPR 60-IR 97073-26-1-1-3	IR10L146 / IR10L137	LS

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Table No. 1.2: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No.	ZONE II-NORTHERN															
		UTTARAKHAND		PUNJAB (1)			HARYANA (1)			RAJASTHAN			Z2(3)				
		@PANTNAGAR		LUDHIANA			KAUL			KOTA				Mean			
3201	28343	3642	9	7097	3	#18%	8211	2	*30%	#24%	7979	2	18%	7762	2	*17%	#16%
3202	26790	4178	2	5193	8		7174	5	*14%		7379	5	9%	6582	7		
3203	Local Check (LC)	3400	10	7983	1		6301	10			5551			6612	6		
3204	28356	4071	5	6800	4	#13%	7638	4	*21%	#16%	6165	10		6868	4		
3205	28366	1089									2155			2155			
3206	Zonal Check (ZC)																
3207	28354	4095	4	4749	9		6738	8	7%		6424	9		5970	10		
3208	28332	5268	1	7853	2	#30%	9302	1	*48%	#41%	7501	3	11%	8219	1	*24%	#23%
3209	28115	4015	7	5672	7		7174	5	*14%		6751	7		6532	8		
3210	CO-51 (NC)	2269		4291			5046				6765	6		5367			
3211	US 314 (HC)	4067	6	6021	6		6601	9			7488	4		6703	5		
3212	28358	4000	8	4332	10		6983	7	11%		6724	8		6013	9		
3213	28329	4118	3	6287	5		7911	3	*26%	#20%	8033	1	*19%	7410	3	*12%	#11%
Exp. Mean		3684.4		6025.17			7188.91				6576.2			6349.42			
CD		846.06		548.84			842.71				1245.74			679.93			
CV%		13.56		5.35			6.88				11.19			6.32			
D/S		17-06-2021		16-06-2021			19-06-2021				26-06-2021						
D/P		13-07-2021		19-07-2021			13-07-2021				21-07-2021						
Local Check Name		Govind		PR 126			HKR-48				Pratap -1						
		*Superior to best check		#Superior over hybrid check			%superior over best check										

Table No.1.2 contd.: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No.	ZONE III-EASTERN																			
		ODISHA				ODISHA (2)				BIHAR				BIHAR (2)							
		CUTTACK		JEYPORE		Mean		BIKRAMGUNJ		PATNA-ICAR		Mean									
3201	28343	4553	5	4066	8	#	4310	5		6061	4	*	6373	5	#	6217	4	*8%	#		
3202	26790	4711	4	4864	2	*	4788	2	*15%	#13%	6633	2	*	6887	3	*	6760	2	*18%	#18%	
3203	Local Check (LC)	3857	8	4444	5	#	4151	8		4408			5747	10		5078					
3204	28356	4237	6	5266	1	*	4752	4	*14%	#12%	6006	6	*	6270	7	#	6138	5	7%		
3205	28366	2168		4066	8	#	3117			3735			6233	8	#	4984					
3206	Zonal Check (ZC)	2385		3544			2965			4146			5390			4768					
3207	28354	6563	1	*#	2964		4764	3	*15%	#13%	5313	10		6730	4	*	6022	7	5%		
3208	28332	5146	3	*	4762	3	#	4954	1	*19%	#17%	7172	1	*	7873	1	*	7523	1	*31%	#31%
3209	28115	3481	10	4588	4	#	4035	9		5552	8		5123			5338	10				
3210	CO-51 (NC)	3738	9	4148	7	#	3943	10		5333	9		6133	9	#	5733	9				
3211	US 314 (HC)	5363	2	3091			4227	7		6036	5		5447			5742	8				
3212	28358	2499		3737	10	#	3118			5728	7		6370	6	#	6049	6	6%			
3213	28329	4212	7	4294	6	#	4253	6		6309	3	*	7183	2	*	6746	3	*18%	#17%		
Exp. Mean		4070.28		4141.04			4105.66			5571.5			6289.23			5930.37					
CD		961.37		410.11			406.77			491.4			582.96			429.6					
CV%		14.02		5.88			5.88			5.23			5.5			4.3					
D/S		30-06-2021		03-07-2021						29-06-2021			17-06-2021								
D/P		29-07-2021		02-08-2021						28-07-2021			11-07-2021								
Local Check Name		Naveen		Mandakini						R. Bhagwati			Sabbhagi Dhan								

Table No. 1.2contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No.	ZONE III-EASTERN																	
		JHARKHAND (1)				WEST BENGAL				WEST BENGAL (1)				UTTAR PRADESH					
		RANCHI		CHINSURAH		@HATWARA		Mean		@MASODHA		VARANASI							
3201	28343	3778		4355		5620	4	*	4355		3464		5109	9					
3202	26790	4944	2	22%	5405	7		5825	2	*	5405	7		3219			5388	6	
3203	Local Check (LC)	2028			5006			3717			5006			3451			5323	7	
3204	28356	3583			6353	1	*	4370	9	*	6353	1	*	22%	3628	9		4646	10
3205	28366	5361	1	*32%	18%	5413	6		4953	8	*	5413	6		3546	10		1371	
3206	Zonal Check (ZC)	4056	9		4774			2442			4774			3737	7		1469		
3207	28354	4333	6	7%	6117	3	*	5732	3	*	6117	3	*	17%	3682	8		5412	5
3208	28332	4778	3	18%	6280	2	*	5472	5	*	6280	2	*	21%	3792	4		5901	2
3209	28115	4278	7	5%	5515	5		5102	6	*	5515	5		6%	4010	2		5830	3
3210	CO-51 (NC)	3944	10		5206	8		3452			5206	8			3873	3		4078	
3211	US 314 (HC)	4528	4	12%	5853	4		6075	1		5853	4		4113	1		6412	1	
3212	28358	4111	8		5026	10		4981	7	*	5026	10		3764	5		5718	4	
3213	28329	4444	5	10%	5197	9		3796	10		5197	9		3764	5		5136	8	
Exp. Mean		4167			5423			4734			5423			3696			4753		
CD		1044.17			885.3			258.03			885.3			485.93			636.69		
CV%		14.87			9.69			3.23			9.69			7.8			7.95		
D/S		25-06-2021			25-06-2021			25-06-2021						15-06-2021			16-06-2021		
D/P		23-07-2021			30-07-2021			23-07-2021						15-07-2021			07-07-2021		
Local Check Name		BVD-110			Ajit			Lalat					Shushk Smarat			HUR-3022			

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Table No. 1.2contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE IV- NORTH EASTERN								
		UTTAR PRADESH (1)			Z3(7)			ASSAM (1)			TRIPURA					
		Mean			Mean			TITABAR			ARUNDHATINAGAR		LEMBUCHERRA			
3201	28343	5109	9	4899	8	5%	5673	1	*28%	# 45%	5437	1	*#	9166	4	
3202	26790	5388	6	5547	2	*19%	# 5183	2	*17%	#32%	4120	4		9577	3	
3203	Local Check (LC)	5323	7	4402			3987	10			3773			7787	7	
3204	28356	4646	10	5194	6	*12%	4201	8			3981	9				
3205	28366	1371		4050			4907	4	11%	#25%	4483	2		6111		
3206	Zonal Check (ZC)	1469		3681			4048	9			4008	8		9695	2	
3207	28354	5412	5	5347	3	* 15%	5183	2	*17%	#32%	3861			10730	1	
3208	28332	5901	2	5987	1	* 29%	#14%	4661	6	6%	#19%	4091	5		6866	10
3209	28115	5830	3	4910	7	6%	2913				3933	10		7080	9	
3210	CO-51 (NC)	4078		4654	10		4416	7	13%		4179	3		7300	8	
3211	US 314 (HC)	6412	1	5247	5		3925				4027	7		8816	5	
3212	28358	5718	4	4741	9	7%	4784	5	8%	#22%	4059	6		8530	6	
3213	28329	5136	8	5254	4	* 13%	1809				3896			2568		
Exp. Mean		4753		4916			4284				4142			7852		
CD		636.69		283.41			519.26				542.94			2309.41		
CV%		7.95		3.42			7.19				7.78			17.37		
D/S								10-07-2021			05-07-2021			20-07-2021		
D/P								10-08-2021			22-07-2021			18-08-2021		
Local Check Name								Disang			Sahabgaidhan (3203)			HAKUCHUK-2		

Table No.1.2 contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN						ZONE-V – CENTRAL								
		TRIPURA (2)			Z4(3)			MADHYA PRADESH (1)			CHHATTISGARH					
		Mean			Mean			REWA			RAIPUR		JAGDALPUR			
3201	28343	7302	1	7%	6759	1	*14%	#21%	5512	2	*15%	4934	5	*	5104	2
3202	26790	6849	4		6293	3	6%	# 13%	4210	9		3664	7		4776	5
3203	Local Check (LC)	5780	7		5182	9			3993			2989			4869	4
3204	28356	3981			4091				5165	5	8%	3403			4121	10
3205	28366	5297			5167	10			5035	6	5%	1640			5323	1
3206	Zonal Check (ZC)	6852	3		5917	4						3430	9		3496	
3207	28354	7296	2	6%	6591	2	11%	#18%	5252	4	10%	5770	1	*	4971	3
3208	28332	5479	10		5206	8			6163	1	*29%	5369	3	*	4284	8
3209	28115	5507	9		4642				4644	8		3428	10		4629	7
3210	CO-51 (NC)	5740	8		5298	7			4774	7		3607	8		3224	
3211	US 314 (HC)	6422	5		5589	6						4491	6		4741	6
3212	28358	6295	6		5791	5			2365			5269	4	*	3400	
3213	28329	3232			2758				5295	3	11%	5455	2	*	4244	9
Exp. Mean		5848			5330				4764			4111			4399	
CD		1121.92			688.62				653.38			1146.29			889.66	
CV%		11.38			7.67				8.05			16.54			12	
D/S									24-06-2021			19-06-2021			01-07-2021	
D/P									19-07-2021			27-07-2021			21-07-2021	
Local Check Name									JR 767			Indira Aerobic-1			Samleshwari	

Table No. 1.2 contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL																
		CHHATTISGARH		CHHATTISGARH (3)		MAHARASHTRA 1		MAHARASHTRA 1 (2)		Z5(6)								
		BILASPUR		Mean		SAKOLI		SINDEWAHI		Mean		Mean						
3201	28343	6300	6	5446	3	*26%	5619	2	4904	3	5262	2	8%	5396	2	*20%		
3202	26790	7187	2	* 5209	5	*21%	4636	7	4974	2	4805	6		4908	6	*9%		
3203	Local Check (LC)	5100		4319	9		4816	6	3260		4038			4171				
3204	28356	5160		4228			4283	10	4237	10	4260	10		4395	9			
3205	28366	4300		3754			3437		3957		3697			3949				
3206	Zonal Check (ZC)	6013	8	4313	10		3764		3508		3636			4042				
3207	28354	6880	4	5874	1	*36%	#10%	4501	9	4414	6	4458	8	5298	3	*18%		
3208	28332	7933	1	*# 5862	2	*36%	#10%	5237	4	5446	1	* 5342	1	10%	5739	1	*28%	#11%
3209	28115	7167	3	5075	6	*18%	3792		4799	4	4296	9		4743	7	6%		
3210	CO-51 (NC)	5613	9	4148			5346	3	4368	8	4857	5		4489	8			
3211	US 314 (HC)	6733	5	5322	4		5101	5	4784	5	4943	4		5170	4			
3212	28358	6250	7	4973	8	*15%	4610	8	4385	7	4498	7		4380	10			
3213	28329	5233	10	4977	7	*15%	5974	1	# 4339	9	5157	3	6%	5090	5	*13%		
Exp. Mean		6144		4885			4701		4413		4557			4751				
CD		1169.26		539.25			638.63		958.59		645.53			347.6				
CV%		11.29		6.55			8.06		12.89		8.41			4.34				
D/S			17-06-2021					24-06-2021		16-06-2021								
D/P			14-07-2021					27-07-2021		20-07-2021								
Local Check Name			Chandrasani					Sakoli-6		Sindewahi-1								

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Table No. 1.2 contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN													
		MAHARASHTRA 2								MAHARASHTRA 2 (4)		MAHARASHTRA (6)			
		KARJAT		SHIRGAON		VADAGAON		RADHANAGARI		Mean		Mean			
3201	28343	6383	3	4308	8	5676	1 *	3805	8	5043	4	*14%	5116	3	*18.31%
3202	26790	6048	5	5006	4	5592	2 *	4887	5	5383	2	*21%	5191	2	*20.04%
3203	Local Check (LC)	5360	9	4546	5	4071	9	3719	9	4424	10		4295	10	
3204	28356	5556	8	5266	3 *	4070	10	5078	3	4993	5	*13%	4748	6	*9.81%
3205	28366	3977		2761		3411		2873		3256			3403		
3206	Zonal Check (ZC)	5240	10	2971		4561	8	4967	4	4435	9		4169		
3207	28354	6439	1	4365	6	4987	6	2812		4651	7		4586	8	6.07%
3208	28332	5657	6	4325	7	5104	4	4215	7	4825	6	9%	4997	4	*15.57%
3209	28115	5619	7	6219	1 *	4609	7	4725	6	5293	3	*19%	4961	5	*14.72%
3210	CO-51 (NC)	3598		3617	10	3493		5521	1	4057			4324	9	
3211	US 314 (HC)	6414	2	5680	2	5118	3	5295	2	5627	1		5399	1	
3212	28358	5051		3741	9	3880		3181		3963			4141		
3213	28329	6319	4	3515		5016	5	3232	10	4521	8		4733	7	*9.45%
Exp. Mean		5512		4332		4584		4178		4652			4620		
CD		1234.01		719.39		567.48		969.57		410.76			384.26		
CV%		13.28		9.85		7.35		13.77		5.24			4.93		
D/S		15-06-2021		17-06-2021		23-06-2021		15-06-2021							
D/P		10-07-2021		12-07-2021		22-07-2021		02-08-2021							
Local Check Name		Karjat 7		Ratnagiri 1		Phule Radha		Phule Radha							

Table No. 1.2 contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN													
		GUJARAT					GUJARAT (3)			Z6(7)					
		NAWAGAM		DABHOI		VYARA	Mean			Mean					
3201	28343	3967	7	5969	5	5164	4	5033	4			5039	5	6%	
3202	26790	4097	4	6111	4	5527	2 #	5245	2		# 13%	5324	1	*12%	
3203	Local Check (LC)	5067	1 #	6166	2 #	4413	8	5215	3		#13%	4763	6		
3204	28356	2391		5850	6	4187	10	4143				4628	9		
3205	28366	4815	2 #	3987		4062		4288				3698			
3206	Zonal Check (ZC)	3979	6	6113	3	4971	5	5021	5			4686	8		
3207	28354	3981	5	4739		4902	7	4541	9			4604	10		
3208	28332	3842		6950	1 * #	6048	1 #	5613	1	8%	#21%	5163	3	*8%	
3209	28115	3942	9	5272	10	4970	6	4728	7			5051	4	6%	
3210	CO-51 (NC)	3967	7	4227		3957		4050				4054			
3211	US 314 (HC)	4195	3	5381	8	4321	9	4632	8			5201	2		
3212	28358	3939	10	5381	8	3996		4439	10			4167			
3213	28329	3906		5708	7	5238	3	4951	6			4705	7		
Exp. Mean		4007		5527		4750		4762				4699			
CD		415.17		770.04		1194.75		406.07				327.2			
CV%		6.15		8.27		14.92		5.06				4.13			
D/S		17-06-2021		25-06-2021		18-06-2021									
D/P		28-07-2021		25-07-2021		19-07-2021									
Local Check Name		Mahisagar		Mahi Sagar		GR-7									

Table No.1.2 contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN															
		ANDHRA PRADESH (1)				TELANGANA						TELANGANA (4)					
		MARUTERU		@RUDRUR		KAMPASAGAR		KUNARAM		WARANGAL		JAGITYAL		Mean			
3201	28343	8966	2	#42%	6057	6	5324	9	5666	6 #	7044	3 #	4482	4	5629	4	#19%
3202	26790				4773		5694	6	6803	3 #	5864	6	3963	10	5581	5	#18%
3203	Local Check (LC)	7531	7	19%	6473	4	4815		5637	7 #	5974	5	4306	5	5183	9	
3204	28356	6156	10		5133		3935		6924	2 #	7171	1 #	3940		5493	6	#16%
3205	28366	5772			5483	9	6019	2	5416	8 #	5234	8	4184	6	5213	8	10%
3206	Zonal Check (ZC)	8953	3	#42%	6270	5	5602	7	7275	1 #	6769	4 #	4156	7	5951	2	#26%
3207	28354	5172			7463	1	5833	5	4834		5223	9	4128	8	5005	10	
3208	28332	6250	9		5707	8	6435	1	5756	5 #	7167	2 #	5076	3	6109	1	#29%
3209	28115	7713	6	#22%	4643		6019	2	4386		5184	10	3919		4877		
3210	CO-51 (NC)	8263	5	#31%	5193	10	4398		5416	8 #	5073		3314		4550		
3211	US 314 (HC)	6309	8		5943	7	5139	10	4488		5181		4122	9	4733		
3212	28358	8672	4	#37%	6800	3	5972	4	6192	4 #	5078		5545	1 * #	5697	3	#20%
3213	28329	9078	1	# 44%	7413	2	5602	7	5258	10 #	5287	7	5511	2 * #	5415	7	#14%
Exp. Mean		7403			5950		5445		5696		5865		4357		5341		
CD		1361.76			88.56		1297.42		672.28		839.59		1014.97		493.14		
CV%		10.86			0.88		14.14		7		8.49		13.82		5.48		
D/S		09-07-2021		15-06-2021		30-06-2021		30-06-2021		29-06-2021		26-06-2021					
D/P		06-08-2021		16-07-2021		03-08-2021		01-08-2021		25-07-2021		26-07-2021					
Local Check Name		MTU1156		MTU 1010		MTU-1010		KNM 118		KNM-118		JGL 18047					

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Table No. 1.2contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN											
		TAMILNADU (1)		KERALA			KERALA (2)		KARNATAKA				
		COIMBATORE		MONCOMPU	PATTAMBI		Mean		MANDYA	@BRAHMAWAR			
3201	28343	6355	6	3864	6	4597		4231	10	3343		5267	1
3202	26790	6081	10	3608	10	4051		3830		2996		4737	3
3203	Local Check (LC)	6878	4	5389	1 #	4467		4928	2	4470	6 #	4370	4
3204	28356	7180	2 #15%	3822	7	5324	2	4573	6	4897	3 #	3885	5
3205	28366	6012		4922	2 #	5098	6	5010	1 10%	3906	9	3502	6
3206	Zonal Check (ZC)	7286	1 #17%	4583	3 #	5159	5	4871	3	4179	8	3109	9
3207	28354	5733		4008	5	5187	4	4598	5	5380	1 * #	2610	
3208	28332	6728	5	3794	8	5051	7	4423	8	4736	4 #	5175	2
3209	28115	6337	7	3512		5035	8	4274	9	4321	7	3222	7
3210	CO-51 (NC)	7014	3 12%	3567		4711	10	4139		4538	5 #	2256	
3211	US 314 (HC)	6253	8	3618	9	5463	1	4541	7	3875	10	3058	10
3212	28358	5816		4101	4	5314	3	4708	4	2792		2995	
3213	28329	6143	9	3499		4943	9	4221		5051	2 #	3129	8
Exp. Mean		6447		4022		4954		4488		4191		3639	
CD		771.91		793.3		1139.18		649.68		594.14		665.16	
CV%		7.1		11.7		13.65		8.59		8.41		10.85	
D/S		13-07-2021		09-07-2021		19-07-2021				28-07-2021		02-07-2021	
D/P		04-08-2021		04-08-2021		13-08-2021				23-08-2021		26-07-2021	
Local Check Name		CO 51		MO 21 (Prathyasa)		KANCHANA				KMP-105 (Raksha)		MO-21	

Table No. 1.2contd: Grain Yield (kg/ha) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									Overall(35)		
		KARNATAKA		KARNATAKA (1)			Z7(9)		Mean				
		@GANGAVATHI		Mean			Mean		Mean				
3201	28343	9561	2	3343		5516	4	#12%	5576	2	* 12%	#	
3202	26790	6276		2996		4883			5389	3	*8%		
3203	Local Check (LC)	8103	7	4470	6	# 15%	5496	6	#11%	4972	9		
3204	28356	7285	9	4897	3	8% #26%	5483	7	#11%	5096	7		
3205	28366	8269	5	3906	9		5174	8		4307			
3206	Zonal Check (ZC)	6635		4179	8		5996	1	#21%	4855			
3207	28354	9788	1	5380	1	*19% #39%	5055			5275	5	*6%	
3208	28332	8538	3	4736	4	#22%	5666	2	#15%	5821	1	*17% #9.76%	
3209	28115	8244	6	4321	7	12%	5158	9		5089	8		
3210	CO-51 (NC)	7679	8	4538	5	#17%	5144	10		4748			
3211	US 314 (HC)	6564		3875	10		4939			5303	4		
3212	28358	8449	4	2792			5498	5	#11%	4958	10		
3213	28329	7237	10	5051	2	11% #30%	5597	3	#13%	5175	6	*	
Exp. Mean		7894		4191			5354			5120			
CD		832.13		594.14			325.96			126.73			
CV%		4.83		8.41			3.61			1.47			
D/S		19-07-2021											
D/P		11-08-2021											
Local Check Name		GNV 10-89											

Table No. 1.3: Days to 50%flowering of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No	ZONE II-NORTHERN					ZONE III-EASTERN			
		UTTARAKHAND	PUNJAB (1)	HARYANA (1)	RAJASTHAN	Z2(3)	ODISHA		ODISHA (2)	
		@PANTNAGAR	LUDHIANA	KAUL	KOTA	Mean	CUTTACK	JEYPORE	Mean	
3201	28343	88	88	83	96	89	84	89	86	
3202	26790	88	88	84	95	89	85	92	88	
3203	Local Check (LC)	80	80	83	101	88	90	93	91	
3204	28356	86	86	83	93	87	88	91	90	
3205	28366	124	124		104	114	87	91	89	
3206	Zonal Check (ZC)						82	88	85	
3207	28354	90	90	83	98	90	86	90	88	
3208	28332	88	88	87	90	88	94	85	90	
3209	28115	87	87	80	97	88	82	91	87	
3210	CO-51 (NC)	80	80	79	87	82	84	86	85	
3211	US 314 (HC)	85	85	81	93	86	86	87	87	
3212	28358	91	91	91	103	95	87	86	87	
3213	28329	87	87	84	92	88	87	90	89	
Exp. Mean		90	90	83	96	90	86	89	88	

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Table No. 1.3 contd.: Days to 50%flowering of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No.	ZONE III-EASTERN						
		BIHAR		BIHAR (2)	JHARKHAND (1)	WEST BENGAL		WEST BENGAL (1)
		BIKRAMGUNJ	PATNA-ICAR	Mean	RANCHI	CHINSURAH	@HATWARA	Mean
3201	28343	91	85	88	91	89	92	89
3202	26790	86	85	86	89	88	88	88
3203	Local Check (LC)	88	88	88	75	88	90	88
3204	28356	89	86	88	91	90	91	90
3205	28366	104	94	99	114	94	104	94
3206	Zonal Check (ZC)	89	76	82	80	83	89	83
3207	28354	87	85	86	94	93	91	93
3208	28332	84	86	85	91	88	92	88
3209	28115	90	83	86	86	86	89	86
3210	CO-51 (NC)	84	76	80	86	86	89	86
3211	US 314 (HC)	86	84	85	86	85	91	85
3212	28358	93	88	90	94	90	98	90
3213	28329	88	87	87	89	92	98	92
Exp. Mean		89	85	87	90	89	92	89

Table No. 1.3 contd.: Days to 50%flowering of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No	ZONE III-EASTERN					ZONE IV- NORTH EASTERN				
		UTTAR PRADESH		UTTAR PRADESH (1)	Z3(7)	ASSAM (1)	TRIPURA			TRIPURA (2)	Z4(3)
		@MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHATINAGAR	LEMBUCHERRA	Mean	Mean	
3201	28343	66	84	84	87	98	79	74	77	84	
3202	26790	78	85	85	87	97	74	73	74	81	
3203	Local Check (LC)	69	87	87	87	90	87	71	79	83	
3204	28356	71	86	86	89	94	87	101	94	94	
3205	28366	64	107	107	99	104	85	67	76	86	
3206	Zonal Check (ZC)	77	71	71	81	87	78	69	74	78	
3207	28354	72	83	83	88	102	82	73	78	86	
3208	28332	75	84	84	87	99	84	70	77	84	
3209	28115	61	82	82	86	89	82	69	76	80	
3210	CO-51 (NC)	82	73	73	82	88	80	72	76	80	
3211	US 314 (HC)	75	82	82	85	96	77	71	74	81	
3212	28358	61	87	87	89	100	79	69	74	83	
3213	28329	75	84	84	88	100	78	79	79	86	
Exp. Mean		71	84	84	87	96	81	74	77	84	

Table No. 1.3 contd.: Days to 50%flowering of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No	ZONE-V - CENTRAL								
		MADHYA PRADESH (1)	CHHATTISGARH				CHHATTISGARH (3)	MAHARASHTRA 1	MAHARASHTRA 1 (2)	Z5(6)
		REWA	RAIPUR	JAGDALPUR	BILASPUR	Mean	SAKOLI	SINDEWAHI	Mean	Mean
3201	28343	92	99	95	91	95	86	94	90	93
3202	26790	91	100	90	89	93	86	92	89	91
3203	Local Check (LC)	86	97	87	91	92	90	95	92	91
3204	28356	89	104	91	92	96	83	95	89	92
3205	28366	90	111	95	121	109	90	103	97	102
3206	Zonal Check (ZC)		97	90	89	92	87	94	91	92
3207	28354	88	102	93	94	96	90	94	92	94
3208	28332	90	98	90	90	93	87	83	85	90
3209	28115	91	95	92	90	92	84	86	85	90
3210	CO-51 (NC)	91	96	87	89	91	81	91	86	89
3211	US 314 (HC)		98	87	90	92	84	95	90	91
3212	28358	98	103	94	92	96	90	87	88	94
3213	28329	92	102	89	91	94	86	93	90	92
Exp. Mean		91	100	91	93	95	86	92	89	92

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Table No. 1.3 contd.: Days to 50%flowering of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No	ZONE VI – WESTERN										
		MAHARASHTRA 2				MAHARASHTRA 2 (4)	MAHARASHTRA (6)	GUJARAT			GUJARAT (3)	Z6(7)
		KARJAT	SHIRGAON	VADAGAON	RADHANAGARI	Mean	Mean	NAWAGAM	DABHOI	VYARA	Mean	Mean
3201	28343	87	83	89	100	90	90	84	91	91	89	89
3202	26790	85	83	87	102	89	89	85	88	88	87	88
3203	Local Check (LC)	87	87	93	102	92	92	87	85	88	87	90
3204	28356	87	83	88	102	90	90	89	86	91	89	90
3205	28366	105	117	96	115	108	104	105	100	116	107	108
3206	Zonal Check (ZC)	85	83	85	106	90	90	86	89	90	88	89
3207	28354	87	89	90	104	92	92	89	92	92	91	92
3208	28332	84	79	88	101	88	87	90	87	91	89	89
3209	28115	86	79	88	105	89	88	87	84	86	86	88
3210	CO-51 (NC)	86	74	81	100	85	86	86	83	80	83	84
3211	US 314 (HC)	86	84	86	104	90	90	89	89	88	89	89
3212	28358	85	92	90	105	93	92	97	93	91	94	93
3213	28329	84	82	90	107	91	90	85	91	91	89	90
Exp. Mean		87	86	88	104	91	91	89	89	91	90	91

Table No. 1.3 contd.: Days to 50%flowering of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No	ZONE VII – SOUTHERN							
		ANDHRA PRADESH (1)		TELANGANA					TELANGANA (4)
		MARUTERU	@RUDRUR	KAMPASAGAR	KUNARAM	WARANGAL	JAGITYAL	Mean	
3201	28343	79	91	89	90	88	92	90	
3202	26790		91	90	86	88	90	88	
3203	Local Check (LC)	86	88	88	85	93	90	89	
3204	28356	79	88	90	88	87	90	89	
3205	28366	89	94	92	104	93	92	95	
3206	Zonal Check (ZC)	86	94	91	88	92	91	91	
3207	28354	88	91	88	86	94	93	90	
3208	28332	80	88	89	85	83	91	87	
3209	28115	80	87	90	81	83	87	85	
3210	CO-51 (NC)	78	83	89	82	80	85	84	
3211	US 314 (HC)	81	88	88	85	83	89	86	
3212	28358	87	90	98	91	84	94	92	
3213	28329	85	88	87	88	89	92	89	
Exp. Mean		83	89	90	88	87	90	89	

Table No. 1.3 contd.: Days to 50%flowering of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No	ZONE VII - SOUTHERN										Overall(35) Mean
		TAMILNADU (1)	KERALA		KERALA (2)	KARNATAKA			KARNATAKA (1)	Z7(9)		
		COIMBATORE	MONCOMPU	PATTAMBI	Mean	MANDYA	@BRAHMAWAR	@GANGAVATHI	Mean	Mean		
3201	28343	87	85	96	91	85	64	90	85	88	89	
3202	26790	89	90	97	93	94	81	89	94	90	89	
3203	Local Check (LC)	86	89	97	93	90	86	90	90	89	89	
3204	28356	85	80	98	89	81	83	89	81	87	89	
3205	28366	89	95	97	96	83	85	91	83	93	99	
3206	Zonal Check (ZC)	88	84	96	90	85	83	89	85	89	87	
3207	28354	87	87	98	93	95	85	90	95	91	90	
3208	28332	86	81	98	90	86	88	85	86	87	88	
3209	28115	88	82	97	89	88	90	90	88	86	87	
3210	CO-51 (NC)	85	83	98	90	81	87	86	81	85	84	
3211	US 314 (HC)	85	80	97	88	85	91	86	85	86	87	
3212	28358	91	88	97	92	86	93	92	86	91	91	
3213	28329	88	90	98	94	84	91	90	84	89	89	
Exp. Mean		87	86	97	91	86	85	89	86	88	89	

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Table No. 1.4: Plant Height (cm) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN		
		UTTARAKHAND	PUNJAB (1)	HARYANA (1)	RAJASTHAN	Z2(3)	ODISHA		ODISHA (2)
		@PANTNAGAR	LUDHIANA	KAUL	KOTA	Mean	CUTTACK	JEYPORE	Mean
3201	28343	107.60	112.33	129.00	101.67	114.33	104.60	108.87	106.73
3202	26790	113.20	107.33	124.00	107.67	113.00	98.94	108.67	103.80
3203	Local Check (LC)	88.60	98.67	114.00	119.00	110.56	120.81	114.20	117.51
3204	28356	91.20	105.33	121.00	107.00	111.11	102.09	129.13	115.61
3205	28366	102.20			110.33	110.33	107.69	111.93	109.81
3206	Zonal Check (ZC)						76.85	105.47	91.16
3207	28354	101.40	113.33	124.00	117.67	118.33	113.72	87.27	100.49
3208	28332	113.40	112.00	127.00	117.67	118.89	103.97	111.87	107.92
3209	28115	107.00	110.33	122.00	119.33	117.22	107.16	107.20	107.18
3210	CO-51 (NC)	101.40	103.00	115.00	107.00	108.33	100.12	112.80	106.46
3211	US 314 (HC)	118.60	118.33	123.00	115.67	119.00	117.03	104.80	110.92
3212	28358	110.40	131.33	124.00	117.67	124.33	114.13	104.13	109.13
3213	28329	111.60	109.67	121.00	119.67	116.78	115.70	129.73	122.72
Exp. Mean		105.55	111.06	122.18	113.36	115.19	106.37	110.47	108.42

Table No. 1.4 contd.: Plant Height (cm) of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No.	ZONE III-EASTERN						
		BIHAR		BIHAR (2)	JHARKHAND (1)	WEST BENGAL		WEST BENGAL (1)
		BIKRAMGUNJ	PATNA-ICAR	Mean	RANCHI	CHINSURAH	@HATWARA	Mean
3201	28343	105.50	110.37	107.93	97.00	110.67	100.00	110.67
3202	26790	113.66	109.95	111.81	102.00	105.33	105.00	105.33
3203	Local Check (LC)	118.66	117.13	117.90	104.00	107.67	106.00	107.67
3204	28356	98.16	106.75	102.46	96.00	97.67	99.00	97.67
3205	28366	107.33	105.42	106.37	93.00	99.83	92.00	99.83
3206	Zonal Check (ZC)	98.16	73.12	85.64	84.00	82.67	93.00	82.67
3207	28354	115.50	111.27	113.38	95.00	118.33	96.00	118.33
3208	28332	108.83	106.75	107.79	98.00	113.67	108.00	113.67
3209	28115	112.00	94.75	103.38	96.00	109.67	107.00	109.67
3210	CO-51 (NC)	107.33	92.82	100.07	100.00	107.33	96.00	107.33
3211	US 314 (HC)	121.50	106.15	113.83	99.00	126.00	102.00	126.00
3212	28358	121.83	108.85	115.34	104.00	140.33	137.00	140.33
3213	28329	102.66	117.33	110.00	99.00	115.67	95.00	115.67
Exp. Mean		110.09	104.67	107.38	97.46	110.37	102.77	110.37

Table No. 1.4 contd.: Plant Height (cm) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE IV- NORTH EASTERN				
		UTTAR PRADESH		UTTAR PRADESH (1)	Z3(7)	ASSAM (1)	TRIPURA		TRIPURA (2)	Z4(3)
		@MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHATINAGAR	LEMBUCHERRA	Mean	Mean
3201	28343	110.00	106.53	106.53	106.22	95.27	121.00	102.00	111.50	106.09
3202	26790	112.00	112.93	112.93	107.35	93.00	123.00	100.33	111.67	105.44
3203	Local Check (LC)	115.00	99.53	99.53	111.71	93.13	148.00	97.33	122.67	112.82
3204	28356	110.00	103.80	103.80	104.80	91.87	132.00	98.33	115.17	107.40
3205	28366	104.00	113.30	113.30	105.50	90.47	118.00	94.33	106.17	100.93
3206	Zonal Check (ZC)	102.00	80.27	80.27	85.79	93.20	108.00	101.33	104.67	100.84
3207	28354	108.00	110.40	110.40	107.36	99.60	129.00	105.33	117.17	111.31
3208	28332	110.00	105.33	105.33	106.92	98.93	120.00	109.67	114.83	109.53
3209	28115	105.00	115.07	115.07	105.98	97.00	129.00	94.67	111.83	106.89
3210	CO-51 (NC)	89.00	98.53	98.53	102.70	97.73	112.00	112.00	112.00	107.24
3211	US 314 (HC)	120.00	111.07	111.07	112.22	100.67	119.00	118.67	118.83	112.78
3212	28358	108.00	124.00	124.00	116.75	103.00	134.00	106.33	120.17	114.44
3213	28329	120.00	105.67	105.67	112.25	96.47	128.00	110.67	119.33	111.71
Exp. Mean		108.69	106.65	106.65	106.58	96.18	124.69	103.92	114.31	108.26

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Table No.1.4 contd.: Plant Height (cm) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL								
		MADHYA PRADESH (1)		CHHATTISGARH		CHHATTISGARH (3)	MAHARASHTRA 1		MAHARASHTRA 1 (2)	Z5(6)
		REWA	RAIPUR	JAGDALPUR	BILASPUR	Mean	SAKOLI	SINDEWAHI	Mean	Mean
3201	28343	110.00	113.57	111.80	123.00	116.12	115.00	118.00	116.50	115.23
3202	26790	105.00	106.16	114.20	118.00	112.79	94.00	121.00	107.50	109.73
3203	Local Check (LC)	106.00	100.64	99.40	118.00	106.01	93.00	108.00	100.50	104.17
3204	28356	96.00	108.55	104.40	123.00	111.98	96.00	111.00	103.50	106.49
3205	28366	100.00	87.22	102.60	119.00	102.94	97.00	113.00	105.00	103.14
3206	Zonal Check (ZC)		98.69	105.60	121.00	108.43	92.00	110.00	101.00	105.46
3207	28354	111.00	108.13	103.80	125.00	112.31	102.00	105.00	103.50	109.15
3208	28332	108.00	113.99	104.80	123.00	113.93	96.00	110.00	103.00	109.30
3209	28115	106.00	111.75	103.60	122.00	112.45	113.00	116.00	114.50	112.06
3210	CO-51 (NC)	118.00	114.66	100.80	121.00	112.15	116.00	113.00	114.50	113.91
3211	US 314 (HC)		128.95	108.00	128.00	121.65	95.00	113.00	104.00	114.59
3212	28358	114.00	142.46	126.20	140.00	136.22	117.00	116.00	116.50	125.94
3213	28329	109.00	112.11	97.20	122.00	110.44	106.00	109.00	107.50	109.22
Exp. Mean		107.55	111.30	106.34	123.31	113.65	102.46	112.54	107.50	110.65

Table No. 1.4 contd.: Plant Height (cm) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN										
		MAHARASHTRA 2				MAHARASHTRA 2 (4)	MAHARASHTRA (6)	GUJARAT			GUJARAT (3)	Z6(7)
		KARJAT	SHIRGAON	VADAGAON	RADHANAGARI	Mean	Mean	NAWAGAM	DABHOI	VYARA	Mean	Mean
3201	28343	121.00	105.70	79.28	106.23	103.05	107.54	112.00	117.80	121.90	117.23	109.13
3202	26790	115.00	106.70	77.08	88.70	96.87	100.41	105.20	122.20	117.60	115.00	104.64
3203	Local Check (LC)	101.00	93.70	70.28	88.60	88.39	92.43	106.90	118.90	102.70	109.50	97.44
3204	28356	110.00	106.00	71.91	86.77	93.67	96.95	103.20	112.90	113.30	109.80	100.58
3205	28366	130.00	112.30	79.33	88.60	102.56	103.37	114.10	115.70	117.70	115.83	108.25
3206	Zonal Check (ZC)	114.00	97.30	76.49	87.23	93.76	96.17	115.90	119.30	122.80	119.33	104.72
3207	28354	113.00	107.50	74.97	83.43	94.73	97.65	114.50	122.00	115.50	117.33	104.41
3208	28332	121.00	101.10	79.61	86.93	97.16	99.11	109.30	120.70	117.50	115.83	105.16
3209	28115	117.00	107.80	74.80	87.83	96.86	102.74	101.80	119.40	113.70	111.63	103.19
3210	CO-51 (NC)	109.00	103.60	72.44	88.30	93.34	100.39	97.10	111.60	104.50	104.40	98.08
3211	US 314 (HC)	114.00	111.20	77.01	88.57	97.69	99.80	112.50	116.80	120.20	116.50	105.75
3212	28358	137.00	127.30	80.69	98.87	110.96	112.81	121.50	127.70	132.70	127.30	117.97
3213	28329	112.00	98.90	77.28	88.33	94.13	98.59	108.60	129.50	114.20	117.43	104.12
Exp. Mean		116.46	106.08	76.24	89.88	97.17	100.61	109.43	119.58	116.48	115.16	104.88

Table No. 1.4 contd.: Plant Height (cm) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						
		ANDHRA PRADESH (1)	TELANGANA				TELANGANA (4)	
		MARUTERU	@RUDRUR	KAMPASAGAR	KUNARAM	WARANGAL	JAGITYAL	Mean
3201	28343	132.33	98.70	101.60	121.23	130.10	109.90	115.71
3202	26790		98.80	98.20	113.27	122.87	101.50	108.96
3203	Local Check (LC)	120.87	99.00	89.80	102.07	117.07	94.90	100.96
3204	28356	125.93	80.10	89.40	109.67	122.20	97.00	104.57
3205	28366	137.87	88.30	95.40	100.40	125.33	102.40	105.88
3206	Zonal Check (ZC)	134.40	94.90	100.40	111.97	124.60	100.20	109.29
3207	28354	134.47	95.70	98.60	112.17	129.53	114.20	113.63
3208	28332	133.13	107.50	99.40	113.97	131.27	102.70	111.83
3209	28115	135.73	94.60	104.20	106.53	106.00	110.10	106.71
3210	CO-51 (NC)	116.33	99.40	91.20	104.27	108.53	95.90	99.98
3211	US 314 (HC)	129.60	94.40	101.60	116.57	122.80	106.30	111.82
3212	28358	150.13	100.60	121.20	116.90	145.60	130.60	128.58
3213	28329	122.80	102.30	93.60	113.60	117.60	110.00	108.70
Exp. Mean		131.13	96.48	98.82	110.97	123.35	105.82	109.74

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Table No.1.4 contd.: Plant Height (cm) of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									Overall(35) Mean
		TAMILNADU (1)	KERALA		KERALA (2)	KARNATAKA			KARNATAKA (1)	Z7(9)	
		COIMBATORE	MONCOMPU	PATTAMBI	Mean	MANDYA	@BRAHMAWAR	@GANGAVATHI	Mean	Mean	
3201	28343	106.67	114.13	96.20	105.17	91.80	71.33	113.50	91.80	111.55	110.40
3202	26790	108.00	113.67	90.40	102.03	104.60	79.33	111.50	104.60	106.56	107.36
3203	Local Check (LC)	101.00	123.27	92.53	107.90	85.07	86.67	110.50	85.07	102.95	105.31
3204	28356	103.67	108.53	86.46	97.50	88.93	73.00	112.00	88.93	103.53	104.68
3205	28366	102.00	114.47	96.80	105.63	82.33	78.33	110.50	82.33	106.33	105.61
3206	Zonal Check (ZC)	106.67	115.80	96.13	105.97	82.73	74.00	109.50	82.73	108.10	101.17
3207	28354	97.33	118.20	92.76	105.48	86.27	80.67	106.00	86.27	109.28	108.85
3208	28332	94.00	114.60	93.16	103.88	92.73	79.00	107.50	92.73	108.33	108.59
3209	28115	108.00	110.00	82.20	96.10	81.93	76.00	106.00	81.93	104.97	107.24
3210	CO-51 (NC)	96.00	108.53	96.70	102.62	94.80	70.67	109.00	94.80	101.36	104.23
3211	US 314 (HC)	99.33	112.60	94.66	103.63	82.13	80.00	106.50	82.13	107.29	110.58
3212	28358	115.33	139.40	102.13	120.77	95.20	95.33	131.50	95.20	124.06	120.90
3213	28329	96.33	116.33	94.86	105.60	100.93	80.00	109.00	100.93	107.34	109.18
Exp. Mean		102.64	116.12	93.46	104.79	89.96	78.79	111.00	89.96	107.82	108.01

Table No. 1.5: Panicles/m2 of entries in AVT 2 – E TP, Kharif 2021

Entry No	IET No	Zone II					Zone III			
		UTTARAKHAND	PUNJAB (1)	HARYANA (1)	RAJASTHAN	Z2(3)	ODISHA		ODISHA (2)	
		@PANTNAGAR	LUDHIANA	KAUL	KOTA	Mean	CUTTACK	JEYPORE	Mean	
3201	28343	310	268	271	290	277	215	238	226	
3202	26790	286	306	247	257	270	232	358	295	
3203	Local Check (LC)	365	282	259	226	256	185	284	235	
3204	28356	356	326	300	260	295	237	327	282	
3205	28366	386			120	120	207	373	290	
3206	Zonal Check (ZC)						210	229	219	
3207	28354	326	299	275	257	277	300	278	289	
3208	28332	300	285	270	278	277	277	306	292	
3209	28115	303	308	302	246	285	222	274	248	
3210	CO-51 (NC)	358	310	271	251	277	269	248	259	
3211	US 314 (HC)	240	286	223	277	262	209	297	253	
3212	28358	355	288	295	241	275	279	239	259	
3213	28329	367	262	306	304	291	268	238	253	
Exp. Mean		329	293	274	251	263	239	284	261	

Table No. 1.5 contd.: Panicles/m2 of entries in AVT 2 – E TP, Kharif 2021

Entry No.	IET No.	ZONE III - EASTERN				
		BIHAR		BIHAR (2)	JHARKHAND (1)	WEST BENGAL (1)
		BIKRAMGUNJ	PATNA-ICAR	Mean	RANCHI	CHINSURAH
3201	28343	282	236	259	148	253
3202	26790	352	289	320	132	275
3203	Local Check (LC)	318	244	281	171	286
3204	28356	356	291	324	195	297
3205	28366	260	260	260	191	253
3206	Zonal Check (ZC)	311	284	298	243	341
3207	28354	282	301	292	177	407
3208	28332	356	236	296	148	341
3209	28115	240	223	231	153	264
3210	CO-51 (NC)	409	276	343	150	286
3211	US 314 (HC)	311	261	286	149	275
3212	28358	274	274	274	178	231
3213	28329	320	256	288	170	297
Exp. Mean		313	264	289	170	293

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Table No. 1.5 contd.: Panicles/m² of entries in AVT 2 – E TP, Kharif 2021

Etry No	IET No	Zone III				Zone IV				
		UTTAR PRADESH		UTTAR PRADESH (1)	Z3(7)	ASSAM (1)	TRIPURA		TRIPURA (2)	Z4(3)
		@MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHATINAGAR	LEMBUCHERRA	Mean	Mean
3201	28343	199	237	237	230	291	365	300	333	319
3202	26790	223	237	237	268	295	318	358	338	324
3203	Local Check (LC)	225	266	266	251	342	312	375	344	343
3204	28356	221	247	247	279	325	363	400	382	363
3205	28366	225	215	215	251	258	261	358	310	292
3206	Zonal Check (ZC)	229	192	192	259	307	230	408	319	315
3207	28354	218	266	266	287	305	239	308	274	284
3208	28332	226	213	213	268	300	229	358	294	296
3209	28115	223	229	229	229	268	303	550	426	374
3210	CO-51 (NC)	248	256	256	271	268	338	275	307	294
3211	US 314 (HC)	234	197	197	243	237	275	308	292	273
3212	28358	233	214	214	241	282	289	342	315	304
3213	28329	244	259	259	258	233	253	492	372	326
Exp. Mean		227	233	233	256	285	290	372	331	316

Table No. 1.5 contd.: Panicles/m² of entries in AVT 2 – E TP, Kharif 2021

Etry No	IET No	Zone V								
		MADHYA PRADESH (1)		CHHATTISGARH		CHHATTISGARH (2)	MAHARASHTRA 1		MAHARASHTRA 1 (2)	Z5(6)
		REWA	RAIPUR	JAGDALPUR	Mean	SAKOLI	SINDEWAHI	Mean	Mean	
3201	28343	214	146	319	232	309	242	276	254	
3202	26790	204	124	282	203	293	235	264	234	
3203	Local Check (LC)	183	112	347	229	301	272	286	258	
3204	28356	174	146	355	251	228	239	234	242	
3205	28366	180	93	373	233	164	207	186	209	
3206	Zonal Check (ZC)	.	142	313	227	185	219	202	215	
3207	28354	176	188	339	264	265	189	227	245	
3208	28332	185	199	327	263	306	214	260	262	
3209	28115	186	86	372	229	195	245	220	225	
3210	CO-51 (NC)	183	177	367	272	298	285	292	282	
3211	US 314 (HC)	.	169	342	255	282	209	245	250	
3212	28358	148	192	300	246	267	226	247	246	
3213	28329	177	192	379	286	341	258	299	292	
Exp. Mean		183	151	339	245	264	234	249	247	

Table No. 1.5 contd.: Panicles/m² of entries in AVT 2 – E TP, Kharif 2021

Etry No	IET No	Zone VI										
		MAHARASHTRA 2				MAHARASHTRA 2 (4)	MAHARASHTRA (6)	GUJARAT			GUJARAT (3)	Z6(7)
		KARJAT	SHIRGAON	VADAGAON	RADHANAGARI	Mean	Mean	NAWAGAM	DABHOI	VYARA	Mean	Mean
3201	28343	225	161	301	194	221	239	274	295	262	277	245
3202	26790	218	118	356	181	218	234	285	252	273	270	240
3203	Local Check (LC)	227	126	247	225	206	233	302	266	235	268	232
3204	28356	238	195	275	168	219	224	230	280	253	254	234
3205	28366	202	171	219	177	192	190	277	258	246	260	221
3206	Zonal Check (ZC)	201	140	231	183	189	193	278	306	260	281	228
3207	28354	225	174	281	174	214	218	277	299	233	270	238
3208	28332	207	166	240	196	202	222	259	273	262	265	229
3209	28115	197	165	354	193	227	225	260	215	233	236	231
3210	CO-51 (NC)	229	145	257	174	201	231	264	281	251	265	229
3211	US 314 (HC)	209	190	277	178	214	224	276	220	242	246	227
3212	28358	205	138	212	163	180	202	271	247	236	251	210
3213	28329	229	160	258	202	212	241	266	244	264	258	232
Exp. Mean		216	158	270	185	207	221	271	264	250	262	231

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Table No. 1.5 contd.: Panicles/m2 of entries in AVT 2 – E TP, Kharif 2021

Etry No	IET No	Zone VII						TELANGANA (3)
		ANDHRA PRADESH (1)	TELANGANA				Mean	
		MARUTERU	@RUDRUR	KUNARAM	WARANGAL	JAGITYAL		
3201	28343	312	246	249	356	312	306	
3202	26790	.	205	229	355	317	300	
3203	Local Check (LC)	290	292	244	404	355	334	
3204	28356	287	225	253	397	342	331	
3205	28366	287	222	235	392	285	304	
3206	Zonal Check (ZC)	299	261	233	354	286	291	
3207	28354	304	305	235	387	317	313	
3208	28332	293	234	244	394	305	314	
3209	28115	299	206	218	342	284	281	
3210	CO-51 (NC)	311	206	334	405	310	350	
3211	US 314 (HC)	301	234	209	352	280	280	
3212	28358	279	296	220	345	312	292	
3213	28329	304	304	240	350	318	303	
Exp. Mean		297	249	242	372	309	308	

Table No. 1.5 contd.: Panicles/m2 of entries in AVT 2 – E TP, Kharif 2021

Etry No	IET No	Zone VII									Ovearl(33)	
		TAMILNADU (1)	KERALA		KERALA (2)	KARNATAKA			KARNATAKA (1)	Z7(9)	Mean	
		COIMBATORE	MONCOMPU	PATTAMBI	Mean	MANDYA	@BRAHMAWAR	@GANGAVATHI	Mean	Mean		
3201	28343	258	291	444	367	238	400	420	238	308	267	
3202	26790	283	333	444	389	240	353	475	240	314	271	
3203	Local Check (LC)	333	358	427	393	222	368	453	222	329	273	
3204	28356	317	382	460	421	298	356	438	298	342	286	
3205	28366	258	267	472	369	260	333	390	260	307	251	
3206	Zonal Check (ZC)	258	238	482	360	251	324	385	251	300	263	
3207	28354	258	396	440	418	242	321	416	242	322	276	
3208	28332	317	353	444	399	262	397	465	262	327	274	
3209	28115	292	229	449	339	249	267	373	249	295	262	
3210	CO-51 (NC)	383	251	441	346	284	260	397	284	340	280	
3211	US 314 (HC)	283	298	458	378	313	296	440	313	312	262	
3212	28358	292	287	502	394	298	292	453	298	317	260	
3213	28329	250	284	428	356	282	313	372	282	307	275	
Exp. Mean		291	305	453	379	265	329	421	265	317	269	

Table No. 1.6: Grain quality characteristics of entries in AVT 2-E TP, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
3201	28343	79.9	72.4	70.6	6.61	2.11	3.13	LS	A	3.0	22.29	68
3202	26790	80.5	74.8	72.1	6.77	2.10	3.22	LS	VOC	3.0	22.90	55
3203	Local Check (LC)											
3204	28356	79.4	72.3	70.4	6.43	2.12	3.03	LS	VOC	3.0	23.52	62
3205	28366	80.2	72.3	70.8	6.43	2.11	3.04	LS	VOC	4.0	23.02	96
3206	MTU 1153 (ZC)	81.0	74.1	73.0	5.55	1.99	2.78	MS	A	4.0	23.29	64
3207	28354	80.6	72.2	69.6	5.87	2.22	2.64	MS	VOC	4.0	24.31	22
3208	28332	85.3	80.2	78.1	6.29	2.23	2.82	LB	VOC	3.0	22.29	67
3209	28115	81.0	72.2	68.4	6.27	2.30	2.72	LB	VOC	3.0	22.88	61
3210	CO-51 (NC)	78.6	71.4	70.8	5.65	2.01	2.81	MS	VOC	4.0	25.22	45
3211	US-314 (NC)	81.0	72.9	71.9	5.85	2.25	2.60	MS	VOC	4.0	22.70	50
3212	28358	79.6	72.9	70.9	6.45	2.08	3.10	LS	VOC	4.0	22.96	57
3213	28329	80.4	73.1	71.9	7.17	2.20	3.25	LS	VOC	5.0	26.78	66

HULL: Hulling (%); **MILL:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length(mm); **KB:** Kernel Breadth(mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content(%); **GC:** Gel Consistency; **LB:** Long Bold; **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

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Table No.1.7: Composition of entries in Advance Variety Trial 1–Early Transplanted (AVT 1E-TP), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
2nd year of testing:				
3301	29140	BRR 2176	IR 97443-11-2-1-1-1-1-B / HUR- 1304	MS
3302	28954	<i>KAVERI-7299 (Hybrid)</i>	-	LB
3303	28960	<i>RRX-848 (Hybrid)</i>	-	LS
3304	Local Check			
3305	29189	RTN 2012-5-1-3-13	Selection from HRTMS-05 Kh 12	LS
3306	29142	JGL 35085	(JGL 20171 / NLR 34449) / JGL 20171	LB
3307	29193	BRR 0111 (IR 93329:61-B-21-12-21-1 RGA -2 RGA-1-B-B	Fedearroz 50 / IR 77298-14-1-2-10 // IRR1 123 / IR07F287 ///Sanhuangzhan No 2 / IRR1 146 // IR 45427-2B-2B-1-1 / IR 4630-22-2-5-1-3	LS
3308	28952	<i>NPH-X73 (Hybrid)</i>	-	LB
3309	28962	<i>JGLH-275 (Hybrid)</i>	-	LS
3310	PR 124-Northern, Narendra 97-Eastern, Luit -North Eastern, Sahbhagidhan- Central & Western, MTU 1153-Southern—ZC			
3311	29177	ORJ 1317 (RP 5530-23-1)	RP Bio 226 / IRGC 48960 // MTU 1081	LS
3312	28959	<i>PHI-20101 (Hybrid)</i>	-	LS
3313	CO-51 (NC)			
3314	28964	<i>VNR-227 (Hybrid)</i>	-	LB
3315	29197	ORJ 1349 (TP 30457)	IR 09L272 / IR 10L105	LB
3316	US 314 (HC)			
3317	28950	<i>HRI-207 (Hybrid)</i>	-	SB
3318	28956	<i>JKRH-1601(Hybrid)</i>	-	LB
3319	28953	<i>YPH-4009 (Hybrid)</i>	-	SB
3320	28123	<i>IIRRH-130 (Hybrid)</i>	-	MS
3321	28124	<i>CRHR 105 (Hybrid)</i>	-	LB

Table No. 1.8: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN																		
		UTTARAKHAND (1)			PUNJAB (1)		HARYANA (1)		RAJASTHAN (1)		Z2 (4)									
		PANTNAGAR			LUDHIANA		KAUL		KOTA		Mean									
3301	29140	5108	2	18%	24%	3567		5592		6137		5101								
3302	28954	4173				4912		7965	2	*28%	#13%	7024	7	11%	6019	4	8%			
3303	28960	4386	7			5276	8	8211	1	*32%	#16%	5633			5877	6	5%			
3304	Local Check (LC)	2997				5585	6	5019				5278			4720					
3305	29189	3503				3421		4337				7270	2	15%	4633					
3306	29142	4209	10			5242	9	6574	10	6%		7065	6	12%	5773	9				
3307	29193	3453				5301	7	6574	10	6%		6806		8%	5534					
3308	28952	4251	9			5117		6328				5715			5353					
3309	28962	4563	6	5%	11%	5781	3	12%	7065	7	*14%	6915	8	9%	6081	3	9%			
3310	Zonal Check (ZC)	4336	8			5631	5	6001				6328			5574					
3311	29177	3407				4411		5919				6328			5016					
3312	28959	5569	1	*28%	#35%	6086	2	8%	#18%	7856	3	*26%	#11%	6847	10	8%	6590	1	*18%	#12%
3313	CO-51 (NC)	3503				4933		6219				6124			5195					
3314	28964	3793				6136	1	9%	#19%	7392	4	*19%	6560		5970	5	7%			
3315	29197	2053				5155		6056				6369			4908					
3316	US 314 (HC)	4116				5175	10	7065	7			7109	4		5866	7				
3317	28950	4693	4	8%	14%	5718	4	10%	7283	5	*17%	7338	1	16%	6258	2	*12%			
3318	28956	4858	3	12%	18%	4758		6656	9	7%		7092	5	12%	5841	8				
3319	28953	3747				4595		7065	7	*14%		7174	3	13%	5645	10				
3320	28123	4587	5	6%	11%	5038		5510				6888	9	9%	5506					
3321	28124	3540				3467		5510				5278			4449					
Exp. Mean		4040				5015		6486				6537			5519					
CD		1133				862		716				1344			626					
CV%		17				10.42		6.69				12.46			6.87					
D/S		25-06-2021			23-06-2021			23-06-2021			26-06-2021									
D/P		27-07-2021			24-07-2021			16-07-2021			22-07-2021									
Local Check Name		Govind			PR 126			HKR-48			Pratap-1									

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Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN												
		ODISHA				ODISHA (2)			BIHAR					
		CAR-NRRI (Cuttack)		JEYPORE		Mean			BIKRAMGANJ (Dhangain)		SABOUR	@PANTNAGAR		
3301	29140	4988	5 * #	5203	8 * #	5096	5 *35%	#32%	7760	1 * #	4528	8147	9	
3302	28954	5659	2 * #	5422	4 * #	5541	2 *47%	#43%	6402	7 * #	5629	3 *	9017	2
3303	28960	5546	3 * #	5294	7 * #	5420	3 *43%	#40%	6692	3 * #	5855	2 *#	8727	4
3304	Local Check (LC)	3842		3558		3700			4672		3505		7260	
3305	29189	3225		5895	1 * #	4560	9 *21%	#18%	6596	5 * #	4559		7913	
3306	29142	4415	#	1341		2878			5867	10 * #	4343		7837	
3307	29193	3842		3379		3611			5518	*	4145		7617	
3308	28952	3156		3851		3504			5578	*	5340	7*	7723	
3309	28962	3817		4005		3911			5188		5302	8 *	8330	7
3310	Zonal Check (ZC)	3309		1328		2319			3699		3961		4470	
3311	29177	4647	7 #	1762		3205			6478	6 * #	4435		7810	
3312	28959	3319		3567		3443			7235	2 * #	5559	5*	9023	1
3313	CO-51 (NC)	4286	#	3276		3781			4601		4148		4837	
3314	28964	4533	9 #	4403	9 *	4468	10 *18%	#16%	5607	*	4986	9*	8480	6
3315	29197	3259		3835		3547			5653	* #	2933		7463	
3316	US 314 (HC)	3531		4205		3868			5090		4977	10	8263	8
3317	28950	4919	6 * #	5397	5 * #	5158	4 *36%	#33%	6670	4 * #	5973	1*#	7977	10
3318	28956	4607	8 #	5447	3 * #	5027	6 *33%	#30%	5568	*	5501	6*	8757	3
3319	28953	4435	10 #	5367	6 * #	4901	7 *30%	#27%	6318	8 * #	5604	4*	8627	5
3320	28123	5783	1 * #	5493	2 * #	5638	1 *49%	#46%	6025	9 * #	4787		7323	
3321	28124	5042	4 * #	4208	10	4625	8 *22%	#20%	5283	*	3567			
Exp. Mean		4293		4106		4200			5833		4745		7780	
CD		478		746		451			546		711		452	
CV%		6.74		11.01		6.51			5.67		9.09		3.51	
D/S		30-06-2021		03-07-2021					29-06-2021		25-06-2021		28-06-2021	
D/P		29-07-2021		02-08-2021					30-07-2021		21-07-2021		23-07-2021	
Local Check Name		Naveen		Mandakini					R. Bhagwati		Sabour Deep		Sabbhagi Dhan	

Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN											
		BIHAR (2)			JHARKHAND (1)		WEST BENGAL			WEST BENGAL (1)			
		Mean			RANCHI		CHINSURAH		@HATWARA		Mean		
3301	29140	6144	4 *40%	#22%	4485		6121	4 #	4367		6121	4 #	#21%
3302	28954	6016	5 *38%	#20%	4601	10	6398	2 #	5401	3	6398	2 #	6% #26%
3303	28960	6274	3 *43%	#25%	4803	7 8%	6923	1 * #	5593	2	6923	1 *15%	#37%
3304	Local Check (LC)	4089			4427		5417	9	3607		5417	9	
3305	29189	5578	7 *27%	#11%	5179	3 17%	5527	6	4835	10	5527	6	
3306	29142	5105	*17%		2865		6142	3 #	3827		6142	3 #	#21%
3307	29193	4832	10%		4253		4640		4005		4640		
3308	28952	5459	9 *25%		3530		4505		4932	9	4505		
3309	28962	5245	*20%		4919	6 11%	5128		5301	5	5128		
3310	Zonal Check (ZC)	3830			2025		5112		2630		5112		
3311	29177	5457	10 *25%		4745	8 7%	5096		5175	6	5096		
3312	28959	6397	1 *46%	#27%	4601	10	5405	10	4493		5405	10	
3313	CO-51 (NC)	4375			2951		6028	5 #	5314	4	6028	5 #	#19%
3314	28964	5297	*21%		4659	9 5%	5446	8	5720	1	5446	8	
3315	29197	4293			3038		4436		3311		4436		
3316	US 314 (HC)	5034			5150	4	5059		4757		5059		
3317	28950	6322	2 *45%	#26%	5961	1 *35%	16%5185		4981	8	5185		
3318	28956	5535	8 *27%		4977	5 12%	5242		4320		5242		
3319	28953	5961	6 *36%	#18%	3935		5470	7	4268		5470	7	
3320	28123	5406	*24%		5295	2 20%	5022		5051	7	5022		
3321	28124	4425			3299		4233		3558		4233		
Exp. Mean		5289			4271		5359		4545		5359		
CD		507			1053		894		178		894		
CV%		5.81			14.94		10.11		2.38		10.11		
D/S						24-06-2021		25-06-2021		25-06-2021			
D/P						21-07-2021		30-07-2021		23-07-2021			
Local Check Name						Lalat		Ajit		Lalat			

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Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									ZONE IV- NORTH EASTERN	
		UTTAR PRADESH			UTTAR PRADESH (1)			Z3 (7)			ASSAM (1)	
		@MASODHA	VARANASI	Mean	Mean	Mean	Mean	Mean	TITABAR			
3301	29140	3410		6743	4 * #	6743	4 *21% #61%	5690	2 *28% #24%	4902	9 9%	
3302	28954	3983	8	4817		4817	15%	5561	4 *26% #21%	4647		
3303	28960	4801	1	6841	3 * #	6841	3 *22% #63%	5993	1 *35% #30%	5808	3 *30%	
3304	Local Check (LC)	3682	10	5595	8	5595	8	4431		4278		
3305	29189	4037	7	5884	6 #	5884	6 5% #40%	5266	8 *19% #14%	4562		
3306	29142	3355		4014		4014		4141		4788	7%	
3307	29193	3410		4384		4384		4309		4562		
3308	28952	3257		3244		3244		4172		3995		
3309	28962	3322		4009		4009		4624		5043	7 *13%	
3310	Zonal Check (ZC)	3628		872		872		2901		3938		
3311	29177	3573		5616	7 #	5616	7 #34%	4683	*6%	4448		
3312	28959	4637	2	7415	1 * #	7415	1 *33% #77%	5300	7 *20% #15%	5610	5 *25%	
3313	CO-51 (NC)	3178		497		497		3684		4477		
3314	28964	3819	9	6153	5 #	6153	5 10% #47%	5112	10 *15% #11%	5610	5 *25%	
3315	29197	3191		4109		4109		3895		5015	8 *12%	
3316	US 314 (HC)	4419	3	4196		4196		4601		5893	2	
3317	28950	4228	4	5128	#	5128	#22%	5605	3 *26% #22%	5695	4 *27%	
3318	28956	3437		7105	2 * #	7105	2 *27% #69%	5492	5 *24% #19%	4788	7%	
3319	28953	4146	5	4728		4728	13%	5122	9 *16% #11%	4788	7%	
3320	28123	4092	6	5302	10 #	5302	10 #26%	5387	6 *22% #17%	5950	1 *33%	
3321	28124	3410		5417	9 #	5417	9 #29%	4436		4080		
Exp. Mean		3763		4860		4860		4781		4899		
CD		375		754		754		237		471		
CV%		6.04		9.41		9.41		3		5.83		
D/S		25-06-2021		22-06-2021						19-07-2021		
D/P		24-07-2021		16-07-2021						17-08-2021		
Local Check Name		Shushk Smarat		HUR-3022						Disang		

Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN						ZONE-V - CENTRAL					
		TRIPURA		TRIPURA (1)		Z4 (2)		MADHYA PRADESH (0)		CHHATTISGARH			
		ARUNDHATHINAGAR	@LEMBUCHERRA	Mean	Mean	Mean	Mean	@REWA	RAIPUR				
3301	29140	4565	*	3917		4565	*12%	4734	7 *17%	4210	5	4001	
3302	28954	4625	8 *	4009		4625	8 *13%	4636	10 *15%	3754	6	4773	7
3303	28960	4714	4 *	4085		4714	4 *15%	5261	4 *30%	3602	9	4257	
3304	Local Check (LC)	3606		4397	9	3606		3942		3190		4627	8
3305	29189	4698	5 *	3102		4698	5 *15%	4630	*15%	2431		3863	
3306	29142	4546	*	1440		4546	*11%	4667	9 *16%	3255		3644	
3307	29193	3638		2678		3638		4100		1519		3686	
3308	28952	3930		5792	3	3930		3963		4514	4	3246	
3309	28962	3651		3873		3651		4347	*8%	5143	1	4620	9
3310	Zonal Check (ZC)	4083		4464	8	4083		4011		3168		3876	
3311	29177	3362		4576	6	3362		3905		1194		5045	4
3312	28959	4635	7 *	4129	10	4635	7 *14%	5123	5 *27%	3733	7	5655	2 *
3313	CO-51 (NC)	3600		2299		3600		4039		1150		2944	
3314	28964	3537		3002		3537		4574	*13%	3364		3970	
3315	29197	4822	3 *	3694		4822	3 *18%	4919	6 *22%	1541		4079	
3316	US 314 (HC)	4971	1	4866	5	4971	1	5432	1	3472	10	4850	6
3317	28950	4886	2 *	5301	4	4886	2 *20%	5291	2 *31%	4796	3	5027	5
3318	28956	3765		4553	7	3765		4277	6%	2756		5692	1 *
3319	28953	4568	10 *	4029		4568	10 *12%	4678	8 *16%	5035	2	5121	3
3320	28123	4587	9 *	6495	2	4587	9 *12%	5269	3 *30%	3733	7	4511	10
3321	28124	4654	6 *	7354	1	4654	6 *14%	4367	*8%	586		3416	
Exp. Mean		4259		4193		4259		4579		3150		4329	
CD		379		3616		379		272		571		1019	
CV%		5.39		41.34		5.39		3.6		10.98		14.26	
D/S		05-07-2021		18-07-2021						24-06-2021		24-06-2021	
D/P		22-07-2021		10-08-2021						21-07-2021		27-07-2021	
Local Check Name		Sahabagidhan (3304)		HAKUCHUK-2						JR767		Indira Aerobic-1	

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Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL													
		CHHATTISGARH			CHATTISGARH (2)			MAHARASHTRA 1			MAHARASHTRA1(2)		Z5 (4)		
		@JAGDALPUR	BILASPUR	Mean	Mean	Mean	SAKOLI	SINDEWAHI	Mean	Mean					
3301	29140	3333		6867	7 #	5434	10%	6004	1 * #	4245	9	5125	1 #17%	5279	4 *18%
3302	28954	3985	8	7200	6 * #	5987	4 * 22% 12%	4745	8	4371	7	4558	7	5272	5 *18%
3303	28960	4054	7	7633	3 * #	5945	5 *21% 11%	3848		4024		3936		4941	8 * 11%
3304	Local Check (LC)	3170		5167		4897		3979		3234		3607		4252	
3305	29189	3587		5700		4782		3617		3817		3717		4249	
3306	29142	3152		6517	9	5081		3877		4706	1	4292		4686	
3307	29193	3892	10	5500		4593		5136	6	4044		4590	6	4592	
3308	28952	3966	9	4267		3757		4630	10	4254	8	4442	9	4099	
3309	28962	3259		6700	8	5660	7 *15%	4644	9	4411	6	4528	8	5094	6 *14%
3310	Zonal Check (ZC)	3256		5967		4922		3588		4423	5	4006		4464	
3311	29177	4175	5	5967		5506	9 12%	5325	4 #	4015		4670	4	5088	7 *14%
3312	28959	4661	3 *	7417	5 * #	6536	2 *33% #22%	5613	2 #	4467	4	5040	2 #15%	5788	1 *30% #19%
3313	CO-51 (NC)	3678		3190		3067		5266	5 #	4496	3	4881	3 11%	3974	
3314	28964	3536		7750	2 * #	5860	6 *19%	3270		2794		3032		4446	
3315	29197	3307		5067		4573		5382	3 #	3939		4661	5	4617	
3316	US 314 (HC)	4378	4	5867		5359		4601		4158		4380		4869	
3317	28950	4877	1 *	7500	4 * #	6264	3 *27% #17%	5006	7	3826		4416	10	5340	3 *20% #
3318	28956	4874	2 *	8077	1 * #	6885	1 *40% #28%	4456		3648		4052		5468	2 *22% #12%
3319	28953	4151	6	6050		5586	8 13%	4167		4199	10	4183		4884	10 9%
3320	28123	3769		6467	10	5489	10 12%	4051		4691	2	4371		4930	9 *10%
3321	28124	3443		5433		4425		4601		3677		4139		4282	
Exp. Mean		3833		6205		5267		4562		4069		4315		4791	
CD		692		971		700		592		949		615		429	
CV%		10.95		9.48		8.05		7.86		14.13		8.63		5.43	
D/S		25-06-2021		24-06-2021				24-06-2021		22-06-2021					
D/P		16-07-2021		11-07-2021				23-07-2021		21-07-2021					
Local Check Name		Samleshwari		Chandrasahini				Sakoli-6		Sakoli-6					

Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN											
		MAHARASHTRA 2						MAHARASHTRA 2 (4)			MAHARASHTRA (6)		
		KARJAT	SHIRGAON	VADAGAON	RADHANAGARI	Mean	Mean						
3301	29140	4473	10	6020	4 *	3534		3388		4354	10	4611	
3302	28954	4274		3699		4255		4062		4073		4234	
3303	28960	4986	6	6327	2 *	4823	8	4456	5	5148	4 *18%	4744	
3304	Local Check (LC)	4772	8	3510		4083		4111		4119		3948	
3305	29189	4843	7	2863		4164		4178	10	4012		3914	
3306	29142	4416		5144	6 *	4657	10	4686	3	4726	5 8%	4581	
3307	29193	4202		3686		4405		4281	8	4144		4292	
3308	28952	4345		4641	7	3990		3750		4182		4268	
3309	28962	4345		3556		4839	7	4479	4	4305		4379	
3310	Zonal Check (ZC)	5342	3	3908	10	4111		4150		4378	8	4254	
3311	29177	4060		3850		4858	6	4046		4204		4359	
3312	28959	4202		6824	1 *	5602	1 * #	4207	9	5209	2 *19%	5152	
3313	CO-51 (NC)	3561		3085		4300		4103		3762		4135	
3314	28964	3989		4386	8	5141	4 *	4442	6	4490	6	4004	
3315	29197	5057	5	4183	9	4142		4055		4359	9	4460	
3316	US 314 (HC)	5627	1	6242	3	4526		4317	7	5178	3	4912	
3317	28950	3917		3229		5335	2 * #	4714	2	4299		4338	
3318	28956	5342	3	3464		4982	5	4080		4467	7	4329	
3319	28953	5556	2	5961	5 *	5171	3 *	4908	1 *	5399	1 *23%	4993	
3320	28123	4701	9	3288		4243		4059		4073		4172	
3321	28124	4060				4708	9	4066		4278		4222	
Exp. Mean		4575		4393		4565		4216		4436		4395	
CD		1031		1021		751		628		465			
CV%		13.66		14.06		9.96		9.03		6.35			
D/S		22-06-2021		21-06-2021		23-06-2021		23-06-2021					
D/P		20-07-2021		15-07-2021		22-07-2021		02-08-2021					
Local Check Name		Karjat-7		ratnagiri - 1		Phule Radha		Phule Radha					

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Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN							ZONE VII – SOUTHERN														
		GUJARAT			GUJARAT (3)		Z6 (7)		ANDHRA PRADESH (1)		TELANGANA												
		NAWAGAM	DABHOI	VYARA	Mean		Mean		MARUTERU	@RUDRUR	KAMPASAGAR												
3301	29140	6452	2	6309	7	3465		5409	8	7%	4806	7	5672		3143		7356	9	*				
3302	28954	5798	8	7516	1	* #	3719	5678	7	12%	4760	8	7778	#27%	3630		6820		*				
3303	28960	6196	4	6730	3		5582	4	*	6169	1	*21%	5586	2	*19%	8086	8	#32%	3263	7510	6	*	
3304	Local Check (LC)	5278		5207		4528		5004			4498		7717		5910	5	5287		*				
3305	29189	5246		4020		3771		4346			4155		7502	#23%	6260	2	* 7050		*				
3306	29142	5887	6	5861				5874	4	16%	5109	5	9%	8332	5	#37%	3377		5900				
3307	29193	5548		4052		5043	7	4881			4460		8424	4	#38%	5177	6	5441					
3308	28952	5212		5708		3812		4911			4494		7102	16%	4517	9	6743						
3309	28962	6622	1	5054		3538		5071			4633		8117	7	#33%	4177		7893	3	*			
3310	Zonal Check (ZC)	5184		5708		4342		5078			4678	10	9346	1		4147							
3311	29177	5549	10	4039		5762	2	*	5117	10	4595		9131	2	#50%	3250		7663	5	*			
3312	28959	6188	5	6885	2	*	5022	8	6032	3	*19%	5561	3	*19%	8516	3	#40%	3420		6130			
3313	CO-51 (NC)	5532		5261		3964		4919			4258		5965			6103	4	5287					
3314	28964	1998		6710	4	4844	10	4517			4501		7025	15%	3443		4674						
3315	29197	4697		6028	10	3319		4681			4497		6555		4727	7	8199	2	*				
3316	US 314 (HC)	5811	7	6275	8	5190	6	5759	6	5427	4	6103		8387	1	7739	4						
3317	28950	3539		6074	9	5597	3	*	5070		4629		8286	6	#36%	4203		7280	10	*			
3318	28956	5760	9	6558	5	5198	5	5839	5	15%	5055	6	8%	7840	10	#28%	4720	8	7433	7	*		
3319	28953	5503		6492	6	6295	1	* #	6097	2	*20%	5698	1	*22%	7865	9	#29%	6157	3	8506	1	*	
3320	28123	6394	3	4728		3354		4825			4395		7219	18%	3820		7433	7	*				
3321	28124	5114		5621		4865	9	5200	9	4739	9	5549		4357	10	6513							
Exp. Mean		5405		5754		4561		5244		4756		7530		4580		6843							
CD		1577		1081		1030		828		477		1288		122		1602							
CV%		14		11.38		13.66		9.56		6.08		10.36		1.61		14.16							
D/S		29-06-2021		25-06-2021		24-06-2021							09-07-2021		06-07-2021		30-06-2021						
D/P		06-08-2021		25-07-2021		23-07-2021							06-08-2021		09-08-2021		01-08-2021						
Local Check Name		Mahisagar		Mahi Sagar		GR-7							MTU1156		MTU 1010		MTU-1010						

Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN																					
		KUNARAM			WARANGAL			@JAGITYAL			TELANGANA (3)		TAMILNADU (1)		KERALA		KERALA (2)						
											Mean		COIMBATORE		MANCHIRIAL	PATTAMBI	Mean						
3301	29140	5924	1	#	5919	6	#	3423		6400	2	#15%	6873	1	#35%	2840		4584		3712			
3302	28954	4568			4761			4489	7	5383			6513	6	#28%	4553		5057		4805			
3303	28960	3553			7710	1	* #	2740		6258	3	#12%	6203	9	#22%	4859	7	4448		4654			
3304	Local Check (LC)	4651	10		6146	5		3380		5361			6768	2		4926	6	4749		4838	9		
3305	29189	3350			5122	10		3523		5174			4912			3264		5146		4205			
3306	29142	5864	2	#	6696	3	#	5127	3	6153	6	10%	6294	8	#24%	3985		4419		4202			
3307	29193	5511	4	#	4905			3959	9	5286			4924			3827		5314	10	4571			
3308	28952	4508			4792			2974		5348			6088	#20%	4414		5940	2	#	5177	7	6%	
3309	28962	4354			5053			3394		5767	8		6442	7	#27%	4023		5171		4597			
3310	Zonal Check (ZC)	5803	3		6621	4		4549	6	6212	4		6715	3		4824	8	4952		4888	8		
3311	29177	5282	7	#	4905			5562	1	5950	7		5051			4945	5	5813	4	5379	5	10% 12%	
3312	28959	5376	5	#	5668	8		5466	2	5725	9		5419			4684		4952		4818	10		
3313	CO-51 (NC)	5219	8	#	5619	9		3108		5375			5149			4101		5340	8	4721			
3314	28964	4071			4310			3922	10	4352			6010	#18%	3287		5400	7	4344				
3315	29197	5355	6	#	5798	7		3649		6451	1	#16%	5488			4696	10	5917	3	#	5307	6	9% 11%
3316	US 314 (HC)	3948			5065			3480		5584			5078			4772	9	4810		4791			
3317	28950	4329			6917	2	#	3784		6175	5	11%	6685	4	#32%	5519	2	5441	6	5480	4	12% #14%	
3318	28956	4556			4493			4160	8	5494			6617	5	# 30%	5700	1	5327	9	5514	3	13% #15%	
3319	28953	3867			4570			4953	4	5648	10		5594	#10%	5449	3	5981	1	#	5715	1	*17% #19%	
3320	28123	4474			4905			2948		5604			5209			3916		4238		4077			
3321	28124	4784	9	#	4205			4706	5	5167			6192	10	#22%	5329	4	5705	5	5517	2	13% #15%	
Exp. Mean		4731			5437			3967		5660			5915			4472		5176		4824			
CD		732			846			910		642			509			937		1020		664			
CV%		9.38			9.43			13.91		6.87			5.21			12.69		11.94		8.33			
D/S		01-07-2021			27-06-2021			26-06-2021					13-07-2021			19-07-2021		19-07-2021					
D/P		02-08-2021			25-07-2021			26-07-2021					04-08-2021			13-08-2021		11-08-2021					
Local Check Name		KNM 118			KNM 118			JGL 18047					CO 51			MO 21 (Prathyasa)		kanchana					

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Table No. 1.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN											Overall Mean (35)		
		KARNATAKA						KARNATAKA (3)		PUDUCHERRY (1)		Z7(11)			
		MANDYA		BRAHMAWAR		GANGAVATH		Mean		KURUMBAPET		Mean			
3301	29140	3958	#	3382	#	6192		4511		4508		5201		5190	9 *8%
3302	28954	4413	10 #	4629	8 #	8853	3 #	5965	5 #19%	4881		5711	8 #	5415	6 *12% #
3303	28960	4847	7 #	3196	#	8801	5 #	5615	10 #12%	4622		5803	5 #	5677	2 *18% #
3304	Local Check (LC)	5402	2	4375	9	7205		5661	9	5283	6	5683		4822	
3305	29189	5343	3 #	5183	3 #	6833		5786	7 #16%	4881		5326		4838	
3306	29142	4127	#	3300	#	7769		5065		4996		5607		5073	10 *5%
3307	29193	4979	6 #	5102	4 #	7064		5715	8 #14%	5656	2 7%	5559		4892	
3308	28952	4989	5 #	4986	6 #	8058	10	6011	4 #20%	4967		5690	10 #	4828	
3309	28962	5116	4 #	5070	5 #	8404	9 #	6197	3 #24%	4881		5866	4 #11%	5221	7 *8%
3310	Zonal Check (ZC)	6122	1	4131		8571	7	6275	2	5254	8	6234	1	4811	
3311	29177	4843	8 #	3602	#	7064		5170		5340	5	5785	6 #	5052	*4.76%
3312	28959	3307		4936	7 #	9179	1 #	5807	6 #16%	5254	8	5766	7 #	5692	1 *18% #
3313	CO-51 (NC)	4317	#	5443	2 #	6090		5283		4020		5141		4483	
3314	28964	4238	#	3795	#	8442	8 #	5492	#10%	4192		5040		4959	
3315	29197	3243		4342	10 #	6404		4663				5600		4785	
3316	US 314 (HC)	3079				6904		4992		5398	3	5290		5203	8
3317	28950	3259		4288	#	9135	2 #	5561	#11%	5254	8	6036	3 #14%	5572	4 *16% #
3318	28956	3423		3116	#	8833	4 #	5124		5369	4	5701	9 #	5438	5 *13% #
3319	28953	4772	9 #	5738	1 #	8647	6 #	6386	1 #28%	6919	1 *31% #28%	6173	2 #17%	5575	3 *16% #
3320	28123	4333	#	3182	#	6628		4714		5254	8	5163		5073	10 *5%
3321	28124	3074		3143	#	6519		4245		4565		5053		4668	
Exp. Mean		4342		4247		7695		5054		5075		5519		5078	
CD		712		687		1009		487		1147		346		177	
CV%		9.94		9.79		6.29		5.84		13.67		3.79		2.12	
D/S		28-07-2021		28-06-2021		19-07-2021					27-09-2021				
D/P		23-08-2021		24-07-2021		11-08-2021					26-10-2021				
Local Check Name		MP-105 (Raksha)		MO-21		GNV 10-89					ADT 53				

Table No. 1.9: Days to 50%flowering of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN						ZONE III-EASTERN									
		UTTARAKHAND (1)		PUNJAB (1)	HARYANA (1)	RAJASTHAN (1)		ODISHA		ODISHA (2)							
		PANTNAGAR		LUDHIANA	KAUL	KOTA		Mean	ICAR-NRRI (Cuttack)	JEYPORE	Mean						
3301	29140		89		93		90		98		93		84		85		85
3302	28954		87		92		84		94		89		86		88		87
3303	28960		89		93		85		102		92		84		98		91
3304	Local Check (LC)		81		94		85		98		90		90		92		91
3305	29189		99		99		93		100		98		86		91		89
3306	29142		90		92		88		98		92		85		99		92
3307	29193		94		94		98		97		96		87		97		92
3308	28952		83		83		78		99		86		87		87		87
3309	28962		93		93		85		91		90		83		90		87
3310	Zonal Check (ZC)		96		98		88		96		94		84		88		86
3311	29177		100		105		102		100		102		87		88		88
3312	28959		89		95		81		99		91		84		95		89
3313	CO-51 (NC)		82		103		80		98		91		82		94		88
3314	28964		88		93		85		94		90		83		95		89
3315	29197		89		95		87		98		92		84		87		86
3316	US 314 (HC)		87		93		85		99		91		84		95		90
3317	28950		88		93		89		97		92		85		93		89
3318	28956		90		95		87		94		92		88		87		88
3319	28953		90		92		88		97		92		88		92		90
3320	28123		95		99		93		98		96		85		85		85
3321	28124		99		103		93		93		99		87		96		91
Exp. Mean			90		95		88		98		93		85		92		88

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Table No. 1.9 contd.: Days to 50%flowering of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR			BIHAR (2)	JHARKHAND (1)	WEST BENGAL		WEST BENGAL (1)
		BIKRAMGANJ (Dhangain)	SABOUR	@PANTNAGAR	Mean	RANCHI	CHINSURAH	@HATWARA	Mean
3301	29140	88	102	86	95	89	90	89	90
3302	28954	94	94	85	94	90	87	88	87
3303	28960	87	94	88	90	92	89	95	89
3304	Local Check (LC)	97	87	86	92	93	88	88	88
3305	29189	96	107	90	101	99	98	105	98
3306	29142	84	97	85	91	91	91	94	91
3307	29193	95	104	89	99	93	94	92	94
3308	28952	86	88	80	87	89	83	87	83
3309	28962	89	94	86	92	93	92	86	92
3310	Zonal Check (ZC)	83	83	76	83	78	81	84	81
3311	29177	104	110	91	107	99	76	102	76
3312	28959	92	98	87	95	93	88	97	88
3313	CO-51 (NC)	85	89	77	87	90	87	89	87
3314	28964	88	93	88	90	93	85	88	85
3315	29197	90	104	83	97	91	86	91	86
3316	US 314 (HC)	90	102	85	96	92	89	89	89
3317	28950	95	94	86	94	92	89	91	89
3318	28956	94	97	86	95	94	89	91	89
3319	28953	91	101	86	96	93	90	88	90
3320	28123	97	101	89	99	92	95	98	95
3321	28124	104	111		108	99	93	102	93
Exp. Mean		92	98	85	95	92	89	92	89

Table No. 1.9 contd.: Days to 50%flowering of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN					ZONE IV- NORTH EASTERN				
		UTTAR PRADESH		UTTAR PRADESH (1)	Z3 (7)	ASSAM (1)	TRIPURA			TRIPURA (1)	Z4 (2)
		@MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHATHINAGAR	@LEMBUCHERRA	Mean	Mean	
3301	29140	81	80	80	88	92	80	72	80	86	
3302	28954	80	84	84	89	81	72	74	72	77	
3303	28960	77	85	85	90	90	81	77	81	86	
3304	Local Check (LC)	77	84	84	90	84	96	79	96	90	
3305	29189	79	90	90	95	96	91	73	91	93	
3306	29142	80	79	79	90	94	82	73	82	88	
3307	29193	85	81	81	93	91	89	69	89	90	
3308	28952	80	74	74	85	83	71	76	71	77	
3309	28962	80	81	81	89	89	85	69	85	87	
3310	Zonal Check (ZC)	84	74	74	82	80	75	73	75	78	
3311	29177	83	87	87	93	76	91	75	91	83	
3312	28959	85	84	84	90	93	92	75	92	92	
3313	CO-51 (NC)	84	73	73	86	86	75	73	75	80	
3314	28964	78	85	85	89	80	90	78	90	85	
3315	29197	78	77	77	89	92	79	72	79	86	
3316	US 314 (HC)	82	78	78	90	90	96	75	96	93	
3317	28950	84	83	83	90	93	76	78	76	85	
3318	28956	86	86	86	91	94	79	77	79	87	
3319	28953	83	85	85	91	92	78	71	78	85	
3320	28123	80	83	83	91	93	82	76	82	88	
3321	28124	86	90	90	97	103	85	85	85	94	
Exp. Mean		82	82	82	90	89	83	74	83	86	

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Table No. 1.9 contd.: Days to 50%flowering of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL								
		MADHYA PRADESH (0)		CHHATTISGARH		CHATTISGARH (2)	MAHARASHTRA 1		MAHARASHTRA1(2)	Z5 (4)
		@REWA	RAIPUR	@JAGADALPUR	BILASPUR	Mean	SAKOLI	SINDEWAHI	Mean	Mean
3301	29140	91	97	89	81	89	83	89	86	88
3302	28954	91	97	89	81	89	80	80	80	85
3303	28960	98	102	90	84	93	90	91	90	92
3304	Local Check (LC)	91	99	89	90	95	85	94	90	92
3305	29189	102	107	99	89	98	93	105	99	99
3306	29142	93	96	88	79	87	83	82	83	85
3307	29193	94	99	94	85	92	86	97	92	92
3308	28952	88	90	85	78	84	77	88	83	83
3309	28962	92	93	88	81	87	84	91	88	87
3310	Zonal Check (ZC)	89	94	86	81	88	81	88	85	86
3311	29177	101	106	99	90	98	95	102	99	98
3312	28959	95	100	92	84	92	89	94	92	92
3313	CO-51 (NC)	91	93	88	78	86	80	92	86	86
3314	28964	96	95	88	82	89	86	86	86	87
3315	29197	101	95	88	82	89	85	94	90	89
3316	US 314 (HC)	93	94	87	81	87	85	91	88	88
3317	28950	93	97	90	82	90	89	90	89	89
3318	28956	99	97	90	83	90	90	92	91	91
3319	28953	92	98	90	84	91	87	93	90	90
3320	28123	95	98	89	83	90	85	94	89	90
3321	28124	102	105	101	79	92	93	80	86	89
Exp. Mean		95	98	90	83	90	86	91	89	89

Table No. 1.9 contd.: Days to 50%flowering of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN										
		MAHARASHTRA 2				MAHARASHTRA 2 (4)	MAHARASHTRA (6)	GUJARAT			GUJARAT (3)	Z6 (7)
		KARJAT	SHIRGAON	VADAGAON	RADHANAGARI	Mean	Mean	NAWAGAM	DABHOI	VYARA	Mean	Mean
3301	29140	91	92	90	98	93	90	90	88	85	88	91
3302	28954	92	91	90	99	93	89	83	82	83	83	89
3303	28960	88	95	95	104	95	94	88	87	86	87	92
3304	Local Check (LC)	89	89	95	102	94	92	88	84	87	86	90
3305	29189	80	95	98	107	95	96	91	95	92	92	94
3306	29142	95	93	95	104	97	92	95	88		91	95
3307	29193	85	97	97	107	97	95	90	94	88	91	94
3308	28952	86	91	87	97	90	88	78	83	82	81	86
3309	28962	94	96	90	100	95	92	89	86	88	87	92
3310	Zonal Check (ZC)	94	91	88	98	93	90	94	86	87	89	91
3311	29177	89	94	97	106	96	97	94	95	91	93	95
3312	28959	88	94	98	107	97	95	96	87	86	89	94
3313	CO-51 (NC)	90	88	87	98	91	89	85	81	82	83	87
3314	28964	90	91	95	105	95	92	86	88	82	85	91
3315	29197	87	90	87	97	90	90	89	88	87	88	89
3316	US 314 (HC)	84	95	86	95	90	89	87	89	84	87	89
3317	28950	85	93	94	104	94	92	89	83	87	86	91
3318	28956	87	94	95	105	95	94	90	88	88	89	92
3319	28953	87	96	95	104	96	94	92	88	89	90	93
3320	28123	90	98	90	99	94	93	93	92	91	92	93
3321	28124	88		99	107	98	93	96	96	98	97	97
Exp. Mean		89	93	93	102	94	92	89	88	87	88	92

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Table No. 1.9 contd.: Days to 50%flowering of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN							
		ANDHRA PRADESH (1)	TELANGANA					TELANGANA (3)	TAMILNADU (1)
		MARUTERU	@RUDRUR	KAMPASAGAR	KUNARAM	WARANGAL	@JAGITYAL	Mean	COIMBATORE
3301	29140	80	89	87	85	93	90	88	84
3302	28954	80	90	88	84	86	93	86	92
3303	28960	88	89	94	90	88	94	91	88
3304	Local Check (LC)	87	92	92	85	95	91	91	83
3305	29189	88	97	98	95	96	95	96	90
3306	29142	83	94	92	91	99	92	94	88
3307	29193	88	95	81	91	97	95	90	87
3308	28952	75	88	84	82	85	86	84	86
3309	28962	82	97	94	87	93	93	91	83
3310	Zonal Check (ZC)	88	94		90	95	91	93	87
3311	29177	90	97	99	94	103	97	99	89
3312	28959	88	100	101	89	89	96	93	93
3313	CO-51 (NC)	75	88	77	85	86	89	83	85
3314	28964	82	95	121	85	88	95	98	85
3315	29197	80	96	85	87	95	90	89	85
3316	US 314 (HC)	81	95	85	86	91	89	87	82
3317	28950	83	97	96	87	89	89	91	87
3318	28956	87	101	101	85	88	96	91	92
3319	28953	87	97	101	89	94	92	95	94
3320	28123	86	97	96	89	97	94	94	85
3321	28124	92	103	97	100	106	100	101	100
Exp. Mean		84	95	93	88	93	93	92	88

Table No. 1.9 contd.: Days to 50%flowering of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						Overall Mean (35)
		KARNATAKA			KARNATAKA (3)	PUDUCHERRY (1)	Z7(11)	
		MANDYA	BRAHMAWAR	GANGAVATHI	Mean	KURUMBAPET	Mean	
3301	29140	98	87	88	91	83	86	88
3302	28954	84	90	88	87	81	85	87
3303	28960	97	94	93	95	82	90	90
3304	Local Check (LC)	91	86	88	88	83	86	89
3305	29189	94	95	97	95	84	92	95
3306	29142	88	87	89	88	82	87	89
3307	29193	87	96	90	91	83	88	92
3308	28952	89	86	82	86	81	82	84
3309	28962	85	86	83	85	83	85	88
3310	Zonal Check (ZC)	92	95	90	92	82	89	87
3311	29177	88	96	95	93	82	91	94
3312	28959	92	99	96	96	85	91	91
3313	CO-51 (NC)	91	97	82	90	82	84	86
3314	28964	93	87	93	91	81	89	89
3315	29197	92	86	82	86		85	88
3316	US 314 (HC)	88		83	86	83	84	88
3317	28950	94	83	93	90	83	86	89
3318	28956	85	87	95	89	83	88	90
3319	28953	92	89	94	92	82	89	91
3320	28123	91	93	85	90	82	88	91
3321	28124	87	91	101	93	86	94	95
Exp. Mean		90	91	90	90	83	88	90

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Table No. 1.10: Plant Height (cm) of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN		
		UTTARAKHAND (1)	PUNJAB (1)	HARYANA (1)	RAJASTHAN (1)	Z2 (4)	ODISHA		ODISHA (2)
		PANTNAGAR	LUDHIANA	KAUL	KOTA	Mean	ICAR-NRRI (Cuttack)	JEYPORE	Mean
3301	29140	116.20	119.67	118.00	95.00	112.22	104.08	95.97	100.02
3302	28954	105.80	116.33	124.00	94.67	110.20	106.64	96.20	101.42
3303	28960	113.40	124.00	131.00	117.00	121.35	122.41	107.87	115.14
3304	Local Check (LC)	94.20	97.00	123.00	113.00	106.80	120.01	125.27	122.64
3305	29189	118.00	133.67	143.00	109.00	125.92	118.55	109.27	113.91
3306	29142	116.80	115.00	122.00	117.67	117.87	107.85	105.00	106.43
3307	29193	114.20	125.00	125.00	108.33	118.13	111.84	107.47	109.65
3308	28952	118.40	128.00	131.00	106.33	120.93	116.35	107.27	111.81
3309	28962	126.40	125.00	144.00	108.33	125.93	113.65	105.73	109.69
3310	Zonal Check (ZC)	101.00	98.33	112.00	110.00	105.33	93.69	103.93	98.81
3311	29177	120.00	125.67	130.00	113.00	122.17	121.15	103.07	112.11
3312	28959	122.00	132.33	132.00	109.67	124.00	116.67	101.80	109.24
3313	CO-51 (NC)	105.20	112.67	116.00	104.67	109.63	101.13	110.53	105.83
3314	28964	112.00	117.67	124.00	115.33	117.25	111.33	102.07	106.70
3315	29197	119.00	114.67	137.00	107.00	119.42	116.73	105.00	110.87
3316	US 314 (HC)	107.60	121.33	135.00	103.33	116.82	107.22	112.60	109.91
3317	28950	110.40	115.00	123.00	109.67	114.52	108.69	107.00	107.85
3318	28956	99.60	120.67	122.00	117.00	114.82	110.74	107.27	109.00
3319	28953	107.80	134.33	135.00	119.67	124.20	117.83	105.20	111.52
3320	28123	113.20	126.00	142.00	122.33	125.88	120.70	102.93	111.82
3321	28124	114.40	129.33	134.00	119.00	124.18	131.50	104.53	118.02
Exp. Mean		112.17	120.56	128.71	110.48	117.98	113.27	106.00	109.64

Table No. 1.10 contd: Plant Height (cm) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR			BIHAR (2)	JHARKHAND (1)	WEST BENGAL		WEST BENGAL (1)
		BIKRAMGANJ (Dhangain)	SABOUR	@PANTNAGAR	Mean	RANCHI	CHINSURAH	@HATWARA	Mean
3301	29140	97.00	103.33	109.39	103.19	87.00	113.67	92.30	113.67
3302	28954	105.50	101.00	117.33	111.42	88.00	108.12	107.60	108.12
3303	28960	117.83	115.00	118.17	118.00	105.00	122.33	120.60	122.33
3304	Local Check (LC)	116.33	111.67	115.28	115.80	99.00	109.67	107.60	109.67
3305	29189	108.33	124.67	127.50	117.92	106.00	124.33	112.00	124.33
3306	29142	108.66	103.33	114.22	111.44	92.00	104.67	104.00	104.67
3307	29193	102.83	118.67	122.56	112.69	100.00	125.33	105.00	125.33
3308	28952	114.66	117.33	117.42	116.04	97.00	118.67	101.00	118.67
3309	28962	112.16	111.00	117.11	114.64	97.00	117.00	112.00	117.00
3310	Zonal Check (ZC)	94.83	85.33	90.56	92.69	85.00	79.33	75.00	79.33
3311	29177	110.50	116.00	117.39	113.94	98.00	128.33	119.00	128.33
3312	28959	115.33	118.33	129.33	122.33	104.00	129.25	123.00	129.25
3313	CO-51 (NC)	96.33	94.67	102.33	99.33	96.00	106.33	106.00	106.33
3314	28964	104.83	103.67	115.44	110.14	102.00	115.08	110.00	115.08
3315	29197	108.66	115.00	113.50	111.08	101.00	121.67	114.00	121.67
3316	US 314 (HC)	107.50	115.67	117.78	112.64	100.00	123.33	111.00	123.33
3317	28950	110.83	105.00	107.67	109.25	95.00	109.37	85.00	109.37
3318	28956	105.16	105.67	111.17	108.16	89.00	118.22	91.00	118.22
3319	28953	121.33	117.67	123.00	122.17	98.00	128.45	111.00	128.45
3320	28123	110.00	112.67	118.94	114.47	105.00	132.09	127.00	132.09
3321	28124	109.33	133.33		109.33	108.00	139.29	125.00	139.29
Exp. Mean		108.47	110.90	115.30	111.75	97.71	117.84	107.58	117.84

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Table No. 1.10 contd: Plant Height (cm) of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE IV- NORTH EASTERN				
		UTTAR PRADESH		UTTAR PRADESH (1)	Z3 (7)	ASSAM (1)	TRIPURA		TRIPURA (1)	Z4 (2)
		@MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHATHINAGAR	@LEMBUCHERRA	Mean	Mean
3301	29140	112.00	95.87	95.87	99.56	98.60	114.00	104.00	114.00	106.30
3302	28954	108.00	114.13	114.13	102.80	99.33	115.00	109.50	115.00	107.17
3303	28960	126.00	124.07	124.07	116.36	112.67	129.00	119.00	129.00	120.83
3304	Local Check (LC)	110.00	99.87	99.87	111.69	98.53	141.00	107.50	141.00	119.77
3305	29189	118.00	120.40	120.40	115.94	108.35	122.00	98.50	122.00	115.18
3306	29142	99.00	98.23	98.23	102.82	101.80	120.00	108.00	120.00	110.90
3307	29193	130.00	111.33	111.33	111.07	100.00	132.00	116.00	132.00	116.00
3308	28952	110.00	120.93	120.93	113.17	106.87	110.00	106.50	110.00	108.43
3309	28962	126.00	107.47	107.47	109.14	107.87	121.00	102.50	121.00	114.43
3310	Zonal Check (ZC)	110.00	86.63	86.63	89.82	97.47	106.00	109.00	106.00	101.73
3311	29177	110.00	115.13	115.13	113.17	97.87	136.00	110.50	136.00	116.93
3312	28959	125.00	124.77	124.77	115.74	112.53	122.00	106.00	122.00	117.27
3313	CO-51 (NC)	133.00	96.87	96.87	100.27	95.43	128.00	95.50	128.00	111.72
3314	28964	115.00	107.47	107.47	106.63	102.20	125.00	108.50	125.00	113.60
3315	29197	110.00	108.27	108.27	110.90	106.33	113.00	107.50	113.00	109.67
3316	US 314 (HC)	114.00	100.80	100.80	109.59	105.27	138.00	105.50	138.00	121.63
3317	28950	102.00	109.03	109.03	106.42	99.60	104.00	102.50	104.00	101.80
3318	28956	128.00	112.60	112.60	106.95	98.53	124.00	109.50	124.00	111.27
3319	28953	129.00	113.70	113.70	114.60	107.00	130.00	105.50	130.00	118.50
3320	28123	122.00	114.13	114.13	113.93	110.60	127.00	126.50	127.00	118.80
3321	28124	123.00	123.60	123.60	121.37	107.73	136.00	102.50	136.00	121.87
Exp. Mean		117.14	109.78	109.78	109.14	103.55	123.48	107.64	123.48	113.51

Table No. 1.10 contd: Plant Height (cm) of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL								
		MADHYA PRADESH (0)		CHHATTISGARH		CHATTISGARH (2)	MAHARASHTRA 1	MAHARASHTRA(2)	Z5 (4)	
		@REWA	RAIPUR	@JAGADALPUR	BILASPUR	Mean	SAKOLI	SINDEWAHI	Mean	Mean
3301	29140	100.00	105.79	96.40	119.00	112.39	114.00	118.60	116.30	114.35
3302	28954	94.67	111.93	92.80	119.00	115.46	95.00	113.10	104.05	109.76
3303	28960	101.67	111.46	98.60	135.00	123.23	86.00	118.20	102.10	112.67
3304	Local Check (LC)	90.33	120.54	107.00	115.00	117.77	93.00	95.80	94.40	106.09
3305	29189	110.00	182.39	99.60	139.00	160.69	103.00	126.20	114.60	137.65
3306	29142	93.67	111.22	98.00	120.00	115.61	75.00	132.00	103.50	109.56
3307	29193	93.33	115.45	95.00	123.00	119.23	115.00	110.40	112.70	115.96
3308	28952	106.33	116.43	100.20	129.00	122.71	93.00	122.40	107.70	115.21
3309	28962	101.33	128.04	105.00	129.00	128.52	103.00	115.00	109.00	118.76
3310	Zonal Check (ZC)	93.00	105.59	94.60	124.00	114.80	85.00	116.40	100.70	107.75
3311	29177	101.67	109.15	98.80	120.00	114.58	116.00	117.00	116.50	115.54
3312	28959	106.67	123.64	110.60	131.00	127.32	123.00	124.80	123.90	125.61
3313	CO-51 (NC)	84.33	113.80	94.60	119.00	116.40	96.00	102.50	99.25	107.83
3314	28964	88.67	112.63	85.80	128.00	120.32	114.00	128.40	121.20	120.76
3315	29197	109.00	124.29	110.80	126.00	125.14	84.00	119.00	101.50	113.32
3316	US 314 (HC)	94.33	181.11	98.40	126.00	153.56	97.00	114.40	105.70	129.63
3317	28950	93.33	112.43	91.20	120.00	116.21	105.00	104.60	104.80	110.51
3318	28956	101.33	123.09	90.00	118.00	120.54	114.00	106.60	110.30	115.42
3319	28953	100.00	121.71	108.80	124.00	122.85	93.00	117.20	105.10	113.98
3320	28123	97.67	120.75	96.00	134.00	127.37	84.00	113.00	98.50	112.94
3321	28124	101.00	131.00	114.80	122.00	126.50	97.00	135.90	116.45	121.48
Exp. Mean		98.21	122.97	99.38	124.76	123.87	99.29	116.74	108.01	115.94

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Table No. 1.10 contd: Plant Height (cm) of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN										
		MAHARASHTRA 2				MAHARASHTRA 2 (4)	MAHARASHTRA (6)	GUJARAT			GUJARAT (3)	Z6 (7)
		KARIJAT	SHIRGAON	VADAGAON	RADHANAGARI	Mean	Mean	NAWAGAM	DABHOI	VYARA	Mean	Mean
3301	29140	117.60	89.87	66.56	73.83	86.96	96.74	116.98	115.50	110.00	114.16	98.62
3302	28954	118.00	83.07	74.84	82.27	89.54	94.38	97.42	113.30	104.00	104.91	96.13
3303	28960	126.80	89.27	72.89	82.23	92.80	95.90	114.78	124.00	126.00	121.59	105.14
3304	Local Check (LC)	126.20	67.07	72.83	85.23	87.83	90.02	104.98	119.90	109.00	111.29	97.89
3305	29189	113.80	99.60	87.19	91.83	98.11	103.60	113.86	123.30	133.00	123.39	108.94
3306	29142	131.20	90.73	70.06	82.40	93.60	96.90	103.08	117.50		110.29	99.16
3307	29193	126.20	93.80	82.80	87.17	97.49	102.56	116.00	134.10	123.00	124.37	109.01
3308	28952	116.80	98.07	71.89	81.83	92.15	97.33	104.56	130.10	116.00	116.89	102.75
3309	28962	113.80	89.67	80.60	82.07	91.53	97.36	124.66	123.00	129.00	125.55	106.11
3310	Zonal Check (ZC)	122.60	92.00	76.08	77.63	92.08	94.95	109.20	120.90	124.00	118.03	103.20
3311	29177	104.40	97.27	69.17	89.27	90.03	98.85	109.00	120.50	130.00	119.83	102.80
3312	28959	127.80	100.07	88.13	90.20	101.55	109.00	117.20	124.40	120.00	120.53	109.69
3313	CO-51 (NC)	115.00	76.33	70.67	79.20	85.30	89.95	96.98	106.70	108.00	103.89	93.27
3314	28964	99.80	92.47	75.23	80.00	86.88	98.32	96.10	114.30	112.00	107.47	95.70
3315	29197	107.40	97.40	86.47	87.10	94.59	96.89	128.00	116.10	118.00	120.70	105.78
3316	US 314 (HC)	117.00	89.27	74.28	77.77	89.58	94.95	116.98	115.30	119.00	117.09	101.37
3317	28950	113.00	83.20	83.58	90.37	92.54	96.62	107.34	110.80	115.00	111.05	100.47
3318	28956	120.80	86.00	66.44	78.37	87.90	95.37	109.10	112.80	119.00	113.63	98.93
3319	28953	107.60	98.33	96.16	93.93	99.01	101.04	107.10	135.30	126.00	122.80	109.20
3320	28123	126.20	97.40	72.08	77.70	93.34	95.06	123.52	132.50	132.00	129.34	108.77
3321	28124	128.20		92.83	90.10	103.71	108.81	117.86	124.20	133.00	125.02	114.37
Exp. Mean		118.10	90.54	77.66	83.83	92.69	97.84	111.18	120.69	120.30	117.23	103.20

Table No. 1.10 contd: Plant Height (cm) of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN							
		ANDHRA PRADESH (1)	TELANGANA					TELANGANA (3)	TAMILNADU (1)
		MARUTERU	@RUDRUR	KAMPASAGAR	KUNARAM	WARANGAL	@JAGITYAL	Mean	COIMBATORE
3301	29140	127.00	88.57	102.20	110.20	114.53	95.30	108.98	107.33
3302	28954	124.33	78.99	105.00	102.00	101.07	99.20	102.69	108.00
3303	28960	134.40	88.96	119.00	117.37	122.57	120.60	119.64	115.67
3304	Local Check (LC)	126.40	83.64	115.60	103.59	114.13	94.00	111.11	103.00
3305	29189	145.53	94.80	121.00	121.43	135.53	129.80	125.99	119.00
3306	29142	132.60	103.48	106.00	121.53	113.13	104.40	113.56	111.00
3307	29193	143.80	97.43	108.20	115.28	114.60	106.30	112.69	107.33
3308	28952	132.87	78.51	119.20	113.80	115.60	109.30	116.20	97.00
3309	28962	131.93	89.30	117.00	115.03	120.60	113.80	117.54	96.67
3310	Zonal Check (ZC)	132.20	88.51		110.50	115.80	100.90	113.15	113.67
3311	29177	132.80	93.17	121.00	106.60	128.93	106.60	118.84	108.67
3312	28959	131.40	87.37	115.20	109.13	134.07	121.00	119.47	124.33
3313	CO-51 (NC)	118.27	82.62	97.40	100.85	100.40	87.80	99.55	113.00
3314	28964	124.80	70.72	110.00	102.53	108.60	108.60	107.04	110.67
3315	29197	132.67	96.20	111.20	112.93	123.07	108.00	115.73	105.33
3316	US 314 (HC)	130.07	82.02	108.60	109.23	124.47	105.10	114.10	110.33
3317	28950	122.53	70.37	109.00	100.93	115.27	101.60	108.40	112.33
3318	28956	119.27	77.51	117.60	102.67	96.47	96.60	105.58	101.67
3319	28953	146.27	76.12	137.80	104.17	132.67	115.60	124.88	110.67
3320	28123	139.67	73.49	125.00	109.13	136.67	113.10	123.60	111.00
3321	28124	144.60	83.00	128.80	120.93	128.20	131.90	125.98	110.33
Exp. Mean		132.07	84.99	114.74	109.99	118.87	108.07	114.51	109.38

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Table No. 1.10 contd: Plant Height (cm) of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									Overall Mean (35)
		KERALA		KERALA (2)	KARNATAKA			KARNATAKA (3)	PUDUCHERRY (1)	Z7(11)	
		MONCOMPU	PATTAMBI	Mean	MANDYA	BRAHMAWAR	GANGAVATHI	Mean	KURUMBAPET	Mean	
3301	29140	114.47	89.86	102.16	107.33	75.00	107.00	96.44	76.00	102.81	103.92
3302	28954	114.40	91.06	102.73	91.13	74.33	106.00	90.49	81.00	99.85	102.43
3303	28960	125.73	96.23	110.98	112.53	83.00	121.50	105.68	95.00	113.00	113.46
3304	Local Check (LC)	118.00	94.36	106.18	89.00	87.67	105.50	94.06	80.00	103.39	105.58
3305	29189	123.67	86.93	105.30	85.53	86.00	122.00	97.84	90.00	112.42	117.01
3306	29142	109.87	87.93	98.90	93.87	82.67	103.00	93.18	78.00	103.60	105.46
3307	29193	123.47	83.06	103.26	100.47	95.67	109.00	101.71	85.00	107.81	111.28
3308	28952	119.73	94.60	107.17	103.73	91.33	119.00	104.69	85.00	108.35	110.42
3309	28962	119.20	89.76	104.48	87.60	86.67	114.00	96.09	76.00	104.95	110.54
3310	Zonal Check (ZC)	114.07	86.40	100.23	99.73	80.67	113.50	97.97	83.00	104.95	101.66
3311	29177	118.87	94.96	106.91	87.80	81.33	112.50	93.88	90.00	107.59	110.86
3312	28959	125.80	87.06	106.43	99.80	85.33	124.50	103.21	93.00	111.78	115.44
3313	CO-51 (NC)	112.47	91.10	101.78	94.67	90.67	102.00	95.78	95.00	101.44	101.82
3314	28964	113.07	95.20	104.13	94.33	83.67	102.00	93.33	86.00	102.81	106.47
3315	29197	119.47	92.50	105.98	100.53	84.33	118.00	100.96		110.00	110.80
3316	US 314 (HC)	119.33	84.26	101.80	87.00		112.00	99.50	88.00	107.33	111.15
3317	28950	113.27	110.66	111.96	97.67	82.33	107.00	95.67	81.00	104.73	105.83
3318	28956	125.47	93.26	109.36	79.47	91.67	102.50	91.21	85.00	101.37	105.71
3319	28953	130.67	98.66	114.66	96.53	85.00	121.50	101.01	93.00	114.27	114.66
3320	28123	119.07	103.06	111.06	92.67	91.67	112.50	98.94	80.00	110.95	113.49
3321	28124	132.53	94.16	113.35	80.60	91.33	117.50	96.48	96.00	113.18	117.86
Exp. Mean		119.65	92.62	106.14	94.38	85.52	112.02	97.53	85.80	106.98	109.33

Table No. 1.11: Panicles/m² of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN			
		UTTARAKHAND (1)	PUNJAB (1)	HARYANA (1)	RAJASTHAN (1)	Z2 (4)	ODISHA		ODISHA (2)	
		PANTNAGAR	LUDHIANA	KAUL	KOTA	Mean	ICAR-NRRI (Cuttack)	JEYPORE	Mean	
3301	29140	269	273	295	221	264	235	197	216	
3302	28954	259	293	245	277	268	255	195	225	
3303	28960	229	213	261	221	231	186	195	191	
3304	Local Check (LC)	317	273	270	209	267	189	238	213	
3305	29189	269	275	259	284	272	217	256	236	
3306	29142	265	233	255	268	255	237	193	215	
3307	29193	320	293	280	262	289	218	343	281	
3308	28952	229	191	241	220	220	217	185	201	
3309	28962	329	233	282	257	275	264	246	255	
3310	Zonal Check (ZC)	301	246	258	235	260	220	251	235	
3311	29177	319	235	269	233	264	245	313	279	
3312	28959	239	282	259	247	257	212	284	248	
3313	CO-51 (NC)	324	244	259	218	261	269	264	267	
3314	28964	233	229	248	227	234	219	251	235	
3315	29197	314	275	304	211	276	216	245	230	
3316	US 314 (HC)	250	299	285	272	277	213	283	248	
3317	28950	288	251	244	286	267	235	238	236	
3318	28956	269	255	276	253	263	235	222	229	
3319	28953	237	235	225	282	245	224	231	227	
3320	28123	309	301	265	266	285	322	306	314	
3321	28124	193	211	235	205	211	208	265	236	
Exp. Mean		274	254	263	245	259	230	248	239	

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Table No. 1.11 Contd.: Panicles/m2 of entries in AVT 1– E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						
		BIHAR			BIHAR (2)	JHARKHAND (1)	WEST BENGAL	WEST BENGAL (1)
		BIKRAMGANJ (Dhangain)	SABOUR	@PANTNAGAR	Mean	RANCHI	CHINSURAH	Mean
3301	29140	312	246	224	279	163	319	319
3302	28954	288	336	260	312	181	286	286
3303	28960	232	274	224	253	149	308	308
3304	Local Check (LC)	295	237	222	266	193	286	286
3305	29189	246	317	272	282	186	319	319
3306	29142	302	277	269	289	146	319	319
3307	29193	311	273	275	292	185	231	231
3308	28952	255	223	222	239	114	209	209
3309	28962	273	306	191	290	160	297	297
3310	Zonal Check (ZC)	297	338	276	318	191	253	253
3311	29177	284	291	282	287	195	242	242
3312	28959	295	284	212	290	159	231	231
3313	CO-51 (NC)	292	300	233	296	180	286	286
3314	28964	281	230	265	255	143	242	242
3315	29197	274	208	178	241	133	253	253
3316	US 314 (HC)	247	242	215	245	150	242	242
3317	28950	294	294	181	294	138	253	253
3318	28956	287	228	216	257	132	275	275
3319	28953	280	278	210	279	146	286	286
3320	28123	307	386	246	347	157	264	264
3321	28124	241	174		208	95	220	220
Exp. Mean		281	273	234	277	157	268	268

Table No. 1.11 Contd.: Panicles/m2 of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE IV- NORTH EASTERN				
		UTTAR PRADESH		UTTAR PRADESH (1)	Z3 (7)	ASSAM (1)	TRIPURA		TRIPURA (1)	Z4 (2)
		@MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHATHINAGAR	@LEMBUCHERRA	Mean	Mean
3301	29140	218	190	190	237	269	384	313	384	327
3302	28954	225	172	172	245	235	364	325	364	300
3303	28960	263	130	130	211	182	365	238	365	274
3304	Local Check (LC)	249	188	188	232	282	306	263	306	294
3305	29189	243	157	157	243	250	384	263	384	317
3306	29142	226	159	159	233	240	363	338	363	302
3307	29193	209	198	198	251	255	339	188	339	297
3308	28952	205	142	142	192	192	353	288	353	272
3309	28962	232	240	240	255	260	359	413	359	310
3310	Zonal Check (ZC)	234	215	215	252	297	397	275	397	347
3311	29177	227	203	203	253	282	320	300	320	301
3312	28959	273	176	176	234	193	185	413	185	189
3313	CO-51 (NC)	213	170	170	252	310	403	325	403	357
3314	28964	230	141	141	215	245	331	288	331	288
3315	29197	233	148	148	211	253	260	250	260	257
3316	US 314 (HC)	252	167	167	220	242	363	313	363	303
3317	28950	246	154	154	229	237	375	325	375	306
3318	28956	202	174	174	222	238	359	238	359	299
3319	28953	244	184	184	233	225	383	338	383	304
3320	28123	254	196	196	277	258	330	188	330	294
3321	28124	220	95	95	185	198	290	425	290	244
Exp. Mean		233	171	171	233	245	344	300	344	294

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Table No. 1.11 Contd.: Panicles/m² of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL								
		MADHYA PRADESH (0)		CHHATTISGARH		CHATTISGARH (1)	MAHARASHTRA 1		MAHARASHTRA1(2)	Z5 (3)
		@REWA	RAIPUR	@JAGADALPUR	Mean	SAKOLI	SINDEWAHI	Mean	Mean	
3301	29140	147	172	200	172	337	286	311	265	
3302	28954	156	168	168	168	262	269	265	233	
3303	28960	106	188	195	188	246	237	242	224	
3304	Local Check (LC)	203	144	193	144	296	315	306	252	
3305	29189	188	160	221	160	175	211	193	182	
3306	29142	152	139	166	139	262	269	265	223	
3307	29193	169	176	195	176	304	252	278	244	
3308	28952	186	122	194	122	207	269	238	199	
3309	28962	193	193	214	193	248	260	254	234	
3310	Zonal Check (ZC)	147	181	210	181	196	319	258	232	
3311	29177	184	185	179	185	293	239	266	239	
3312	28959	164	148	177	148	333	245	289	242	
3313	CO-51 (NC)	148	179	192	179	271	283	277	244	
3314	28964	146	165	183	165	189	256	222	203	
3315	29197	183	168	187	168	317	295	306	260	
3316	US 314 (HC)	150	184	222	184	261	235	248	227	
3317	28950	172	196	211	196	295	241	268	244	
3318	28956	160	188	184	188	184	260	222	211	
3319	28953	171	189	199	189	177	243	210	203	
3320	28123	190	191	201	191	186	270	228	216	
3321	28124	199	114	154	114	203	225	214	180	
Exp. Mean		167	169	193	169	250	261	255	226	

Table No. 1.11 Contd.: Panicles/m² of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN										
		MAHARASHTRA 2				MAHARASHTRA 2 (4)	MAHARASHTRA (6)	GUJARAT			GUJARAT (3)	Z6 (7)
		KARJAT	SHIRGAON	VADAGAON	RADHANAGARI	Mean	Mean	NAWAGAM	DABHOI	VYARA	Mean	Mean
3301	29140	202	169	273	191	209	243	286	258	271	272	236
3302	28954	213	150	288	171	206	225	305	297	288	297	245
3303	28960	187	173	280	175	204	216	210	271	262	248	222
3304	Local Check (LC)	205	124	321	201	212	243	265	261	297	274	239
3305	29189	198	158	264	206	206	202	237	239	284	253	226
3306	29142	197	159	295	221	218	234	243	253		248	228
3307	29193	186	176	297	222	220	239	317	248	275	280	246
3308	28952	207	158	244	184	198	211	274	252	260	262	225
3309	28962	206	135	301	197	210	225	268	263	295	275	238
3310	Zonal Check (ZC)	204	146	253	179	196	216	298	243	277	273	229
3311	29177	190	128	289	200	202	223	279	239	277	265	229
3312	28959	187	124	337	225	218	242	290	285	277	284	246
3313	CO-51 (NC)	185	142	256	198	195	223	243	260	328	277	230
3314	28964	212	134	298	217	215	218	246	276	275	266	237
3315	29197	210	153	276	212	213	244	270	254	308	277	240
3316	US 314 (HC)	207	151	276	197	208	221	259	260	262	260	230
3317	28950	202	143	307	238	223	238	268	249	288	269	242
3318	28956	182	158	307	202	212	215	271	266	269	269	236
3319	28953	203	151	297	232	221	217	267	271	279	272	243
3320	28123	195	132	274	195	199	209	274	253	290	272	231
3321	28124	209		264	196	223	219	219	251	286	252	238
Exp. Mean		199	148	286	203	210	225	266	260	282	269	235

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Table No. 1.11 Contd.: Panicles/m2 of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN							
		ANDHRA PRADESH (1)		TELANGANA				TELANGANA (3)	TAMILNADU (1)
		MARUTERU	@RUDRUR	KAMPASAGAR	KUNARAM	WARANGAL	@JAGITYAL	Mean	COIMBATORE
3301	29140	285	208	387	196	399	289	327	300
3302	28954	304	202	317	141	369	298	276	300
3303	28960	284	218	312	112	377	251	267	292
3304	Local Check (LC)	306	276	310	231	375	345	305	325
3305	29189	304	287	284	147	421	298	284	267
3306	29142	315	245	289	235	417	268	314	333
3307	29193	301	254	422	200	414	344	345	292
3308	28952	281	209	225	174	381	256	260	225
3309	28962	293	243	326	169	403	324	299	283
3310	Zonal Check (ZC)	312	259		191	408	279	300	258
3311	29177	301	245	322	213	391	352	309	367
3312	28959	293	208	314	163	400	286	292	325
3313	CO-51 (NC)	301	277	334	194	395	345	308	333
3314	28964	274	256	269	125	405	281	266	325
3315	29197	297	225	477	196	415	306	363	275
3316	US 314 (HC)	284	315	351	136	388	293	292	250
3317	28950	271	246	376	156	389	281	307	317
3318	28956	281	252	282	139	378	264	266	367
3319	28953	292	294	357	152	382	279	297	233
3320	28123	297	218	353	152	398	298	301	275
3321	28124	295	224	285	141	370	258	265	233
Exp. Mean		294	246	330	170	394	295	297	294

Table No. 1.11 Contd.: Panicles/m2 of entries in AVT 1 – E TP, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN									Overall Mean (35)
		KERALA		KERALA (2)	KARNATAKA			KARNATAKA (3)	PUDUCHERRY (1)	Z7(11)	
		MONCOMPU	PATTAMBI	Mean	MANDYA	BRAHMAWAR	GANGAVATHI	Mean	KURUMBAPET	Mean	
3301	29140	262	437	350	256	260	434	317	410	330	278
3302	28954	309	475	392	296	303	325	308	383	320	274
3303	28960	244	392	318	289	302	351	314	300	296	248
3304	Local Check (LC)	322	383	353	251	345	351	316	464	333	276
3305	29189	300	372	336	253	342	573	390	523	344	275
3306	29142	262	372	317	260	296	428	328	467	334	272
3307	29193	369	495	432	244	311	523	359	360	357	291
3308	28952	218	428	323	260	365	405	343	377	303	244
3309	28962	296	404	350	251	314	371	312	450	324	277
3310	Zonal Check (ZC)	244	452	348	269	311	436	339	400	328	275
3311	29177	298	399	349	278	303	392	324	433	336	278
3312	28959	342	443	393	244	373	432	350	433	342	272
3313	CO-51 (NC)	416	475	445	300	389	453	381	390	362	290
3314	28964	251	424	338	244	310	379	311	473	316	258
3315	29197	318	454	386	247	319	363	310		336	270
3316	US 314 (HC)	356	346	351	229		370	299	623	333	269
3317	28950	342	387	365	258	310	412	327	553	343	279
3318	28956	311	412	361	318	317	363	333	392	324	266
3319	28953	324	434	379	300	384	375	353	433	333	270
3320	28123	336	440	388	269	242	418	310	410	326	280
3321	28124	216	456	336	271	280	356	302	403	301	239
Exp. Mean		302	423	362	266	319	405	330	434	330	270

Table No. 1.12: Grain quality characteristics of entries in AVT 1-E TP, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
3301	29140	82.6	76.1	75.1	5.77	1.99	2.89	MS	VOC	4.0	25.96	25
3302	28954	81.4	74.9	73.3	7.01	2.47	2.83	LB	VOC	7.0	24.87	22
3303	28960	83.2	74.4	70.8	7.32	2.10	3.48	LS	VOC	4.0	23.76	22
3304	Local Check											
3305	29189	79.9	71.9	67.2	6.86	2.11	3.25	LS	VOC	4.0	28.04	22
3306	29142	80.1	69.9	63.8	6.34	2.26	2.80	LB	VOC	3.0	25.66	63
3307	29193	81.2	74.1	73.1	6.67	1.95	3.42	LS	VOC	4.0	27.83	40
3308	28952	80.4	71.8	69.1	6.56	2.32	2.82	LB	VOC	7.0	25.10	22
3309	28962	81.0	73.6	71.1	7.00	2.09	3.34	LS	VOC	7.0	26.13	22
3310	MTU-1153	80.8	70.9	66.0	5.53	1.94	2.85	MS	VOC	4.0	24.08	63
3311	29177	82.0	73.2	68.8	6.73	2.21	3.04	LS	VOC	4.0	27.19	60
3312	28959	82.9	74.3	69.5	6.75	2.12	3.18	LS	VOC	4.0	22.70	25
3313	CO-51 (NC)	80.2	72.7	71.8	5.49	2.03	2.70	MS	A	4.0	25.63	56
3314	28964	80.9	72.8	69.9	6.16	2.74	2.24	LB	VOC	4.0	24.40	25
3315	29197	79.6	72.1	70.7	6.68	2.28	2.92	LB	A	4.0	23.60	35
3316	US-314 (HC)	80.8	72.7	71.4	5.60	2.13	2.62	MS	VOC	4.0	22.14	50
3317	28950	80.1	72.9	66.4	5.54	2.41	2.29	SB	OC	4.0	24.84	22
3318	28956	80.3	73.3	69.9	6.69	2.38	2.81	LB	VOC	4.0	22.76	22
3319	28953	79.4	72.9	71.1	5.87	2.69	2.18	SB	OC	4.0	26.04	22
3320	28123	80.7	71.6	69.8	5.83	2.23	2.61	MS	VOC	4.0	26.10	22
3321	28124	78.9	70.3	67.0	6.30	2.31	2.72	LB	VOC	4.0	24.52	36

HULL: Hulling (%); **MILL:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length (mm); **KB:** Kernel Breadth (mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content (%); **GC:** Gel Consistency; **LB:** Long Bold; **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

Table No.1.13: Composition of entries in Initial Variety Trial–Early Transplanted (IVT-E TP), Kharif, 2021

Entry No.	IET No.	Designation	Cross Combination	GT
1st year of testing:				
3401	29938	CB 16660	CB 08504 / JGL 17190	MS
3402	29939	CR 4060-1318-5-2-2-2-1-5-3-4	IET 22729 / Browngora	LB
3403	29173 (R)	CR 3948-1-1-2-1-1	Lalat / CR 2340-11	LS
3404	29940	CRU-BCKV-22-35 (14-N22/35-13-4-5-2)	N22 / IET 25701	MS
3405	29941	CSR 189-11-80	Sarjoo 52 / FL478 // Sajoo52*3	SB
3406	29942	JGL 37180	IRTON 52 / IRRI 104	LS
3407	29943	KNM 11544	KNM 118 / CT 1865-1-5-1-25-4	LS
3408	29944	Luchai Mutant-1	Mutant of Luchai local landrace	LS
3409	29945	HKR 2018-24	HKR48 / HKR06-47 / HKR47	LS
3410	29946	MTU-1363	MTU 1010 / FL478 // *3 MTU 1010	LS
3411	29947	NLR 3684	NLR 34449 / NLR 33359	MS
3412	29948	NVSR-610	IRRI-AMT-301 / IET 22121	LS
3413	29949	PRNP 21282	NP 124-8 / NP 5682	MS
3414	29950	RP 6486-MAID-IR 143214-12-28-8-3-10-1-B	Naveen / IR 96321-1447-561-B-1 // Naveen / IR 87707-445-B-B //// Naveen / IRBL9 // Naveen / Aganni / 6 // Naveen / IRBB 60	LB
3415	CO-51 (NC)			
3416	29951	RTN 1403-7-1-1-2-4	RTN-1 / HRTMS-55	LS
3417	29952	TRC GBPT 206-B-B-33-1	Gomati / BPT 5204	LS
3418	29953	UPR 4381-9-2-1-1	Narendra 359 / UPRI 2011-14	LS
3419	29954	RP 6112- SP-M-MS-SS-1-22-6-4-9-3-7	BPT 5204 Mutant	MS
3420	29955	RDR 1934	MTU 1061 / IR 10A 155	LS
3421	29956	R 1779-321-1-112-1	Danteshwari / WLG 3020100	MS
3422	29957	RNR 39029	IR14G 3108	LS
3423	29958	RCPR 82-IR 14L362	IR09L 272 / IR09L 337	LS
3424	29959	BRR 2019	Sita / Pusa Basmati-1	LS
3425	29960	CR 3561-3-2-1-1-1-1	Surendra / Annapurna	MB
3426	29961	CRU-BCKV-V-35 (14-V/35-11-119-37-14-07)	Vandana / Sel(GS) was a homozygous line selected from a cross between gobindabhog and satabdi	MS
3427	29962	AD 18006	ADT 37 / WGL 14377	SB
3428	29963	HURS 21-1	NDR 359 / Shusk Samrat	LS
3429	29964	KNM 11505	TME 80518 / MTU 1156	LS
3430	29965	KPS 6850	RNR 15048 / JGL 17004	MS
3431	29966	MTU 1341	MTU 1010 / KMP 149	LS
3432	29967	NVSR 3090	IR 28 / GAR 13	LS
3433	29968	NWGR 16035	Gurjari / IET 20325 (39-2-1-1-1-1)	MB
3434	29969	RCPR 81-IR 95817-5-1-1-2	IR 09N 520 / IRRI 200	LS
3435	29970	RP 6485-MAID-IR 143216-1-180-3-4-2-23-B-2	IR 96321-1447-561-B-1 / Aganni // IR 96321-1447-561-B-1 / Abhaya //// IR 96321-1447-561-B-1 / IRBB 4 // IR 96321-1447-561-B-1 / IRBB 60 / 11 // IR 96321-1447-561-B-1 / Aganni // IR 96321-1447-561-B-1 / Abhaya //// IR 96321-1447-561-B-1 / Rathu Heenathi // IR 96321-1447-561-B-1 / IRBL9	SB
3436	29971	TRC B3N 1710-B-B-7-3	Bhalum 3 / Naveen	MB
3437	29972	NLR 3489	NLR 40024 / NLR 34449	SB
3438	29973	KMP 225	(IR 64 / DHMAS-70Q-164-1b) / IRBL9-W(LT)-Pi9	MS
3439	29974	ACK 12026	Mutant of White Ponni –WP 22-2	MS
3440	29975	KPS 6251	MTU 1010 / Chittimuthyalu	MS

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Entry No.	IET No.	Designation	Cross Combination	GT
3441	29976	ORJ 1313 (RP-5530-B-31-1)	RP Bio 226 / IRGC 48960 // MTU 1081	MB
3442	29977	RDR 1935	MTU 1160 / KNM 118	LS
3443	29978	RTN 1410-1-2-1-1-7	RTN RR-1 / HRTMS 16	LB
3444	PR 124-Northern, Narendra 97-Eastern, Luit -North Eastern, Sahbhagidhan- Central & Western, MTU 1153-Southern-- ZC			
3445	29979	CR 4352- 3-1-1-1-1-1	CR 3511-3-4-1-1-1-1 / CR 3504-14-1-1-1-1-1	MS
3446	29980	BRR 2034	Sita / RAU 3036	LS
3447	29981	CRR 822-2	IR 11 L152 / Sabitri	LS
3448	29982	KMP 235	BPT 5204 / MTU 1010	MS
3449	29983	HKR 2018-39	HKR 46 / OM 6377 / OM 5240	LS
3450	29984	R 2220-382-1-243-1	R 1546-1328-1-40-1 / Mahamaya	MB
3451	29985	CR 3947-2-1-2-2-1	IR 64 / IET 23467	LS
3452	29986	CRR 631-25-2	RR 51-1 / IR 64	LS
3453	29987	CB 16618	CO 51 / IET 20142 // CO 51 / IET 20716	MS
3454	29988	CR 3856-64-2-1-1-1-1-2-1-2	IR 73963-86-1-5-2-2 / CR 2324-1-1	MS
3455	29989	UPR 4296-17-1-1-1	Pant Dhan 4 / HKR 4	LS
3456	29990	PAU 6359-7-1-2-1-3 (RYT 3844)	MT16 // IR 64 Sub1 / PAU 3699-13-2-2-4	LS
3457	29991	CR 3426-115-55-25	Apo / O. nivara	MS
3458	29992	CRR 841-IR14L245	IR 10L179 / IR 10L15	LS
3459	29993	CR 4340-1-4-GSR IR2-1-R6- N6-N1-N20-N88	WTR / Haoannong	MB
3460	29994	CR 3006-8-2	Pusa 44 / Salakathi	LS
3461	29995	NVSR 2801	Gurjari / IR 28	LB
3462	29996	CR 3847-2-1-1-1-1	IR 79643-39-2-2 / CR Dhan 201	LS
3463	29997	NVSR 781	NVSR 303-06 / IRRI-AMT-301	SB
3464	Local Check			

(R): Repeat

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Table No.1.14: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP, Kharif 2021

Entry No	IET No	ZONE-II												ZONE-III					
		HARYANA						RAJASTHAN			Z2 (3)			ODISHA					
		KAUL			Karnal (ICAR-CSSRI)			KOTA			Mean			ICAR-NRRI (Cuttack)			JEYPORE		
GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP		
3401	29938	3700		84	2370		87	6150		91	4073		87	2270		91	5419	8	85
3402	29939	5450		87	7060	2 *	96	6981		95	6497	6 *	92	6420	2 *	90	2628		88
3403	29173 (R)	4850		96	6360	9 *	100	5851		104	5687		100	4620		90	4859		103
3404	29940	3900		86	4250		91	7214		102	5121		93	6190	5	90	4957		90
3405	29941	4100		92	6720	6 *	89	5585		102	5468		94	6010	6	90	2457		102
3406	29942	5950		88	6010		98	6915		93	6292		93	3330		88	4551		89
3407	29943	6150	8 *	90	5210		99	6848		92	6069		94	5900	8	86	2214		91
3408	29944	5200		82	3840		85	7447	7	91	5496		86	3780		90	4083		89
3409	29945	5600		82	6740	5 *	88	6715		90	6352	8	86	2750		87	4045		93
3410	29946	5350		83	7240	1 *	97	7314	9	98	6635	3 *	93	2780		90	5064		95
3411	29947	5850		90	4020		96	7580	6	102	5817		96	4480		90	5333	10	92
3412	29948	4200		91	5520		103	6117		104	5279		99	5030		90	3803		108
3413	29949	5750		91	4870		95	6217		93	5612		93	4930		88	5079		89
3414	29950	4650		92	5340		102	6582		100	5524		98	5050		90	5192		92
3415	CO-51 (NC)	4950		81	5140		88	7447	7	101	5846		90	5660	10	87	5021		88
3416	29951	6950	1 *	85	4820		93	7846	2	101	6539	5 *	93	3920		82	4252		93
3417	29952	6050	10 *	91	6820	4 *	102	7945	1	102	6938	2 *	98	3780		85	5000		96
3418	29953	5750		86	2630		94	6383		96	4921		92	3530		86	3547		90
3419	29954	4900		74	4220		82	5173		92	4764		83	2510		84	3568		82
3420	29955	5600		85	5570		94	5751		98	5640		92	3480		91	5513	6	90
3421	29956	4200		86	4220		89	5598		100	4673		91	4530		86	4735		95
3422	29957	6600	4 *	85	4020		88	6981		92	5867		88	4270		83	4872		93
3423	29958	6200	7 *	87	6130		98	5585		100	5972		95	5360		85	6004	2	87
3424	29959	4750		90	4900		99	4854		101	4835		96	5140		85	3205		92
3425	29960				5500		109	5246		103	5373		106	5880	9	82	4316		92
3426	29961	4550		82	2750		89	4501		89	3934		87	1920		84	5385	9	88
3427	29962	5950		84	5600		85	4601		90	5384		86	2100		89	4530		88
3428	29963	5550		88	3980		98	5818		99	5116		95	3560		82	5556	5	89
3429	29964	6800	2 *	84	6940	3 *	95	7148		98	6963	1 *	92	6194	4 *	91	5171		84
3430	29965	5950		85	4900		99	6569		98	5806		94	3974		90	3472		90
3431	29966	6700	3 *	91	4220		102	7846	2	101	6255		98	5250		89	3013		90
3432	29967	4350		86	4190		99	6051		92	4864		92	1990		84	4784		92
3433	29968	5900		88	5290		92	5585		95	5592		91	3550		83	4838		91
3434	29969	5300		87	6570	8 *	98	6004		92	5958		92	6560	1 *	90	4887		89
3435	29970			111	4362		105	3741		108	2870		108	2870		89	5496	7	94
3436	29971	3300		86	4980		91	4481		88	4254		88	3260		88	2389		93
3437	29972				3630		110	3790		104	3710		107	5170		89	5021		97
3438	29973	4800		84	6220		94	5984		92	5668		90	4220		92	2451		88
3439	29974	5000		96	4750		103	5685		96	5145		98	4340		88	3827		95
3440	29975	4900		92	4810		98	5751		90	5154		93	3450		84	2842		88
3441	29976	4300		96	5740		103	7706	5	95	5915		98	4940		88	5043		102
3442	29977	6150	8 *	84	6320	10 *	91	6449		97	6306	9	91	6270	3 *	86	2269		91
3443	29978	4800		94	5690		102	5984		101	5491		99	5630		82	3761		98
3444	Zonal Check (ZC)	5350		95	3820		93	6516		98	5229		95	2090		91	3355		86
3445	29979	4850		92	3710		102	4727		94	4429		96	3960		86	2607		96
3446	29980	3800		111	4490		97	3856		97	4049		102	4750		85	3141		93
3447	29981	6250	6 *	82	6260		96	6383		98	6298	10	92	3240		84	1996		85
3448	29982	5700		89	6050		96	6416		91	6055		92	3540		89	3312		88
3449	29983	6500	5 *	86	5550		90	7779	4	98	6610	4 *	91	3774		91	2400		98
3450	29984	4550		88	3750		88	5851		89	4717		88	4626		82	5235		92
3451	29985	5600		91	3000		98	5505		103	4702		97	5510		89	3415		92
3452	29986	3200		82	3500		91	3983		92	3561		88	2330		84	2132		87
3453	29987	4600		82	2870		89	4847		96	4106		89	3500		84	4951		92
3454	29988				4240		111	4355		101	4298		106	3764		80	6132	1	94
3455	29989	6050	10 *	83	3600		88	4574		94	4741		88	1560		90	5705	4	91
3456	29990	4950		97	4290		99	6782		102	5341		99	4500		84	5812	3	101
3457	29991	4400		97	6620	7 *	89	4874		99	5298		95	4790		84	5085		103
3458	29992	5950		89	5910		99	7314	9	100	6391	7	96	5050		89	5128		91
3459	29993	5600		85	3790		89	6948		98	5446		90	5920	7	86	2564		94
3460	29994	3700		85	5610		104	6848		101	5386		96	3500		83	4444		87
3461	29995	5400		86	4990		95	5891		97	5427		93	4330		82	2308		92
3462	29996	5550		88	5310		99	3637		99	4832		95	4350		81	3919		93
3463	29997	5000		84	3440		91	3324		97	3921		91	5250		83	4594		91
3464	Local Check (LC)	5100		82	3200		91	5519		102	4606		91	4040		90	4368		90
Mean				5218	88	4894	95	5978	97	5344	94	4238	87	4173					92
F Value				13.18(p<0.0001)S		8.79(p<0.0001)S		12.76(p<0.0001)S		5.11(p<0.0001)S		44.09(p<0.0001)S		5.92(p<0.0001)S					
CD				681		1175		917		546		531		1335					
SEm				1		2		1		1		1		1					1
CV%				6.53		12.01		7.67		5.11		6.27		16.01					
D/S				01-07-2021		30-06-2021		05-07-2021					06-07-2021		15-07-2021				
D/P				23-07-2021		02-08-2021		01-08-2021					09-08-2021		10-08-2021				
Local Check Name				HKR-48		CSR 10		Pratap-1					Naveen		Mandakini				

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP, Kharif 2021

Entry No	IET No	ZONE-III																			
		BIHAR						West Bengal												UP	
		BIKRAMGANJ (Dhangain)			Patna-ICAR			CHINSURAH			Pundibhari			MALDA			VARANASI				
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE		
3401	29938	4080		100	4430		87	4252		84					5867		80	4857		88	
3402	29939	5704	10	96	6660	8 *	88	4025		87	7000	10	88	7233	2 *	84	7305	3 *	85		
3403	29173 (R)	5881	6	100	5780	*	100	4138		100	4100		80	6733	8 *	85	6302			91	
3404	29940	6851	1 *	98	6550	*	91	4535		85	5500		77	6625		86	7461	2 *		90	
3405	29941	4953		102	5570		98	5839	4	93	4800		98	6517		83	5703			92	
3406	29942	5289		109	6710	7 *	89	5556	7	87	3800		97	6683		81	6901	5		84	
3407	29943	5193		93	5930	*	93	5272		89	7300	3	85	6642		83	5065			85	
3408	29944	4486		108	4650		86	4082		84	5400		88	5825		89	5000			82	
3409	29945	5754	9	97	5410		86	4365		87	4700		88	6000		86	6055			81	
3410	29946	4978		100	6510	*	87	5215		83	6400		79	6108		84	6250			84	
3411	29947	5757	8	106	5880	*	97	4960		90	5600		78	6317		85	6576	7		92	
3412	29948	5674		112	6860	5 *	97	4819		90	5300		85	6658		94	6016			95	
3413	29949	4718		109	6300	*	86	4110		86	4500		83	6733	8 *	87	6094			89	
3414	29950	5590		108	5940	*	99	4649		93	7200	6	86	4842		82	5547			92	
3415	CO-51 (NC)	3515		96	4870		86	5329	10	83	2700		86	6025		86	4544			86	
3416	29951	6231	5 *	94	6630	9 *	90	4365		87	4300		79	6742	6 *	83	5430			94	
3417	29952	5463		104	7690	2 *	98	4819		99	3800		85	6917	4 *	87	6380			91	
3418	29953	4877		97	6390	*	92	5329	10	88	4000		91	6750	5 *	83	6341			85	
3419	29954	3475		107	3860		80	5215		77	4700		83	4108		81	4245			74	
3420	29955	4482		94	4930		87	5782	5	86	6000		89	5500		85	4870			84	
3421	29956	3853		104	5110		91	4649		83	4700		89	5067		83	5807			84	
3422	29957	5512		101	7890	1 *	87	4252		84	6000		94	6517		86	4609			88	
3423	29958	4964		101	6440	*	91	4875		87	5100		86	6625		88	6419	9		86	
3424	29959	4802		102	5130		100	4365		93	5100		75	6625		88	5391			93	
3425	29960	5677		109	4880		105	4847		102	7100	9	84	6342		85	5365			98	
3426	29961	3475		100	5060		89	5952	3	85	4800		76	5133		86	5781			85	
3427	29962	5277		107	6370	*	87	4932		86	6000		71	4925		82	6393	10		84	
3428	29963	4641		99	5590		96	4252		87	3900		75	5342		84	5534			91	
3429	29964	5024		99	6110	*	88	4082		86	4800		83	5025		83	5521			82	
3430	29965	4510		105	6150	*	87	6293	1	87	5500		102	5500		85	6784	6		113	
3431	29966	4685		101	5860	*	98	4025		97	7200	6	91	7275	1 *	85	5638			91	
3432	29967	4723		111	3700		92	4422		90	7300	3	86	4717		85	4208			94	
3433	29968	6698	3 *	98	6580	10 *	93	4620		90	5000		92	4917		87	5560			95	
3434	29969	6796	2 *	107	7470	3 *	87	5159		87	4900		87	5483		81	6471	8		85	
3435	29970	5197		98	3960		111	4989		93	4700		102	6958	3 *	93	4208			104	
3436	29971	4093		102	4850		92	4932		90	6500		88	5375		90	5846			86	
3437	29972	5802	7	109	3720		112	5385	9	105	4900		96	6433		95	4388			79	
3438	29973	4716		109	5770	*	91	5499	8	87	6200		91	5800		87	5169			86	
3439	29974	4542		110	5610		98	4478		97	5000		81	6192		84	5339			106	
3440	29975	5179		101	5740	*	88	6009	2	88	5400		95	4833		89	6380			85	
3441	29976	6608	4 *	111	5860	*	96	4393		90	5400		92	6650		88	6120			94	
3442	29977	5200		98	4740		87	4422		83	6800		89	5958		85	5273			80	
3443	29978	4322		109	3970		95	4478		90	7700	2	94	6742	6 *	85	5286			96	
3444	Zonal Check (ZC)	5167		109	4860		83	5272		82	4700		97	4842		85	4219			77	
3445	29979	5605		110	5830	*	100	4138		102	4500		82	3817		97	5000			92	
3446	29980	5056		97	4900		99	4649		101	4800		86	4567		87	4909			92	
3447	29981	4574		103	6460	*	88	4535		86	3000		82	6067		84	5677			83	
3448	29982	4549		100	5420		93	4762		83	3800		84	6608		89	5924			81	
3449	29983	5136		101	6720	6 *	91	4195		90	3900		81	6700	10	85	5833			91	
3450	29984	4884		97	3780		89	4535		85	7300	3	83	6108		83	4987			84	
3451	29985	4649		106	6430	*	92	4138		90	5900		90	5808		85	6159			80	
3452	29986	3613		109	3400		85	5045		84	4900		85	3725		84	4792			84	
3453	29987	3931		101	4430		91	4223		87	3100		77	6250		84	5755			86	
3454	29988	4730		105	5440		100	4422		102	6100		98	5783		92	4961			90	
3455	29989	4712		97	4320		86	4932		83	7100	9	69	5583		81	5677			82	
3456	29990	5679		113	7130	4 *	96	4762		89	4600		78	6392		89	5169			100	
3457	29991	4642		107	4330		104	5159		109	6100		91	4175		89	5169			93	
3458	29992	5198		97	5160		100	5669	6	90	7800	1	85	6308		82	8229	1 *		91	
3459	29993	5206		98	4440		89	5045		84	7200	6	87	4692		81	6055			90	
3460	29994	4512		109	5010		104	5215		89	4900		79	4625		90	4961			96	
3461	29995	5500		107	6220	*	92	4478		84	4400		77	4708		89	7018	4 *		89	
3462	29996	5099		102	5770	*	94	4138		99	4000		85	6642		83	5443			86	
3463	29997	3964		96	4860		90	4535		93	7000	10	84	4425		95	4714			85	
3464	Local Check (LC)	4401		95	4920		88	4989		87	6300		87	5075		81	5560			83	
Mean		5001		103	5530		93	4794		89	5373		86	5815		86	5635			88	
F Value		5.97(p<0.0001)S			16.51(p<0.0001)S			12.08(p<0.0001)S			2.90(p<0.0001)S			13.98(p<0.0001)S			3.01(p<0.0001)S				
CD		883			715			1158			2073			675			1371				
SEm				0			0			0			2			2				1	
CV%		8.84			6.47			12.09			19.30			5.81			12.18				
D/S		03-07-2021			30-06-2021			30-06-2021			10-07-2021			30-06-2021			01-07-2021				
D/P		03-08-2021			25-07-2021			03-08-2021			06-08-2021			04-08-2021			29-07-2021				
Local Check Name		R. Bhawati			Sahbhagi Dhan			Ajit			MTU 1153			Muktothree			HUR-3022				

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP, Kharif 2021

Entry No	IET No	ZONE-III						ZONE-V											
		Z3 (8)			Chhattisgarh						Maharashtra I						Z5 (4)		
		Mean			RAIPUR			JAGADALPUR			SAKOLI			SINDHEWAHI			Mean		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
3401	29938	3897		88	2056		93	3242		91	3947		82	3281		88	3132		88
3402	29939	5872	4 *	88	4250		94	5951	5	91	5648	4	84	4609		94	5115	3	91
3403	29173 (R)	5302		93	5500	7	109	4284		101	3211		93	4879	4	100	4469		101
3404	29940	6084	1 *	88	6153	2 *	99	6217	3	94	4402		90	4190		97	5241	2	95
3405	29941	5231		95	4139		105	4375		100	3982		95	4020		96	4129		99
3406	29942	5353		89	2718		98	5436		95	5380	6	84	4226		99	4440		94
3407	29943	5440	*	88	3926		100	4993		98	4632		84	4183		86	4434		92
3408	29944	4663		89	2315		90	3561		91	4009		81	3928		75	3453		84
3409	29945	4885		88	3843		95	4870		96	4782		91	4425		90	4480		93
3410	29946	5413	*	88	3949		93	4811		91	4279		83	4162		92	4300		89
3411	29947	5613	7 *	91	5241	9	102	5645	8	100	4012		96	4517		94	4854	5	98
3412	29948	5520	9 *	96	3944		110	4707		100	3893		90	3480		93	4006		98
3413	29949	5308		90	3241		93	5000		96	5792	1	84	5099	3	86	4783	6	89
3414	29950	5501	*	93	4417		97	4889		97	3893		91	4510		88	4427		93
3415	CO-51 (NC)	4708		87	4231		91	4811		87	5352	7	82	4432		94	4707		88
3416	29951	5234		87	5199		98	4395		97	3242		90	4361		93	4299		94
3417	29952	5481	*	93	5722	5	107	3802		102	3372		96	4467		93	4341		99
3418	29953	5096		89	4486		98	3685		97	4071		91	4013		99	4064		96
3419	29954	3960		83	907		85	3027		84	4752		78	3267		72	2988		80
3420	29955	5070		88	2648		93	4915		94	5054		84	4851	5	84	4367		89
3421	29956	4806		89	3065		92	5475		91	4102		88	3885		95	4132		91
3422	29957	5490	*	89	4412		96	3724		96	3266		89	4219		76	3905		89
3423	29958	5723	5 *	89	2981		95	4023		89	5286	9	86	3892		93	4046		91
3424	29959	4970		91	4208		99	5020		101	4479		91	4091		96	4450		97
3425	29960	5551	8 *	94	6097	3 *	105	3770		100	3853		100	4034		101	4439		101
3426	29961	4688		86	3815		93	3776		94	3750		85	3800		86	3785		89
3427	29962	5066		87	2977		87	5553	9	95	4909		88	5199	2	80	4660		87
3428	29963	4797		88	4227		95	5208		95	3802		91	3402		98	4160		94
3429	29964	5241		88	3560		96	2988		91	5154	10	84	3977		86	3920		89
3430	29965	5273		95	3856		93	5540	10	91				4545		73	4647		86
3431	29966	5368		93	4292		100	4701		94	5669	3	89	4411		97	4768	8	95
3432	29967	4481		92	2736		97	4505		97	4173		87	4055		89	3867		92
3433	29968	5220		91	3870		96	4342		98	3576		94	4616		92	4101		95
3434	29969	5966	3 *	89	3968		94	4798		94	4222		84	4077		83	4266		89
3435	29970	4797		98	5185		113	4212		102	3295		100	3572		105	4066		105
3436	29971	4656		91	3481		98	5820	6	92	3413		86	3089		91	3951		92
3437	29972	5102		98	5597	6	105	3919		108	3372		102	2805		96	3923		103
3438	29973	4978		91	3000		93	4857		88	4526		83	4595		73	4245		84
3439	29974	4916		95	3903		99	5651	7	95	5302	8	89	4780	7	94	4909	4	94
3440	29975	4979		90	6079	4 *	94	6738	1	104	5742	2	84	4837	6	83	5849	1 *	91
3441	29976	5627	6 *	95	4384		100	3646		100	4939		94	4368		86	4334		95
3442	29977	5117		87	2602		90	6074	4	99	5457	5	79	4624		75	4689		86
3443	29978	5236		94	5231	10	99	3626		101	4132		94	4368		96	4339		97
3444	Zonal Check (ZC)	4313		89	3130		91	3802		99	4295		84	3260		93	3622		92
3445	29979	4432		95	6824	1 *	99	3659		97	4809		97	3729		103	4755	9	99
3446	29980	4597		92	5139		103	5286		100	3165		98	3999		91	4397		98
3447	29981	4444		87	4972		96	4902		91	4466		83	4780	7	88	4780	7	89
3448	29982	4739		88	4296		91	5215		95	4603		81	4638	10	91	4688		89
3449	29983	4832		91	4153		96	4349		96	4686		90	4616		93	4451		94
3450	29984	5182		87	2773		91	4596		91	3192		87	3707		82	3567		87
3451	29985	5251		90	4528		96	3750		96	4093		89	4382		95	4188		94
3452	29986	3742		88	1648		96	4225		91	3342		81	4503		80	3430		87
3453	29987	4518		88	4542		95	5137		88	4762		84	3459		77	4475		86
3454	29988	5167		95	3116		104	4505		104	3076		93	3615		81	3578		95
3455	29989	4949		85	3529		91	3958		91	3732		84	3551		99	3693		91
3456	29990	5506	10 *	94	4190		102	4128		100	3604		94	4659	9	93	4145		97
3457	29991	4931		97	5324	8	104	4557		106	3089		90	3445		102	4104		100
3458	29992	6068	2 *	90	3870		93	4271		95	4163		86	3842		96	4037		92
3459	29993	5140		89	2778		90	4271		97	3494		88	3857		86	3600		90
3460	29994	4646		92	3856		93	4323		95	4434		94	4176		81	4197		90
3461	29995	4870		89	3856		98	6224	2	95	4730		91	3849		91	4665		93
3462	29996	4920		90	4880		99	4219		94	4485		85	3885		77	4367		88
3463	29997	4918		90	3602		93	3346		93	3398		81	3849		80	3549		87
3464	Local Check (LC)	4957		87	4685		96	5462		89	3443		86	5391	1	92	4745	10	90
Mean		5064		90	4033		96	4606		96	4241		88	4146		89	4258		92
F Value					5.72(p<0.0001)S			2.63(p<0.0001)S			7.57(p<0.0001)S			2.02(p<0.0001)S			5.22(p<0.0001)S		
CD		442			1330			1458			772			1055			615		
SEm		0			2			0			1			2			1		
CV%		4.37			16.51			15.84			9.11			12.74			7.23		
D/S					29-06-2021			25-06-2021			28-06-2021			30-06-2021					
D/P					02-08-2021			16-07-2021			27-07-2021			27-07-2021					
Local Check Name					Indira Aerobic-1			Samleshwari			Sakoli-6			Sakoli-6					

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP, Kharif 2021

Entry No	IET No	ZONE-VI																	
		Maharashtra 2						Gujarat						Z6 (5)					
		KARJAT			VADAGAON			NAWAGAM			DABHOI			VYARA			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
3401	29938	2549		90	3641		81	3625		92	2892		81	2982		78	3138		84
3402	29939	4241		91	5377	1 *	86	3171		97	3407		90	3049		84	3849		89
3403	29173 (R)	4706		100	4788	9	97	4303		99	3824		94	4136		96	4351		97
3404	29940	3725		90	4644		96	3832		94	3858		87	4303		83	4072		90
3405	29941	4608		96	4781	10	87	3383		103	2745		89	2618		92	3627		93
3406	29942	4333		88	4331		87	5079	1	101	4755		87	5037	6	82	4707	6	89
3407	29943	4608		91	4041		94	4456		102	3917		88	3877		85	4180		92
3408	29944	2745		83	3675		77	3367		88	3127		81	3346		76	3252		81
3409	29945	4020		90	3966		86	4264		81	4436		83	3531		91	4043		86
3410	29946	5583	8	91	3684		88	3540		95	5324	4	83	3469		79	4320		87
3411	29947	5471	10	94	5025	7	87	3152		102	5735	1	88	4877		91	4852	3	92
3412	29948	5464		95	4714		95	4116		103	4863	9	92	3469		97	4525		96
3413	29949	5571	9	85	4392		95	4943	2	103	4098		86	4469		82	4695	8	90
3414	29950	6922	1 *	91	4374		87	4456		102	3358		89	4383		85	4699	7	91
3415	CO-51 (NC)	4304		88	4668		87	3804		74	4559		80	3408		78	4149		81
3416	29951	4860		86	4684		89	3787		87	4765		83	5463	1	86	4712	5	86
3417	29952	2900		85	5031	6	97	3968		102	5417	3	92	4734		94	4410		94
3418	29953	4049		91	3554		96	3923		99	3926		87	4427		85	3976		91
3419	29954	3451		85	3852		78	4399		77	3284		72	3759		76	3749		77
3420	29955	3137		89	4209		90	3764		91	3961		87	3482		81	3711		87
3421	29956	5647	7	89	4146		81	3073		85	3480		84	3741		79	4017		83
3422	29957	5176		86	3889		89	4649	8	92	4412		84	3253		83	4276		87
3423	29958	3971		88	3550		90	4070		101	3701		87	5444	2	83	4147		90
3424	29959	4118		91	3828		96	4841	3	104	3725		91	5371	3	83	4377		93
3425	29960	4608		95	4405		98	4501		101	4902	8	97	4358		87	4555	10	95
3426	29961	3824		89	4430		86	3681		89	3725		82	2858		96	3704		88
3427	29962	3431		92	3950		86	4012		73	3873		82	4201		79	3893		82
3428	29963	4137		93	3797		88	4376		100	3922		91	4333		79	4113		90
3429	29964	2588		88	4399		90	4036		93	4000		85	4148		89	3834		89
3430	29965	4216		90	4331		88	3299		94	4167		86	4457		82	4094		88
3431	29966	3500		91	4300		90	4308		97	3990		87	4383		82	4096		89
3432	29967	4268		90	3904		85	3968		94	3912		87	4457		85	4102		88
3433	29968	3333		87	5283	2	89	3549		92	5083	7	86	4458		89	4341		88
3434	29969	4049		89	4916	8	89	3810		96	4569		86	4704		89	4410		90
3435	29970	5931	5	99	3484		94	3923		95	2794		100	4161		107	4059		99
3436	29971	3857		92	4682		88	4025		95	3426		89	2648		83	3728		89
3437	29972	4814		100	3980		96	3957		97	3088		98	3234		96	3815		97
3438	29973	4942		90	4622		81	4138		91	3848		85	4278		81	4366		85
3439	29974	4412		94	4445		85	4671	7	94	3029		92	3938		87	4099		90
3440	29975	4020		93	4201		88	4116		93	3593		87	4833		81	4153		88
3441	29976	6078	4	89	5061	5	93	4320		89	4706		97	4593		89	4952	1	91
3442	29977	4314		88	4279		87	3753		90	4505		83	4538		78	4278		85
3443	29978	6539	3 *	89	4437		94	4308		97	2554		97	4728		88	4513		93
3444	Zonal Check (ZC)	4216		92	4033		80	4751	5	92	5108	6	86	4982	9	81	4618	9	86
3445	29979	5784	6	94	4400		93	4762	4	93	4853	10	91	2401		93	4440		93
3446	29980	2995		95	4186		97	4252		91	3824		91	2858		91	3623		93
3447	29981	4510		89	5146	4	89	4331		93	5588	2	84	5037	6	79	4922	2	87
3448	29982	3608		91	4041		89	4048		91	4510		94	4309		81	4103		89
3449	29983	5098		90	3974		89	4546	9	83	5245	5	85	4920	10	82	4757	4	86
3450	29984	3804		89	4421		87	3878		77	4510		82	3698		83	4062		84
3451	29985	4775		93	4286		94	3779		94	3775		83	5006	8	87	4324		90
3452	29986	4353		88	3401		80	3707		87	3127		87	2524		78	3422		84
3453	29987	3765		92	3988		87	4053		87	2578		87	4130		79	3703		86
3454	29988	4412		99	3425		101	4161		91	4211		82	3161		86	3874		92
3455	29989	2556		88	4010		84	3968		82	4495		97	4673		76	3940		85
3456	29990	6569	2 *	89	3546		101	3594		92	3745		78	4864		90	4464		90
3457	29991	4412		100	3813		102	4116		93	4721		86	3994		91	4211		94
3458	29992	4314		89	4010		89	3832		92	4029		89	3265		84	3890		88
3459	29993	4608		86	5154	3	90	4150		86	4054		94	3518		82	4297		87
3460	29994	3627		90	4308		86	3730		92	2941		89	5074	4	90	3936		89
3461	29995	3794		93	4613		90	3810		87	4725		81	5056	5	86	4400		87
3462	29996	4324		92	3653		96	4543	10	91	4015		86	4278		82	4163		89
3463	29997	2686		87	3543		88	4705	6	89	3623		84	1988		79	3309		85
3464	Local Check (LC)	5186		86	4221		94	4070		89	4657		84	3093		90	4245		88
Mean		4350		90	4249		89	4055		92	4056		87	4043		85	4151		89
F Value		9.03(p<0.0001)S			4.05(p<0.0001)S			3.82(p<0.0001)S			10.44(p<0.0001)S			3.69(p<0.0001)S			9.93(p<0.0001)S		
CD		927			690			756			657			1203			354		
SEm				1			1			1			0			0			0
CV%		10.67			8.13			9.34			8.10			14.89			4.27		
D/S		29-05-2021			25-06-2021			30-06-2021			02-07-2021			19-05-2021					
D/P		25-07-2021			24-07-2021			09-08-2021			31-07-2021			15-07-2021					
Local Check Name		Karjat-7			Phule Radha ©			Mahisagar			Mahi Sagar			GR-7					

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP, Kharif 2021

Entry No	IET No	ZONE-VII														
		Andhra Pradesh			Telangana						TamilNadu			Kerala		
		MARUTERU			KAMPASAGAR			WARANGAL			COIMBATORE			MONCOMPU		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
3401	29938	5647		75	3767		76	3987		84	5830		85	3448		75
3402	29939	5775		76	5889		83	4683		91	6938	1	88	4524		83
3403	29173 (R)	7814	4 *	88	4556		92	6170	6	102	5108		109	4892		90
3404	29940	7446	7	82	9333	1 *	87	5940	10	91	6448		98	6288	9	93
3405	29941	6833		84	6556		92	3959		95	6508		98	5351		100
3406	29942	6259		75	8000	5	89	4650		92	5279		90	4878		81
3407	29943	4553		82	3889		85	7358	1	98	5227		92	5496		90
3408	29944	5865		74	6111		74	3659		83	5461		84	4163		83
3409	29945	6911		76	7000		82	4829		91	5066		92	5073		82
3410	29946	7839	3 *	77	7222	10	83	4467		92	5283		87	5239		87
3411	29947	8341	1 *	81	6222		89	4020		95	6031		99	5885		89
3412	29948	7205		85	4889		93	4515		99	5177		107	5878		95
3413	29949	5538		75	3444		85	5138		93	6711	9	91	4976		100
3414	29950	5865		82	2100		84	3610		97	5235		91	5184		94
3415	CO-51 (NC)	5315		76	4778		78	4016		86	6833	5	90	5330		83
3416	29951	7240	8	84	6222		89	4268		93	5125		96	7788	1	98
3417	29952	8289	2 *	89	6000		84	6826	3	102	5685		100	5587		98
3418	29953	7790	6 *	80	4289		83	4821		93	5494		106	2899		86
3419	29954	4368		69	1011		72	4813		78	5418		83	4684		80
3420	29955				3667		87	4626		93	5289		88	4698		87
3421	29956				1933		85	5553		84	5010		86	5594		88
3422	29957				3967		85	6220	5	92	5502		94	6885	4	90
3423	29958	6182		82	2678		85	5163		99	5158		90	4691		83
3424	29959				1689		89	5756		104	5006		94	5892		90
3425	29960				1733		92	4780		90	6289		94	4573		98
3426	29961				1378		84	3610		87	6608		95	4455		98
3427	29962	5642		76	1878		84	4724		79	6393		86	5212		82
3428	29963	5039		83	3267		90	4943		94	5199		100	5503		90
3429	29964	6759		76	4278		89	5995	9	92	6474		90	4816		93
3430	29965	4510		76	3311		91	6122	7	93	6748	7	91	4739		83
3431	29966	6371		81	3167		92	5886		97	6314		87	5267		90
3432	29967	5476		81	2444		90	4732		94	6810	6	92	4746		81
3433	29968	6400		85	4567		90	5805		91	6278		98	6121	10	88
3434	29969	6996		80	6611		85	5894		95	5269		87	5323		95
3435	29970	5252		89	6622		95	5285		100	5053		87	4795		90
3436	29971	3726		82	8000	5	91	4886		95	6399		93	4670		95
3437	29972	3902		93	5667		99	5333		111	5019		107	7045	3	102
3438	29973	5273		78	5000		80	4537		91	5179		84	4344		83
3439	29974	7219	10	80	7333	9	87	3862		102	4837		89	5020		95
3440	29975	4132		78	6333		86	5065		95	6625	10	89	4964		100
3441	29976	7223	9	88	8778	2 *	95	7158	2	104	6748	7	99	5531		102
3442	29977	3931		76	5333		88	5363		90	4984		86	5135		81
3443	29978	6239		88	8111	4	90	4813		107	5021		105	6638	6	89
3444	Zonal Check (ZC)	5301		78	5556		89	6447	4	96	6916	3	91	4298		82
3445	29979	4408		86	2889		93	4407		101	6391		99	6548	7	95
3446	29980	3777		87	4556		92	3766		99	5024		98	4728		99
3447	29981	6049		76	7111		85	4659		94	4695		91	5902		86
3448	29982	6485		78	5778		85	5642		92	6923	2	92	4732		88
3449	29983	6655		79	7222	10	84	5236		91	4703		90	4881		86
3450	29984	3409		75	3111		85	4447		86	4958		90	4837		95
3451	29985	7001		84	3778		89	4837		105	5031		92	5471		100
3452	29986	3402		78	6000		85	4650		88	5251		83	2823		85
3453	29987	4122		77	4444		84	4504		86	5616		94	5045		87
3454	29988				5333		91	5528		100	5395		102	5582		90
3455	29989	6007		76	3333		81	4854		86	5060		93	3955		87
3456	29990	5741		89	4556		86	5833		98	5695		104	6117		95
3457	29991	4259		89	6222		90	4911		105	5051		109	5934		95
3458	29992	5796		80	2667		89	4476		94	5211		89	5302		82
3459	29993	4387		81	7667	8	87	4976		93	5211		97	6367	8	90
3460	29994	7811	5 *	82	7778	7	87	5667		94	6259		90	3774		95
3461	29995				6889		88	4561		88	5103		95	6705	5	90
3462	29996				8667	3 *	87	4732		97	5229		92	5434		90
3463	29997	5382		83	4667		87	5114		95	5220		85	5010		90
3464	Local Check (LC)	6619		85	6556		86	6008	8	95	6849	4	88	7316	2	84
Mean		5851		81	5059		87	5048		94	5670		93	5234		90
F Value		11.71(P<0.0001)s			12.71(P<0.0001)S			4.36(p<0.0001)S			4.67(p<0.0001)S			5.82(p<0.0001)S		
CD		1090			1626			1145			910			1098		
SEm				1			2			1			1			0
CV%		9.29			16.09			11.35			8.03			10.50		
D/S		13-07-2021			30-06-2021			04-07-2021			13-07-2021			15-07-2021		
D/P		06-08-2021			03-08-2021			07-08-2021			10-08-2021			12-08-2021		
Local Check Name		MTU1156			MTU-1010			KNM 118			CO 51			Prathyasa		

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Entry No	IET No	ZONE-VII									Overall (27)		
		Karnataka						Z7 (7)					
		MANDYA			GANGAVATHI			Mean			Mean		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
3401	29938	3961		87	4359		83	4428		80	3947		
3402	29939	6327	7	89	8234	5 *	91	6053		86	5501	5 *	89
3403	29173 (R)	5473		98	7506		98	5931		97	5208		97
3404	29940	6060		98	8417	4 *	95	7133	1 *	92	5751	1 *	91
3405	29941	6132		97	6212		91	5936		94	4980		95
3406	29942	5628		82	7429		89	6018		85	5375	7	89
3407	29943	5689		84	6429		93	5520		89	5148		90
3408	29944	5730		85	3692		81	4954		80	4391		84
3409	29945	5041		90	5295		90	5602		86	5018		88
3410	29946	5329		81	5962		87	5906		85	5309	9	88
3411	29947	5309		97	8641	3 *	95	6350	5	92	5573	3 *	93
3412	29948	5360		95	6141		93	5595		95	5104		97
3413	29949	5885		89	6987		91	5526		89	5207		90
3414	29950	6348	6	89	6532		94	4982		90	5061		92
3415	CO-51 (NC)	5947		79	6962		89	5597		83	4961		85
3416	29951	5658		91	7660	9	96	6280	7	92	5415	6 *	90
3417	29952	4928		90	7917	7	98	6462	4	94	5530	4 *	95
3418	29953	5504		95	6929		97	5389		91	4792		91
3419	29954	4167		80	3923		78	4055		77	3891		80
3420	29955	5442		87	7987	6	89	5285		88	4816		89
3421	29956	5350		83	6478		88	4986		85	4577		88
3422	29957	7305	1	87	5596		96	5913		90	5154		89
3423	29958	5977		87	7577		90	5347		88	5113		90
3424	29959	5628		89	6346		97	5053		94	4779		93
3425	29960	4640		94	7256		98	4879		94	4998		97
3426	29961	4146		93	4917		93	4186		92	4157		88
3427	29962	6142	10	86	4583		86	4939		83	4791		85
3428	29963	5463		91	6686		94	5157		92	4705		91
3429	29964	3179		76	9763	2 *	90	5895		87	5146		88
3430	29965	5535		87	7769	8	87	5533		87	5106		90
3431	29966	5195		82	7545		92	5678		89	5223	10	92
3432	29967	5813		87	6891		89	5273		88	4568		90
3433	29968	4918		93	9936	1 *	95	6289	6	91	5210		91
3434	29969	5195		89	5090		83	5768		87	5374	8	89
3435	29970	3560		89	5801		91	5195		91	4569		98
3436	29971	5185		82	6192		90	5580		90	4574		90
3437	29972	5099		89	6763		99	5547		100	4686		100
3438	29973	4095		79	4141		82	4653		82	4748		87
3439	29974	7099	4	84	5135		86	5786		89	5015		93
3440	29975	5473		81	6013		83	5515		87	5113		89
3441	29976	5967		89	7385		97	6970	2	96	5691	2 *	95
3442	29977	5772		79	6397		95	5274		85	5071		86
3443	29978	6317	8	89	5353		97	6070	9	95	5214		95
3444	Zonal Check (ZC)	7274	2	88	5596		91	5913		88	4784		89
3445	29979	5998		87	5936		98	5225		94	4687		95
3446	29980	5720		87	5417		97	4713		94	4356		95
3447	29981	7181	3	85	5474		88	5867		86	5157		88
3448	29982	5072		81	5538		89	5739		86	5019		88
3449	29983	5226		84	6096		86	5717		86	5189		89
3450	29984	5473		83	3244		88	4211		86	4432		86
3451	29985	6224	9	84	6681		95	5575		92	4945		92
3452	29986	3302		76	3782		77	4173		81	3728		85
3453	29987	4506		82	4346		82	4655		84	4350		86
3454	29988	4331		85	4814		93	5164		93	4584		95
3455	29989	5864		88	3103		89	4597		86	4462		86
3456	29990	4465		100	6391		102	5543		96	5102		95
3457	29991	5226		97	7609	10	98	5602		97	4890		97
3458	29992	4691		87	6545		89	4955		87	5111		90
3459	29993	6759	5	89	6571		96	5991		90	5010		89
3460	29994	4362		85	4821		86	5782		88	4825		91
3461	29995	5864		95	7263		91	6064	10	91	5088		90
3462	29996	5247		84	7199		90	6085	8	90	4948		90
3463	29997	4259		86	7205		90	5265		88	4396		88
3464	Local Check (LC)	6029		87	7346		89	6675	3	88	5200		88
Mean		5407		87	6309		91	5500		89	4919		90
F Value		5.57(p<0.0001)S			22.58(p<0.0001)S			20.26(p<0.0001)S			35.08(p<0.0001)S		
CD		1060			856			403			197		
SEm				2			2			0			0
CV%		9.81			6.79			3.67			2.00		
D/S		28-07-2021			19-07-2021								
D/P		17-08-2021			13-08-2021								
Local Check Name		KMP-105 (Raksha)			GNV 10-89								

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Table No. 1.14 Contd: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP (State Means), Kharif 2021

Entry No	IET No	HARYANA			ODISHA			BIHAR			WEST BENGAL			CHHATTISGARH		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD
3401	29938	3035		85	3845		88	4255		94	5060		82	2649		92
3402	29939	6255	4 *	91	4524		89	6182	10 *	92	6086	6	86	5101	6	92
3403	29173 (R)	5605		98	4740		96	5831	*	100	4990		88	4892		105
3404	29940	4075		88	5574	4	90	6701	2 *	94	5553		83	6185	2 *	96
3405	29941	5410		90	4234		96	5262		100	5719		91	4257		102
3406	29942	5980	10 *	93	3941		88	6000	*	99	5346		85	4077		96
3407	29943	5680		94	4057		88	5562		93	6405	2 *	86	4460		99
3408	29944	4520		83	3932		89	4568		97	5102		87	2938		90
3409	29945	6170	7 *	85	3398		90	5582		91	5022		87	4357		95
3410	29946	6295	3 *	90	3922		92	5744	*	94	5908	8	82	4380		92
3411	29947	4935		93	4907		91	5819	*	102	5626		84	5443	3	101
3412	29948	4860		97	4417		99	6267	8 *	105	5592		89	4326		105
3413	29949	5310		93	5005		89	5509		98	5114		85	4121		94
3414	29950	4995		97	5121	7	91	5765	*	103	5564		87	4653		97
3415	CO-51 (NC)	5045		84	5341	5	87	4193		91	4685		85	4521		89
3416	29951	5885	*	89	4086		87	6431	6 *	92	5136		83	4797		97
3417	29952	6435	2 *	96	4390		91	6577	5 *	101	5179		90	4762		105
3418	29953	4190		90	3539		88	5634	*	95	5360		87	4086		98
3419	29954	4560		78	3039		83	3668		94	4674		80	1967		84
3420	29955	5585		90	4497		91	4706		91	5761		86	3782		93
3421	29956	4210		87	4633		91	4482		98	4805		85	4270		91
3422	29957	5310		86	4571		88	6701	2 *	94	5590		88	4068		96
3423	29958	6165	8 *	92	5682	3	86	5702	*	96	5533		87	3502		92
3424	29959	4825		94	4173		88	4966		101	5363		85	4614		100
3425	29960	5500		109	5098	8	87	5279		107	6096	5	90	4934		102
3426	29961	3650		85	3653		86	4268		95	5295		82	3796		94
3427	29962	5775		84	3315		88	5824	*	97	5286		80	4265		91
3428	29963	4765		93	4558		85	5116		97	4498		82	4718		95
3429	29964	6870	1 *	90	5683	2	92	5567		94	4636		84	3274		93
3430	29965	5425		92	3723		90	5330		96	5764		91	4698		92
3431	29966	5460		96	4132		89	5273		100	6167	4	91	4497		97
3432	29967	4270		92	3387		88	4212		101	5480		87	3621		97
3433	29968	5595		90	4194		87	6639	4 *	96	4846		90	4106		97
3434	29969	5935	*	93	5724	1	89	7133	1 *	97	5181		85	4383		94
3435	29970	3120		111	4183		91	4579		104	5549		96	4699		107
3436	29971	4140		88	2825		90	4472		97	5602		89	4651		95
3437	29972	3630		110	5096	9	93	4761		110	5573		99	4758		107
3438	29973	5510		89	3336		90	5243		100	5833	10	88	3929		90
3439	29974	4875		99	4084		91	5076		104	5223		87	4777		97
3440	29975	4855		95	3146		86	5460		94	5414		91	6409	1 *	99
3441	29976	5020		100	4992		95	6234	9 *	104	5481		90	4015		100
3442	29977	6235	6 *	87	4270		89	4970		92	5727		86	4338		94
3443	29978	5245		98	4696		90	4146		102	6307	3	90	4429		100
3444	Zonal Check (ZC)	4585		94	2723		89	5014		96	4938		88	3466		95
3445	29979	4280		97	3284		91	5718	*	105	4152		94	5242	4	98
3446	29980	4145		104	3946		89	4978		98	4672		91	5213	5	101
3447	29981	6255	4 *	89	2618		84	5517		95	4534		84	4937	10	93
3448	29982	5875	*	93	3426		88	4985		96	5057		85	4756		93
3449	29983	6025	9 *	88	3087		94	5928	*	96	4932		85	4251		96
3450	29984	4150		88	4931		87	4332		93	5981	7	84	3685		91
3451	29985	4300		95	4463		90	5540		99	5282		88	4139		96
3452	29986	3350		86	2231		85	3507		97	4557		84	2937		93
3453	29987	3735		86	4226		88	4181		96	4524		82	4840		91
3454	29988	4240		111	4948		87	5085		103	5435		97	3811		104
3455	29989	4825		86	3633		90	4516		91	5872	9	77	3744		91
3456	29990	4620		98	5156	6	93	6405	7 *	105	5251		85	4159		101
3457	29991	5510		93	4938		93	4486		106	5145		96	4941	9	105
3458	29992	5930	*	94	5089	10	90	5179		98	6592	1 *	86	4071		94
3459	29993	4695		87	4242		90	4823		94	5646		84	3525		93
3460	29994	4655		94	3972		85	4761		107	4913		86	4090		94
3461	29995	5195		90	3319		87	5860	*	100	4529		83	5040	8	96
3462	29996	5430		93	4135		87	5435		98	4927		89	4550		96
3463	29997	4220		87	4922		87	4412		93	5320		91	3474		93
3464	Local Check (LC)	4150		86	4204		90	4661		91	5455		85	5074	7	92
Mean		5022		92	4205		89	5266		98	5326		87	4319		96
F Value		7.91(p<0.0001)S			8.26(p<0.0001)S			14.90(p<0.0001)S			3.00(p<0.0001)S			4.54(p<0.0001)S		
CD		794			781			577			834			988		
SEm				1			1			0			1			1
CV%		7.91			9.29			5.48			7.84			11.44		

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA 1			MAHARASHTRA 2			MAHARASHTRA			GUJARAT		
		Mean			Mean			Mean			Mean		
		GY	R	DDF	GY	R	DDF	GY	R	DDF	GY	R	DDF
3401	29938	3614		85	3095		85	3354		85	3166		84
3402	29939	5129	3	89	4809		88	4969	3	88	3209		90
3403	29173 (R)	4045		96	4747		98	4396		97	4088		96
3404	29940	4296		93	4185		93	4240		93	3998		88
3405	29941	4001		95	4695		91	4348		93	2915		94
3406	29942	4803	10	91	4332		87	4568		89	4957	2	90
3407	29943	4408		85	4325		92	4366		89	4083		92
3408	29944	3969		78	3210		80	3589		79	3280		82
3409	29945	4604		91	3993		88	4298		89	4077		85
3410	29946	4221		87	4634		89	4427		88	4111		86
3411	29947	4265		95	5248	4	90	4756	6	93	4588	8	94
3412	29948	3687		92	5089	6	95	4388		93	4149		97
3413	29949	5446	1	85	4982	8	90	5213	1*	87	4503		90
3414	29950	4202		89	5648	1 *	89	4925	4	89	4066		92
3415	CO-51 (NC)	4892	9	88	4486		87	4689	10	87	3924		77
3416	29951	3802		92	4772		87	4287		89	4672	6	85
3417	29952	3920		94	3966		91	3943		93	4706	5	96
3418	29953	4042		95	3802		93	3922		94	4092		90
3419	29954	4010		75	3652		81	3831		78	3814		75
3420	29955	4953	8	84	3673		89	4313		87	3736		86
3421	29956	3994		91	4897	9	85	4445		88	3431		83
3422	29957	3743		83	4533		87	4137		85	4105		86
3423	29958	4589		89	3761		89	4175		89	4405		90
3424	29959	4285		93	3973		93	4129		93	4646	7	92
3425	29960	3944		100	4507		96	4225		98	4587	9	95
3426	29961	3775		85	4127		87	3951		86	3421		89
3427	29962	5054	4	84	3691		89	4372		86	4029		78
3428	29963	3602		94	3967		90	3785		92	4210		90
3429	29964	4566		85	3494		89	4030		87	4061		89
3430	29965	4545		73	4274		89			83	3974		87
3431	29966	5040	7	93	3900		90	4470		91	4227		88
3432	29967	4114		88	4086		87	4100		87	4112		88
3433	29968	4096		93	4308		88	4202		90	4363		89
3434	29969	4150		84	4483		89	4316		86	4361		90
3435	29970	3434		102	4708		97	4071		99	3626		100
3436	29971	3251		88	4270		90	3760		89	3366		89
3437	29972	3089		99	4397		98	3743		98	3426		97
3438	29973	4561		78	4782		85	4671		82	4088		86
3439	29974	5041	5	91	4429		89	4735	7	90	3879		91
3440	29975	5290	2	83	4111		90	4700	9	87	4181		87
3441	29976	4654		90	5570	2 *	91	5112	2	90	4540	10	92
3442	29977	5041	5	77	4297		87	4668		82	4265		84
3443	29978	4250		95	5488	3 *	91	4869	5	93	3863		94
3444	Zonal Check (ZC)	3778		89	4125		86	3951		87	4947	3	86
3445	29979	4269		100	5092	5	93	4681		96	4005		92
3446	29980	3582		95	3591		96	3586		95	3645		91
3447	29981	4623		86	4828		89	4725	8	87	4985	1	85
3448	29982	4621		86	3825		90	4223		88	4289		88
3449	29983	4651		91	4536		90	4594		90	4904	4	83
3450	29984	3450		84	4113		88	3781		86	4029		81
3451	29985	4238		92	4531		93	4384		92	4187		88
3452	29986	3923		80	3877		84	3900		82	3119		84
3453	29987	4111		80	3877		89	3993		85	3587		84
3454	29988	3346		87	3919		100	3632		93	3844		86
3455	29989	3642		91	3283		86	3462		88	4379		85
3456	29990	4132		93	5058	7	95	4594		94	4068		87
3457	29991	3267		96	4113		101	3689		98	4277		90
3458	29992	4003		91	4162		89	4082		90	3709		88
3459	29993	3676		87	4881	10	88	4278		87	3907		87
3460	29994	4305		87	3968		88	4136		87	3915		90
3461	29995	4290		91	4204		91	4247		91	4530		85
3462	29996	4185		81	3989		94	4087		87	4279		86
3463	29997	3624		81	3115		87	3369		84	3439		84
3464	Local Check (LC)	4417		89	4704		90	4560		89	3940		87
Mean		4196		88	4299		90	4247		89	4051		88
F Value		5.4(p<0.0001)S			7.21(p<0.0001)S			8.19(p<0.0001)S			8.17(p<0.0001)S		
CD		643			600			410			467		
SEm		1			0			1			0		
CV%		7.67			6.99			4.83			5.77		

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP (State Means), Kharif 2021

Entry No	IET No	TELANGANA			KERALA			KARNATAKA		
		Mean			Mean			Mean		
		GY	R	DFP	GY	R	DFP	GY	R	DFP
3401	29938	3877		80	3448		75	4160		85
3402	29939	5286		87	4524		83	7281	2	90
3403	29173 (R)	5363		97	4892		90	6490		98
3404	29940	7637	2 *	89	6288	9	93	7239	3	96
3405	29941	5258		93	5351		100	6172		94
3406	29942	6325	8	90	4878		81	6529		85
3407	29943	5624		91	5496		90	6059		88
3408	29944	4885		78	4163		83	4711		83
3409	29945	5915		87	5073		82	5168		90
3410	29946	5845		87	5239		87	5646		84
3411	29947	5121		92	5885		89	6975	4	96
3412	29948	4702		96	5878		95	5751		94
3413	29949	4291		89	4976		100	6436		90
3414	29950	2855		90	5184		94	6440		92
3415	CO-51 (NC)	4397		82	5330		83	6455		84
3416	29951	5245		91	7788	1	98	6659	10	94
3417	29952	6413	7	93	5587		98	6423		94
3418	29953	4555		88	2899		86	6217		96
3419	29954	2912		75	4684		80	4045		79
3420	29955	4147		90	4698		87	6715	6	88
3421	29956	3743		84	5594		88	5914		85
3422	29957	5094		88	6885	4	90	6451		91
3423	29958	3921		92	4691		83	6777	5	88
3424	29959	3723		96	5892		90	5987		93
3425	29960	3257		91	4573		98	5948		96
3426	29961	2494		85	4455		98	4532		93
3427	29962	3301		81	5212		82	5363		86
3428	29963	4105		92	5503		90	6075		93
3429	29964	5137		91	4816		93	6471		83
3430	29965	4717		92	4739		83	6652		87
3431	29966	4527		95	5267		90	6370		87
3432	29967	3588		92	4746		81	6352		88
3433	29968	5186		90	6121	10	88	7427	1 *	94
3434	29969	6253		90	5323		95	5143		86
3435	29970	5954		97	4795		90	4681		90
3436	29971	6443	6	93	4670		95	5689		86
3437	29972	5500		105	7045	3	102	5931		94
3438	29973	4769		86	4344		83	4118		80
3439	29974	5598		94	5020		95	6117		85
3440	29975	5699		90	4964		100	5743		82
3441	29976	7968	1 *	99	5531		102	6676	8	93
3442	29977	5348		89	5135		81	6085		87
3443	29978	6462	5	98	6638	6	89	5835		93
3444	Zonal Check (ZC)	6002		92	4298		82	6435		90
3445	29979	3648		97	6548	7	95	5967		92
3446	29980	4161		95	4728		99	5569		92
3447	29981	5885		89	5902		86	6328		86
3448	29982	5710		88	4732		88	5305		85
3449	29983	6229		87	4881		86	5661		85
3450	29984	3779		85	4837		95	4359		85
3451	29985	4308		97	5471		100	6453		89
3452	29986	5325		86	2823		85	3542		76
3453	29987	4474		85	5045		87	4426		82
3454	29988	5431		95	5582		90	4573		89
3455	29989	4094		83	3955		87	4484		88
3456	29990	5195		92	6117		95	5428		101
3457	29991	5567		97	5934		95	6418		97
3458	29992	3572		92	5302		82	5618		88
3459	29993	6322	9	90	6367	8	90	6665	9	93
3460	29994	6723	3	90	3774		95	4592		85
3461	29995	5725		88	6705	5	90	6564		93
3462	29996	6700	4	92	5434		90	6223		87
3463	29997	4891		91	5010		90	5732		88
3464	Local Check (LC)	6282	10	91	7316	2	84	6688	7	88
Mean		5054		90	5234		90	5858		89
F Value		12.46(p<0.0001)S			5.82(p<0.0001)S			12.34(p<0.0001)S		
CD		914			1098			702		
SEm		1			0			1		
CV%		9.05			10.50			6.00		

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP (Trials Not Considered), Kharif 2021

Entry No	IET No	UTTARAKHAND			PUNJAB			Bihar			Jharkhand			UTTAR PRADESH		
		@PANTNAGAR			@LUDHIANA			@SABOUR			@RANCHI			@HATWARA		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
3401	29938	2046		82	1183		87	2928		89	2593		96	2000		95
3402	29939	4973	10	87	5350	3	95	3625		97	5785	2	97	2004		84
3403	29173 (R)	4023		94	3567		102	3784		104	4721		109	1673		90
3404	29940	5009	9	89	4258		90	5075	1	88	5053		105	2419		89
3405	29941	4627		95	2258		101	2620		104	3258		106	2245		92
3406	29942	5639	1	85	5267	4	90	3207		96	3723		100	3798	6	85
3407	29943	4437		89	4567		94	3257		111	3125		102	1785		85
3408	29944	2996		77	2642		82	4034		87	2394		98	2120		82
3409	29945	3986		87	3642		89	4439	4	90	3790		105	2294		89
3410	29946	4244		86	4683		93	3870		89	2460		93	2228		84
3411	29947	3841		94	4017		96	3756		101	3125		105	2138		94
3412	29948	4485		94	4008		102	4038	10	103	5319	9	111	3981	5	99
3413	29949	4673		87	4650		93	3555		95	5785	2	102	2141		96
3414	29950	3471		92	2258		108	3019		100	4987		103	2435		89
3415	CO-51 (NC)	4726		78	3117		84	4125	9	83	5718	4	104	3495	9	91
3416	29951	5367	3	87	4533		91	3583		87	3723		109	2726		82
3417	29952	4761		95	4692	10	101	4522	3	108	4455		111	1887		91
3418	29953	3676		87	3567		92	3832		92	4920		104	2293		84
3419	29954	4558		74	2242		76	2988		79	5386	7	93	2873		90
3420	29955	3590		82	3992		92	2990		92	3657		99	2794		87
3421	29956	3331		93	3708		92	3279		89	3590		99	2656		100
3422	29957	5224	4	84	4092		88	3966		88	4056		106	2334		93
3423	29958	4815		87	4250		94	3493		101	4854		102	2877		89
3424	29959	3463		93	4317		97	3632		97	3590		110	2242		88
3425	29960	3162		102	1342		111	3207		110	6649	1	101	2058		88
3426	29961	4609		84	3167		92	3639		83	2593		103	1679		78
3427	29962	4573		86	3917		90	3721		89	4255		98	4026	3	97
3428	29963	3519		93	4283		100	3188		96	5386	7	104	2365		83
3429	29964	5026	8	87	5400	2	89	4221	6	89	2793		99	2351		81
3430	29965	3786		86	3608		88	3556		90	4854		99	2590		92
3431	29966	5618	2	92	3742		98	3663		96	3524		104	2681		84
3432	29967	2991		89	4425		93	3268		100	2460		101	3243		83
3433	29968	5223	5	92	4742	9	93	2180		95	4122		103	2449		88
3434	29969	4040		87	4917	7	88	3566		98	2726		99	2685		82
3435	29970	430		110				3241		113	3923		114	2295		88
3436	29971	3877		91	3408		90	3197		100	4056		99	3051		86
3437	29972	3269		88	642		116	3351		117	5652	5	115	3461	10	87
3438	29973	927		109	3258		89	3152		92	3590		99	2480		82
3439	29974	3485		86	2333		98	3226		107	4189		103	2096		87
3440	29975	5124	6	87	3517		90	3341		94	5386	7	104	1639		91
3441	29976	3199		94	3800		101	4142	8	102	4056		105	2915		88
3442	29977	602		111	3733		85	3481		88	3324		97	2825		93
3443	29978	2907		93	3742		92	3856		104	3457		111	3020		90
3444	Zonal Check (ZC)	5063	7	90	3608		99	2959		79	1130		92	1916		89
3445	29979				2350		106	4918	2	107	5053		108	2945		98
3446	29980	2176		93	2375		96	4022		104	4521		106	2721		97
3447	29981	4887		84	5133	5	92	3655		93	3524		99	2486		86
3448	29982	4784		86	4133		90	3718		90	2926		100	3343		92
3449	29983	3916		87	5092	6	92	3423		90	3790		105	2319		86
3450	29984	3301		82	3525		87	2744		94	3923		91	3046		92
3451	29985	4549		91	3358		98	3436		100	5319	9	105	2763		89
3452	29986	2995		82	1800		92	2188		94	1862		96	4211	1	86
3453	29987	3194		83	3742		89	3447		91	3989		99	2107		92
3454	29988	3106		95	1275		106	2613		108	5253		106	2797		89
3455	29989	3451		83	3083		84	4202	7	80	3723		101	3359		89
3456	29990	3274		92	4208		100	3803		104	3258		112	3420		86
3457	29991	2379		95	2400		100	3200		106	3524		105	2914		83
3458	29992	4316		87	4908	8	95	4293	5	97	2726		102	4108	2	101
3459	29993	4009		85	3983		87	2659		90	2992		104	2496		84
3460	29994	3311		100	4542		101	3942		95	2992		99	3997	4	83
3461	29995	3761		88	4608		91	3649		97	3590		100	3687	7	91
3462	29996	2936		88	3742		94	3075		97	4322		103	3166		88
3463	29997	2999		85	1642		95	3112		90	4122		97	3542	8	92
3464	Local Check (LC)	3318		78	5533	1	89	3163		87	1396		91	2899		84
Mean		3810		89	3649		94	3516		96	3922		102	2712		88
F Value		14.45(p<0.0001)S			8.66(p<0.0001)S			5.26(p<0.0001)S			15.04(p<0.0001)S			113.80(p<0.0001)S		
CD		821			1085			695			818			170		
SEm				1			1			1			1			1
CV%		10.78			14.87			9.90			10.44			3.14		
D/S		02-07-2021			30-06-2021			30-06-2021			30-06-2021			09-07-2021		
D/P		29-07-2021			30-07-2021			22-07-2021			05-08-2021			05-08-2021		
Local Check Name		Govind			PR 126			Sabour Deep			BVD-110			LALAT		

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Table No. 1.14 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – E TP (Data Not Considered), Kharif 2021

Entry No	IET No	TRIPURA			MADHYA PRADESH			MAHARASHTRA 2			Kerala		
		@Lembucherra			@REWA			@SHIRGAON			@PATTAMBI		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
3401	29938	2825		63	3678	4	86	3069		81	6205		109
3402	29939	4728		69	2118		88	5986	2	88	6771		109
3403	29173 (R)	5999		77	546		103	5639	7	97	7614	7	110
3404	29940	5698		70	740		93	5092		89	4767		108
3405	29941	6991	10	75	316		106	3264		97	7038		108
3406	29942	7314	6	71	1846		87	5819	5	83	6948		104
3407	29943	5352		71	1482		89	5625	9	88	7286	10	108
3408	29944	5642		68	1823		82	4903		83	7281		109
3409	29945			74	1444		93	5625	9	83	7529	8	107
3410	29946	4317		72	760		87	5126		87	5905		108
3411	29947	6512		75	421		102	3708		92	7205		111
3412	29948	8630	2	71	714		103	4667		100	7776	6	108
3413	29949	4572		69	2995	6	90	2083		89	5876		108
3414	29950	5720		74	517		91	3222		93	5038		110
3415	CO-51 (NC)	5241		69	1283		81	2792		83	6610		108
3416	29951	4003		70	880		89	4417		91	5138		109
3417	29952	7002	9	75	342		111	5219		97	5186		108
3418	29953	7013	8	71	143		98	5540		88	4819		110
3419	29954	2431		63	531		76	3194		81	6638		106
3420	29955	4369		70	1410		85	5847	4	87	5876		107
3421	29956	4021		69	485		90	3361		82	6552		107
3422	29957	5341		68	1428		86	5469		88	6743		109
3423	29958	5495		70	2051		89	2722		99	6748		106
3424	29959	5530		72	368		99	5681	6	96	6810		108
3425	29960	7539	3	72	114		110	3417		96	8214	4	108
3426	29961	2609		63	243		89	3556		89	8652	3	109
3427	29962	2655		67	3776	2	89	2764		80	8695	2	108
3428	29963	3791		71	1656		91	5051		87	8700	1	106
3429	29964	4717		69	852		87	3458		87	6433		110
3430	29965	3871		69	277		85	3931		88	6348		108
3431	29966	3869		70	1417		91	2917		86	4043		108
3432	29967	4861		70	1633		88	3500		87	4090		107
3433	29968	5151		71	561		95	3278		90	4248		108
3434	29969	6199		68	258		85	5986		87	3957		106
3435	29970	6478		73	767		97	2375		99	4043		108
3436	29971	6589		71	179		89	2778		88	4333		106
3437	29972	6746		77	171		101	3597		102	4333		107
3438	29973	4717		69	1090		88	6132	1	85	4857		108
3439	29974	4572		66	1007		93	3014		94	4905		108
3440	29975	7416	5	69	1796		89	5208		86	4429		107
3441	29976	7282	7	75	407		97	3806		99	5638		107
3442	29977	3846		68	1301		81	2444		82	5771		106
3443	29978	6222		70	160			3236		100	4610		105
3444	Zonal Check (ZC)	3880		67	217		84	3014		88	5605		108
3445	29979	6690		78	4036	1	104	3083		99	4248		110
3446	29980	7448	4	71	208		102	4722		96	4476		107
3447	29981	3680		71	2018		87	4875		87	4824		108
3448	29982	4716		70	2995	6	88	4389		89	7110		105
3449	29983	3356		69	2507	10	90	3111		84	7319	9	106
3450	29984	6233		70	2604	9	85	2542		82	4190		109
3451	29985	6500		69	2930	8	90	3083		93	5138		110
3452	29986	3312		71	1091		94	2861		88	5348		107
3453	29987	5185		69	3776	2	93	5636	8	84	4852		111
3454	29988	4382		71	210		106	2847		102	4981		106
3455	29989			67	266		84	3694		82	6414		106
3456	29990	5663		71	1245		93	3431		102	5800		111
3457	29991	5753		78	493		103	2875		101	5838		109
3458	29992	4683		74	2098		89	3667		87	6043		106
3459	29993	5081		72	1604		88	2764		87	6124		109
3460	29994	4460		69	613		99	5210		94	6100		108
3461	29995	10080	1	74	1424		92	3847		84	5757		108
3462	29996	3089		69	3646	5	84	4653		87	5390		108
3463	29997	4471		74	1307		84	2111		87	7186		106
3464	Local Check (LC)	6843		79	1501		82	3472		88	7857	5	108
Mean		5313		71	1293		91	3975		90	5957		108
F Value		3.20(p<0.0001)S			1.92(p<0.0001)S			9.10(p<0.0001)S			2.40(p<0.0001)S		
CD		2447			2154			1090			2420		
SEm			1			3				1		2	
CV%		23.03			83.34			13.72			20.33		
D/S		20-07-2021			03-07-2021			29-06-2021			16-07-2021		
D/P		10-08-2021			22-07-2021			27-07-2021			10-08-2021		
Local Check Name		HAKUCHUK-2			JR767						Kanhana		

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Table No. 1.15: Plant Height (cm) & Panicles/m2 of entries in IVT – E TP, Kharif 2021

Entry No	IET No	ZONE-II								ZONE-III					
		HARYANA				RAJASTHAN		Z2 (3)		ODISHA				BIHAR	
		KAUL		Karnal (ICAR-CSSRI)		KOTA		Mean		ICAR-NRRI (Cuttack)		JEYPORE		BIKRAMGANJ (Dhangain)	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3401	29938	94	265	98	359	104	209	98	277	87	323	89	351	94	269
3402	29939	115	262	130	385	121	258	122	302	101	298	103	350	110	230
3403	29173 (R)	124	269	112	465	104	195	113	309	114	282	96	250	110	284
3404	29940	114	246	100	449	96	286	103	327	94	400	79	234	107	264
3405	29941	121	306	108	621	106	214	112	380	91	397	87	240	115	300
3406	29942	108	315	97	457	105	294	103	355	92	320	93	270	107	260
3407	29943	142	269	116	397	119	238	126	301	91	348	99	262	122	277
3408	29944	112	328	97	473	105	300	105	367	87	245	79	221	105	289
3409	29945	114	280	103	416	118	234	112	310	91	367	84	278	106	305
3410	29946	120	287	114	425	106	282	113	331	88	308	97	228	97	255
3411	29947	114	288	100	426	99	305	104	339	92	333	82	260	119	303
3412	29948	117	320	101	516	101	237	106	357	105	280	89	241	104	283
3413	29949	113	316	104	432	107	206	108	318	90	287	88	222	107	269
3414	29950	109	244	103	412	102	235	105	297	105	299	87	266	121	248
3415	CO-51 (NC)	108	297	92	428	110	297	103	341	96	399	83	307	95	284
3416	29951	104	270	101	334	106	314	104	306	90	212	89	240	103	263
3417	29952	112	248	98	480	108	322	106	350	95	285	98	235	113	237
3418	29953	99	288	90	350	90	233	93	290	88	291	81	238	93	316
3419	29954	103	231	89	364	98	153	97	249	85	479	77	250	103	262
3420	29955	125	274	106	494	114	176	115	315	87	306	98	239	105	264
3421	29956	108	272	104	467	107	220	106	320	97	401	98	239	107	273
3422	29957	113	278	94	380	100	258	102	305	86	406	80	433	104	316
3423	29958	131	304	120	411	121	206	124	307	106	443	102	283	112	256
3424	29959	125	302	109	405	114	193	116	300	105	312	106	239	121	230
3425	29960			118	458	118	216	118	337	111	300	100	266	117	246
3426	29961	108	296	94	411	104	164	102	290	86	314	81	235	86	269
3427	29962	106	303	91	428	101	168	99	299	83	250	78	329	106	310
3428	29963	121	315	108	318	115	181	115	271	98	281	106	347	119	298
3429	29964	125	352	110	445	114	276	116	358	85	283	98	272	120	251
3430	29965	120	344	102	443	112	246	111	344	93	287	85	232	111	265
3431	29966	111	333	97	430	110	311	106	358	93	344	86	372	102	299
3432	29967	110	284	89	399	114	248	104	310	74	368	84	343	96	303
3433	29968	100	315	104	357	114	208	106	293	82	295	86	369	121	277
3434	29969	124	320	102	453	120	239	115	337	117	305	95	255	122	299
3435	29970			77	301	101	159	89	230	85	338	82	239	97	250
3436	29971	127	277	122	438	121	173	123	296	121	322	85	228	128	300
3437	29972			90	364	97	143	93	253	101	427	85	283	109	253
3438	29973	117	290	112	404	115	235	115	310	96	453	88	227	110	307
3439	29974	109	308	81	478	101	203	97	330	85	351	86	227	102	249
3440	29975	117	303	98	515	119	228	111	348	93	272	89	255	106	258
3441	29976	130	274	100	416	118	285	116	325	108	388	99	239	105	260
3442	29977	125	307	107	393	119	250	117	317	84	266	93	316	104	287
3443	29978	114	284	97	342	106	232	106	286	96	247	86	305	106	277
3444	Zonal Check (ZC)	99	287	86	504	96	248	94	346	74	337	87	295	106	245
3445	29979	130	292	99	445	99	191	109	309	110	301	101	278	113	250
3446	29980	129	245	112	462	119	135	120	281	113	276	109	221	104	260
3447	29981	119	278	97	607	107	275	108	387	92	319	84	216	96	256
3448	29982	121	299	103	412	116	243	113	318	91	193	87	310	121	303
3449	29983	113	259	104	415	115	296	111	323	101	404	87	217	78	288
3450	29984	115	249	95	438	106	195	105	294	89	361	96	272	103	260
3451	29985	130	277	101	378	109	183	113	279	99	280	83	357	97	275
3452	29986	146	267	136	366	121	150	134	261	104	260	118	233	107	246
3453	29987	105	250	95	361	106	166	102	259	88	402	79	211	96	321
3454	29988			92	364	105	140	98	252	103	271	94	266	109	317
3455	29989	111	270	90	433	113	160	104	288	83	318	79	281	107	263
3456	29990	102	332	90	389	101	260	98	327	88	474	82	326	107	261
3457	29991	150	299	128	329	122	170	133	266	128	327	118	261	97	282
3458	29992	111	274	107	352	112	296	110	307	88	303	86	244	109	256
3459	29993	110	298	93	371	97	263	100	310	88	268	82	234	103	300
3460	29994	99	249	89	332	91	244	93	275	67	396	81	270	101	247
3461	29995	111	271	97	384	101	273	103	309	82	336	83	248	94	267
3462	29996	140	317	101	356	117	144	119	272	111	290	97	397	110	304
3463	29997	150	261	120	456	122	134	131	283	102	331	110	230	128	273
3464	Local Check (LC)	119	254	72	546	119	240	103	346	118	348	122	307	113	235
Mean		117	286	101	419	109	225	109	310	95	326	91	272	107	273

PH: Plant Height (cm) NP: No. of Panicles/Sqm

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Table No. 1.15 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – E TP, Kharif 2021

Entry No	IET No	ZONE-III												ZONE-V	
		BIHAR		West Bengal				MALDA		UP		Z3 (8)		Chhattisgarh	
		Patna-ICAR		CHINSURAH		Pundibhari		VARANASI		Mean		RAIPUR			
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP		
3401	29938	110	229	101	215			119	344	98	208	100	277	114	157
3402	29939	120	254	122	198	109	213	100	315	95	196	107	257	119	175
3403	29173 (R)	92	239	131	231	85	188	105	274	110	209	105	245	115	147
3404	29940	143	266	145	248	93	203	97	310	101	214	107	267	109	172
3405	29941	116	309	109	347	93	247	111	310	107	346	104	312	101	165
3406	29942	102	259	95	297	89	171	106	324	100	253	98	269	108	176
3407	29943	120	228	109	264	110	217	107	277	114	185	109	257	116	156
3408	29944	96	259	102	248	103	239	121	387	92	253	98	267	93	176
3409	29945	116	324	110	264	98	261	123	397	105	233	104	303	111	207
3410	29946	110	354	99	330	102	260	111	412	107	226	101	296	98	143
3411	29947	94	292	108	231	105	245	112	285	108	209	102	270	102	193
3412	29948	107	268	110	264	100	188	103	386	103	303	103	276	99	194
3413	29949	107	212	107	281	106	177	110	248	98	193	102	236	117	160
3414	29950	107	291	104	248	100	274	102	387	106	267	104	285	115	158
3415	CO-51 (NC)	96	303	95	314	100	191	125	292	98	257	98	293	110	186
3416	29951	102	211	107	231	99	204	122	388	102	208	102	244	117	163
3417	29952	105	265	112	281	101	251	112	293	108	273	106	265	100	214
3418	29953	92	284	98	347	97	246	120	381	97	247	96	294	96	165
3419	29954	93	243	70	297	82	217	101	308	94	213	88	284	82	72
3420	29955	96	287	99	363	98	206	127	347	92	219	100	279	108	193
3421	29956	123	207	99	281	89	268	130	295	107	223	106	273	125	189
3422	29957	96	225	86	215	94	255	100	321	93	292	92	308	106	188
3423	29958	107	280	110	231	101	197	115	340	105	228	107	282	113	193
3424	29959	109	265	117	198	97	204	116	361	113	235	110	255	113	188
3425	29960	122	291	124	215	104	223	120	286	115	270	114	262	117	202
3426	29961	93	200	96	297	86	287	96	297	96	205	90	263	98	142
3427	29962	110	283	99	281	100	276	105	344	103	237	98	289	107	136
3428	29963	107	270	121	215	96	251	130	360	105	243	110	283	121	128
3429	29964	107	323	102	182	86	252	121	310	100	258	102	266	107	171
3430	29965	100	288	101	281	104	224	110	323	99	225	100	265	99	179
3431	29966	104	309	108	215	98	291	110	341	94	277	99	306	103	247
3432	29967	83	257	98	264	88	196	105	410	81	252	89	299	108	150
3433	29968	115	193	110	264	100	160	118	287	111	209	105	257	112	169
3434	29969	110	267	126	281	102	184	131	412	106	261	114	283	120	197
3435	29970	126	310	102	215	97	202	105	409	87	196	98	270	98	206
3436	29971	104	371	132	231	114	206	114	327	130	212	116	274	119	126
3437	29972	105	271	110	281	113	216	128	399	97	229	106	295	106	222
3438	29973	105	307	111	264	97	233	105	312	97	232	101	292	111	183
3439	29974	97	309	102	215	88	234	130	420	96	246	98	281	93	165
3440	29975	117	313	102	314	97	209	125	363	99	205	103	273	109	175
3441	29976	114	295	117	231	98	196	130	415	102	193	109	277	118	168
3442	29977	98	244	105	198	96	203	98	300	102	227	97	255	108	154
3443	29978	95	272	114	198	90	177	95	352	100	202	98	254	115	178
3444	Zonal Check (ZC)	104	280	86	281	97	203	105	328	85	236	93	275	85	153
3445	29979	114	277	114	198	109	205	122	300	111	228	112	254	108	192
3446	29980	128	304	126	248	102	258	114	406	125	238	115	276	114	179
3447	29981	103	266	102	215	98	232	112	310	91	240	97	257	95	198
3448	29982	105	271	106	231	97	218	118	336	98	214	103	259	101	168
3449	29983	105	292	114	182	103	280	110	434	103	191	100	286	98	155
3450	29984	110	235	103	198	99	252	99	382	102	189	100	268	107	152
3451	29985	107	326	107	198	104	201	111	285	103	249	101	271	116	146
3452	29986	139	274	127	281	113	229	130	372	137	201	122	262	140	128
3453	29987	132	259	100	182	88	221	122	284	92	200	100	260	111	164
3454	29988	107	212	116	215	85	298	125	344	106	204	106	266	111	135
3455	29989	102	313	105	215	98	241	120	320	101	263	99	276	97	164
3456	29990	102	279	112	231	101	196	100	295	100	219	99	285	104	176
3457	29991	108	311	139	215	115	246	130	263	127	205	120	263	134	193
3458	29992	96	311	101	281	100	227	110	363	98	246	98	279	109	175
3459	29993	95	160	98	248	92	211	127	342	99	202	98	245	88	110
3460	29994	88	272	100	215	97	261	119	357	93	169	93	273	101	150
3461	29995	123	260	97	165	105	275	123	297	103	226	101	259	98	169
3462	29996	113	310	127	231	83	184	105	367	112	196	107	285	111	149
3463	29997	131	250	133	182	115	255	114	304	134	224	121	256	141	150
3464	Local Check (LC)	111	242	106	281	106	320	127	310	86	249	111	286	110	179
Mean		108	272	108	246	99	228	114	338	103	229	103	273	108	169

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Entry No	IET No	ZONE-V								ZONE-VI					
		Chhattisgarh		Maharashtra I				Z5 (4)		Maharashtra 2			Gujarat		
		JAGADALPUR		SAKOLI		SINDHEWAHI		Mean		KARJAT		VADAGAON		NAWAGAM	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3401	29938	76	164	102	175	110	247	100	186	113	220	53	311	93	237
3402	29939	120	205	74	360	115	210	107	238	134	225	76	263	117	241
3403	29173 (R)	112	200	94	188	131	249	113	196	130	230	72	258	114	267
3404	29940	99	192	106	180	96	181	102	181	103	228	66	202	96	240
3405	29941	94	277	95	258	96	251	97	238	120	239	66	260	105	247
3406	29942	82	176	96	291	81	217	92	215	118	235	71	287	100	247
3407	29943	111	174	86	198	123	227	109	189	125	220	76	232	116	231
3408	29944	83	183	93	178	98	209	92	186	110	215	66	201	110	227
3409	29945	108	188	116	341	103	219	109	239	124	234	66	212	96	231
3410	29946	102	199	122	274	102	245	106	215	129	224	72	149	108	263
3411	29947	93	211	94	175	102	170	98	187	124	238	66	202	109	279
3412	29948	108	168	103	157	91	144	100	166	125	230	70	302	108	267
3413	29949	91	173	126	365	120	268	114	241	115	247	70	191	107	260
3414	29950	105	239	84	282	93	195	99	218	116	235	71	141	112	302
3415	CO-51 (NC)	98	216	76	267	101	231	96	225	105	215	67	282	93	234
3416	29951	92	153	94	243	116	237	105	199	112	230	66	260	103	227
3417	29952	84	164	84	177	111	208	95	190	130	246	62	309	101	256
3418	29953	78	154	82	164	90	216	87	175	113	233	57	210	95	266
3419	29954	81	179	96	259	109	234	92	186	112	225	62	217	85	253
3420	29955	100	223	104	289	109	282	105	247	123	220	74	221	102	250
3421	29956	102	245	105	271	103	237	109	235	119	223	74	279	105	263
3422	29957	88	164	71	162	91	159	89	168	104	223	57	230	87	201
3423	29958	115	198	100	264	133	253	115	227	127	210	77	258	121	231
3424	29959	112	174	117	241	112	241	114	211	138	213	75	278	114	293
3425	29960	109	195	94	240	96	164	104	200	126	244	87	166	111	295
3426	29961	90	145	97	193	99	210	96	172	118	233	57	145	95	236
3427	29962	95	237	84	209	105	224	98	201	103	217	64	150	93	235
3428	29963	107	209	98	231	125	218	113	196	132	234	76	148	113	211
3429	29964	103	173	115	281	103	242	107	216	124	237	72	254	112	289
3430	29965	90	205			109	219	100	201	119	230	75	201	105	208
3431	29966	98	179	195	316	103	229	125	243	120	228	70	246	104	283
3432	29967	75	161	75	174	88	227	87	178	106	232	61	251	92	224
3433	29968	96	160	94	177	129	235	108	185	117	230	66	267	103	218
3434	29969	100	197	97	213	116	223	108	207	126	215	81	218	118	305
3435	29970	116	178	104	113	89	225	102	180	113	245	57	249	107	224
3436	29971	120	200	75	170	133	163	112	165	133	199	101	274	119	230
3437	29972	95	233	116	240	111	243	107	234	121	222	65	277	103	312
3438	29973	107	97	86	263	113	251	104	198	133	225	69	287	108	235
3439	29974	79	192	95	248	95	282	91	221	107	233	58	302	95	264
3440	29975	99	162	196	332	105	217	127	222	120	242	70	289	101	205
3441	29976	100	236	105	252	112	202	109	214	134	230	71	299	114	316
3442	29977	92	164	188	264	124	263	128	211	118	226	68	317	113	257
3443	29978	97	137	97	287	106	187	104	197	122	234	68	212	106	208
3444	Zonal Check (ZC)	95	195	94	198	112	194	96	185	125	240	79	306	106	231
3445	29979	99	189	115	176	79	157	100	178	115	234	76	319	105	260
3446	29980	114	218	103	280	91	112	105	197	127	211	91	256	118	289
3447	29981	94	192	94	295	91	268	94	238	107	231	66	272	103	231
3448	29982	96	222	76	254	102	203	94	212	118	225	69	288	104	247
3449	29983	98	162	126	239	102	237	106	198	123	230	69	202	107	266
3450	29984	92	184	117	258	114	181	107	193	118	221	71	249	108	218
3451	29985	107	198	123	192	99	237	111	193	121	232	70	202	114	295
3452	29986	115	206	97	209	131	176	121	180	133	211	91	290	136	241
3453	29987	92	143	86	194	111	235	100	184	109	218	70	150	94	263
3454	29988	92	182	94	333	117	187	103	209	120	235	77	158	112	247
3455	29989	78	181	76	170	98	212	87	182	108	226	74	265	96	212
3456	29990	85	155	98	171	116	199	101	175	110	222	60	192	98	266
3457	29991	123	192	72	278	121	194	113	214	167	220	85	201	132	261
3458	29992	101	189	104	157	97	180	103	175	124	230	65	202	101	270
3459	29993	86	173	113	179	101	174	97	159	116	230	56	269	97	241
3460	29994	85	155	94	278	105	166	96	187	99	232	54	199	90	253
3461	29995	91	269	122	242	104	262	104	235	112	236	62	276	105	256
3462	29996	115	200	126	242	117	169	117	190	125	219	86	229	117	270
3463	29997	106	148	93	260	132	247	118	201	128	228	100	221	128	240
3464	Local Check (LC)	105	244	92	205	94	259	100	221	92	230	71	276	103	259
Mean		98	188	102	234	107	215	104	202	120	228	70	239	106	251

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Entry No	IET No	ZONE-VI						ZONE-VII					
		Gujarat				Z6 (5)		Andhra Pradesh		Telangana			
		DABHOI		VYARA		Mean		MARUTERU		KAMPASAGAR		WARANGAL	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3401	29938	115	190	107	273	96	246	120	287	92	523	120	411
3402	29939	127	196	135	214	118	228	132	267	115	390	133	384
3403	29173 (R)	120	196	116	284	110	247	142	299	119	395	128	431
3404	29940	114	204	106	228	97	220	124	267	115	423	111	403
3405	29941	111	224	115	298	103	253	135	320	118	713	116	391
3406	29942	115	206	114	256	104	246	123	300	103	426	99	386
3407	29943	132	220	122	249	114	230	144	290	125	385	127	383
3408	29944	113	211	115	238	103	219	120	281	319	495	114	419
3409	29945	120	207	101	245	101	226	132	309	125	391	111	403
3410	29946	127	224	116	231	110	218	132	304	128	380	120	370
3411	29947	118	236	122	242	108	239	124	305	119	435	110	399
3412	29948	123	200	111	256	108	251	137	300	131	383	108	397
3413	29949	120	214	108	266	104	236	119	307	121	398	115	380
3414	29950	113	203	120	238	107	224	120	294	126	455	112	376
3415	CO-51 (NC)	112	225	151	263	106	244	123	300	111	411	112	360
3416	29951	114	210	102	245	99	234	124	294	117	333	110	358
3417	29952	120	224	106	189	104	245	133	314	139	425	108	394
3418	29953	113	204	112	266	98	236	117	261	115	360	101	389
3419	29954	109	227	96	252	93	235	115	279	111	375	97	411
3420	29955	123	208	119	305	108	241			132	395	127	399
3421	29956	114	200	118	263	106	245			126	418	121	393
3422	29957	109	213	116	266	95	227			133	338	92	401
3423	29958	136	206	98	270	112	235	134	297	136	486	114	417
3424	29959	132	212	120	273	116	254			142	320	121	398
3425	29960	142	221	125	287	118	242			149	435	139	389
3426	29961	117	191	115	266	101	214			112	563	103	361
3427	29962	103	197	99	305	92	221	105	294	119	566	102	384
3428	29963	121	213	113	270	111	215	134	304	142	368	119	411
3429	29964	126	219	127	263	112	252	133	320	118	431	121	403
3430	29965	122	215	126	284	109	228	121	290	113	430	116	388
3431	29966	112	226	114	259	104	248	122	300	108	518	109	384
3432	29967	103	217	107	301	94	245	114	314	110	504	97	417
3433	29968	130	213	103	256	104	237	133	314	117	415	114	384
3434	29969	133	199	109	315	113	251	139	277	133	401	117	419
3435	29970	114	205	123	238	103	232	112	294	134	395	93	419
3436	29971	127	197	121	270	120	234	171	312	167	431	145	398
3437	29972	112	209	117	280	104	260	120	277	118	311	111	386
3438	29973	119	211	109	315	108	255	107	297	112	335	111	408
3439	29974	105	206	99	259	93	253	101	327	106	356	99	363
3440	29975	117	204	109	235	103	235	100	277	112	331	113	406
3441	29976	131	220	117	252	114	263	119	325	146	340	134	404
3442	29977	115	210	112	224	105	247	112	271	116	335	124	413
3443	29978	110	188	117	217	105	212	117	295	130	388	124	414
3444	Zonal Check (ZC)	112	211	121	235	109	244	117	300	122	271	118	409
3445	29979	120	207	122	280	108	260	140	264	130	445	128	384
3446	29980	128	204	119	217	116	235	138	274	150	475	128	373
3447	29981	113	232	113	294	100	252	119	287	119	591	109	380
3448	29982	159	206	114	217	113	237	129	307	120	408	115	417
3449	29983	113	226	112	259	105	237	133	290	130	341	117	371
3450	29984	116	208	117	245	106	228	124	271	121	368	112	373
3451	29985	114	202	127	326	109	251	133	300	133	488	115	394
3452	29986	121	203	146	245	125	238	161	266	162	411	138	380
3453	29987	134	186	96	256	101	214	113	282	110	375	105	403
3454	29988	108	210	110	228	105	216			141	360	118	401
3455	29989	125	202	117	235	104	228	123	285	114	448	106	376
3456	29990	109	188	94	263	94	226	115	300	124	318	106	419
3457	29991	109	209	142	217	127	221	186	281	178	368	129	389
3458	29992	117	199	115	207	104	222	124	297	115	355	102	403
3459	29993	116	219	104	266	98	245	124	257	117	285	105	403
3460	29994	101	189	97	224	88	219	111	327	103	325	109	401
3461	29995	117	209	112	266	102	249			113	391	106	386
3462	29996	134	195	123	266	117	236			146	405	118	389
3463	29997	154	192	126	284	127	233	188	304	145	453	141	376
3464	Local Check (LC)	113	206	102	245	96	243	133	310	93	519	135	394
Mean		119	208	115	257	106	237	128	294	128	411	115	394

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Entry No	IET No	ZONE-VII										Overall (27)	
		TamilNadu		Kerala		Karnataka		Z7 (7)					
		COIMBATORE		MONCOMPU		MANDYA	GANGAVATHI	Mean		Mean			
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP		
3401	29938	96	313	109	323	95	237	96	392	104	355	100	278
3402	29939	108	263	119	293	101	260	121	345	118	315	114	268
3403	29173 (R)	114	263	109	283	103	217	115	335	119	317	112	264
3404	29940	99	300	110	263	84	283	100	350	106	327	104	268
3405	29941	104	375	103	470	94	337	100	512	110	445	105	332
3406	29942	95	225	102	373	93	257	100	386	102	336	100	284
3407	29943	107	225	113	250	103	317	127	390	121	320	115	263
3408	29944	94	238	104	280	91	260	92	403	133	339	108	276
3409	29945	93	425	116	297	91	293	106	365	110	355	107	293
3410	29946	97	300	107	297	97	263	103	380	112	328	108	282
3411	29947	97	275	107	387	91	257	105	367	108	346	104	279
3412	29948	108	325	118	370	92	267	105	464	114	358	107	285
3413	29949	96	238	119	403	93	247	106	448	110	346	107	274
3414	29950	97	300	121	367	94	260	111	525	112	368	106	287
3415	CO-51 (NC)	97	300	115	347	89	313	109	437	108	353	102	295
3416	29951	105	338	115	370	91	250	108	288	110	319	104	262
3417	29952	108	263	97	317	86	253	113	440	112	343	105	280
3418	29953	90	325	98	343	87	257	96	392	100	332	96	275
3419	29954	85	225	116	307	80	313	95	459	100	338	93	270
3420	29955	103	288	109	290	86	277	116	410	112	343	107	285
3421	29956	118	338	108	267	87	277	117	405	113	349	108	285
3422	29957	90	275	114	467	79	257	93	383	100	353	95	281
3423	29958	117	413	111	260	99	273	114	358	118	358	114	287
3424	29959	125	300	107	337	94	280	120	376	118	335	114	272
3425	29960	113	300	114	330	97	273	119	383	122	352	115	276
3426	29961	87	338	100	270	78	257	91	332	95	353	96	264
3427	29962	99	325	113	283	96	243	95	423	104	360	99	283
3428	29963	118	313	116	300	92	237	113	340	119	324	114	267
3429	29964	97	313	115	337	89	260	119	357	113	346	109	287
3430	29965	100	313	115	300	86	227	102	418	108	338	105	279
3431	29966	94	250	105	313	88	273	96	369	103	344	106	301
3432	29967	81	250	106	347	78	263	84	362	96	351	93	286
3433	29968	108	250	112	390	95	273	110	345	113	339	107	268
3434	29969	109	225	112	357	103	300	108	448	117	347	114	288
3435	29970	87	363	97	330	82	243	89	340	99	340	99	265
3436	29971	129	325	123	260	110	273	135	528	140	361	123	275
3437	29972	100	238	119	363	87	290	102	492	108	337	105	287
3438	29973	101	550	105	280	84	310	101	304	103	355	105	289
3439	29974	91	300	98	290	82	267	84	384	94	327	95	284
3440	29975	99	325	110	280	92	257	103	375	104	322	108	279
3441	29976	104	238	114	267	96	273	116	363	118	316	113	280
3442	29977	100	275	105	283	92	277	110	350	108	315	108	269
3443	29978	92	238	104	310	95	297	95	375	108	331	103	261
3444	Zonal Check (ZC)	106	313	110	297	103	260	106	456	112	329	101	278
3445	29979	111	325	125	430	98	307	104	406	120	366	111	279
3446	29980	111	338	117	293	103	290	122	348	124	341	117	274
3447	29981	96	250	125	318	92	287	97	329	108	349	101	291
3448	29982	98	275	109	193	85	240	103	368	108	316	106	269
3449	29983	92	313	117	280	95	233	111	348	113	311	106	274
3450	29984	99	300	103	343	99	237	100	288	108	311	105	264
3451	29985	108	300	104	370	92	270	111	357	113	354	109	278
3452	29986	124	238	143	290	110	270	130	385	138	320	128	260
3453	29987	98	550	105	257	95	263	98	329	103	351	101	264
3454	29988	102	313	109	310	92	280	108	358	112	337	106	263
3455	29989	97	363	124	360	88	250	104	361	108	349	101	273
3456	29990	102	263	118	337	91	243	93	381	107	323	100	272
3457	29991	126	313	143	350	119	230	145	350	146	326	129	265
3458	29992	96	263	110	330	91	270	101	430	106	335	103	271
3459	29993	88	263	107	307	90	270	103	372	105	308	100	256
3460	29994	87	238	95	270	74	277	89	433	95	324	93	264
3461	29995	92	375	115	273	89	270	94	375	101	345	102	279
3462	29996	113	300	108	293	101	267	124	362	118	336	115	271
3463	29997	125	238	115	290	106	293	133	384	136	334	127	267
3464	Local Check (LC)	97	313	115	333	91	240	107	475	110	369	106	297
Mean		102	301	112	318	92	268	106	387	111	340	107	277

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Table No. 1.15 contd.: Plant Height (cm) & Panicles/m² of entries in IVT – E TP (State Means), Kharif 2021

Entry No	IET No	HARYANA		ODISHA		BIHAR		WEST BENGAL		CHHATTISGARH		MAHARASHTRA 1	
		Mean		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3401	29938	96	312	88	337	102	249	110	279	95	161	106	211
3402	29939	123	323	102	324	115	242	110	242	120	190	95	285
3403	29173 (R)	118	367	105	266	101	262	107	231	113	173	113	218
3404	29940	107	347	87	317	125	265	112	253	104	182	101	180
3405	29941	115	464	89	318	115	304	104	301	98	221	96	254
3406	29942	103	386	92	295	105	259	96	264	95	176	89	254
3407	29943	129	333	95	305	121	252	109	253	114	165	105	213
3408	29944	105	400	83	233	100	274	109	291	88	179	96	193
3409	29945	109	348	88	322	111	314	110	307	109	198	110	280
3410	29946	117	356	92	268	103	304	104	334	100	171	112	259
3411	29947	107	357	87	297	106	297	108	253	98	202	98	173
3412	29948	109	418	97	260	105	275	104	279	104	181	97	150
3413	29949	109	374	89	254	107	240	108	235	104	166	123	316
3414	29950	106	328	96	282	114	269	102	303	110	199	89	238
3415	CO-51 (NC)	100	362	90	353	95	293	107	265	104	201	89	249
3416	29951	103	302	89	226	103	237	109	274	105	158	105	240
3417	29952	105	364	97	260	109	251	108	275	92	189	98	192
3418	29953	95	319	84	265	92	300	105	324	87	159	86	190
3419	29954	96	297	81	365	98	252	84	274	81	125	103	246
3420	29955	115	384	92	272	100	275	108	305	104	208	107	285
3421	29956	106	370	98	320	115	240	106	281	113	217	104	254
3422	29957	104	329	83	419	100	270	93	263	97	176	81	160
3423	29958	125	358	104	363	109	268	109	256	114	195	117	258
3424	29959	117	354	105	275	115	248	110	254	113	181	115	241
3425	29960	118	458	105	283	120	269	116	241	113	198	95	202
3426	29961	101	354	83	275	89	234	93	294	94	143	98	202
3427	29962	99	365	80	289	108	296	101	300	101	186	95	216
3428	29963	114	317	102	314	113	284	116	275	114	168	112	225
3429	29964	118	399	92	277	114	287	103	248	105	172	109	261
3430	29965	111	394	89	260	105	276	105	276	95	192	109	219
3431	29966	104	381	89	358	103	304	106	282	101	213	149	273
3432	29967	100	341	79	355	89	280	97	290	92	155	82	200
3433	29968	102	336	84	332	118	235	109	237	104	164	112	206
3434	29969	113	386	106	280	116	283	120	292	110	197	107	218
3435	29970	77	301	83	288	112	280	101	275	107	192	97	169
3436	29971	125	357	103	275	116	336	120	255	120	163	104	166
3437	29972	90	364	93	355	107	262	117	299	100	227	114	241
3438	29973	115	347	92	340	108	307	104	270	109	140	100	257
3439	29974	95	393	85	289	99	279	107	289	86	178	95	265
3440	29975	107	409	91	263	111	286	108	295	104	169	151	275
3441	29976	115	345	103	313	110	278	115	280	109	202	109	227
3442	29977	116	350	88	291	101	266	100	233	100	159	156	263
3443	29978	106	313	91	276	100	275	100	242	106	157	102	237
3444	Zonal Check (ZC)	92	395	81	316	105	262	96	270	90	174	103	196
3445	29979	115	369	105	289	113	263	115	234	104	190	97	166
3446	29980	120	353	111	248	116	282	114	304	114	198	97	196
3447	29981	108	442	88	268	99	261	104	252	95	195	93	281
3448	29982	112	355	89	251	113	287	107	262	98	195	89	228
3449	29983	109	337	94	311	92	290	109	299	98	158	114	238
3450	29984	105	343	93	316	107	247	100	277	99	168	116	219
3451	29985	116	327	91	318	102	300	107	228	112	172	111	215
3452	29986	141	316	111	246	123	260	123	294	127	167	114	192
3453	29987	100	305	83	306	114	290	103	229	102	154	99	214
3454	29988	92	364	98	268	108	264	109	286	101	159	106	260
3455	29989	100	351	81	299	104	288	108	258	87	172	87	191
3456	29990	96	360	85	400	105	270	104	241	95	166	107	185
3457	29991	139	314	123	294	102	296	128	241	129	192	97	236
3458	29992	109	313	87	274	103	284	103	290	105	182	101	169
3459	29993	101	334	85	251	99	230	106	267	87	142	107	177
3460	29994	94	290	74	333	94	259	105	277	93	152	100	222
3461	29995	104	327	83	292	109	263	108	245	95	219	113	252
3462	29996	121	337	104	343	111	307	105	261	113	175	122	205
3463	29997	135	358	106	280	130	261	121	247	123	149	113	253
3464	Local Check (LC)	95	400	120	327	112	239	113	303	107	211	93	232
Mean		109	356	93	299	107	273	107	271	103	179	105	225

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Table No. 1.15 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – E TP (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA 2		MAHARASHTRA		GUJARAT		TELANGANA		KERALA		KARNATAKA	
		Mean		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3401	29938	83	265	95	238	105	233	106	467	109	323	95	314
3402	29939	105	244	100	264	126	217	124	387	119	293	111	302
3403	29173 (R)	101	244	107	231	117	249	124	413	109	283	109	276
3404	29940	84	215	93	197	105	224	113	413	110	263	92	317
3405	29941	93	249	94	252	110	256	117	552	103	470	97	424
3406	29942	94	261	91	257	110	236	101	406	102	373	96	321
3407	29943	100	226	102	219	123	233	126	384	113	250	115	353
3408	29944	88	208	92	201	113	225	217	457	104	280	91	331
3409	29945	95	223	102	251	106	228	118	397	116	297	98	329
3410	29946	101	187	106	223	117	239	124	375	107	297	100	322
3411	29947	95	220	96	196	116	252	115	417	107	387	98	312
3412	29948	98	266	97	208	114	241	119	390	118	370	98	365
3413	29949	93	219	108	268	112	247	118	389	119	403	99	347
3414	29950	94	188	91	213	115	248	119	415	121	367	102	392
3415	CO-51 (NC)	86	249	87	249	118	240	111	385	115	347	99	375
3416	29951	89	245	97	242	106	227	114	346	115	370	99	269
3417	29952	96	277	97	235	109	223	123	409	97	317	99	346
3418	29953	85	222	85	206	106	245	108	375	98	343	91	324
3419	29954	87	221	95	234	97	244	104	393	116	307	87	386
3420	29955	99	220	103	253	115	254	129	397	109	290	101	343
3421	29956	97	251	100	253	112	242	124	405	108	267	102	341
3422	29957	81	227	81	193	104	227	112	369	114	467	86	320
3423	29958	102	234	109	246	118	235	125	452	111	260	106	315
3424	29959	107	245	111	243	122	259	131	359	107	337	107	328
3425	29960	107	205	101	203	126	267	144	412	114	330	108	328
3426	29961	88	189	93	195	109	231	108	462	100	270	84	294
3427	29962	83	183	89	200	98	245	111	475	113	283	95	333
3428	29963	104	191	108	208	116	231	131	389	116	300	102	288
3429	29964	98	246	104	253	122	257	120	417	115	337	104	308
3430	29965	97	216	101	217	118	235	114	409	115	300	94	322
3431	29966	95	237	122	255	110	256	109	451	105	313	92	321
3432	29967	83	241	82	221	101	247	104	461	106	347	81	313
3433	29968	91	248	101	227	112	229	115	400	112	390	102	309
3434	29969	103	217	105	217	120	273	125	410	112	357	106	374
3435	29970	85	247	91	208	115	222	114	407	97	330	85	292
3436	29971	117	236	110	201	122	232	156	414	123	260	122	401
3437	29972	93	249	103	245	111	267	115	349	119	363	94	391
3438	29973	101	256	100	256	112	254	112	371	105	280	93	307
3439	29974	83	267	89	266	100	243	103	360	98	290	83	325
3440	29975	95	266	123	270	109	214	112	369	110	280	97	316
3441	29976	103	264	106	245	121	263	140	372	114	267	106	318
3442	29977	93	271	124	267	114	230	120	374	105	283	101	313
3443	29978	95	223	98	230	111	204	127	401	104	310	95	336
3444	Zonal Check (ZC)	102	273	103	234	113	225	120	340	110	297	104	358
3445	29979	95	276	96	221	116	249	129	415	125	430	101	356
3446	29980	109	233	103	215	122	236	139	424	117	293	112	319
3447	29981	87	251	90	266	109	252	114	485	125	318	94	308
3448	29982	94	256	91	242	126	223	118	413	109	193	94	304
3449	29983	96	216	105	227	111	250	123	356	117	280	103	291
3450	29984	95	235	105	227	114	224	116	370	103	343	99	262
3451	29985	96	217	103	216	118	274	124	441	104	370	101	313
3452	29986	112	251	113	221	134	230	150	395	143	290	120	327
3453	29987	89	184	94	199	108	235	107	389	105	257	96	296
3454	29988	98	197	102	228	110	228	129	380	109	310	100	319
3455	29989	91	245	89	218	113	216	110	412	124	360	96	305
3456	29990	85	207	96	196	100	239	115	369	118	337	92	312
3457	29991	126	210	111	223	128	229	153	379	143	350	132	290
3458	29992	95	216	98	192	111	225	109	379	110	330	96	350
3459	29993	86	249	97	213	106	242	111	344	107	307	97	321
3460	29994	76	215	88	218	96	222	106	363	95	270	81	355
3461	29995	87	256	100	254	112	244	110	389	115	273	91	322
3462	29996	105	224	113	214	125	244	132	397	108	293	112	314
3463	29997	114	224	113	239	136	238	143	415	115	290	120	338
3464	Local Check (LC)	81	253	87	242	106	237	114	457	115	333	99	357
Mean		95	234	100	229	113	239	121	403	112	318	99	328

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Table No. 1.15 contd.: Plant Height (cm) & Panicles/m² of entries in IVT – E TP (Data Not Considered), Kharif 2021

Entry No	IET No	UTTARAKHAND		PUNJAB		Bihar		Jharkhand		UTTAR PRADESH	
		@PANTNAGAR		@LUDHIANA		@SABOUR		@RANCHI		@HATWARA	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3401	29938	106	232	88	234	116	230	91	209	96	
3402	29939	125	298	109	261	122	237	99	178	100	
3403	29173 (R)	126	237	108	314	116	165	97	245	110	
3404	29940	92	286	96	310	101	351	86	179	107	
3405	29941	112	230	94	284	110	277	86	228	113	
3406	29942	102	261	100	314	103	196	78	214	101	
3407	29943	106	290	115	281	118	143	95	137	91	
3408	29944	109	323	97	320	93	310	86	219	109	
3409	29945	111	256	97	320	106	314	88	198	90	
3410	29946	108	278	99	290	117	178	99	258	146	
3411	29947	108	216	101	238	107	215	84	258	102	
3412	29948	119	324	99	297	114	310	91	252	119	
3413	29949	116	236	109	254	109	198	88	224	122	
3414	29950	116	338	99	271	110	235	85	282	104	
3415	CO-51 (NC)	109	374	95	317	102	313	88	276	112	
3416	29951	104	246	99	281	100	250	81	194	103	
3417	29952	112	350	97	248	113	273	79	224	101	
3418	29953	102	335	91	277	96	260	80	227	104	
3419	29954	106	234	93	248	95	224	87	213	109	
3420	29955	111	320	99	264	111	203	91	257	99	
3421	29956	114	296	104	314	114	230	90	235	116	
3422	29957	94	276	95	257	93	269	66	167	127	
3423	29958	122	257	104	267	115	194	92	245	103	
3424	29959	127	240	104	307	119	188	93	215	106	
3425	29960	112	301	111	314	127	254	93	262	101	
3426	29961	104	313	91	251	97	258	78	242	96	
3427	29962	103	253	93	271	107	258	86	218	106	
3428	29963	116	287	103	284	113	257	97	257	106	
3429	29964	111	279	111	238	109	280	94	178	106	
3430	29965	104	304	105	284	107	286	91	266	93	
3431	29966	101	305	98	291	102	278	82	220	115	
3432	29967	94	242	95	261	94	273	65	207	107	
3433	29968	117	285	113	251	110	191	85	212	112	
3434	29969	116	335	113	248	120	304	86	228	92	
3435	29970	95	301			97	205	72	229	93	
3436	29971	100	432	128	294	139	194	109	248	99	
3437	29972	144	256	88	310	110	234	77	254	98	
3438	29973	117	358	94	254	106	216	92	248	112	
3439	29974	111	275	90	314	103	320	75	239	114	
3440	29975	115	259	99	294	105	259	93	265	115	
3441	29976	121	266	101	297	113	190	88	208	135	
3442	29977	92	266	100	304	107	245	93	210	104	
3443	29978	115	218	97	320	103	241	84	148	110	
3444	Zonal Check (ZC)	91	323	81	287	86	340	78	250	100	
3445	29979			106	284	114	333	86	261	116	
3446	29980	142	213	92	257	127	227	111	276	105	
3447	29981	97	290	91	284	98	298	83	208	112	
3448	29982	109	313	109	310	105	318	82	150	96	
3449	29983	111	274	106	294	108	239	91	219	98	
3450	29984	111	259	100	290	110	172	82	178	104	
3451	29985	105	267	90	257	107	186	85	261	109	
3452	29986	160	180	130	287	132	185	93	115	103	
3453	29987	98	260	98	294	100	249	86	245	128	
3454	29988	118	265	92	257	108	232	86	176	112	
3455	29989	100	272	91	254	103	290	84	250	94	
3456	29990	102	252	97	271	103	209	79	153	116	
3457	29991	166	209	125	281	140	202	111	205	98	
3458	29992	98	252	101	317	111	280	83	243	100	
3459	29993	102	239	91	297	98	284	79	165	112	
3460	29994	98	250	84	251	93	208	76	149	106	
3461	29995	109	237	102	323	104	275	80	253	115	
3462	29996	125	290	114	310	121	234	105	202	95	
3463	29997	154	212	139	264	126	168	104	224	96	
3464	Local Check (LC)	94	380	96	294	107	140	99	197	115	
Mean		112	278	101	283	109	243	88	219	107	

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Table No. 1.15 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – E TP (Data Not Considered), Kharif 2021

Entry No	IET No	TRIPURA		MADHYA PRADESH		MAHARASHTRA 2		Kerala	
		@Lembucherra		@REWA		@SHIRGAON		@PATTAMBI	
		PH	NP	PH	NP	PH	NP	PH	NP
3401	29938	101	288	108	201	96	131	101	360
3402	29939	121	300	104	133	105	154	91	430
3403	29173 (R)	118	338	84	180	104	163	93	288
3404	29940	99	400	93	210	101	156	95	445
3405	29941	101	513	88	185	91	135	100	412
3406	29942	97	263	90	204	83	164	97	279
3407	29943	118	325	114	138	106	125	103	395
3408	29944	102	363	87	193	98	114	109	366
3409	29945	117	363	104	225	97	152	112	278
3410	29946	106	263	85	190	107	143	104	361
3411	29947	100	425	91	142	95	124	100	368
3412	29948	107	400	87	172	106	158	103	427
3413	29949	106	363	94	184	108	134	89	394
3414	29950	110	475	89	170	104	139	98	430
3415	CO-51 (NC)	100	400	97	198	105	163	90	422
3416	29951	99	325	95	163	101	136	88	403
3417	29952	102	400	80	233	91	139	95	403
3418	29953	95	388	72	93	104	131	105	323
3419	29954	91	338	90	187	91	164	102	455
3420	29955	100	313	88	145	107	149	95	408
3421	29956	101	425	103	142	89	142	104	369
3422	29957	104	313	90	169	92	148	99	458
3423	29958	114	338	106	177	105	120	98	388
3424	29959	114	300	91	133	108	134	102	401
3425	29960	112	325	88	88	114	139	95	397
3426	29961	97	300	98	187	75	111	92	443
3427	29962	104	288	100	111	82	156	97	355
3428	29963	110	413	97	144	108	154	102	346
3429	29964	105	338	94	126	108	129	101	458
3430	29965	103	375	105	213	99	129	99	388
3431	29966	106	450	96	163	96	106	101	401
3432	29967	92	425	78	179	85	164	94	393
3433	29968	109	363	93	175	105	119	102	405
3434	29969	118	300	99	198	92	148	101	405
3435	29970	90	388	85	170	90	112	103	424
3436	29971	128	338	111	138	108	112	104	461
3437	29972	110	350	89	159	101	135	90	273
3438	29973	108	338	90	158	93	121	95	327
3439	29974	95	438	79	184	89	133	99	419
3440	29975	108	313	97	170	97	145	99	323
3441	29976	101	388	87	161	115	133	108	404
3442	29977	108	413	97	208	101	135	102	357
3443	29978	98	263	85	123	105	141	98	441
3444	Zonal Check (ZC)	104	363	99	167	98	141	100	373
3445	29979	112	288	83	142	101	132	102	393
3446	29980	112	350	91	160	109	154	88	451
3447	29981	97	500	84	152	97	126	98	458
3448	29982	106	375	95	165	104	113	101	420
3449	29983	107	288	87	161	106	118	112	441
3450	29984	105	263	91	136	102	145	113	435
3451	29985	103	350	100	238	90	134	100	371
3452	29986	125	388	117	168	115	139	99	405
3453	29987	99	300	98	187	85	139	95	442
3454	29988	102	363	89	162	94	151	103	416
3455	29989	93	388	99	205	94	134	102	395
3456	29990	97	363	89	159	101	139	95	401
3457	29991	130	263	111	171	123	161	104	360
3458	29992	109	300	97	190	104	127	90	395
3459	29993	97	338	86	152	103	154	93	340
3460	29994	93	275	83	142	93	143	102	365
3461	29995	99	275	95	219	76	125	91	405
3462	29996	118	275	116	177	106	158	103	370
3463	29997	127	363	125	186	103	116	98	450
3464	Local Check (LC)	118	463	99	165	90	114	100	440
Mean		106	352	94	169	99	138	99	394

ADVANCE VARIETY TRIAL 2 & 1-IRRIGATED MID EARLY (AVT 2 & AVT 1-IME)

Locations: 44

Test Entries:37

Checks: Gontra Bidhan-3 (National); PR 113 (Northern), Lalat (Eastern & North Eastern), Karjat-7 (Western), MTU 1010(Central and Southern)-(Zonal); US 312 (Hybrid) and Local Check. **Table:1.16**

Advance Variety Trial 1-Irrigated Mid Early (AVT 1-IME) consisted of 37 test entries and 4 checks: Gontra Bidhan 3 (National check), PR 113 in Northern, Lalat in Eastern & North Eastern, Karjat-7 in Western and MTU 1010 in Central and Southern zones as Zonal checks, US 312 (Hybrid check) and a local check. Among 37 test entries, five entries (IET 28979, IET 28972, IET 28128, IET 28982 and IET 28981) are hybrids. Out of 37 test entries only one entry (IET 28396) was in 3rd year of testing and the remaining 36 entries are in 2nd year of testing. The trial was sent to 45 locations covering 6 zones (II, III, IV, V, VI and VII). However, data was not received from 6 centres viz., Waraseoni, Jabalpur, Jagtial, Mugad, Kurumbapet and Sabour. Out of 39 locations, data from 6 centres recorded low experimental mean viz., Pantnagar (3601 kg/ha), Ranchi (3692 kg/ha), Hathwara (3202 kg/ha), Varanasi (3649 kg/ha), Gerua-ICAR (3485 kg/ha) and Brahmavar (3437 kg/ha); 2 centres recorded Low CV viz., Patna – ICAR (3.9%) and Masodha (4.9%). Therefore data from these 8 centres was not considered for analysis and data from remaining 31 locations was considered for analysis. The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 1.17, 1.18, 1.19, 1.20 and 1.21 respectively.

AVT-2 (Entries which are in 3rd year of testing):

Only one entry is in 3rd of year testing i.e., **IET 28396** (Shuats Dhan-6) derived cross IRODA 117 / IR 72891-29-3-3-3/IR 73012-137-2-2-2 (70) possess long slender grain type. The entry showed consistence yield superiority over the best check in Zone II (1st and 2nd year). The entry IET 28396 also showed yield superiority in Zone V (MP) in 1st year and Zone IV (Assam) in 3rd year. The entry recorded HRR (73.1%), ASV (4.0), AC (25.9), and GC (22). **Since the entry did not consistence yield performance, it is discontinued.**

Performance of IET 28396 in 3rd year of testing in AVT 1 IME during Kharif 2021

IET No/ Designation	Year	Zone		State	
		Zone (Rank)	% BC	State (Rank)	% BC
IET 28396 Shuats Dhan-6	2019	Z II (2)	9	-	-
		Z V (-)	6	MP (-)	14
IRODA 117 / IR 72891-29-3-3-3/IR 73012-137-2-2-2 (70)	2020	Z II (2)	24	RA (2)	24
	2021	Z IV (10)	11	AS (4)	12

AVT-1 (Entries which are in 2nd year of testing):

Performance of the entries on overall mean basis

Across the locations the mean yield ranged from 3202 kg/ha (Hathwara) to 9143 kg/ha (Rajendranagar); while CV ranged from 3.9 % (Pantnagar) to 27.2% (Gerua-ICAR).

Overall mean yield of the entries ranged from 4407 kg/ha (IET 28386) to 6453 kg/ha (IET 28982); days to 50% flowering from 92 days (IET 29229) to 107 days (IET 29214). Among the checks, Gontra Bidhan 3 (National check) was the highest yielder (5813 Kg/ha) followed by Local check (5427 kg/ha) and Zonal check (5005 kg/ha). Among 37 test entries, on overall mean basis, **only two entries IET 28982 and IET 28979 out yielded the best check by 11% (both) and hence promoted to 3rd year of testing.** The performance of the top 2 entries on overall mean is tabulated and described in detail as below.

Overall performance of the entries based on yield in Advance Variety Trial 1 – Irrigated Mid Early (AVT 1-IME) Kharif 2021

Rank	IET No/ Designation/Cross Combination	GY/DFF/GT	% NC/ZC/LC/HC
1	28982 RRX – 809 (Hybrid)	6453 96 LB	11 29 19 14
2	28979 PHI – 20102 (Hybrid)	6450 96 LB	11 29 19 14
	<i>Gontra Bidhan-3 (National Check, NC)</i>	5813 95	
	Zonal Check (ZC)	5005 95	
	Local Check (LC)	5427 96	
	US 312 (Hybrid Check, HC)	5641 97	

Bold & Italics: Best check & over the best check; GY: Grain Yield (kg/ha); DFF: Days to 50% flowering; GT: Grain Type; BCV: Best Varietal Check. NC: National Check; ZC: Zonal Check; HC: Hybrid Check; LC: Local Check; LB: Long Bold; LS: Long Slender; MS: Medium Slender; SB: Short Bold, SS: Short Slender.

Zone wise performance of the entries:

Zone II

The trial was evaluated at three locations viz., Pantnagar (Uttarkhand), Ludhiana (Punjab) and Kaul (Haryana) of Northern Zone (Zone II). Data from Pantnagar was not considered for analysis due to low mean (3601 kg/ha), hence Ludhiana and Kaul was considered for analysis in Zone II. Zonal mean yield of the entries varied from 4077 kg/ha (IET 29251) to 8400 kg/ha (IET 28981); days to 50% flowering ranged from 87 days (IET 28386) to 112 days (IET 29236 and IET 29239); plant height ranged from 103 cm (PR 113, Zonal check) to 136.2 cm (IET 29236) and panicles per square meter ranged from 246 (IET 29239) to 360 (IET 29214). **In Zone II, only one entry IET 28981 recorded superior yield performance over the best check (Local check), however the entry recorded HRR (70.8%), ASV (4.0), AC (26.10), and GC (22). Due to unacceptable grain quality parameters, the entry IET 28981 is not promoted.**

Zone III

The trial was evaluated at 11 locations in 5 states viz., Odisha (ICAR-NRRI-Cuttack, Jeypore, Chiplima), Bihar (Bikramganj-Dhangain, Patna-ICAR), Jharkhand (Ranchi), West

Bengal (Chinsura, Hathwara, Bankura), Uttar Pradesh (Masodha, Varanasi). The data from Ranchi (3692 kg/ha), Hathwara (3202 kg/ha), Varanasi (3649 kg/ha) recorded low experimental mean yield and data from Patna – ICAR (3.9%) and Masodha (4.9%) recorded Low CV, hence data from these 5 locations was not included in analysis and data from remaining 6 locations was considered for analysis in Zone III. Zonal mean yield of the entries varied from 4345 kg/ha (IET 29251) to 6497kg/ha (IET 28979); days to 50% flowering ranged from 92 days (IET 29229 and IET 29230) to 107 days (IET 29214 and IET 29238); plant height ranged from 96.46 cm (IET 29214) to 119.8cm (IET 29236) and panicles per square meter ranged from 262 (IET 28378) to 348 (IET 29214). In Zone III, **two entries IET 28979 and IET 28982 recorded superior yield performance over the best check, Gontra Bidhan 3, National check and promoted to 3rd year of testing in AVT-2-IME.**

Performance of the entries in AVT 1-IME during Kharif 2021- Zone III

Rank	IET No/ Designation/ Cross Combination	GY/ DFF/ GT	% NC/ZC/ LC/HC	Performance across states			
				State/ Rank	Yield	%BVC	%HC
Promising in Zone-III (Eastern)							
1	28979 PHI 20102 (Hybrid)	6497 95 LB	13 37 24 15	WB (1)	7116	39	17
2	28982 RRX-809 (Hybrid)	6277 99 LB	10 32 20 11	OD (1) WB (9)	6190 6193	6 20	16 -
	Gontra Bidhan-3 <i>(National Check)</i>	5730 99					
	Lalat(Zonal Check)	4755 100					
	Local Check	5248 97					
	US 312 (Hybrid Check)	5633 99					

Zone IV

The trial was evaluated at 3 locations in 2 states viz., Assam (Titabar, Geruva-ICAR) and Tripura (Lembucherra). Gerua-ICAR recorded low experimental mean (3485 kg/ha), hence the data from this location was not included in analysis and data from remaining 2 locations (Titabar and Lembucherra) was considered for analysis in Zone IV. Zonal mean yield of the entries varied from 3236 kg/ha (IET 29251) to 6863 kg/ha (IET 29236); days to 50% flowering ranged from 89 days (IET 28357 and IET 29215) to 105 days (IET 29214, IET 29246 and IET 29238); plant height ranged from 89.3 cm (IET 28396) to 126.3 cm (IET 29251) and panicles per square meter ranged from 209 (IET 28128) to 346 (IET 28506).

In Zone IV, 14 entries IETs 28236 (34%), 29214 (27%), 28981 (23%), 28506 (19%), 28128 (16%), 29238 (15%), 29212 (14%), 29217 (14%), 29235 (12%), 28396 (11%), 28982 (11%), 29233 (9%), 28378 (7%), 29246 (6%) out yielded the best check Gontra Bidhan-3 (National check). **Nine entries, IETs 29236, 28506, 28128, 29212, 29217, 29235, 28982, 29214 and 29233 are promoted to third year of testing under AVT 2- IME.**

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The two entries viz., IET 28981 (HRR=70.8%, ASV= 4, AC=26.10, GC=22), IET 28378 (HRR=68.2%, ASV=7, AC=26.75, GC=22) recorded unacceptable grain quality parameters; hence these two entries IET 28981 and IET 28378 are not promoted. However, IET 29238 (HRR=53.9%, ASV= 4, AC=27.36, GC=45) recorded desirable cooking quality parameters and hence it is considered for promotion.

Performance of the entries in AVT 1-IME during Kharif 2021- Zone IV

Rank	IET No/ Designation/ Cross Combination	GY/ DFP/ GT	% NC/ZC/ LC/HC	Performance across states			
				State/ Rank	Yield	%BVC	%HC
Promising in Zone-IV (North Eastern)							
1	29236 CR 3580-3-1-1-1-1-2 Lalat / N 22	6863 102 SB	34 64 59 74	TR (2)	8058	27	53
4	28506 CR 3849-2-1-2-1-2 Pooja / IR 64 MAS	6122 100 LB	19 46 42 55	TR (1)	8221	30	56
5	28128 SHX – 468 (Hybrid)	5934 96 LB	16 42 37 50	AS (9)	5447	6	107
7	29212 Shuats Dhan-7 IR 7405-297-2-1 / IR 71700-247-1-1-5	5858 96 LS	14 40 35 48	AS (6)	5700	10	117
	29217 Pusa 2090-17-20 Pusa 44 / CB 501	5824 99 LB	14 39 35 47	TR (7)	6517	3	23
	29235 PNPK 7106 PNP 3/SR	5720 99 LS	12 37 32 45	AS (1)	6428	25	145
	28982 RRX -809 (Hybrid)	5702 99 LB	11 36 32 44	TR (10)	6305	-0.36	19
	29233 RNR 28360 Bhadrakali / NSN 20984	5596 98 LS	9 34 29 42	TR (^)	6663	5	26
	29238 ORJ 1351 IRRI 154/ Mazhan (Red) // IR08N194	5889 105 LB	15 41 36 49	AS (2)	6175	20	135
	Gontra Bidhan-3 (National Check)	5128 91					
	Lalat (Zonal Check)	4180 99					
	Local Check	4322 102					
	US 312 (Hybrid Check)	3954 97					

Zone V

The trial was evaluated at 6 locations in 2 states viz., Chhattisgarh (Raipur, Ambikapur, Jagadalpur, Bilaspur), Maharashtra (Sakoli, Sindewahi) and data from all 6 locations was considered for analysis in Zone V. Zonal mean yield of the entries varied from 3788 kg/ha (IET 28386) to 6188 kg/ha (IET 28972); days to 50% flowering ranged from 94 days (IET 28380, IET 29229 and Zonal check) to 110 days (IET 29214); plant height ranged from 93.42 cm (IET 29233) to 131.32 cm (IET 28328) and panicles per square meter ranged from 164 (IET 28982) to 267 (IET 29214). In Zone V, **two entries IET 28972 (17% against BVC, 13% against HC) and IET 28979 (15% against BVC, 11% against HC) recorded superior yield performance. The entry IET 28972 recorded HRR (70.8%), ASV (7.0), AC (27.10), and GC (22). Due to unacceptable grain quality parameters, it is not promoted. Therefore, only one entry, IET 28979 is promoted to 3rd year of testing in AVT-2-IME.**

Performance of the entries in AVT 1-IME during Kharif 2021- Zone V

Rank	IET No/ Designation/ Cross Combination	GY/ DFF/ GT	% NC/ZC/ LC/HC	Performance across states			
				State/ Rank	Yield	%BVC	%HC
Promising in Zone-V (Central)							
2	28979 PHI 20102 (Hybrid)	6119 97 LB	15 47 27 11	CH (2)	6805	13	6
	Gontra Bidhan-3 (National Check)	5301 99					
	Lalat (Zonal Check)	4176 94					
	Local Check	4803 97					
	US 312 (Hybrid Check)	5494 99					

Zone VI

The trial was evaluated at six locations in two states viz., Maharashtra 2 (Karjat, Shirgaon and Radhanagari) and Gujarat (Navsari, Nawagam and Vyara). The data from all locations was considered for analysis. Zonal mean yield of the entries varied from 3965 kg/ha (IET 29229) to 6161 kg/ha (IET 28982); days to 50% flowering ranged from 89 days (IET 29243) to 113 days (IET 29219); plant height ranged from 91.1 cm (Karjat-7, Zonal check) to 126.3 cm (IET 29251) and panicles per square meter ranged from 206 (Karjat-7, Zonal check) to 268 (IET 29214). In Zone VI, 12 entries IETs 28982 (32%), 29128 (30%), 28981 (27%), 28979 (19%), 28972 (16%), 28353 (10%), 29239 (10%), 29246 (10%), 28506 (8%), 29214 (8%), 29235 (6%) and 29236 (5%) out yielded the best varietal check, Gontra Bidhan-3 (National check). **Eight entries, IETs 28982, 29128, 28979, 28353, 29246, 28506, 29235, and 29236 are promoted to third year of testing under AVT 2 IME. The entries IET 28981 (HRR=70.8%, ASV= 4, AC=26.10, GC=22) and IET 28972 (HRR=70.8%, ASV= 4, AC=27.10, GC=22), recorded unacceptable grain quality parameters; hence are not promoted. IET 29239 was dropped due to poor grain quality.**

Performance of the entries in AVT 1-IME during Kharif 2021- Zone VI

Rank	IET No/ Designation/ Cross Combination	GY/ DFF/ GT	% NC/ ZC /LC / HC	Performance across states			
				State/ Rank	Yield	%BVC	%HC
Promising in Zone-VI (Western)							
1	28982 RRX-809 (Hybrid) -	6161 94 LB	32 42 35 22	MH2(1) GJ (6)	6476 5845	55 11	31 12
2	28128 SHX- 458 (Hybrid) -	6063 93 LB	30 39 33 20	MH2(3) GJ (1)	5408 6718	29 28	9 29
4	28979 PHI – 20102 (Hybrid) -	5576 95 LB	19 28 22 10	GJ (2)	6611	26	27
	Gontra Bidhan-3 (National Check)	4670 92					
	Karjat - 7 (Zonal Check)	4350 90					
	Local Check	4566 92					
	US 312 (Hybrid Check)	5059 96					

Zone VII

The trial was evaluated at 10 Locations in five states Andhra Pradesh (Maruteru), Telangana (Rajendranagar, Kunaram and Warangal), Tamilnadu (Aduthurai and Coimbatore), Kerala (Moncompu and Pattambi) and Karnataka (Mandya and Brahmavar). The data from Brahmavar location recorded low experimental mean yield (3437 kg/ha) hence not considered for analysis. The data from remaining 9 locations was considered for analysis. Zonal mean yield of the entries varied from 4983 kg/ha (IET 28386) to 7473 kg/ha (IET 28982); days to 50% flowering ranged from 90 days (IET 29229) to 104 days (IET 29214); plant height ranged from 98.2 cm (IET 29229) to 117.7 cm (IET 29251) and number of panicles per square meter ranged from 303 (IET 28979) to 399 (IET 29214). None of the test entries out yielded the best varietal check (Gontra Bidhan 3, NC, 7171 kg/ha). **Hence none of the entries in AVT 1-IME got promoted in zone VII.**

Performance of test entries and grain quality parameters

Sl. No.	IET No.	Yield superiority in Zone						Grain quality parameters				Remarks
		Overall	Z II	Z III	Z IV	Z V	Z VI	HRR	ASV	AC	GC	
1	28981	-	16	-	23	-	27	70.8	4	26.10	22	Dropped
2	28979	11	-	13	-	15	19	69.2	4	22.49	27	<i>Promoted</i>
3	28982	11	-	10	11	-	32	68.6	3	26.72	50	<i>Promoted</i>
4	29236	-	10	-	34	-	-	73.5	4	21.97	22	<i>Promoted</i>
5	28506	-	-	-	19	-	8	62.5	3	24.72	54	<i>Promoted</i>
6	28128	-	-	-	16	-	30	73.1	4	22.00	48	<i>Promoted</i>
7	29212	-	-	-	14	-	-	62.5	4	23.61	42	<i>Promoted</i>
8	28972	-	-	-	-	17	16	70.8	7	27.10	22	Dropped

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Sl. No.	IET No.	Yield superiority in Zone						Grain quality parameters				Remarks
		Overall	Z II	Z III	Z IV	Z V	Z VI	HRR	ASV	AC	GC	
9	29214	-	-	-	27	-	8	63.2	4	25.40	41	<i>Promoted</i>
10	29233	-	-	-	9	-	-	69.3	7	24.02	22	<i>Promoted</i>
11	28378	-	-	-	7	-	-	68.2	7	26.75	22	Dropped
12	29217	-	-	-	14	-	-	56.3	3.5	23.52	57	<i>Promoted</i>
13	29235	-	-	-	12	-	6	71.7	4	22.29	28	<i>Promoted</i>
14	29246	-	-	-	6	-	10	73.1	7	21.91	22	<i>Promoted</i>
15	29238	-	-	-	15	-	-	53.9	4	27.36	45	<i>Promoted</i>
16	29239	-	-	-	-	-	10	58.1	4	26.28	22	Dropped
17	28353	-	-	-	-	-	10	70.2	4	24.64	26	<i>Promoted</i>

INITIAL VARIETAL TRIAL –IRRIGATED MID-EARLY (IVT-IME)

Locations: 45

Test Entries: 61

Checks: Gontra Bidhan-3 (National); PR 113 (Northern), Lalat (Eastern & North Eastern), Karjat-7 (Western), MTU 1010 (Central and Southern)-(Zonal) and Local Check.

Table: 1.22

Centers - Data received: 34

Pantnagar, Ludhiana, Cuttack, Jeypore, Chiplima, Bikramganj, Patna, Ranchi, Chinsurah, Malda, Bankura, Masodha, Varanasi, Titabar, Lembucherra, Raipur, Jagdalpur, Sakoli, Sindewahi, Karjat, Nawagam, Navsari, Vyara, Maruteru, Rajendranagar, Warangal, Aduthurai, Coimbtore, Moncompu, Pattambi, Mandya, Brahmavar, Kurumbapet.

Centers - Data not received: 11

Kaul, Warseoni, Jabalpur, Gerua, Ambikapur, Bilaspur, Shirgoan, Radhanagari, Kunaram, Jagtial, Mugad.

Initial Varietal Trial – Irrigated Mid Early (IVT-IME) was constituted with 61 test entries and three checks namely national check – Gontra Bidhan, respective zonal checks and local checks for zone II (Northern), zone III (Eastern), zone IV (North Eastern), zone V

(Central), zone VI (Western), zone VII (Southern). The trial was sent to 45 locations across zones II, II, IV, V, VI, VII and the data was received from 34 locations. Data from nine centers were excluded from analysis due to either low (<5%) or high CV (20%) or low experimental yield (<3000 Kg/ha) or non-significant F variance ratio between treatments.

The information on data inclusion/exclusion in analysis

Data status	Zone/location/state	Total no. of locations
The centers from which data is not included in the analysis (Low/high CV)	Pantnagar, Titabar, Lembucherra, Jagdalpur	4
The centers from which data is not included in the analysis (Low experimental mean)	Ludhiana, Sabour, Ranchi, Malda, Varanasi,	5
The centers from which data is not included in the analysis (Low CV and low experimental mean)	-	-
The centers from which data is not received	Kaul, Warsheoni, Jabalpur, Gerua, Ambikapur, Bilaspur, Shirgoan, Radhanagari, Kunaram, Jagtial, Mugad	11
The centers from which data is included in the analysis		25
	Total number of locations	45

Zonal performance of the entries

As per the revised guidelines for IVT, the CD mean was added to the best check observed in each zone and overall. The IET numbers lines having yield over the best check + CD were considered. The flowering duration DFF 50% was considered according to the standard error of mean in each zone and overall. Based on the DFF, the entries have been recommended/ considered for other trials. The mean data for zone III, zone V, zone VI, and zone VII were considered. The data for Zone II and Zone IV was not taken into consideration due to mean yield, and low/ high CV.

Overall mean performance

The overall yield means for all the 25 locations varied from 6031 kg/ ha (IET 29188) to 4307 kg/ha (IET 29816). The data pertaining to yield, days to 50% flowering, plant height and panicles/m² are presented in tables 1.23 and 1.24. The BC was NC, Gontra Bidhan -3 with 5775 kg/ ha and the mean CD was 206. Only one IET 29188 with 6031 kg/ ha and 98 days' duration (days to 50% flowering) was above 5981 kg/ ha (BC+CD).

Hence, IET 29188 (WGL 1355 WGL-347/HKR-06-47) can be promoted on the basis of the overall 25 locations.

Zone III Eastern

The Eastern zone's overall mean yield (kg/ha) varied from 6408 kg/ha for IET 29808 to 4155 kg/ ha for IET 29816. The days to 50% flowering varied from 111 days for IET 29765 to 84 days for IET 29771, panicles/m² varied from 352 panicles/m² for IET 29812 panicles/m² to 245 panicles/m² (29769), the plant height varied from 121.16 cm for IET 29819 to 89.88 cm for IET 29777.

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The BC was NC, Gontra Bidhan -3 with 5534 kg/ ha and the mean CD was 374. The flowering duration 50% DFF had a standard error of mean of 0. Nine IETs were above the 5908 kg/ha (BC+CD) and are as follows.

The seven entries are recommended for promotion to advanced varietal trials Irrigated mid-early in Zone III.

The IETs, 29808 (RP 6317-RMS-S35-BC2F4-49-25-12-24 MTU1121*2/ Swarna) with 100 DFF, 29188 WGL 1355 (WGL-347/HKR-06-47) with 99 DFF, 29822 (ORJ 1342 (TP 29409) IR 10M300) with 100 DFF, 29304 (R 2454-1-R1-10 KM/IRBB 59) with 100 DFF, 29805 (RP 5976-78-26-6-2 Improved Samba Mahsuri/ Wazuhophek) with 105 DFF, 29807 (Bhata Mahsuri Mutant -1 Bhata Mahsuri) with 92 DFF, 29770 (HKR 17-33 IR 68826A /IR 81873-31-2-2-2) with 94 DFF, 29775 (RP 6112-MS-M-4-11-5-3-7-9-4-1 BPT 5204 Mutant) with 88 DFF, 29820 (OR 2517-8 OR 2006-25 / IR 65629-22-1) with 100 DFF.

The data concerning yield, days to 50% flowering, are presented in the following Table.

Performance of the entries in ZONE III Eastern

Rank	IET No/Designation/ Cross combination	GT	DDF	Grain Yield (Kg/ha)/days to 50% flowering/ grain type	Remarks
1	29808 RP 6317-RMS-S35- BC2F4-49-25-12-24 (MTU1121*2/Swarna)	LS	100	6408*	Promoted to AVT1 IME in Zone III
2	29188 WGL 1355 (WGL-347/HKR-06-47)	LS	99	6347*	Promoted to AVT1 IME in Zone III
3	29822 ORJ 1342 (TP 29409) (IR 10M300)	MB	100	6298*	Promoted to AVT1 IME in Zone III
4	29304 R 2454-1-R1-10 KM/IRBB 59	MB	100	6239*	Promoted to AVT1 IME in Zone III
5	29805 RP 5976-78-26-6-2 (Improved Samba Mahsuri / Wazuhophek)	SB	105	6212*	Shifted to another trial Irrigated Late according to 50% days to flowering
6	29807 Bhata Mahsuri Mutant -1 (Bhata Mahsuri)	MS	92	6129*	Promoted to AVT1 IME in Zone III
7	29770 HKR 17-33 (IR 68826A /IR 81873-31-2-2- 2)	LS	94	6102*	Promoted to AVT1 IME in Zone III
8	29775 RP 6112-MS-M-4-11-5- 3-7-9-4-1 (BPT 5204 Mutant)	MB	88	5997*	Shifted to another trial Irrigated Early according to 50% days to flowering
9	29820 OR 2517-8 (OR 2006-25 / IR 65629-22-1)	MS	100	5956*	Promoted to AVT1 IME in Zone III
	Gontra Bidhan-3 (NC)		90	5534	
	Zonal Check (ZC)		96	4998	
	Local Check (LC)		95	4872	
	CD/ Std Error		0	374	
	BC+CD			5908	

*above the best check and CD mean yield value

The IET 29805 (RP 5976-78-26-6-2 Improved Samba Mahsuri/ Wazuhophek) with 105 DFF is recommended to be shifted to irrigated late duration trail.

The IET 29775 (RP 6112-MS-M-4-11-5-3-7-9-4-1 BPT 5204 Mutant) with 88 DFF is recommended to be shifted to irrigated early duration trail.

Zone V Central

The Central zone's overall mean yield (kg/ha) varied from 5680 kg/ha for IET 29820 to 2956 kg/ ha for IET 29805. The days to 50% flowering varied from 114 days for IET 29776 to 78 days for IET 29771, 29801, panicles/m² varied from 245 panicles/m² (IET 29809) panicles/m² to 151 panicles/m² (IET 29810), the plant height varied from 132.45 cm for IET 29790 to 92.16 cm for IET 29803. The BC was NC, Gontra Bidhan -3 with 5176 kg/ ha and the mean CD was 649. The flowering duration 50% DFF had a standard error of the mean of 1. None of the IETs had a yield over 5825 kg/ ha and hence no entry can be promoted in Zone V Central. **None of the entries qualified for Zone V Central.**

ZONE VI Western

The local check with 5343 kg/ ha was the best check in terms of mean yield kg/ ha in zone VI. The CD value was 478. None of the entry's mean was higher than the LC+CD i.e. 5821 kg/ ha. The mean yield ranged from 3293 kg/ ha (IET 29801) to 5343 (local check), days to 50% flowering time ranged from 103 days (IET 29805) to 83 days (IET 29790), the number of panicles/ m² ranged from 322 panicles/m² (IET 29765) to 228 panicles/m² (IET 29782) and the plant height ranged from 130.69 cm (IET 29788) 90.68 cm (zonal check). **None of the entries qualified for Zone VI Western.**

ZONE VII Southern

In Zone VII, the national check Gontra Bidhan -3 was the best check. The CD value was 388. Only one IET 29188 (WGL 1355 WGL-347/HKR-06-476) had a higher mean yield than 6864 kg/ha (NC+CD).

The mean yield ranged from 6684 kg/ ha (IET 29188) to 4772 kg/ ha (IET 29790), days to 50% flowering time ranged from 102 days (IET 29805) to 86 days (IET 29771), the number of panicles/ m² ranged from 336 panicles/m² (IET 29797) to 269 panicles/m² (IET 29799) and the plant height ranged from 120.05 cm (IET 29788) 90.01 cm (IET 29777). **None of the entries qualified for Zone VII.**

Performance of the promising entries IVT-IME Kharif 2021

Rank	IET No/Designation/ Cross combination	GT	DFF	Grain Yield (Kg/ha)/days to 50% flowering/ grain type	Remarks / Promotion/ Shifting
Overall 25 locations					
	IET 29188 WGL 1355 (WGL-347/ HKR-06-47)	LS	98	6031	
ZONE III					
1	29808 RP 6317-RMS-S35-BC2F4- 49-25-12-24 (MTU1121*2/ Swarna)	LS	100	6408	Promoted to AVT1 IME in Zone III
2	29188 WGL 1355 (WGL-347/HKR- 06-47)	LS	99	6347	Promoted to AVT1 IME in Zone III
3	29822 ORJ 1342 (TP 29409) IR 10M300	MB	100	6298	Promoted to AVT1 IME in Zone III
4	29304 R 2454-1-R1-10	MB	100	6239	Promoted to AVT1 IME

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Rank	IET No/Designation/ Cross combination	GT	DFD	Grain Yield (Kg/ha)/days to 50% flowering/ grain type	Remarks / Promotion/ Shifting
	(KM/IRBB 59)				in Zone III
5	29805 RP 5976-78-26-6-2 (Improved Samba Mahsuri/ Wazuhophek)	SB	105	6212	Shifted to another trial Irrigated Late according to 50% days to flowering
6	29807 Bhata Mahsuri Mutant -1 (Bhata Mahsuri)	MS	92	6129	Promoted to AVT1 IME in Zone III
7	29770 HKR 17-33 (IR 68826A /IR 81873-31-2-2-2)	LS	94	6102	Promoted to AVT1 IME in Zone III
8	29775 RP 6112-MS-M-4-11-5-3-7- 9-4-1 (BPT 5204 Mutant)	MB	88	5997	Shifted to another trial Irrigated Early according to 50% days to flowering
9	29820 OR 2517-8 (OR 2006-25 / IR 65629-22-1)	MS	100	5956	Promoted to AVT1 IME in Zone III

Recommendation

The following seven entries are recommended for promotion to advanced varietal trials Irrigated mid-early in Zone III viz. IET 29808 with 100 DFF, IET29188 with 99 DFF, IET 29822 with 100 DFF, IET 29304 with 100 DFF, IET 29805 with 105 DFF, IET 29807 with 92 DFF, IET 29770 with 94 DFF, IET 29775 with 88 DFF, IET 29820 with 100 DFF.

The IET 29805 (RP 5976-78-26-6-2 Improved Samba Mahsuri/ Wazuhophek) with 105 DFF is recommended to be shifted to irrigated late duration trail in Zone III.

The IET 29775 (RP 6112-MS-M-4-11-5-3-7-9-4-1 BPT 5204 Mutant) with 88 DFF is recommended to be shifted to irrigated early duration trail in Zone III.

Zone III National check (NC) was Gontra Bidhan-3 and Zonal Check (ZC) was Lalat.

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Table No. 1.16: Composition of entries in Advance Variety Trial 2 & 1-Irrigated Mid Early (AVT 2 & AVT 1-IME), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
2nd year of testing:				
3501	28506	CR 3849-2-1-2-1-2	Pooja / IR64 MAS	LB
3502	28380	UPR 4130-1-1-1-1	Pant Dhan 10 / CR 2707-185-10-4-1	LS
3503	29214	OR 2523-6	Khandagiri / IR 72	MS
3504	29216	HTW 46-IR 16L 1833	# WS 2018-STRASA-OYT-Rainfed	LB
3505	29218	R 2223-979-1-394-1	R 1576-1765-1-599-1 / Mahamaya	LS
3506	29226	NVSR 556	(RP Bio-226 / IRGC 16449) / MTU 1081	SB
3507	29219	RP 6467-IR 143507-26-37-2-4-20-10-B	IR 82809:227 / Swarna / 12 // IR 96321-1447-561-B-1 / Aganni // IR 96321-1447-561-B-1 / Abhaya //// IR 96321-1447-561-B-1 / IRBB 4 // IR 96321-1447-561-B-1 / IRBB 60 / 11 // IR 96321-1447-561-B-1 / Aganni // IR 96321-1447-561-B-1 / Abhaya //// IR 96321-1447-561-B-1 / Rathu Heenathi // IR 96321-1447-561-B-1 / IRBL9	LB
3508	29228	TRC 2020-4	Tripura Sharat / Hakuchuk 2	LS
3509	29233	RNR 28360	Bhadrakali / NSN 20894	LS
3510	29236	CR 3580-3-1-1-1-1-2	Lalat / N 22	SB
3511	Gontra Bidhan-3 (NC)			
3rd year of testing				
3512	28396	Shuats Dhan 6	IRODA 117 / IR 72891-29-3-3-3 / IR 73012-137-2-2-2 (70)	LS
2nd year of testing:				
3513	28357	UPR 3968-1-1-1-1	Pant Dhan 10 / NDR 2065	LS
3514	29215	CB 16687	CB 05804 / ADT 39	SB
3515	28378	RCPR 61-IR14L572	IR10L146 / IR10L149	LS
3516	29229	KJTR 2010-4	Karjat 7 / Chandashasli	LS
3517	29239	ORR 1808	Nilagiri / ORR 110	SB
3518	29247	NVSR 2830	Jaya / GR-7	LB
3519	29251	HURS 20-1	Sarjoo 52 / HUR 105	LS
3520	28347	BRR 2015	Sita / Sugandha	LB
3521	29217	Pusa 2090-17-20	Pusa 44 / CB501	LB
3522	29212	Shuats Dhan-7	IR 7405-297-2-1 / IR 71700-247-1-1-5	LS
3523	28374	HTW 30-IR 90257-B-273-1-B-B	CT 9993-5-10-1-M / 2* Samba Mahsuri	LB
3524	28353	NLR 3573	IET 21687 / NLR 40024	SB
3525	28369	CR 3847-2-1-1-1	IR 84852-B-12-2 / IET 25345	LS
3526	PR 113-Northern, Lalat-Eastern and North Eastern, MTU 1010-Central and Southern, Karjat 7-Western—ZC			
3527	29230	RP 6112-MS-M-43-5-9-11-7-5-3	BPT 5204 Mutant	LS
3528	29235	PNPK 7106	PNP 3 / SR	LS
3529	29246	HKR 16-35	HKR 47 / HKR 99-60 // HKR 47	LS
3530	29250	OROI-7-IR87439-BTN-145-2-1	IR 70215-4-CPA 3-1-3-1 / NCIC RC 158	LS
3531	28979	PHI-20102 (Hybrid)	-	LB
3532	28972	KAVERI-7317 (Hybrid)	-	LS
3533	28128	SHX-468 (Hybrid)	-	LB
3534	28982	RRX-809 (Hybrid)	-	LB
3535	28981	PHI-20103 (Hybrid)	-	LB
3536	US 312 (HC)			
3537	28386	RP 6327-B-171-3-2	IR 79156B / Swarna	LS
3538	28328	UPR 4142-2-1-1-4	Pant Dhan 11 / Pant Dhan 19	LB
3539	29243	RCPR 75-IR 93810-17-1-2-3	IR 72022-46-2-3-3-2 / IR09L224	LS
3540	29238	ORJ 1351 (TP 30600)	IRRI 154 / Mazhan (Red) // IR08N194	LB
3541	Local Check			

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Table No. 1.17: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN							
		UTTARAKHAND		PUNJAB(1)		HARYANA (1)		Z2(2)	
		@PANTNAGAR		LUDHIANA		KAUL		Mean	
3501	28506	3281		5119	# 57%	6847		5983	
3502	28380	4119	9	4915	#51%	6710		5813	
3503	29214	2743				5783		5783	
3504	29216	3387		4136	# 27%	6247		5192	
3505	29218	3615		4839	# 49%	6956		5898	
3506	29226	3739		4345	# 33%	6901		5623	
3507	29219	436							
3508	29228	4093		3604	11%	6001		4803	
3509	29233	2418		4687	# 44%	4310		4499	
3510	29236	3634		5033	# 55%	7310		6172	
3511	Gontra Bidhan-3 (NC)	4807	5	3989		7229		5609	
3512	28396 ^	4033		4240	# 30%	8483	6	6362	10 # 13
3513	28357	3289		3352		6083		4718	
3514	29215	3426		4364	# 34%	6983		5674	
3515	28378	3876		4335	# 33%	6519		5427	
3516	29229	3219		3215		7774		5495	
3517	29239	2732				4419		4419	
3518	29247	3373		4245	# 30%	7310		5778	
3519	29251	1366		2507		5646		4077	
3520	28347	2922		4962	# 52%	7310		6136	
3521	29217	3892		4359	# 34%	7474		5917	
3522	29212	3634		4601	# 41%	7038		5820	
3523	28374	3098		5380	# 65%	7965	10	6673	7 #1
3524	28353	3718		3742	15%	6956		5349	
3525	28369	3285		3694	13%	7365		5530	
3526	Zonal Check (ZC)	3658		4839		7092		5966	
3527	29230	2929		4596	#41%	6110		5353	
3528	29235	5360	1	5356	#64%	9274	4 10%	# 1 7315	3 #
3529	29246	3323		5779	# 77%	7229		6504	8
3530	29250	4115	10	4677	# 44%	6765		5721	
3531	28979	4647	6	5328	# 64%	9384	3 * 12%	# 1 7356	2
3532	28972	4523	8	4663	# 43%	8265	8	6464	9
3533	28128	4897	3	4278	# 31%	9274	4. 10%	# 16 6776	6
3534	28982	4538	7	4758	# 46%	9465	2 * 13%	# 18 7112	5
3535	28981	4948	2	6980	1 * 14%	9820	1 * 17%	# 2 8400	1 * 16%
3536	US 312 (HC)	4888	4	3257		7992	9	5625	
3537	28386	3523		3699	14%	6028		4864	
3538	28328	4022		3799	17%	7829		5814	
3539	29243	3036		4938	# 52%	6956		5947	
3540	29238	3789		5114	# 57%	7283		6199	# 10%
3541	Local Check (LC)	3309		6097	2	8402	7	7250	4
Exp. Mean		3601		4522		7220		5885	
CD		818		707		881		570	
CV%		14.0		9.6		7.5		6.0	
D/S		17-06-2021		17-06-2021		18-06-2021			
D/P		20-07-2021		17-07-2021		16-07-2021			
Local Check Name		Pant Dhan 12		PR 124		HKR-47			
		^ 3rd year of testing.		*Superior to best check #Superior over hybrid check		% superior over best check			

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN											
		ODISHA					ODISHA (3)		BIHAR				
		ICAR-NRRI (Cuttack)	JEYPORE	CHIPLIMA	Mean	BIKRAMGANJ (Dhangain)							
3501	28506	4930		4142		5301		4791		5992			
3502	28380	5710	7	3649		5451		4937		5789			
3503	29214	6337	2 #	4757		6660	2 *	5918	3	#	5484		
3504	29216	4860		2605		5078		4181			5764		
3505	29218	4390		4767		5137		4765			5729		
3506	29226	4673		3183		5242		4366			4832		
3507	29219	4880		4928		3680		4496			5019		
3508	29228	4960		2633		4536		4043			5472		
3509	29233	3990		2769		5346		4035			5803		
3510	29236	4453		5718	7 #	6157	6	5443	9		5484		
3511	Gontra Bidhan-3 (NC)	6510	1	6274	2	4732		5839	4		7086	4	
3512	28396 ^	5727	6	3847		4608		4727			6453	7 #	
3513	28357	4747		3325		5046		4373			4787		
3514	29215	4250		4998		4948		4732			5204		
3515	28378	4280		3407		5379		4355			4989		
3516	29229	4676		3981		4673		4443			5444		
3517	29239	5593	9	1547		4980		4040			5880		
3518	29247	4813		1676		4673		3721			5285		
3519	29251	4037		3767		3967		3924			3950		
3520	28347	5030		3246		4817		4364			5049		
3521	29217	4570		5904	4 #	4353		4942			5694		
3522	29212	4747		3233		4993		4324			5451		
3523	28374	4477		2740		4510		3909			5445		
3524	28353	5343		2952		6150	7	4815			6343	9 #	
3525	28369	5039		2924		5830	9	4598			5344		
3526	Zonal Check (ZC)	4777		3218		4523		4173			5757		
3527	29230	4527		3155		5418		4367			4116		
3528	29235	5833	5	5151		5660		5548	7		7190	3 #	
3529	29246	4690		4452		5641		4928			6231	10 #	
3530	29250	5073		5452	9 #	5144		5223			5153		
3531	28979	5533		5649	8 #	6255	4	5812	5		7310	2 #	
3532	28972	5497		6228	3 #	6176	5	5967	2	#	6634	6 #	
3533	28128	5500		4133		5922	8	5185			6429	8 #	
3534	28982	5587	10	6374	1 #	6608	3 *	6190	1	6%	#	6704	5 #
3535	28981	5973	4	3202		7340	1 * #	5505	8		7426	1 #	
3536	US 312 (HC)	5643	8	4648		5719	10	5337			5602		
3537	28386	4403		3040		4497		3980			5127		
3538	28328	5227		2749		4477		4151			5826		
3539	29243	5077		5721	6 #	5222		5340			5816		
3540	29238	5487		5404	10 #	5235		5375	10		5914		
3541	Local Check (LC)	6077	3	5730	5	5222		5676	6		4402		
Exp. Mean		5071		4080		5251		4801			5693		
CD		594		607		1058		444			471		
CV%		7.2		9.2		12.4		5.7			5.1		
D/S		06-07-2021		01-07-2021		03-08-2021					25-06-2021		
D/P		18-08-2021		25-07-2021		06-09-2021					29-07-2021		
Local Check Name		CR Dhan 304		Manaswini		MTU-1156					R.Bhagwati		
^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check							

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN												
		BIHAR		BIHAR (1)		JHARKHAND (0)		WEST BENGAL						
		@Patna-ICAR		Mean		@RANCHI		CHINSURAH	@HATHWARA		BANKURA			
3501	28506	8752	7	5992		3762		7109	10 *	2701		5517	9	
3502	28380	6048		5789		2604		6104		3644	8	4633		
3503	29214	8730	8	5484		4311	6	7260	5 *	2845		6054	4 *	
3504	29216	7170		5764		3588		6859		4038	6 * #	4585		
3505	29218	6856		5729		4138	8	6330		2938		3993		
3506	29226	4874		4832		3993		5631		3032		4912		
3507	29219	3600		5019		3385		7188	6 *	2506		6027	5 *	
3508	29228	8389	10	5472		3559		5983		2967		4612		
3509	29233	7137		5803		4919	2	6878		4130	5 * #	4748		
3510	29236	5722		5484		4398	5	7166	9 *	3456		3993		
3511	Gontra Bidhan-3 (NC)	8830	6	7086	4	3906		5518		3511		4259		
3512	28396 ^	7681		6453	7	# 159	3993		5877		2636		4918	
3513	28357	6626		4787		3675		5763		2813		4272		
3514	29215	6200		5204		3762		7483	2 *	2939		5000		
3515	28378	6852		4989		3328		5533		3003		4184		
3516	29229	8248		5444		2315		5771		3193		4469		
3517	29239	6363		5880		3443		6973		2432		4347		
3518	29247	7137		5285		3993		5688		2679		6279	3 * #	
3519	29251	7833		3950		2865		5559		3370		4789		
3520	28347	7122		5049		3328		5605		2831		4483		
3521	29217	8215		5694		4543	4	5442		2708		4435		
3522	29212	7226		5451		3877		6047		2018		4694		
3523	28374	7515		5445		4109	9	5484		4806	1 * #	5721	8	
3524	28353	7633		6343	9	# 13	3791		6327		2776		5816	7
3525	28369	8874	5	5344		3588		7037		4796	2 * #	4871		
3526	Zonal Check (ZC)	7352		5757		3906		6058		2513		4197		
3527	29230	5907		4116		2257		5620		2737		4728		
3528	29235	9074	4	7190	3	#28%	3819		6621		4613	3 * #	5272	
3529	29246	7615		6231	10	# 11%	5006	1	6678		3748	7	5837	6
3530	29250	6185		5153		3675		6330		2701		4612		
3531	28979	9489	2	7310	2	#30%	3993		7559	1 *	2791		6673	1 * #
3532	28972	6115		6634	6	# 18%	4167	7	7011		3393		5007	
3533	28128	8263		6429	8	# 15	3848		7377	4 *	3633	9	4850	
3534	28982	9985	1	6704	5	#20%	4022	10	7434	3 *	3593	10	4952	
3535	28981	8585	9	7426	1	# 33%	3501		6614		2478		5184	
3536	US 312 (HC)	9241	3	5602		4659	3	7181	7	3248		5007		
3537	28386	6848		5127		2807		5756		4166	4 * #	4231		
3538	28328	5133		5826		3096		6916		3302		4463		
3539	29243	7789		5816		3385		7011		3434		5456	10	
3540	29238	7141		5914		3125		7181	7	3343		6565	2 * #	
3541	Local Check (LC)	5341		4402		2922		5329		2799		4728		
Exp. Mean		7310		5693		3692		6422		3202		4960		
CD		460		471		870		1043		510		1223		
CV%		3.9		5.1		14.5		10.0		9.8		15.2		
D/S		17-06-2021				25-06-2021		25-06-2021		01-07-2021		01-07-2021		
D/P		13-07-2021				30-07-2021		28-07-2021		24-07-2021		05-08-2021		
Local Check Name		Rajendra Sweta				Naveen		KHITISH		LALAT		Lalat		
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check						

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							ZONE IV-NORTH EASTERN				
		WEST BENGAL (2)			UTTAR PRADESH (0)		Z3(6)		ASSAM				
		Mean			@MASODHA	@VARANASI	Mean		TITABAR				
3501	28506	6313	5 *	23%	3734		3361		5499		4022	#	
3502	28380	5369			4285		3690		5223		4338	#	
3503	29214	6657	3 *	30%	3601		3187		6092	3 *	5922	3 * #	
3504	29216	5722	12%		3407		3997		4959		3515		
3505	29218	5162			2387		3395		5058		3768		
3506	29226	5272			2032		4245	7 #	4746		4433		
3507	29219	6608	4 *	29%	4023		1361		5287		5130		
3508	29228	5298			1855		3497		4699		4813		
3509	29233	5813	13%		5158		4187	8 #	4922		4528		
3510	29236	5580	9%		4501		3619		5495		5668	7 #	
3511	Gontra Bidhan-3 (NC)	4889			5835	9	3187		5730	8	3927		
3512	28396 ^A	5398	5%		1614		3184		5238		5795	4 * #	
3513	28357	5018			4187		3340		4657		4243	#	
3514	29215	6242	7 *	22%	4386		3841		5314		4212	#	
3515	28378	4859			1794		4293	6 #	4629		5478	8 #	
3516	29229	5120			4119		3190		4836		4307		
3517	29239	5660	10%		4337		4027		4887		4307		
3518	29247	5984	*	17%			3793		4736		3325		
3519	29251	5174			6015	6 #			4345		2945		
3520	28347	5044			6165	2 #	3480		4705		3990		
3521	29217	4939			4032		1656		5066		5130		
3522	29212	5371			4433		3850		4861		5700	6 #	
3523	28374	5603	9%		4337		3333		4730		4085	#	
3524	28353	6072	*	18%	5987	7 #	3293		5489		4972	#	
3525	28369	5954	*	16%	4078		3184		5174		4307	#	
3526	Zonal Check (ZC)	5128			4419		3575		4755		3293	#	
3527	29230	5174			5797	10 #	3184		4594		2945		
3528	29235	5947	*	16%	5155		6065	1 * #	5955	7	6428	1 * #	
3529	29246	6258	6 *	22%	5974	8 #	4102	10	5588		5067		
3530	29250	5471	7%		5207		3194		5294		5035		
3531	28979	7116	1 *	39%	# 5412		4126	9	6497	1 *	5795	4 * #	
3532	28972	6009	*	17%	6056	5 #	3204		6092	3 *	4655	#	
3533	28128	6114	10 *	19%	6083	4 #	3898		5702	10	5447	9 #	
3534	28982	6193	9 *	21%	5346		4412	5 #	6277	2 *	5098	# 11	
3535	28981	5899	15%		5046		4803	2 #	5957	6	5225	10 #	
3536	US 312 (HC)	6094			4910		3561		5633		2628		
3537	28386	4994			4528		3184		4509		3420		
3538	28328	5690	11%		2905		3980		4943		3737		
3539	29243	6234	8 *	22%	6167	1 #	3228		5717	9	4908		
3540	29238	6873	2 *	34%	13%	6102	3 #	4738	3 #	5964	5	6175	2 * #
3541	Local Check (LC)	5029			5074		4503	4	5248		5162		
Exp. Mean		5691			4512		3649		5246		4582		
CD		816			361		576		350		574		
CV%		8.8			4.9		9.7		4.1		7.7		
D/S					16-06-2021		16-06-2021				29-06-2021		
D/P					17-07-2021		17-07-2021				28-07-2021		
Local Check Name					NDR 3112-1		HUR-4-3				Shraboni		
			^A 3rd year of testing.				*Superior to best check	#Superior over hybrid check			%superior over best check		

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN													
		ASSAM		ASSAM (1)			TRIPURA (1)			ZA(2)					
		@Genua-ICAR		Mean			Lembucherra		Mean						
3501	28506	4000		4022		# 8221	1*	30%	# 56	6122	4*	19%	# 5		
3502	28380	4633	7	4338	#	65%				3917					
3503	29214	2700		5922	3*	15%	# 11	7075	5	12%	# 34	6499	2*	27%	# 64
3504	29216	2900		3515				# 5201				4358	10%		
3505	29218	2600		3768				# 5000				4384	11%		
3506	29226	3667		4433				# 3691				4062			
3507	29219	1067		5130				# 2879				4005			
3508	29228	2700		4813				# 4274				4544	15%		
3509	29233	2433		4528				# 6663	6	5%	26%	5596	9%	# 4	
3510	29236	2500		5668	7	10%	# 11	8058	2*	27%	# 53	6863	1*	34%	# 7
3511	Gontra Bidhan-3 (NC)	3600		3927				6328	9			5128			
3512	28396 ^	3200		5795	4*	12%	# 11	5625				5710	10	11%	# 44
3513	28357	3367		4243	#	61%		3594				3919			
3514	29215	3600		4212	#	60%		5290				4751	20%		
3515	28378	3867		5478	8	6%	# 108	5513				5496	7%	# 39	
3516	29229	2433		4307	#	64%		2522				3415			
3517	29239	2200		4307	#	64%		2957				3632			
3518	29247	2367		3325	#	27%		7344	4	16%	# 39	5335		#	
3519	29251			2945	12%			3527				3236			
3520	28347	4067	10	3990	#	52%		4643				4317			
3521	29217	4400	9	5130	#	95%		6517	7	23%		5824	8	14%	# 4
3522	29212	2767		5700	6	10%	# 11	6015	14%			5858	7	14%	# 48
3523	28374	2533		4085	#	55%		4520				4303			
3524	28353	4000		4972	#	89%		5781				5377			
3525	28369	3600		4307	#	64%		4654				4481	13%		
3526	Zonal Check (ZC)	3433		3293				5067				4180			
3527	29230	2133		2945	12%			4129				3537			
3528	29235	6267	1	6428	1*	25%	# 14	5011				5720	9	12%	#
3529	29246	4600	8	5067	#	93%		5826	10%			5447	6%	#	
3530	29250	3267		5035	#	92%		3973				4504	14%		
3531	28979	4967	5	5795	4*	12%	# 12	5368				5582	9%	#	
3532	28972	5000	4	4655	#	77%		6060	15%			5358			
3533	28128	4667	6	5447	9	6%	#	6420	8	22%		5934	5	16%	# 5
3534	28982	6167	2	5098	#	94%		6305	10	19%		5702	11%		
3535	28981	5733	3	5225	10		#	7366	3	16%	# 40	6296	3*	23%	# 59
3536	US 312 (HC)	3600		2628				5279				3954			
3537	28386	1733		3420	#	30%		4308				3864			
3538	28328	3267		3737	#	42%		4922				4330			
3539	29243	3133		4908	#	87%		4464				4686	19%		
3540	29238	3333		6175	2*	20%	# 135%	5602				5889	6	15%	# 49
3541	Local Check (LC)	2900		5162				3482				4322			
Exp. Mean		3485		4582				5205				4780			
CD		1541		574				1689				912			
CV%		27.2		7.7				20.0				11.7			
D/S		22-06-2021						20-07-2021							
D/P		26-07-2021						11-08-2021							
Local Check Name		Naveen						Tripura Nirog							

^ 3rd year of testing.

*Superior to best check

#Superior over hybrid check

% superior over best check

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL											
		CHHATTISGARH						CHHATTISGARH (4)		MAHARASTRA			
		RAIPUR		AMBIKAPUR	JAGADALPUR	BILASPUR		Mean		SAKOLI			
3501	28506	4802		6170	7 *	6619	2	6033		5906	8	4511	9 #
3502	28380	4011		4844		3579		6533	10	4742		4553	6 #
3503	29214	4946	10	4857		5761	9	4700		5066		4609	4 #
3504	29216	4342		5563		5224		6000		5282			
3505	29218	4250		5221		5620		6500		5398	10	4511	9 #
3506	29226	3905		4177		4778		6633	9	4873		3940	
3507	29219	3454		4112		5390		3400		4089		3425	
3508	29228	3826		4995		4354		5000		4544		3175	
3509	29233	4526		4393		6058	7	4967		4986		3718	
3510	29236	4612		4667		4201		5767		4812		3133	
3511	Contra Bidhan-3 (NC)	5224	8	4745		6408	3	7650	5	6007	7	3453	
3512	28396 ^A	3558		5660	10	5721	10	4733		4918		3690	
3513	28357	3803		5293		5112		6000		5052		3495	
3514	29215	3980		4543		4757		5233		4628		4107	
3515	28378	4404		5614		4944		6333		5324		4400	
3516	29229	3237		5537		4233				4336		4136	
3517	29239	4007		5299		4671		5433		4853		4400	
3518	29247	4097		4810		4858		5333		4775		4289	
3519	29251	3273		4316		3811				3800		5124	2 #
3520	28347	3941		4289		5697		5233		4790		4524	7 #
3521	29217	3302		4248		5118		6367		4759		3732	
3522	29212	4206		6497	4 *	5101		5100		5226		3871	
3523	28374	4128		5044		5465		6100		5184		3759	
3524	28353	5123	9	4095		5061		6467		5187		4971	3 #
3525	28369	3705		5226		4613		4233		4444		4511	9 #
3526	Zonal Check (ZC)	3957		5031		4861		3900		4437		3913	
3527	29230	2710		5146		4386		3567		3952		3885	
3528	29235	5461	4	4463		3189		6967	8	5020		3578	
3529	29246	4734		4497		4071		5433		4684		3732	
3530	29250	3946		5260		4869		5633		4927		3732	
3531	28979	5461	4	7456	2 * #	5970	8	8333	1	6805	2 * 13%	4149	
3532	28972	6332	1 * #	7735	1 * #	7642	1	7433	6	7286	1 * 21% #	3495	
3533	28128	4880		6956	3 * #	6381	4	7733	4	6488	3 * 8%	3704	
3534	28982	5244	6	6207	6 *	6274	6	7083	7	6202	6	3509	
3535	28981	5684	3	6420	5 *	5454		7867	3	6356	5 6%	3690	
3536	US 312 (HC)	5234	7	5990	8	6319	5	8033	2	6394	4	3453	
3537	28386	3700		4333		3379		4333		3936		3551	
3538	28328	3902		4850		4947		4917		4654		4386	
3539	29243	3876		4211		4714		6000		4700		4567	5 #
3540	29238	5806	2	5680	9	5425		5000		5478	9	4415	
3541	Local Check (LC)	3918		4884		4885		5267		4739		5235	1
Exp. Mean		4329		5203		5120		5827		5098		4026	
CD		798		908		1329		1214		460		583	
CV%		11.4		10.7		16.0		12.8		5.6		8.9	
D/S		19-06-2021		01-07-2021		26-06-2021		17-06-2021				24-06-2021	
D/P		31-07-2021		27-07-2021		17-07-2021		10-07-2021				30-07-2021	
Local Check Name		IGKV R 2		MTU 1010		IGKVR 1		Chandrasasini				PKV Ganesh	
		^ 3rd year of testing.		* Superior to best check		# Superior over hybrid check		% superior over best check					

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL						ZONE VI - WESTERN						
		MAHARASTRA		MAHARASTRA (2)		ZS(6)		MAHARASTRA 2						
		SINDHEWAHI	Mean	Mean	Mean	KARJAT	SHIRGAON	RADHANAGARI						
3501	28506	4816	8 #	4664	8	# 26%	5492	7	5773	5	3780	4754	9	
3502	28380	3569		4061			4515		4394		3715	4586	10	
3503	29214	4796	9 #	4703	7	# 27%	4945		4611		4771 *	4922	7 #	
3504	29216	4720		4720	5	# 28%	5170		4321		3083	3875		
3505	29218	4985	6 #	4748	3	#28%	5181	10	4539		3519	3177		
3506	29226	4190		4065	10%		4604		4176		3824	4103		
3507	29219	4184		3805			3994		4466		2712	4108		
3508	29228	3800		3488			4192		4466		5479	7 *	4138	
3509	29233	3942		3830			4601		4684		3486	3478		
3510	29236	3960		3547			4390		4684		4118	4065		
3511	Contra Bidhan-3 (NC)	4324		3889			5301	8	5265	9	3769	3500		
3512	28396 ^	5382	1 #	4536	10	#23%	4791		4321		5120	8 *	5306	3 * #
3513	28357	3823		3659			4588		4684		3943	4573		
3514	29215	3762		3935			4397		4394		3017	4323		
3515	28378	4403		4402		#19%	5016		3958		4052	3549		
3516	29229	3802		3969			4189		3159		3693	3892		
3517	29239	5035	5 #	4718	6	#28%	4808		5120	10	4368	3703		
3518	29247	3957		4123	12%		4557		4611		2277	2918		
3519	29251	3357		4241	15%		3976		4031		4662	5246	4 * #	
3520	28347	3910		4217	14%		4599		4684		4651	3918		
3521	29217	3969		3851			4456		4611		4183	3651		
3522	29212	4123		3997			4816		4539		2963	3716		
3523	28374	3753		3756			4708		4394		4281	3349		
3524	28353	5044	4 #	5008	1	#36%	5127		4539		5011	9 *	4776	8
3525	28369	4193		4352		#18%	4414		4466		4346	4384		
3526	Zonal Check (ZC)	3392		3653			4176		4176		3736	4349		
3527	29230	3360		3623			3842		4248		4553	4526		
3528	29235	4645		4112	11%		4717		5846	4	5708	6 *	3073	
3529	29246	4374		4053			4474		4611		6068	4 * #	4384	
3530	29250	4478		4105	11%		4653		3958		5948	5 * #	4948	5 #
3531	28979	5344	2 #	4747	4	# 28%	6119	2 * 15%	# 11	4975	4706	3940		
3532	28972	4493		3994			6188	1 * 17%	# 13	5701	6	4227	3500	
3533	28128	4773	10	4239	15%		5738	3 * 8%	5628	7	6786	1 * #	3810	
3534	28982	5248	3 #	4379		# 1	5594	4 6%	7298	1 * #	6634	2 * #	5496	2 * #
3535	28981	4429		4060			5591	5 5%	6137	2	6517	3 * #	3741	
3536	US 312 (HC)	3936		3695			5494	6	5919	3	4946	10 *	3983	
3537	28386	3429		3490			3788		2142		4150	5828	1 * #	
3538	28328	4376		4381		#1	4563		5120	10	3802	4935	6 #	
3539	29243	4341		4454		#21	4618		5047		3529	3888		
3540	29238	4892	7 #	4654	9	# 26%	5203	9	5410	8	4924 *	2741		
3541	Local Check (LC)	4630		4933	2		4803		4684		3388	3573		
Exp. Mean		4291		4167			4790		4727		4352	4115		
CD		847		555			366		1068		959	840		
CV%		12.1		8.2			4.7		13.9		13.6	12.6		
D/S		16-06-2021							15-06-2021		17-06-2021	18-06-2021		
D/P		26-07-2021							10-07-2021		23-07-2021	01-08-2021		
Local Check Name		PKV Ganesh							Karjat 3		Ratnagiri - 1	Phule Radha		
						^	3rd year of testing.		*	Superior to best check	#	Superior over hybrid check		% superior over best check

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN										
		MAHARSTRA (5)		MAHARASTRA 2(3)			GUJARAT					
		Mean		Mean			NAVSARI	NAWAGAM		VYARA		
3501	28506	4727		4769	10 *	14%	4446		6160	6	5461	
3502	28380	4163		4232			4767		5210		5597	
3503	29214	4742		4768	*	14%	5493		5645		4692	
3504	29216	4000		3760			5669	10 #	4514		5781	10
3505	29218	4146		3745			5326		4775		4828	
3506	29226	4047		4034			5776	8 #	5609		5476	
3507	29219	3779		3762			6969	1 * #	4696		5265	
3508	29228	4212		4694	*	12%	5301		4761		4622	
3509	29233	3862		3883			4755		6007	7	5083	
3510	29236	3992		4289			4578		7500	1 * #	4574	
3511	Gontra Bidhan-3 (NC)	4062		4178			4602		5196		5686	
3512	28396 ^	4764		4916	7 *	18%	4212		5580		4679	
3513	28357	4104		4400	5%		4088		5775		4321	
3514	29215	3921		3911			4356		3848		3859	
3515	28378	4072		3853			4598		5819	10	5966	6
3516	29229	3737		3581			4815		3746		4482	
3517	29239	4525		4397	5%		4753		5841	9	7028	2 #
3518	29247	3610		3269			4147		5007		4866	
3519	29251	4484		4646	11%		4305		3587		4437	
3520	28347	4338		4418	6%		4099		4551		5525	
3521	29217	4029		4148			4527		5399		5615	
3522	29212	3842		3739			4665		5399		5415	
3523	28374	3907		4008			4208		5399		5514	
3524	28353	4868		4775	9 *	14%	5444		5275		5823	9
3525	28369	4380		4399	5%		4868		4928		5511	
3526	Zonal Check (ZC)	3913		4087			4430		3051		6360	4
3527	29230	4114		4442	6%		5063		3623		5272	
3528	29235	4570		4876	8 *	17%	5543		4196		5263	
3529	29246	4634		5021	4 *	20%	4672		5652		5349	
3530	29250	4613		4951	5 *	19%	5102		4109		5092	
3531	28979	4623		4540	9%		6667	2 *	7130	2 #	6036	5
3532	28972	4283		4476	7%		6382	4	6790	3 #	5920	8
3533	28128	4940		5408	3 *	29%	6444	3 #	6377	5 #	7334	1 #
3534	28982	5637		6476	1 *	55% #31	5948	6 #	5623		5965	7
3535	28981	4903		5465	2 *	31% #10	6092	5 #	6493	4 #	6702	3
3536	US 312 (HC)	4447		4949	6				4995		5451	
3537	28386	3820		4040			4677		3058		4681	
3538	28328	4524		4619	11%		5356		4419		4649	
3539	29243	4275		4155			5782	7 #	4688		4916	
3540	29238	4477		4358			5234		5094		4837	
3541	Local Check (LC)	4302		3882			5724	9 #	5987	8	4038	
Exp. Mean		4302		4398			5097		5159		5316	
CD		366		488			809		1317		1286	
CV%		5.2		6.8			9.8		12.6		14.9	
D/S							16-06-2021		17-06-2021		18-06-2021	
D/P							12-07-2021		27-07-2021		22-07-2021	
Local Check Name							GNR-3		Mahisagar		Gurjari	
		^ 3rd year of testing.		* Superior to best check		# Superior over hybrid check		% superior over best check				

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN					ZONE VII - SOUTHERN								
		GUJARAT (3)			Z6(6)		ANDHRA PRADESH (1)			TELANGANA					
		Mean			Mean		MARUTERU			RAJENDRANAGAR					
3501	28506	5356			5062	9	8%	6438			#9087				
3502	28380	5191			4712			6488			#7682				
3503	29214	5277			5022	8%		6943			#5691				
3504	29216	5321			4541			4834	19%		8137				
3505	29218	4976			4361			6392			#9605				
3506	29226	5620	8	7%	4827			5325	31%		10056	8			
3507	29219	5643	7	7%	4703			5679			#7689				
3508	29228	4895			4795			8248	6	8%	#1034	10762	6		
3509	29233	5282			4582			8635	5	13%	#113	8739			
3510	29236	5551	9	6%	4920	5%		9412	3 *	23%	# 1329	8367			
3511	Gontra Bidhan-3 (NC)	5161			4670			7626	10			12641	2		
3512	28396 ^	4824			4870			6836			#6705				
3513	28357	4728			4564			3909				8853			
3514	29215	4021			3966			6894			#7300				
3515	28378	5461			4657			4046				8738			
3516	29229	4348			3965			6622			#8851				
3517	29239	5874	5	12%	12%	5136	7 *	10%	3450			9473			
3518	29247	4673			3971			5931			#47256				
3519	29251	4110			4378			3573				6880			
3520	28347	4725			4571			6213			#37941				
3521	29217	5180			4664			7699	9		#8394				
3522	29212	5160			4450			4591	13%			9406			
3523	28374	5040			4524			6820			#8890				
3524	28353	5514	10	5%	5145	6 *	10%	4662	15%			10030	10		
3525	28369	5102			4751			7042			#9261				
3526	Zonal Check (ZC)	4614			4350			6915				8997			
3527	29230	4653			4548			3955				9408			
3528	29235	5001			4938	6%		8049	7	6%	#98	11997	3 #		
3529	29246	5224			5123	8 *	10%	6804			#9769				
3530	29250	4768			4860			4649	15%			9644			
3531	28979	6611	2 *	26%	# 279	5576	4 *	19%	# 10	10018	1 *	31%	# 1	9163	
3532	28972	6364	4 *	21%	#229	5420	5 *	16%		7963	8		#9	10552	7
3533	28128	6718	1 *	28%	#299	6063	2 *	30%	#209	9659	2 *	27%	#138	11175	5 #
3534	28982	5845	6	11%	12%	6161	1 *	32%	#229	9244	4 *	21%	# 128	13223	1 #
3535	28981	6429	3 *	22%	# 239	5947	3 *	27%	# 18	6300			# 3	11832	4 #
3536	US 312 (HC)	5223			5059	10		4058				9642			
3537	28386	4139			4089			3580				6943			
3538	28328	4808			4714			6283	#	55%		7763			
3539	29243	5129			4642			5142	27%			10051	9		
3540	29238	5055			4707			6376	#	57%		9493			
3541	Local Check (LC)	5250			4566			6335				8788			
Exp. Mean		5204			4771			6333				9143			
CD		820			447			1608				1352			
CV%		9.7			5.8			15.6				9.1			
D/S										09-07-2021					25-06-2021
D/P										05-08-2021					28-07-2021
Local Check Name										MTU1156					JGL 24423

^ 3rd year of testing.

* Superior to best check

Superior over hybrid check

% superior over best check

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN													
		TELANGANA				TELANGANA (3)		TAMIL NADU				TAMIL NADU (2)		KERALA	
		KUNARAM		WARANGAL		Mean		ADUTHURAI		COIMBATORE		Mean		MONCOMPU	
3501	28506	6174	5 #	7190	6	7484	8	5449		6343	10	5896		4704	
3502	28380	4083		5120		5628		6891	2 *	5769		6330	5	3733	
3503	29214	5007		6385		5694		6747	6 *	5693		6220	8	6724	3 *
3504	29216	5252		4858		6082		3846		5640		4743		4173	
3505	29218	6194	4 #	5117		6972		5160		5921		5541		4210	
3506	29226	4591		5024		6557		5609		5604		5607		3860	
3507	29219	3341		4761		5264		5417		5773		5595		2733	
3508	29228	5242		5417		7140		5865		5618		5742		4979	
3509	29233	5746	10 #	5201		6562		6763	5 *	5713		6238	6	5288	
3510	29236	6076	6 #	5071		6505		5833		6336		6085		5770	8
3511	Contra Bihhan-3 (NC)	5342		7980	2	8654	3	5833		5874		5854		4453	
3512	28396 ^	4370		7724	4	6266		4888		5709		5299		3934	
3513	28357	4335		5230		6139		6122	9	5428		5775		4156	
3514	29215	5910	8 #	5767		6326		5545		5104		5325		3650	
3515	28378	4988		5101		6276		5170		5137		5154		4877	
3516	29229	5682		7171	7	7235		5144		5169		5157		2617	
3517	29239	5121		4766		6453		5673		5136		5405		3593	
3518	29247	5009		5557		5941		5769		6445	3	6107	10	6432	5 *
3519	29251	3850		4698		5143		6090		5448		5769		3975	
3520	28347	3604		4810		5452		6122	9	5073		5598		4774	
3521	29217	5319		7135	8	6949		7147	1 * #	6421	6	6784	1 * 12%	3704	
3522	29212	5401		6254		7020		5481		5036		5259		6663	4 *
3523	28374	3829		6460		6393		5897		5234		5566		4379	
3524	28353	6389	1 * #	6880	10	7766	5	6891	2 *	4861		5876		5424	9
3525	28369	5462		6093		6939		5593		5133		5363		5329	
3526	Zonal Check (ZC)	4973		7000	9	6990		5689		6397	8	6043		4531	
3527	29230	4628	#	5331		6456		5833		5125		5479		3115	
3528	29235	6245	2 #	7751	3	8664	2	5417		4882		5150		7424	1 * #
3529	29246	3787		6661		6739		5833				5833		6885	2 *
3530	29250			6100		7872	4	6506	7	6406	7	6456	3 7%	4449	
3531	28979	4740		9132	1 * #	7678	6	5833		6437	5	6135	9	5193	
3532	28972	3649		4994		6398		6843	4 *	6509	2	6676	2 * 10%	5354	10
3533	28128	4528		6463		7389	10	6090		6372	9	6231	7	5926	6
3534	28982			5521		9372	1 *	5833		5653		5743		4852	
3535	28981	5086		5693		7537	7	5385		6605	1	5995		5346	
3536	US 312 (HC)	4150		7592	5	7128		6250	8	6443	4	6347	4	5807	7
3537	28386	3348		4877		5056		5769		4845		5307		4469	
3538	28328	5181		4541		5828		5256		4952		5104		2741	
3539	29243	5887	9 #	5372		7103		5192		4908		5050		5350	
3540	29238	6239	3 #	6486		7406	9	4776		6048		5412		4230	
3541	Local Check (LC)	5925	7	6130		6948		5487		6170		5829		5066	
Exp. Mean		4992		5986		6766		5779		5684		5733		4753	
CD		456		825		540		714		714		460		1176	
CV%		5.6		8.5		4.9		7.6		7.7		4.9		15.2	
D/S		07-07-2021		26-06-2021				04-09-2021		03-08-2021				09-07-2021	
D/P		03-08-2021		31-07-2021				03-10-2021		25-08-2021				04-08-2021	
Local Check Name		KNM 118		RNR 15048				ADT 39		CO 47				UMA (MO 16)	
		^ 3rd year of testing.		* Superior to best check		# Superior over hybrid check		% superior over best check							

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		KERALA		KERALA (2)		KARNATAKA	
		PATTAMBI		Mean		MANDYA	
3501	28506	6565		5635		7135	
3502	28380	6044		4889		4680	
3503	29214	6267		6496	5 * 15%	4734	
3504	29216	5784		4979		7225	9
3505	29218	6530		5370		7383	7
3506	29226	6194		5027		4878	
3507	29219	6749	8	4741		6713	
3508	29228	6368		5674		6501	
3509	29233	6092		5690		6519	
3510	29236	5867		5819		6834	
3511	Gontra Bidhan-3 (NC)	5994		5224		8799	1
3512	28396 ^	6473		5204		6501	
3513	28357	6279		5218		6623	
3514	29215	6692	9	5171		6902	
3515	28378	6663		5770		6807	
3516	29229	6203		4410		2230	
3517	29239	6298		4946		6259	
3518	29247	6778	7	6605	4 * 17% 11%	5778	
3519	29251	6286		5131		4838	
3520	28347	6657		5716		5278	
3521	29217	6051		4878		6002	
3522	29212	6835	4.5	6749	3 * 19% 13%	5728	
3523	28374	5851		5115		6029	
3524	28353	6835	4.5	6130	6 8%	5382	
3525	28369	5952		5641		5287	
3526	Zonal Check (ZC)	6806	6	5669		3876	
3527	29230	5756		4436		5265	
3528	29235	7137	2	7281	1 * 28% # 2	6474	
3529	29246	7257	1 #	7071	2 * 25% # 19	4806	
3530	29250	5968		5209		5562	
3531	28979	6644		5919		7765	5
3532	28972	6651		6003	9 6%	8026	3
3533	28128	6305		6116	7 8%	7234	8
3534	28982	7057	3	5955	5%	8403	2
3535	28981	6168		5757		7176	10
3536	US 312 (HC)	6121		5964	10	7954	4
3537	28386	6124		5297		4892	
3538	28328	6308		4525		6047	
3539	29243	6683	10	6017	8 6%	6205	
3540	29238	6054		5142		6623	
3541	Local Check (LC)	5883		5475		7612	6
Exp. Mean		6371		5562		6219	
CD		1090		806		579	
CV%		10.5		8.9		5.7	
D/S		19-07-2021				09-07-2021	
D/P		11-08-2021				02-08-2021	
Local Check Name		JYOTHI				Thanu	
^ 3rd year of testing.		* Superior to best check		# Superior over hybrid check			
% superior over best check							

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Table No. 1.17 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN						Overall Mean(31)		
		KARNATAKA		KARNATAKA (1)		Z7(9)				
		@BRAHMAVAR	Mean	Mean	Mean	Mean	Mean			
3501	28506	2625		7135		6565	9	5794	8	
3502	28380	2764		4680		5610		5067		
3503	29214	3140		4734		6021		5644	10	
3504	29216	3384		7225	9	5528		5056		
3505	29218	1758		7383	7	6279		5312		
3506	29226	2794		4878		5682		5018		
3507	29219	3382		6713		5428		4854		
3508	29228	2509		6501		6556	10	5155		
3509	29233	2496		6519		6522		5275		
3510	29236	5421	6 #	6834		6618	8	5628		
3511	Gontra Bidhan-3 (NC)	5677	4	8799	1	7171	4	5813	7	
3512	28396 ^	4809	10 #	6501		5904		5377		
3513	28357	3690		6623		5659		4873		
3514	29215	3591		6902		5974		5054		
3515	28378	2644		6807		5725		5135		
3516	29229	4455		2230		5521		4708		
3517	29239	5628	5 #	6259		5530		5014		
3518	29247	1672		5778		6106		5057		
3519	29251			4838		5071		4416		
3520	28347	2348		5278		5608		4988		
3521	29217	2523		6002		6430		5370		
3522	29212			5728		6155		5274		
3523	28374	5204	8 #	6029		5932		5133		
3524	28353	3733		5382		6373		5592		
3525	28369	2582		5287		6128		5200		
3526	Zonal Check (ZC)	1932		3876		6132		5005		
3527	29230	3355		5265		5380		4648		
3528	29235	5421	6 #	6474		7264	2 #13%	5971	6 #	
3529	29246	4536		4806		6475		5560		
3530	29250	1736		5562		6161		5286		
3531	28979	1087		7765	5	7214	3 # 12%	6450	2* 11%	# 14%
3532	28972	5878	3 #	8026	3	6727	6	6142	5* 6%	#
3533	28128	6119	1 #	7234	8	7084	5 #	6264	3* 8%	#11%
3534	28982	6025	2 #	8403	2	7473	1 #16%	6453	1* 11%	#14%
3535	28981	4823	9 #	7176	10	6621	7	6256	4* 8%	#11%
3536	US 312 (HC)	1039		7954	4	6446		5641		
3537	28386	2491		4892		4983		4407		
3538	28328	1396		6047		5452		4990		
3539	29243	3315		6205		6088		5352		
3540	29238	1895		6623		6258		5669	9	
3541	Local Check (LC)	4168		7612	6	6377		5427		
Exp. Mean		3437		6219		6152		5353		
CD		563		579		342		162		
CV%		10.1		5.7		3.4		1.9		
D/S		28-06-2021								
D/P		23-07-2021								
Local Check Name		KCP-1								
		^ 3rd year of testing. *Superior to best check #Superior over hybrid check								
		% superior over best check								

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Table No. 1.18: Days to 50%flowering of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN				ZONE III-EASTERN			
		UTTARAKHAND	PUNJAB(1)	HARYANA (1)	Z2(2)	ODISHA			ODISHA (3)
		@PANTNAGAR	LUDHIANA	KAUL	Mean	ICAR-NRRI (Cuttack)	JEYPORE	CHIPLIMA	Mean
3501	28506	105	103	96	100	110	100	106	105
3502	28380	95	96	91	94	98	99	100	105
3503	29214	121		110	110	125	93	108	105
3504	29216	100	101	91	96	100	101	99	105
3505	29218	95	96	94	95	95	92	100	105
3506	29226	100	100	94	97	100	94	104	105
3507	29219	132				108	98	92	105
3508	29228	97	98	95	97	99	93	96	105
3509	29233	107	108	106	107	100	96	106	105
3510	29236	112	116	107	112	100	97	105	105
3511	Contra Bidhan-3 (NC)	92	94	91	92	96	100	110	105
3512	28396	100	105	94	100	96	96	103	105
3513	28357	94	95	92	94	101	98	106	105
3514	29215	100	98	95	96	100	95	103	105
3515	28378	96	97	91	94	100	96	101	105
3516	29229	93	96	93	95	98	87	92	105
3517	29239	121		112	112	99	92	95	105
3518	29247	95	98	96	97	98	101	95	105
3519	29251	103	103	91	97	100	98	101	105
3520	28347	98	102	94	98	101	106	106	105
3521	29217	97	95	92	93	110	110	109	105
3522	29212	96	97	90	94	96	103	105	105
3523	28374	100	99	95	97	117	96	109	105
3524	28353	101	102	96	99	99	100	101	105
3525	28369	100	101	97	99	110	99	109	105
3526	Zonal Check (ZC)	101	103	97	100	98	98	105	105
3527	29230	92	97	91	94	97	90	92	105
3528	29235	102	103	96	100	100	96	110	105
3529	29246	103	103	97	100	101	89	104	105
3530	29250	104	105	96	101	108	91	103	105
3531	28979	97	100	95	97	98	89	97	105
3532	28972	92	96	91	93	98	91	104	105
3533	28128	95	97	92	95	101	94	104	105
3534	28982	96	100	93	96	99	96	104	105
3535	28981	99	100	91	95	109	91	106	105
3536	US 312 (HC)	100	99	89	94	100	90	108	105
3537	28386	91	89	85	87	99	97	101	105
3538	28328	96	94	89	91	98	94	104	105
3539	29243	94	96	90	93	96	93	98	105
3540	29238	102	110	105	108	116	100	103	105
3541	Local Check (LC)	93	102	99	101	100	95	99	105
Exp. Mean		100	100	95	98	102	96	103	105

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Table No. 1.18 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR		BIHAR (1)	JHARKHAND	WEST BENGAL			WEST BENGAL (2)
		BIKRAMGANJ (Dhangain)	@Patna-ICAR	Mean	@RANCHI	CHINSURAH	@HATHWARA	BANKURA	Mean
3501	28506	99	103	99	103	92	90	108	100
3502	28380	98	92	98	97	91	71	92	92
3503	29214	94	117	94	116	106	104	115	111
3504	29216	98	100	98	102	93	86	100	97
3505	29218	97	96	97	100	89	88	92	90
3506	29226	93	100	93	98	92	79	98	95
3507	29219	116	134	116	117	107	104	108	108
3508	29228	101	97	101	111	95	82	96	95
3509	29233	110	100	110	106	93	102	108	100
3510	29236	111	110	111	106	109	98	106	108
3511	Gontra Bidhan-3 (NC)	97	99	97	93	94	84	99	96
3512	28396	100	109	100	95	109	88	95	102
3513	28357	96	95	96	93	96	80	110	103
3514	29215	100	100	100	96	95	97	100	97
3515	28378	100	96	100	95	96	78	98	97
3516	29229	92	94	92	92	93	79	89	91
3517	29239	111	115	111	107	108	96	110	109
3518	29247	100	102	100	98	87	89	95	91
3519	29251	100	98	100	107	94	78	98	96
3520	28347	96	96	96	103	92	89	104	98
3521	29217	102	99	102	102	97	86	103	100
3522	29212	100	100	100	106	86	80	108	97
3523	28374	98	100	98	98	98	96	97	98
3524	28353	100	103	100	104	91	89	98	95
3525	28369	101	100	101	103	91	89	104	98
3526	Zonal Check (ZC)	101	100	101	99	98	91	101	99
3527	29230	92	93	92	95	91	74	89	90
3528	29235	100	96	100	101	100	90	98	99
3529	29246	100	100	100	110	95	98	100	98
3530	29250	101	105	101	97	104	90	89	97
3531	28979	93	98	93	94	98	91	96	97
3532	28972	97	94	97	94	98	86	94	96
3533	28128	100	97	100	95	98	86	92	95
3534	28982	99	99	99	98	100	90	94	97
3535	28981	96	99	96	98	98	93	98	98
3536	US 312 (HC)	98	97	98	99	100	89	99	100
3537	28386	92	92	92	93	97	78	93	95
3538	28328	99	93	99	94	94	87	96	95
3539	29243	93	97	93	96	98	88	91	95
3540	29238	110	110	110	107	98	97	113	106
3541	Local Check (LC)	99	106	99	99	91	80	98	94
	Exp. Mean	100	101	100	100	96	88	99	98

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Table No. 1.18 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN			ZONE IV- NORTH EASTERN					ZONE-V - CENTRAL
		UTTAR PRADESH (0)		Z3(6)	ASSAM		ASSAM (1)	TRIPURA (1)	Z4(2)	CHHATTISGARH
		@MASODHA	@VARANASI	Mean	TTABAR	@Genu-ICAR	Mean	Lembucherra	Mean	RAIPUR
3501	28506	102	103	103	110	103	110	90	100	112
3502	28380	104	95	96	103	93	103	96	99	103
3503	29214	105	117	107	118	115	118	93	105	117
3504	29216	102	99	99	99	97	99	92	95	107
3505	29218	110	102	94	91	93	91	91	91	107
3506	29226	99	94	97	98	99	98	88	93	105
3507	29219	87	120	105	117	114	117	88	102	91
3508	29228	121	96	97	98	97	98	91	94	103
3509	29233	87	103	102	102	108	102	93	98	88
3510	29236	102	109	105	113	109	113	90	102	112
3511	Contra Bidhan-3 (NC)	84	93	99	90	91	90	92	91	107
3512	28396	119	100	100	108	104	108	80	94	107
3513	28357	102	93	101	96	93	96	82	89	106
3514	29215	96	97	99	105	97	105	73	89	109
3515	28378	105	94	99	98	96	98	92	95	103
3516	29229	87	92	92	96	93	96	90	93	104
3517	29239	81	115	103	111	113	111	97	104	106
3518	29247		96	96	90	96	90	91	90	106
3519	29251	79		98	98		98	94	96	107
3520	28347	79	99	101	98	96	98	99	99	108
3521	29217	90	95	105	109	96	109	89	99	109
3522	29212	92	101	100	99	101	99	94	96	115
3523	28374	89	96	103	107	99	107	93	100	108
3524	28353	91	103	98	97	101	97	95	96	109
3525	28369	97	101	102	110	100	110	93	102	110
3526	Zonal Check (ZC)	88	101	100	109	103	109	90	99	102
3527	29230	94	90	92	95	89	95	98	96	102
3528	29235	97	97	101	106	96	106	93	99	109
3529	29246	100	101	98	110	96	110	101	105	110
3530	29250	103	98	99	108	104	108	91	100	109
3531	28979	104	96	95	109	96	109	91	100	106
3532	28972	104	93	97	94	92	94	95	95	104
3533	28128	102	93	98	98	96	98	94	96	104
3534	28982	105	94	99	106	95	106	93	99	96
3535	28981	99	98	100	105	96	105	96	101	104
3536	US 312 (HC)	98	97	99	102	95	102	91	97	108
3537	28386	101	91	96	92	88	92	91	91	104
3538	28328	95	96	98	92	92	92	92	92	104
3539	29243	103	92	95	95	92	95	96	96	104
3540	29238	99	111	107	111	107	111	99	105	113
3541	Local Check (LC)	98	101	97	113	96	113	92	102	95
	Exp. Mean	98	99	99	103	98	103	92	97	106

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Table No. 1.18 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL							
		CHHATTISGARH			CHHATTISGARH (4)	MAHARASTRA 1		MAHARASTRA 1 (2)	Z5(6)
		AMBIKAPUR	JAGADALPUR	BILASPUR	Mean	SAKOLI	SINDEWAHI	Mean	Mean
3501	28506	100	101	95	102	104	109	107	103
3502	28380	94	93	88	95	92	96	94	94
3503	29214	108	108	105	110	112	109	110	110
3504	29216	95	95	91	97		109	109	99
3505	29218	101	101	93	101	99	103	101	101
3506	29226	95	93	91	96	110	91	101	98
3507	29219	110	110	122	108	95	108	102	106
3508	29228	95	95	89	96	106	97	102	98
3509	29233	106	99	97	98	102	117	109	101
3510	29236	100	102	101	104	93	115	104	104
3511	Contra Bidhan-3 (NC)	98	95	90	98	99	103	101	99
3512	28396	95	95	95	98	94	109	102	99
3513	28357	95	97	88	97	101	105	103	99
3514	29215	95	101	96	100	92	97	95	98
3515	28378	94	94	90	95	94	107	100	97
3516	29229	89	87		93	103	87	95	94
3517	29239	103	102	110	105	100	110	105	105
3518	29247	98	99	93	99	94	99	97	98
3519	29251	100	104		104	104	111	107	105
3520	28347	97	102	91	100	100	105	103	101
3521	29217	99	103	90	100	93	109	101	101
3522	29212	97	98	88	99	101	97	99	99
3523	28374	98	98	91	99	101	109	105	101
3524	28353	100	102	96	102	97	105	101	102
3525	28369	99	101	96	101	91	110	101	101
3526	Zonal Check (ZC)	99	90	86	94	94	90	92	94
3527	29230	95	94	90	95	99	95	97	96
3528	29235	100	101	95	101	104	108	106	103
3529	29246	103	106	94	103	100	106	103	103
3530	29250	95	96	90	98	94	110	102	99
3531	28979	97	93	90	97	93	105	99	97
3532	28972	96	95	89	96	99	105	102	98
3533	28128	95	96	90	96	96	101	98	97
3534	28982	97	98	91	95	98	92	95	95
3535	28981	96	95	95	98	103	106	105	100
3536	US 312 (HC)	97	96	92	98	94	108	101	99
3537	28386	94	94	87	95	99	99	99	96
3538	28328	98	97	91	98	92	104	98	98
3539	29243	95	93	89	95	104	83	94	95
3540	29238	103	102	98	104	102	110	106	105
3541	Local Check (LC)	89	97	89	93	100	111	106	97
Exp. Mean		98	98	93	99	99	104	101	100

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Table No. 1.18 Contd.: Days to 50% flowering of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN									
		MAHARASTRA 2			MAHARASTRA 2(3)	MAHARASTRA (5)	GUJARAT			GUJARAT (3)	Z6(6)
		KARJAT	SHIRGAON	RADHANAGARI	Mean	Mean	NAVSARI	NAWAGAM	VYARA	Mean	Mean
3501	28506	98	100	103	100	103	93	90	96	93	97
3502	28380	91	95	102	96	95	85	93	92	90	93
3503	29214	104	105	110	107	108	108	106	107	107	107
3504	29216	93	98	99	97	100	90	100	93	95	96
3505	29218	93	93	101	96	98	84	86	89	86	91
3506	29226	94	99	102	98	99	85	99	93	92	95
3507	29219	110	115	106	110	107	121	102	121	115	113
3508	29228	92	97	103	97	99	88	99	91	93	95
3509	29233	94	99	102	98	103	87	98	90	92	95
3510	29236	102	101	105	103	103	97	99	102	99	101
3511	Gontra Bidhan-3 (NC)	91	96	103	97	98	89	88	85	87	92
3512	28396	91	101	103	98	100	89	106	96	97	97
3513	28357	93	97	107	99	101	85	103	88	92	96
3514	29215	97	94	99	97	96	86	80	91	86	91
3515	28378	92	100	106	99	100	86	99	89	91	95
3516	29229	90	94	99	94	95	80	89	89	86	90
3517	29239	105	105	107	106	106	108	107	107	107	106
3518	29247	94	94	103	97	97	80	91	91	87	92
3519	29251	92	101	109	101	103	82	100	97	93	97
3520	28347	93	95	103	97	99	83	98	93	91	94
3521	29217	97	101	106	102	101	88	97	102	96	99
3522	29212	95	99	103	99	99	83	93	93	89	94
3523	28374	93	99	99	97	100	85	101	93	93	95
3524	28353	91	95	102	96	98	86	82	93	87	92
3525	28369	95	100	106	101	101	90	96	97	94	97
3526	Zonal Check (ZC)	92	92	99	94	93	84	85	87	85	90
3527	29230	93	93	101	96	96	83	87	87	86	91
3528	29235	95	100	110	102	104	93	91	94	93	97
3529	29246	99	99	112	103	103	93	94	98	95	99
3530	29250	93	106	103	101	101	86	105	97	96	98
3531	28979	94	94	104	97	98	89	97	94	93	95
3532	28972	90	94	102	95	98	84	90	90	88	92
3533	28128	91	96	104	97	98	83	93	92	89	93
3534	28982	93	98	106	99	97	86	91	93	90	94
3535	28981	92	100	100	97	100	90	95	94	93	95
3536	US 312 (HC)	92	97	105	98	99		94	94	94	96
3537	28386	91	92	105	96	97	83	107	86	92	94
3538	28328	91	95	102	96	97	88	80	89	86	91
3539	29243	91	93	102	96	95	79	80	88	82	89
3540	29238	99	102	107	102	104	95	104	101	100	101
3541	Local Check (LC)	98	91	104	98	101	86	86	89	87	92
	Exp. Mean	95	98	104	99	100	89	95	94	92	96

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Table No.1.18 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN						
		ANDHRA PRADESH (1)	TELANGANA			TELANGANA (3)	TAMIL NADU	
		MARUTERU	RAJENDRANAGAR	KUNARAM	WARANGAL	Mean	ADUTHURAI	COIMBATORE
3501	28506	89	102	95	102	100	99	93
3502	28380	80	104	82	99	95	92	86
3503	29214	101	116	101	111	109	94	97
3504	29216	84	102	86	101	96	98	83
3505	29218	81	94	91	93	93	95	90
3506	29226	82	100	81	101	94	97	92
3507	29219	101	113	90	109	104	96	87
3508	29228	83	97	85	100	94	94	90
3509	29233	85	101	90	107	99	94	89
3510	29236	90	108	94	109	104	97	89
3511	Gontra Bidhan-3 (NC)	81	97	85	92	91	98	94
3512	28396	88	108	93	106	102	98	96
3513	28357	82	99	82	100	93	93	95
3514	29215	85	100	90	99	96	95	86
3515	28378	80	101	83	100	95	97	83
3516	29229	81	98	76	97	90	94	86
3517	29239	91	105	91	102	99	92	87
3518	29247	79	89	81	93	88	95	95
3519	29251	92	104	92	102	99	97	94
3520	28347	85	101	88	101	97	97	95
3521	29217	91	108	93	109	103	99	101
3522	29212	84	105	85	99	96	96	96
3523	28374	91	109	88	107	101	98	96
3524	28353	86	101	85	98	95	99	94
3525	28369	90	109	94	108	104	99	98
3526	Zonal Check (ZC)	80	101	82	94	92	97	83
3527	29230	82	100	85	101	95	96	87
3528	29235	87	105	92	101	99	95	93
3529	29246	89	105	94	102	100	100	
3530	29250	90	105		108	107	95	92
3531	28979	86	101	90	98	96	92	94
3532	28972	86	95	86	91	91	99	93
3533	28128	86	100	86	97	94	98	87
3534	28982	88	99		99	99	95	89
3535	28981	88	100	89	99	96	94	95
3536	US 312 (HC)	87	101	88	100	96	101	91
3537	28386	81	102	84	93	93	99	84
3538	28328	84	100	87	96	94	98	94
3539	29243	81	101	85	98	95	99	89
3540	29238	93	104	95	115	105	95	91
3541	Local Check (LC)	81	102	82	99	94	94	83
	Exp. Mean	86	102	88	101	97	96	91

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Table No. 1.18 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN								Overall Mean(31)
		TAMIL NADU (2)	KERALA		KERALA (2)	KARNATAKA		KARNATAKA (1)	Z7(9)	
		Mean	MONCOMPU	PATTAMBI	Mean	MANDYA	@BRAHMAVAR	Mean	Mean	
3501	28506	96	98	99	98	106	98	106	98	100
3502	28380	89	85	98	92	91	87	91	91	94
3503	29214	96	98	115	107	103	87	103	104	107
3504	29216	91	87	119	103	95	91	95	95	97
3505	29218	92	96	117	106	96	85	96	95	95
3506	29226	95	88	100	94	87	95	87	92	95
3507	29219	92	98	99	98	92	101	92	98	105
3508	29228	92	88	97	92	86	88	86	91	95
3509	29233	91	95	98	97	94	94	94	95	98
3510	29236	93	98	114	106	95	103	95	99	102
3511	Gontra Bidhan-3 (NC)	96	87	92	90	98	91	98	92	95
3512	28396	97	90	90	90	92	107	92	96	98
3513	28357	94	87	93	90	93	93	93	92	96
3514	29215	91	93	101	97	94	94	94	94	95
3515	28378	90	87	104	96	88	93	88	91	95
3516	29229	90	93	102	97	83	82	83	90	92
3517	29239	90	93	93	93	87	93	87	94	102
3518	29247	95	96	94	95	103	94	103	92	94
3519	29251	96	90	89	90	96		96	95	98
3520	28347	96	94	102	98	102	95	102	96	98
3521	29217	100	98	98	98	96	96	96	99	100
3522	29212	96	98	103	101	94		94	96	97
3523	28374	97	99	105	102	101	92	101	99	99
3524	28353	97	90	103	97	95	92	95	95	96
3525	28369	98	98	121	110	96	93	96	101	101
3526	Zonal Check (ZC)	90	90	117	103	89	96	89	92	95
3527	29230	91	95	99	97	93	90	93	93	93
3528	29235	94	93	98	96	102	93	102	96	99
3529	29246	100	95	104	100	103	92	103	99	100
3530	29250	93	90	100	95	94	93	94	97	98
3531	28979	93	95	119	107	95	97	95	97	96
3532	28972	96	90	102	96	96	94	96	93	95
3533	28128	92	87	118	103	93	93	93	95	96
3534	28982	92	96	104	100	95	95	95	96	96
3535	28981	94	90	117	104	94	92	94	96	98
3536	US 312 (HC)	96	95	100	97	96	96	96	95	97
3537	28386	92	96	102	99	91	98	91	92	94
3538	28328	96	87	103	95	102	92	102	95	95
3539	29243	94	97	101	99	89	87	89	93	93
3540	29238	93	97	100	98	102	89	102	99	103
3541	Local Check (LC)	89	98	103	100	102	90	102	94	96
	Exp. Mean	94	93	103	98	95	93	95	95	97

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Table No. 1.19: Plant Height (cm) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN				ZONE III-EASTERN			
		UTTARAKHAND	PUNJAB(1)	HARYANA (1)	Z2(2)	ODISHA			ODISHA (3)
		@PANTNAGAR	LUDHIANA	KAUL	Mean	ICAR-NRRI (Cuttack)	JEYPORE	CHIPLIMA	Mean
3501	28506	102.80	111.67	124.00	117.83	100.00	105.22	90.83	98.69
3502	28380	102.40	108.00	124.00	116.00	101.40	95.53	85.17	94.03
3503	29214	101.00		107.00	107.00	95.00	94.22	86.83	92.02
3504	29216	108.00	113.33	125.00	119.17	90.20	86.66	82.75	86.54
3505	29218	118.40	116.00	138.00	127.00	105.73	109.89	90.00	101.87
3506	29226	116.40	120.00	134.00	127.00	104.80	111.22	93.83	103.29
3507	29219	106.20				97.47	102.04	78.00	92.50
3508	29228	102.20	113.67	122.00	117.83	104.80	115.12	84.25	101.39
3509	29233	104.00	104.00	114.00	109.00	104.80	116.41	86.75	102.65
3510	29236	124.00	128.33	144.00	136.17	120.93	115.96	90.33	109.08
3511	Gontra Bidhan-3 (NC)	101.00	104.67	121.00	112.83	94.73	92.56	88.25	91.85
3512	28396	104.80	103.33	122.00	112.67	94.93	92.51	81.17	89.54
3513	28357	111.20	108.33	135.00	121.67	106.20	111.67	86.25	101.37
3514	29215	110.60	108.67	122.00	115.33	96.87	98.56	86.92	94.11
3515	28378	101.20	119.67	142.00	130.83	106.27	110.36	90.67	102.43
3516	29229	96.60	98.67	121.00	109.83	93.13	91.03	78.58	87.58
3517	29239	118.40		123.00	123.00	96.00	106.89	85.75	96.21
3518	29247	98.00	104.00	123.00	113.50	94.87	85.22	90.50	90.20
3519	29251	115.00	132.33	147.00	139.67	116.93	118.18	97.92	111.01
3520	28347	102.00	100.67	117.00	108.83	95.60	99.95	78.67	91.40
3521	29217	103.40	107.33	125.00	116.17	105.87	110.19	91.08	102.38
3522	29212	102.40	109.00	128.00	118.50	97.33	102.56	84.83	94.91
3523	28374	106.40	108.67	122.00	115.33	102.60	93.89	85.17	93.89
3524	28353	105.40	109.33	124.00	116.67	99.73	104.11	82.17	95.34
3525	28369	117.80	116.33	130.00	123.17	110.13	112.42	88.58	103.71
3526	Zonal Check (ZC)	96.00	97.00	109.00	103.00	99.73	95.00	91.50	95.41
3527	29230	98.40	113.67	122.00	117.83	100.07	98.33	84.50	94.30
3528	29235	117.40	123.00	133.00	128.00	109.07	106.19	86.55	100.60
3529	29246	108.80	111.33	127.00	119.17	100.73	102.33	87.67	96.91
3530	29250	112.80	114.00	134.00	124.00	103.47	112.30	85.00	100.26
3531	28979	111.80	124.00	143.00	133.50	107.40	104.00	85.00	98.80
3532	28972	102.60	113.67	126.00	119.83	102.60	103.56	90.17	98.77
3533	28128	107.00	115.33	124.00	119.67	95.27	99.56	87.50	94.11
3534	28982	104.00	120.33	142.00	131.17	101.80	103.08	90.83	98.57
3535	28981	109.20	123.33	138.00	130.67	108.53	106.56	90.17	101.75
3536	US 312 (HC)	117.40	116.67	136.00	126.33	109.40	108.44	90.83	102.89
3537	28386	112.60	113.67	136.00	124.83	95.67	99.44	84.17	93.09
3538	28328	99.20	112.00	122.00	117.00	96.13	96.03	87.67	93.28
3539	29243	116.00	119.67	133.00	126.33	100.80	103.22	85.00	96.34
3540	29238	93.00	116.33	134.00	125.17	100.47	111.33	83.75	98.52
3541	Local Check (LC)	100.80	102.00	129.00	115.50	111.40	100.18	86.42	99.33
	Exp. Mean	107.0	112.7	128.1	120.4	101.9	103.2	86.9	97.3

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Table No. 1.19 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR		BIHAR (1)	JHARKHAND	WEST BENGAL			WEST BENGAL (2)
		BIKRAMGANJ (Dhangain)	@Patna-ICAR	Mean	@RANCHI	CHINSURAH	@HATHWARA	BANKURA	Mean
3501	28506	114.60	108.50	114.60	94.67	109.50	109.00	105.00	107.25
3502	28380	93.83	106.22	93.83	92.00	109.50	113.00	105.00	107.25
3503	29214	86.22	104.33	86.22	82.33	111.50	96.00	105.00	108.25
3504	29216	107.00	104.72	107.00	84.67	111.00	101.00	115.00	113.00
3505	29218	106.33	118.44	106.33	99.33	124.00	105.00	120.00	122.00
3506	29226	120.83	117.06	120.83	98.00	115.50	107.00	120.00	117.75
3507	29219	112.00	87.89	112.00	99.33	123.00	121.00	115.00	119.00
3508	29228	116.50	110.62	116.50	92.67	128.00	98.00	110.00	119.00
3509	29233	119.83	108.94	119.83	96.00	118.00	99.00	110.00	114.00
3510	29236	119.66	126.94	119.66	94.33	137.00	111.00	135.00	136.00
3511	Gontra Bidhan-3 (NC)	109.33	105.06	109.33	88.67	129.50	93.00	125.00	127.25
3512	28396	112.00	106.61	112.00	89.00	118.00	104.00	110.00	114.00
3513	28357	112.50	116.06	112.50	96.00	113.00	113.00	115.00	114.00
3514	29215	114.33	110.44	114.33	98.33	111.50	119.00	110.00	110.75
3515	28378	123.83	129.78	123.83	98.00	129.00	123.00	125.00	127.00
3516	29229	123.83	98.00	123.83	84.00	112.50	101.00	110.00	111.25
3517	29239	125.00	109.94	125.00	91.00	121.00	103.00	120.00	120.50
3518	29247	113.83	108.11	113.83	91.67	133.50	105.00	120.00	126.75
3519	29251	104.00	118.50	104.00	106.67	127.50	104.00	120.00	123.75
3520	28347	114.50	105.72	114.50	86.67	113.00	99.00	125.00	119.00
3521	29217	111.83	108.39	111.83	100.00	123.50	112.00	120.00	121.75
3522	29212	120.00	107.22	120.00	90.00	115.50	112.00	115.00	115.25
3523	28374	118.16	111.39	118.16	85.00	122.50	103.00	120.00	121.25
3524	28353	106.33	113.44	106.33	88.00	113.50	130.00	100.00	106.75
3525	28369	124.00	114.78	124.00	101.00	113.50	127.00	135.00	124.25
3526	Zonal Check (ZC)	109.66	103.28	109.66	99.67	117.00	119.00	115.00	116.00
3527	29230	104.83	105.89	104.83	94.67	112.50	113.00	115.00	113.75
3528	29235	114.50	110.06	114.50	94.00	127.50	118.00	105.00	116.25
3529	29246	104.50	115.72	104.50	94.00	121.00	105.00	118.00	119.50
3530	29250		111.56		91.00	128.50	104.00	110.00	119.25
3531	28979	119.00	116.11	119.00	93.67	138.00	118.00	130.00	134.00
3532	28972	119.33	107.89	119.33	93.00	101.50	108.00	110.00	105.75
3533	28128	108.33	106.56	108.33	94.67	120.00	111.00	120.00	120.00
3534	28982	119.83	125.61	119.83	93.67	123.50	111.00	115.00	119.25
3535	28981	110.00	109.56	110.00	97.00	130.50	106.00	120.00	125.25
3536	US 312 (HC)	113.83	116.83	113.83	96.67	126.00	110.00	120.00	123.00
3537	28386	101.83	108.33	101.83	88.00	121.50	112.00	125.00	123.25
3538	28328	128.66	104.76	128.66	84.33	119.50	111.00	110.00	114.75
3539	29243	107.83	125.56	107.83	99.00	139.50	108.00	110.00	124.75
3540	29238	107.16	123.72	107.16	92.67	117.00	115.00	130.00	123.50
3541	Local Check (LC)	103.83	105.44	103.83	102.33	115.50	102.00	110.00	112.75
	Exp. Mean	112.6	111.1	112.6	93.6	120.6	109.2	116.4	118.5

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Table No. 1.19 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN			ZONE IV- NORTH EASTERN					ZONE-V - CENTRAL
		UTTAR PRADESH (0)		Z3(6)	ASSAM		ASSAM (1)	TRIPURA (1)	Z4(2)	CHHATTISGARH
		@MASODHA	@VARANASI	Mean	TITABAR	@Gerua-ICAR	Mean	Lembucherra	Mean	RAIPUR
3501	28506	98.00	96.30	104.19	116.13	114.40	116.13	95.50	105.82	98.73
3502	28380	114.00	99.60	98.41	107.00	111.20	107.00	95.50	101.25	93.85
3503	29214	108.00	93.20	96.46	108.73	104.00	108.73	101.00	104.87	96.67
3504	29216	93.00	88.60	98.77	105.53	108.00	105.53	95.00	100.27	98.04
3505	29218	117.00	110.00	109.33	116.40	121.40	116.40	107.50	111.95	106.37
3506	29226	122.00	115.10	111.03	119.87	121.80	119.87	106.50	113.18	124.33
3507	29219	108.00	91.80	104.58	114.53	120.40	114.53	92.50	103.52	97.05
3508	29228	101.00	107.40	109.78	111.80	119.00	111.80	91.00	101.40	101.73
3509	29233	111.00	99.70	109.30	109.73	107.80	109.73	96.50	103.12	92.85
3510	29236	112.00	115.80	119.81	124.67	141.40	124.67	112.00	118.33	118.95
3511	Gontra Bidhan-3 (NC)	110.00	102.40	106.56	94.33	106.20	94.33	98.00	96.17	104.24
3512	28396	103.00	100.70	101.44	109.07	116.20	109.07	69.50	89.28	99.41
3513	28357	106.00	106.30	107.44	115.93	11.80	115.93	98.50	107.22	107.84
3514	29215	107.00	103.90	103.03	109.00	108.00	109.00	101.00	105.00	94.47
3515	28378	112.00	111.40	114.19	121.87	123.20	121.87	106.00	113.93	116.50
3516	29229	110.00	85.80	101.51	105.47	100.80	105.47	96.50	100.98	93.24
3517	29239	109.00	104.10	109.11	111.80	109.20	111.80	92.00	101.90	103.81
3518	29247		95.10	106.32	96.07	102.00	96.07	98.50	97.28	101.27
3519	29251	105.00		114.09	131.60		131.60	121.00	126.30	115.05
3520	28347	103.00	94.80	104.45	107.53	112.40	107.53	98.00	102.77	104.82
3521	29217	116.00	96.00	110.41	115.13	107.00	115.13	99.00	107.07	115.23
3522	29212	110.00	103.20	105.87	111.00	118.20	111.00	107.00	109.00	102.69
3523	28374	108.00	89.30	107.05	105.20	110.80	105.20	90.00	97.60	104.81
3524	28353	131.00	98.50	100.97	112.80	107.80	112.80	96.00	104.40	107.14
3525	28369	106.00	98.60	113.94	122.80	121.00	122.80	104.50	113.65	105.00
3526	Zonal Check (ZC)	115.00	99.70	104.65	110.33	115.00	110.33	96.00	103.17	96.25
3527	29230	102.00	94.70	102.54	105.27	104.20	105.27	93.50	99.38	91.83
3528	29235	118.00	117.90	108.13	111.47	119.00	111.47	113.00	112.23	114.79
3529	29246	110.00	106.80	105.71	113.40	109.80	113.40	101.00	107.20	106.88
3530	29250	121.00	99.10	107.85	112.40	124.60	112.40	103.50	107.95	105.73
3531	28979	118.00	105.20	113.90	118.53	116.80	118.53	114.50	116.52	107.82
3532	28972	110.00	105.40	104.53	105.93	110.00	105.93	114.50	110.22	105.54
3533	28128	110.00	99.90	105.11	106.27	112.60	106.27	100.00	103.13	95.95
3534	28982	114.00	111.10	109.01	112.40	123.20	112.40	103.50	107.95	112.89
3535	28981	120.00	107.00	110.96	115.73	118.20	115.73	98.00	106.87	120.45
3536	US 312 (HC)	115.00	98.80	111.42	116.80	116.40	116.80	112.50	114.65	108.86
3537	28386	100.00	90.60	104.60	100.53	97.20	100.53	111.00	105.77	97.98
3538	28328	122.00	98.40	106.33	102.13	105.20	102.13	95.50	98.82	91.59
3539	29243	110.00	97.30	107.73	114.93	116.60	114.93	116.00	115.47	99.23
3540	29238	116.00	111.70	108.29	121.00	123.60	121.00	103.00	112.00	104.44
3541	Local Check (LC)	118.00	91.00	104.55	128.00	133.40	128.00	114.00	121.00	107.07
	Exp. Mean	111.0	101.1	106.9	112.2	111.7	112.2	101.4	106.8	104.2

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Table No. 1.19 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL							
		CHHATTISGARH			CHHATTISGARH (4)	MAHARASTRA 1		MAHARASTRA 1 (2)	ZS(6)
		AMBIKAPUR	JAGADALPUR	BILASPUR	Mean	SAKOLI	SINDHEWAHI	Mean	Mean
3501	28506	102.80	105.60	117.00	106.03	101.00	122.00	111.50	107.86
3502	28380	99.67	92.00	120.00	101.38	104.00	81.00	92.50	98.42
3503	29214	93.27	104.00	93.00	96.73	96.00	106.00	101.00	98.16
3504	29216	93.13	94.00	115.00	100.04		85.00	85.00	97.03
3505	29218	113.80	105.60	133.00	114.69	115.00	122.00	118.50	115.96
3506	29226	100.40	106.00	120.00	112.68	104.00	111.00	107.50	110.95
3507	29219	105.07	106.00	97.00	101.28	93.00	114.00	103.50	102.02
3508	29228	107.87	93.60	121.00	106.05	98.00	76.00	87.00	99.70
3509	29233	103.27	73.40	102.00	92.88	96.00	93.00	94.50	93.42
3510	29236	118.40	117.00	128.00	120.59	115.00	106.00	110.50	117.23
3511	Gontra Bidhan-3 (NC)	103.07	94.40	114.00	103.93	97.00	103.00	100.00	102.62
3512	28396	102.47	104.80	110.00	104.17	93.00	114.00	103.50	103.95
3513	28357	108.60	98.00	126.00	110.11	95.00	118.00	106.50	108.91
3514	29215	100.07	90.60	119.00	101.04	85.00	103.00	94.00	98.69
3515	28378	115.40	112.40	120.00	116.08	94.00	122.00	108.00	113.38
3516	29229	98.27	99.20		96.90	85.00	94.00	89.50	93.94
3517	29239	102.87	102.40	119.00	107.02	96.00	116.00	106.00	106.68
3518	29247	92.60	97.20	112.00	100.77	94.00	108.00	101.00	100.84
3519	29251	123.87	127.60		122.17	102.00	134.00	118.00	120.50
3520	28347	98.53	98.60	120.00	105.49	103.00	115.00	109.00	106.66
3521	29217	102.93	103.40	121.00	110.64	94.00	121.00	107.50	109.59
3522	29212	104.07	99.60	108.00	103.59	105.00	106.00	105.50	104.23
3523	28374	101.20	95.40	116.00	104.35	98.00	82.00	90.00	99.57
3524	28353	98.67	102.00	114.00	105.45	96.00	105.00	100.50	103.80
3525	28369	105.27	116.20	120.00	111.62	105.00	125.00	115.00	112.74
3526	Zonal Check (ZC)	104.40	99.20	101.00	100.21	94.00	92.00	93.00	97.81
3527	29230	107.27	97.40	123.00	104.87	102.00	108.00	105.00	104.92
3528	29235	112.13	108.40	120.00	113.83	96.00	122.00	109.00	112.22
3529	29246	100.00	101.80	119.00	106.92	104.00	124.00	114.00	109.28
3530	29250	111.53	109.40	124.00	112.67	102.00	119.00	110.50	111.94
3531	28979	109.87	104.80	130.00	113.12	96.00	113.00	104.50	110.25
3532	28972	104.93	95.60	117.00	105.77	92.00	114.00	103.00	104.85
3533	28128	102.53	101.20	114.00	103.42	104.00	90.00	97.00	101.28
3534	28982	115.87	105.80	120.00	113.64	97.00	109.00	103.00	110.09
3535	28981	110.87	103.00	123.00	114.33	108.00	132.00	120.00	116.22
3536	US 312 (HC)	110.93	105.40	127.00	113.05	84.00	119.00	101.50	109.20
3537	28386	99.73	93.20	119.00	102.48	93.00	105.00	99.00	101.32
3538	28328	93.73	281.60	112.00	144.73	93.00	116.00	104.50	131.32
3539	29243	99.80	105.00	126.00	107.51	92.00	95.00	93.50	102.84
3540	29238	100.80	107.20	114.00	106.61	113.00	122.00	117.50	110.24
3541	Local Check (LC)	99.53	100.00	113.00	104.90	125.00	123.00	124.00	111.27
Exp. Mean		104.4	106.3	117.1	107.9	99.0	109.4	104.0	106.6

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Table No. 1.19 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN									
		MAHARASTRA 2			MAHARASTRA 2(3)	MAHARASTRA (5)	GUJARAT			GUJARAT (3)	Z6(6)
		KARJAT	SHIRGAON	RADHANAGARI	Mean	Mean	NAVSARI	NAWAGAM	VYARA	Mean	Mean
3501	28506	119.00	89.60	97.80	102.13	105.88	123.70	120.80	120.00	121.50	111.82
3502	28380	111.00	98.80	100.07	103.29	98.97	111.30	116.10	126.00	117.80	110.54
3503	29214	107.00	93.13	100.07	100.07	100.44	112.50	113.10	115.00	113.53	106.80
3504	29216	110.00	82.80	94.10	95.63	92.98	107.50	107.90	122.00	112.47	104.05
3505	29218	135.00	94.67	88.10	105.92	110.95	133.50	119.10	124.00	125.53	115.73
3506	29226	128.00	103.40	101.13	110.84	109.51	124.60	118.70	128.00	123.77	117.31
3507	29219	140.00	106.60	90.53	112.38	108.83	143.70	113.40	133.00	130.03	121.21
3508	29228	113.00	103.13	97.63	104.59	97.55	129.60	118.50	122.00	123.37	113.98
3509	29233	129.00	94.47	89.10	104.19	100.31	129.90	101.70	107.00	112.87	108.53
3510	29236	135.00	106.33	93.80	111.71	111.23	119.00	132.30	140.00	130.43	121.07
3511	Gontra Bidhan-3 (NC)	115.00	98.67	77.87	97.18	98.31	113.60	113.10	105.00	110.57	103.87
3512	28396	105.00	87.93	80.20	91.04	96.03	98.60	112.50	120.00	110.37	100.71
3513	28357	136.00	97.20	91.87	108.36	107.61	102.60	117.10	126.00	115.23	111.79
3514	29215	119.00	100.60	86.73	102.11	98.87	114.50	108.50	122.00	115.00	108.56
3515	28378	118.00	104.47	96.83	106.43	107.06	126.50	120.20	134.00	126.90	116.67
3516	29229	101.00	90.40	93.00	94.80	92.68	105.00	106.40	106.00	105.80	100.30
3517	29239	140.00	103.87	92.80	112.22	109.73	141.70	120.10	140.00	133.93	123.08
3518	29247	108.00	88.73	77.07	91.27	95.16	114.90	110.20	116.00	113.70	102.48
3519	29251	140.00	116.47	92.83	116.43	117.06	136.00	136.60	136.00	136.20	126.32
3520	28347	121.00	89.13	94.00	101.38	104.43	121.00	119.80	121.00	120.60	110.99
3521	29217	112.00	98.00	73.00	94.33	99.60	125.70	119.80	130.00	125.17	109.75
3522	29212	129.00	88.60	92.50	103.37	104.22	120.90	119.10	116.00	118.67	111.02
3523	28374	105.00	92.60	92.70	96.77	94.06	119.50	112.70	119.00	117.07	106.92
3524	28353	115.00	89.60	102.20	102.27	101.56	120.70	107.40	117.00	115.03	108.65
3525	28369	123.00	100.40	91.27	104.89	108.93	128.30	124.90	128.00	127.07	115.98
3526	Zonal Check (ZC)	93.00	72.60	88.13	84.58	87.95	98.50	88.50	106.00	97.67	91.12
3527	29230	118.00	89.47	75.93	94.47	98.68	115.50	110.10	122.00	115.87	105.17
3528	29235	124.00	103.47	79.07	102.18	104.91	127.70	122.90	128.00	126.20	114.19
3529	29246	122.00	103.47	83.83	103.10	107.46	120.70	114.40	128.00	121.03	112.07
3530	29250	127.00	102.00	90.13	106.38	108.03	118.70	112.10	126.00	118.93	112.66
3531	28979	125.00	98.93	88.03	103.99	104.19	125.30	123.80	128.00	125.70	114.84
3532	28972	114.00	95.80	83.07	97.62	99.77	119.30	116.80	117.00	117.70	107.66
3533	28128	106.00	92.53	91.07	96.53	96.72	114.50	114.50	121.00	116.67	106.60
3534	28982	124.00	103.13	100.77	109.30	106.78	124.10	119.50	132.00	125.20	117.25
3535	28981	118.00	103.93	96.20	106.04	111.63	124.70	116.40	131.00	124.03	115.04
3536	US 312 (HC)	130.00	103.93	104.13	112.69	108.21		120.50	135.00	127.75	118.71
3537	28386	107.00	89.27	94.17	96.81	97.69	74.70	104.60	103.00	94.10	95.46
3538	28328	113.00	84.40	88.77	95.39	99.03	122.90	108.90	111.00	114.27	104.83
3539	29243	111.00	95.73	96.70	101.14	98.09	127.80	120.20	132.00	126.67	113.91
3540	29238	137.00	99.40	94.80	110.40	113.24	128.10	121.50	126.00	125.20	117.80
3541	Local Check (LC)	99.00	76.13	102.00	92.38	105.03	128.20	109.50	109.00	115.57	103.97
	Exp. Mean	119.1	95.9	91.3	102.1	102.9	119.9	115.5	122.6	119.4	110.7

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Table No. 1.19 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN						
		ANDHRA PRADESH (1)	TELANGANA			TELANGANA (3)	TAMIL NADU	
		MARUTERU	RAJENDRANAGAR	KUNARAM	WARANGAL	Mean	ADUTHURAI	COIMBATORE
3501	28506	128.27	103.73	102.89	116.07	107.56	96.60	100.17
3502	28380	117.13	104.33	100.83	113.47	106.21	75.50	106.00
3503	29214	121.87	93.07	97.33	102.73	97.71	96.00	87.67
3504	29216	124.67	105.13	98.97	102.67	102.26	92.50	97.00
3505	29218	137.13	102.93	114.02	121.20	112.72	75.40	121.60
3506	29226	135.87	105.27	109.37	120.60	111.74	91.00	106.00
3507	29219	132.60	102.27	99.57	113.87	105.23	82.60	102.67
3508	29228	128.67	108.20	110.41	124.13	114.25	86.50	112.67
3509	29233	122.47	104.20	116.60	116.13	112.31	86.40	105.00
3510	29236	134.13	115.00	126.58	139.07	126.88	80.80	114.53
3511	Gontra Bikhani-3 (NC)	119.67	103.13	102.20	117.73	107.69	72.50	100.33
3512	28396	119.27	102.93	99.75	112.80	105.16	84.50	99.00
3513	28357	125.73	107.27	116.63	119.80	114.57	73.50	111.67
3514	29215	121.00	104.40	112.50	122.13	113.01	81.20	108.53
3515	28378	132.80	107.33	119.17	137.00	121.17	92.00	108.33
3516	29229	114.13	101.67	100.60	107.60	103.29	74.50	94.50
3517	29239	128.47	106.20	104.73	116.80	109.24	70.40	105.33
3518	29247	121.67	101.93	103.27	104.87	103.36	75.00	99.00
3519	29251	149.53	122.73	122.57	135.40	126.90	92.50	114.20
3520	28347	123.93	103.40	105.23	116.13	108.26	95.00	100.50
3521	29217	143.00	105.47	111.20	128.60	115.09	84.80	111.33
3522	29212	128.07	107.27	110.03	114.47	110.59	83.00	107.33
3523	28374	133.60	104.33	109.17	117.33	110.28	94.20	101.90
3524	28353	129.87	103.27	117.40	115.00	111.89	91.60	103.07
3525	28369	135.40	108.07	118.40	124.47	116.98	93.50	107.00
3526	Zonal Check (ZC)	118.00	102.20	109.97	118.47	110.21	65.20	104.33
3527	29230	128.13	107.00	116.33	117.73	113.69	85.00	98.67
3528	29235	136.47	107.50	116.27	124.40	116.06	87.50	111.00
3529	29246	133.47	103.93	107.67	117.07	109.56	90.80	
3530	29250	131.93	111.60		126.20	118.90	93.20	106.00
3531	28979	133.73	107.87	113.00	118.67	113.18	94.50	111.33
3532	28972	127.00	103.87	106.37	117.33	109.19	86.50	108.00
3533	28128	120.00	109.47	95.13	114.13	106.24	93.50	108.67
3534	28982	135.60	106.20		127.13	116.67	92.20	105.33
3535	28981	133.87	106.27	105.41	114.80	108.82	94.20	120.87
3536	US 312 (HC)	131.27	105.93	103.70	122.40	110.68	83.80	107.67
3537	28386	120.53	102.13	92.79	111.27	102.06	72.80	103.67
3538	28328	125.07	100.93	94.77	118.47	104.72	73.50	96.00
3539	29243	131.13	108.47	114.07	116.47	113.00	102.80	117.00
3540	29238	136.93	103.33	117.77	116.80	112.63	106.20	108.00
3541	Local Check (LC)	122.93	104.33	104.03	137.27	115.21	92.50	106.33
	Exp. Mean	128.7	105.5	108.4	119.0	111.1	86.2	106.0

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Table No.1.19 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	JET No	ZONE VII - SOUTHERN								Overall Mean(31)	
		TAMIL NADU (2)		KERALA		KERALA (2)	KARNATAKA		KARNATAKA (1)		Z(9)
		Mean	MONCOMPU	PATTAMBI	Mean	MANDYA	@BRAHMAVAR	Mean	Mean		
3501	28506	98.38	111.70	96.00	103.85	94.20	81.00	94.20	105.51	107.75	
3502	28380	90.75	111.07	100.00	105.53	93.67	68.67	93.67	102.44	103.25	
3503	29214	91.83	107.00	98.00	102.50	85.13	73.33	85.13	98.76	100.47	
3504	29216	94.75	104.20	98.00	101.10	93.47	89.00	93.47	101.84	101.92	
3505	29218	98.50	116.20	93.60	104.90	113.53	86.00	113.53	110.62	113.54	
3506	29226	98.50	118.93	95.00	106.97	109.13	91.00	109.13	110.13	113.14	
3507	29219	92.63	113.00	98.60	105.80	100.07	92.33	100.07	105.03	107.56	
3508	29228	99.58	109.53	88.00	98.77	104.40	83.67	104.40	108.06	108.12	
3509	29233	95.70	112.33	95.20	103.77	102.13	81.67	102.13	106.72	104.91	
3510	29236	97.67	129.57	90.00	109.78	103.13	96.67	103.13	114.76	119.05	
3511	Gontra Bidhan-3 (NC)	86.42	105.77	96.00	100.88	102.00	82.00	102.00	102.15	103.73	
3512	28396	91.75	107.73	80.00	93.87	82.87	77.67	82.87	98.76	100.94	
3513	28357	92.58	112.37	88.00	100.18	105.27	83.00	105.27	106.69	109.25	
3514	29215	94.87	78.40	95.00	86.70	103.67	82.67	103.67	102.98	104.17	
3515	28378	100.17	121.43	100.60	111.02	101.87	83.33	101.87	113.39	115.34	
3516	29229	84.50	100.10	106.00	103.05	84.27	74.00	84.27	98.15	99.52	
3517	29239	87.87	102.00	80.00	91.00	102.00	85.33	102.00	101.77	109.20	
3518	29247	87.00	103.77	100.00	101.88	92.53	73.67	92.53	100.23	102.63	
3519	29251	103.35	130.63	80.00	105.32	111.40		111.40	117.66	121.19	
3520	28347	97.75	108.43	75.00	91.72	95.07	70.00	95.07	102.52	105.76	
3521	29217	98.07	121.97	80.00	100.98	93.27	83.33	93.27	108.85	109.83	
3522	29212	95.17	112.57	100.00	106.28	94.27		94.27	106.33	107.70	
3523	28374	98.05	119.00	108.00	113.50	95.87	80.00	95.87	109.27	106.15	
3524	28353	97.33	113.77	90.00	101.88	95.80	82.00	95.80	106.64	105.89	
3525	28369	100.25	125.30	100.00	112.65	96.33	79.00	96.33	112.05	114.13	
3526	Zonal Check (ZC)	84.77	103.17	100.00	101.58	84.00	80.00	84.00	100.59	99.33	
3527	29230	91.83	104.43	80.00	92.22	94.47	97.33	94.47	103.53	104.58	
3528	29235	99.25	120.07	103.50	111.78	110.20	82.67	110.20	112.99	113.05	
3529	29246	90.80	116.23	90.00	103.12	96.33	89.00	96.33	106.94	109.02	
3530	29250	99.60	117.57	95.60	106.58	100.13	91.33	100.13	110.28	111.48	
3531	28979	102.92	114.33	98.00	106.17	104.87	83.33	104.87	110.70	113.88	
3532	28972	97.25	114.17	88.40	101.28	100.60	81.00	100.60	105.80	106.92	
3533	28128	101.08	107.83	97.00	102.42	96.13	96.33	96.13	104.65	105.34	
3534	28982	98.77	115.03	105.20	110.12	103.93	90.67	103.93	111.33	112.90	
3535	28981	107.53	116.93	85.60	101.27	102.07	94.00	102.07	108.89	113.17	
3536	US 312 (HC)	95.73	122.80	93.60	108.20	101.33	83.00	101.33	108.06	112.39	
3537	28386	88.23	112.17	87.80	99.98	95.27	85.00	95.27	99.82	102.19	
3538	28328	84.75	106.07	94.00	100.03	93.80	94.00	93.80	100.29	109.33	
3539	29243	109.90	112.67	81.20	96.93	96.40	83.33	96.40	108.91	110.02	
3540	29238	107.10	118.97	84.00	101.48	102.67	92.00	102.67	110.52	112.48	
3541	Local Check (LC)	99.42	110.43	92.00	101.22	112.80	104.33	112.80	109.18	108.85	
	Exp. Mean	95.9	112.4	92.9	102.6	98.8	84.8	98.8	106.4	108.3	

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Table No. 1.20: Panicles/m² of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN				ZONE III-EASTERN			
		UTTARAKHAND	PUNJAB(1)	HARYANA (1)	ZZ(2)	ODISHA			ODISHA (3)
		@PANTNAGAR	LUDHIANA	KAUL	Mean	ICAR-NRRI (Cuttack)	JEYPORE	CHIPLIMA	Mean
3501	28506	321	301	313	307	323	441	220	328
3502	28380	287	284	351	317	323	341	221	295
3503	29214	316		360	360	422	477	248	383
3504	29216	309	301	272	287	297	325	195	272
3505	29218	258	262	309	285	364	323	223	303
3506	29226	293	262	279	270	331	360	207	300
3507	29219	299				400	352	240	331
3508	29228	313	260	307	283	351	357	217	308
3509	29233	276	290	345	318	285	437	243	322
3510	29236	290	290	293	292	359	367	295	340
3511	Gontra Bidhan-3 (NC)	302	271	284	277	291	345	187	274
3512	28396	299	332	274	303	323	286	201	270
3513	28357	287	282	285	283	348	466	199	338
3514	29215	275	244	316	280	249	358	179	262
3515	28378	333	253	281	267	292	326	197	272
3516	29229	244	266	272	269	314	446	196	318
3517	29239	270		246	246	325	474	215	338
3518	29247	243	246	265	256	315	374	181	290
3519	29251	266	277	262	270	294	252	173	240
3520	28347	312	286	286	286	354	415	244	338
3521	29217	243	249	258	253	295	368	213	292
3522	29212	282	319	277	298	301	326	225	284
3523	28374	274	343	320	331	324	335	169	276
3524	28353	327	304	293	298	333	262	207	267
3525	28369	255	286	283	284	304	275	199	259
3526	Zonal Check (ZC)	290	297	284	291	313	344	271	309
3527	29230	283	275	301	288	276	336	203	272
3528	29235	293	282	265	273	309	315	215	279
3529	29246	298	290	322	306	341	365	241	316
3530	29250	295	279	303	291	313	355	220	296
3531	28979	229	288	296	292	252	326	219	266
3532	28972	242	290	265	278	310	324	213	283
3533	28128	273	251	257	254	332	325	195	284
3534	28982	280	282	257	269	265	321	191	259
3535	28981	239	266	246	256	341	325	209	292
3536	US 312 (HC)	284	286	259	273	394	320	223	312
3537	28386	308	293	268	280	330	366	240	312
3538	28328	333	308	257	283	318	246	185	250
3539	29243	285	330	303	317	328	260	189	259
3540	29238	294	283	280	281	355	301	224	293
3541	Local Check (LC)	387	286	309	298	328	326	204	286
	Exp. Mean	287	284	288	286	322	347	213	294

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Table No. 1.20 Contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						
		BIHAR		BIHAR (1)	JHARKHAND	WEST BENGAL		WEST BENGAL (2)
		BIKRAMGANJ (Dhangain)	@Patna-ICAR	Mean	@RANCHI	CHINSURAH	BANKURA	Mean
3501	28506	328	254	328	204	319	297	308
3502	28380	302	269	302	178	253	396	325
3503	29214	271	316	271	210	319	352	336
3504	29216	302	251	302	211	308	319	314
3505	29218	260	272	260	193	253	297	275
3506	29226	275	256	275	182	220	330	275
3507	29219	255	344	255	162	308	374	341
3508	29228	273	265	273	178	231	297	264
3509	29233	273	304	273	200	286	451	369
3510	29236	261	273	261	175	297	396	347
3511	Gontra Bidhan-3 (NC)	263	226	263	138	231	374	303
3512	28396	282	270	282	149	242	451	347
3513	28357	302	275	302	164	242	352	297
3514	29215	319	286	319	181	341	330	336
3515	28378	260	261	260	161	220	275	248
3516	29229	307	282	307	150	242	429	336
3517	29239	290	304	290	155	297	385	341
3518	29247	343	285	343	158	264	473	369
3519	29251	298	213	298	102	264	330	297
3520	28347	290	273	290	176	264	429	347
3521	29217	260	221	260	144	220	319	270
3522	29212	304	315	304	205	253	462	358
3523	28374	340	280	340	193	231	407	319
3524	28353	280	242	280	218	253	462	358
3525	28369	277	232	277	167	297	429	363
3526	Zonal Check (ZC)	271	280	271	217	264	495	380
3527	29230	217	309	217	140	253	363	308
3528	29235	281	238	281	163	275	473	374
3529	29246	241	256	241	202	286	440	363
3530	29250	256	275	256	169	253	385	319
3531	28979	313	219	313	129	363	330	347
3532	28972	271	171	271	154	319	341	330
3533	28128	300	244	300	131	352	286	319
3534	28982	311	228	311	175	352	352	352
3535	28981	240	182	240	149	275	429	352
3536	US 312 (HC)	282	272	282	160	319	352	336
3537	28386	318	277	318	168	264	451	358
3538	28328	253	271	253	193	297	363	330
3539	29243	271	308	271	188	319	440	380
3540	29238	282	264	282	146	330	407	369
3541	Local Check (LC)	320	301	320	232	242	462	352
	Exp. Mean	284	265	284	172	278	385	332

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Table No.1.20 Contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN			ZONE IV- NORTH EASTERN					ZONE-V – CENTRAL
		UTTAR PRADESH (0)		Z3(6)	ASSAM		ASSAM (1)	TRIPURA (1)	Z4(2)	CHHATTISGARH
		@MASODHA	@VARANASI	Mean	TITABAR	@Gerua-ICAR	Mean	Lembucherra	Mean	RAIPUR
3501	28506	259	162	321	230	260	245	463	346	164
3502	28380	272	204	306	272	266	269	288	280	154
3503	29214	265	229	348	278	283	281	363	320	148
3504	29216	250	212	291	242	253	247	400	321	117
3505	29218	223	151	287	250	248	249	288	269	112
3506	29226	230	165	287	228	230	229	238	233	132
3507	29219	276	207	321	242	250	246	350	296	126
3508	29228	211	184	288	228	259	244	375	302	113
3509	29233	318	162	329	240	244	242	450	345	159
3510	29236	262	135	329	282	233	257	313	297	167
3511	Gontra Bidhan-3 (NC)	330	134	282	248	249	249	313	280	133
3512	28396	213	193	298	248	254	251	313	280	128
3513	28357	282	142	318	257	258	257	350	303	137
3514	29215	276	175	296	200	239	220	288	244	108
3515	28378	216	169	262	262	259	261	375	318	119
3516	29229	256	142	322	255	243	249	325	290	147
3517	29239	285	194	331	262	236	249	263	262	136
3518	29247		148	325	228	248	238	300	264	125
3519	29251	350		268	172		172	350	261	121
3520	28347	354	183	333	242	266	254	350	296	113
3521	29217	246	116	279	205	215	210	263	234	139
3522	29212	283	168	312	257	282	269	225	241	144
3523	28374	276	199	301	223	239	231	363	293	154
3524	28353	312	153	299	228	249	239	238	233	146
3525	28369	228	141	297	222	245	233	250	236	125
3526	Zonal Check (ZC)	265	216	326	253	276	265	338	295	145
3527	29230	311	164	275	258	268	263	250	254	112
3528	29235	287	177	311	242	222	232	288	265	137
3529	29246	344	172	319	267	253	260	300	283	124
3530	29250	302	143	297	268	262	265	288	278	124
3531	28979	293	103	301	262	227	245	250	256	117
3532	28972	356	142	296	282	241	261	263	272	118
3533	28128	348	168	298	218	247	233	200	209	112
3534	28982	286	158	299	195	223	209	250	223	104
3535	28981	265	151	303	263	237	250	263	263	118
3536	US 312 (HC)	255	147	315	238	236	237	388	313	127
3537	28386	260	128	328	285	237	261	313	299	126
3538	28328	228	159	277	257	246	251	363	310	131
3539	29243	322	158	301	265	279	272	225	245	115
3540	29238	325	167	317	217	239	228	363	290	141
3541	Local Check (LC)	280	197	314	199	256	228	325	262	115
	Exp. Mean	280	165	305	243	249	245	311	277	130

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Table No. 1.20 Contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL						Z5(5) Mean
		CHHATTISGARH		CHHATTISGARH (3)	MAHARASTRA 1		MAHARASTRA 1 (2)	
		AMBIKAPUR	JAGADALPUR	Mean	SAKOLI	SINDHEWAHI	Mean	
3501	28506	257	257	226	265	151	208	219
3502	28380	280	316	250	208	262	235	244
3503	29214	314	379	280	222	271	247	267
3504	29216	282	257	219		291	291	237
3505	29218	278	297	229	177	313	245	235
3506	29226	224	233	197	245	187	216	204
3507	29219	262	311	233	180	235	208	223
3508	29228	230	246	196	191	279	235	212
3509	29233	247	322	243	146	179	163	211
3510	29236	228	335	243	160	200	180	218
3511	Gontra Bidhan-3 (NC)	231	265	209	156	206	181	198
3512	28396	262	273	221	172	239	205	215
3513	28357	266	293	232	159	268	213	225
3514	29215	251	298	219	155	256	206	214
3515	28378	256	246	207	202	192	197	203
3516	29229	258	267	224	231	241	236	229
3517	29239	255	245	212	201	253	227	218
3518	29247	239	256	207	198	229	214	210
3519	29251	189	252	188	276	177	226	203
3520	28347	231	329	224	222	249	236	229
3521	29217	196	245	193	147	168	157	179
3522	29212	231	291	222	167	179	173	203
3523	28374	224	287	221	164	235	200	213
3524	28353	252	261	219	277	264	271	240
3525	28369	254	248	209	204	246	225	215
3526	Zonal Check (ZC)	263	280	230	214	274	244	235
3527	29230	253	270	212	220	294	257	230
3528	29235	223	257	206	190	167	178	195
3529	29246	258	316	233	166	298	232	233
3530	29250	251	252	209	163	218	191	202
3531	28979	206	230	184	171	200	185	185
3532	28972	253	282	218	161	172	167	197
3533	28128	205	262	193	139	202	170	184
3534	28982	206	198	169	134	179	156	164
3535	28981	189	269	192	156	216	186	190
3536	US 312 (HC)	243	299	223	157	268	212	219
3537	28386	232	261	206	137	233	185	198
3538	28328	273	244	216	148	207	178	201
3539	29243	203	239	186	149	254	201	192
3540	29238	225	254	206	223	281	252	225
3541	Local Check (LC)	246	244	202	316	295	306	243
Exp. Mean		242	272	215	189	232	212	213

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Table No. 1.20 Contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN						
		MAHARASTRA 2			MAHARASTRA 2 (3)	MAHARASTRA (5)	GUJARAT	
		KARJAT	SHIRGAON	RADHANAGARI	Mean	Mean	NAVARI	NAWAGAM
3501	28506	218	141	304	221	216	233	245
3502	28380	204	176	277	219	225	222	268
3503	29214	201	142	300	214	227	307	335
3504	29216	216	109	262	196	220	244	297
3505	29218	209	160	265	211	225	263	268
3506	29226	204	154	297	218	217	216	246
3507	29219	216	160	259	212	210	247	287
3508	29228	196	142	252	197	212	214	271
3509	29233	217	123	252	197	183	244	271
3510	29236	210	135	273	206	196	214	249
3511	Gontra Bidhan-3 (NC)	199	140	283	208	197	180	262
3512	28396	195	141	287	208	207	175	293
3513	28357	206	160	270	212	213	221	291
3514	29215	195	157	235	196	200	206	291
3515	28378	222	127	242	197	197	203	300
3516	29229	195	136	304	212	222	236	274
3517	29239	200	169	242	204	213	238	271
3518	29247	215	171	295	227	222	215	239
3519	29251	209	156	270	212	218	166	220
3520	28347	204	160	290	218	225	186	294
3521	29217	222	135	281	213	190	176	293
3522	29212	200	127	233	186	181	249	233
3523	28374	207	134	275	205	203	256	233
3524	28353	202	145	339	229	245	192	284
3525	28369	190	159	238	196	208	241	274
3526	Zonal Check (ZC)	198	126	199	174	202	222	207
3527	29230	182	123	295	200	223	263	280
3528	29235	200	158	264	207	196	212	255
3529	29246	215	147	337	233	233	245	284
3530	29250	206	117	295	206	200	221	249
3531	28979	205	150	308	221	207	177	236
3532	28972	207	134	285	208	192	219	296
3533	28128	199	148	272	206	192	185	258
3534	28982	247	141	242	210	189	190	284
3535	28981	205	129	281	205	197	218	255
3536	US 312 (HC)	221	159	307	229	222		242
3537	28386	204	153	285	214	202	256	258
3538	28328	213	114	252	193	187	188	268
3539	29243	203	109	272	194	197	252	297
3540	29238	203	183	218	201	222	269	294
3541	Local Check (LC)	221	114	261	199	241	248	293
Exp. Mean		207	143	273	208	209	223	269

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Table No. 1.20 Contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN			ZONE VII – SOUTHERN		
		GUJARAT	GUJARAT (3)	Z6(6)	ANDHRA PRADESH (1)	TELANGANA	
		VYARA	Mean	Mean	MARUTERU	RAJENDRANAGAR	KUNARAM
3501	28506	295	258	239	299	567	227
3502	28380	275	255	237	319	496	191
3503	29214	323	322	268	320	740	299
3504	29216	319	286	241	306	531	273
3505	29218	304	278	245	286	587	290
3506	29226	299	254	236	284	429	222
3507	29219	288	274	243	297	527	172
3508	29228	310	265	231	315	527	238
3509	29233	308	274	236	295	389	264
3510	29236	293	252	229	314	580	218
3511	Gontra Bidhan-3 (NC)	275	239	223	282	480	194
3512	28396	286	252	230	268	444	220
3513	28357	313	275	244	301	429	200
3514	29215	306	267	231	284	484	273
3515	28378	293	265	231	277	553	235
3516	29229	312	274	243	299	564	240
3517	29239	277	262	233	286	507	240
3518	29247	301	252	239	312	593	242
3519	29251	262	216	214	301	487	216
3520	28347	304	261	240	290	496	220
3521	29217	269	246	229	293	493	189
3522	29212	290	257	222	319	511	235
3523	28374	308	266	235	286	531	216
3524	28353	321	266	247	299	582	244
3525	28369	284	266	231	288	600	220
3526	Zonal Check (ZC)	286	239	206	317	580	238
3527	29230	306	283	241	267	489	244
3528	29235	277	248	228	299	502	218
3529	29246	326	285	259	281	551	176
3530	29250	297	256	231	308	427	
3531	28979	310	241	231	277	442	194
3532	28972	297	271	240	299	482	165
3533	28128	306	250	228	290	482	169
3534	28982	268	247	229	310	458	
3535	28981	321	265	235	275	449	161
3536	US 312 (HC)	284	263	243	290	664	158
3537	28386	348	287	251	312	544	134
3538	28328	332	263	228	293	469	264
3539	29243	319	289	242	299	484	264
3540	29238	295	286	244	308	367	277
3541	Local Check (LC)	301	281	240	301	516	284
	Exp. Mean	300	264	236	296	513	224

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Table No. 1.20 Contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		TELANGANA	TELANGANA (3)	TAMIL NADU		TAMIL NADU (2)	KERALA
		WARANGAL	Mean	ADUTHURAI	COIMBATORE	Mean	MONCOMPU
3501	28506	372	388	267	378	323	284
3502	28380	372	353	300	368	334	264
3503	29214	421	487	248	415	332	411
3504	29216	380	394	278	359	319	284
3505	29218	381	419	264	373	319	264
3506	29226	378	343	226	298	262	267
3507	29219	383	360	206	305	255	318
3508	29228	383	382	287	355	321	304
3509	29233	394	349	227	360	294	338
3510	29236	383	394	167	365	266	331
3511	Gontra Bidhan-3 (NC)	374	349	266	377	321	327
3512	28396	372	345	197	473	335	324
3513	28357	396	342	338	315	327	249
3514	29215	347	368	210	288	249	258
3515	28378	377	389	229	362	295	238
3516	29229	362	389	312	352	332	316
3517	29239	364	370	310	328	319	358
3518	29247	358	398	237	317	277	309
3519	29251	363	355	330	305	318	264
3520	28347	374	363	227	410	319	251
3521	29217	359	347	218	337	278	271
3522	29212	364	370	343	297	320	316
3523	28374	376	374	300	301	301	276
3524	28353	364	397	313	293	303	293
3525	28369	363	394	188	378	283	344
3526	Zonal Check (ZC)	375	398	244	345	295	367
3527	29230	384	372	314	292	303	293
3528	29235	352	357	281	298	290	290
3529	29246	380	369	194		194	307
3530	29250	361	394	255	320	288	322
3531	28979	364	333	177	325	251	271
3532	28972	373	340	304	365	334	234
3533	28128	389	347	247	362	304	293
3534	28982	366	412	315	312	314	320
3535	28981	371	327	241	368	305	269
3536	US 312 (HC)	397	407	194	317	256	304
3537	28386	398	359	185	319	252	289
3538	28328	377	370	241	393	317	289
3539	29243	367	372	298	318	308	331
3540	29238	362	335	271	322	297	287
3541	Local Check (LC)	380	393	246	408	327	268
Exp. Mean		374	373	256	344	298	297

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Table No. 1.20 Contd.: Panicles/m2 of entries in AVT 2 & AVT 1 - IME, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						Overall Mean(30)
		KERALA	KERALA (2)	KARNATAKA		KARNATAKA (1)	Z7(9)	
		PATTAMBI	Mean	MANDYA	@BRAHMAVAR	Mean	Mean	
3501	28506	465	375	311	209	311	352	298
3502	28380	428	346	318	293	318	339	291
3503	29214	395	403	340	288	340	399	332
3504	29216	508	396	289	303	289	356	295
3505	29218	473	369	307	202	307	358	290
3506	29226	390	328	280	230	280	308	265
3507	29219	466	392	302	222	302	331	288
3508	29228	439	372	309	270	309	351	283
3509	29233	408	373	291	290	291	330	291
3510	29236	411	371	300	376	300	341	289
3511	Gontra Bidhan-3 (NC)	466	396	313	405	313	342	274
3512	28396	576	450	331	375	331	356	287
3513	28357	478	364	289	308	289	333	289
3514	29215	498	378	284	315	284	325	274
3515	28378	433	335	304	313	304	334	272
3516	29229	437	376	324	339	324	356	295
3517	29239	477	418	320	404	320	354	291
3518	29247	451	380	293	204	293	346	286
3519	29251	430	347	253		253	328	264
3520	28347	490	370	333	312	333	343	294
3521	29217	493	382	260	309	260	324	261
3522	29212	457	386	327		327	352	282
3523	28374	398	337	287	373	287	330	283
3524	28353	418	356	304	317	304	346	288
3525	28369	429	387	273	266	273	343	279
3526	Zonal Check (ZC)	491	429	284	252	284	360	293
3527	29230	401	347	289	347	289	330	277
3528	29235	455	372	280	423	280	331	275
3529	29246	491	399	324	351	324	338	294
3530	29250	467	395	282	253	282	343	278
3531	28979	400	335	276	276	276	303	264
3532	28972	454	344	264	414	264	327	275
3533	28128	469	381	247	419	247	328	265
3534	28982	462	391	267	418	267	351	268
3535	28981	461	365	262	374	262	317	269
3536	US 312 (HC)	509	407	304	202	304	349	293
3537	28386	501	395	271	236	271	328	286
3538	28328	425	357	298	194	298	339	276
3539	29243	485	408	291	307	291	349	283
3540	29238	478	382	289	286	289	329	286
3541	Local Check (LC)	511	389	324	318	324	360	296
Exp. Mean		458	378	295	308	295	340	283

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Table No. 1.21: Grain quality characteristics of entries in AVT 2 & AVT 1 - IME, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
3501	28506	80.9	71.0	62.5	6.42	2.48	2.58	LB	OC	3.0	24.72	54
3502	28380	81.9	75.6	72.9	6.79	2.24	3.03	LS	VOC	4.0	26.34	22
3503	29214	78.5	67.1	63.2	5.69	2.07	2.74	MS	VOC	4.0	25.40	41
3504	29216	80.5	73.2	70.7	6.53	2.21	2.95	LB	VOC	7.0	27.80	33
3505	29218	81.1	74.1	71.1	7.19	2.25	3.19	LS	VOC	4.0	23.84	22
3506	29226	82.6	73.6	71.3	5.55	2.28	2.43	SB	VOC	4.0	21.41	25
3507	29219	79.3	66.1	51.6	6.29	2.46	2.55	LB	OC	4.0	27.72	43
3508	29228	81.7	74.4	71.2	6.48	2.11	3.07	LS	VOC	4.0	24.90	22
3509	29233	79.7	72.6	69.3	6.87	2.18	3.15	LS	VOC	7.0	24.02	22
3510	29236	81.4	74.9	73.5	5.34	2.56	2.08	SB	VOC	4.0	21.97	22
3511	Gontra Bidhan-3	81.0	74.7	73.2	5.64	2.35	2.40	SB	VOC	4.0	25.28	22
3512	28396	81.3	75.3	73.1	6.71	2.10	3.19	LS	VOC	4.0	25.90	22
3513	28357	78.4	72.1	70.4	6.80	2.23	3.04	LS	VOC	4.0	26.60	25
3514	29215	79.6	72.2	71.4	5.19	2.10	2.47	SB	VOC	4.0	24.69	22
3515	28378	79.8	72.0	68.2	7.10	2.12	3.34	LS	VOC	7.0	26.75	22
3516	29229	80.5	73.2	71.2	7.12	2.22	3.20	LS	VOC	7.0	26.16	22
3517	29239	82.4	66.3	58.1	5.78	2.54	2.27	SB	OC	4.0	26.28	22
3518	29247	79.0	70.6	65.6	6.47	2.55	2.53	LB	OC	7.0	26.01	22
3519	29251	79.7	71.9	67.8	6.76	2.14	3.15	LS	VOC	7.0	21.17	22
3520	28347	80.9	70.5	66.0	6.53	2.45	2.66	LB	VOC	4.0	23.58	66
3521	29217	81.2	69.6	56.3	6.39	2.37	2.69	LB	VOC	3.5	23.52	57
3522	29212	78.4	70.2	62.5	6.62	2.12	3.12	LS	VOC	4.0	23.61	42
3523	28374	80.7	73.7	67.6	6.68	2.35	2.84	LB	F	4.0	23.84	53
3524	28353	79.7	72.4	70.2	5.43	2.18	2.49	SB	VOC	4.0	24.64	26
3525	28369	81.6	73.9	68.9	6.97	2.03	3.43	LS	VOC	4.0	25.66	45
3526	MTU-1010	80.1	73.2	71.9	6.49	2.09	3.10	LS	VOC	7.0	21.85	53
3527	29230	81.5	75.0	73.5	7.04	2.20	3.20	LS	VOC	3.0	18.77	47
3528	29235	81.0	74.2	71.7	6.81	2.17	3.13	LS	VOC	4.0	22.29	28
3529	29246	79.7	74.1	73.1	6.84	2.17	3.15	LS	VOC	7.0	21.91	22
3530	29250	80.5	71.2	67.7	7.52	2.01	3.74	LS	VOC	4.0	22.32	53
3531	28979	81.8	73.2	69.2	6.40	2.31	2.77	LB	VOC	4.0	22.49	27
3532	28972	81.6	74.7	70.8	7.32	2.31	3.16	LS	VOC	7.0	27.10	22
3533	28128	80.3	75.1	73.1	6.35	2.17	2.92	LB	VOC	4.0	22.00	48
3534	28982	80.8	72.2	68.6	6.62	2.49	2.65	LB	VOC	3.0	26.72	50
3535	28981	82.6	74.5	70.8	6.36	2.28	2.78	LB	VOC	4.0	26.10	22
3536	US-312	82.1	76.2	74.9	5.78	2.14	2.70	MS	VOC	4.0	22.67	53
3537	28386	80.8	74.0	71.5	7.41	2.04	3.63	LS	VOC	4.0	23.61	57
3538	28328	81.6	74.8	71.3	6.57	2.53	2.59	LB	VOC	7.0	19.06	59
3539	29243	80.3	73.8	69.9	6.82	2.13	3.20	LS	VOC	7.0	25.69	40
3540	29238	80.4	65.2	53.9	6.41	2.36	2.71	LB	OC	4.0	27.36	45
3541	Local Check											

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length(mm); KB: Kernel Breadth(mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB: Long Bold; SB:Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

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Table No. 1.22: Composition of entries in Initial Variety Trial -Irrigated Mid Early (IVT-IME), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
1st year of testing:				
3601	29765	BPT 3059	MTU 1061 / IR 78585-64-2-4-3	LS
3602	29766	CR 3562-2-2-1-3-1-1	Surendra / N 22	MS
3603	29767	CB 16580	CO 51 / CB 06651	MS
3604	29768	AD 17084	WGL 14377 / MDU 5	MS
3605	29769	JGL 37074	JGL 30865 / MTU 1152	LS
3606	29770	HKR 17-33	IR 68826A / IR 81873-31-2-2-2	LS
3607	29771	CRR 721-1-B	IR 7152519-1-1 / Thadokkham 1	LS
3608	29772	JR 12	JR 201 / NPT 116 / JR 201	MS
3609	29773	KMP 232	Mandya Vijaya / BPT 5204	LS
3610	29774	CR 4367-2-IR 143216-26-191-5-3-15-3-B	IR 96321-1447-561-B-1 / Aganni // IR 96321-1447-561-B-1 / Abhaya /// IR 96321-1447-561-B-1 / IRBB 4 // IR 96321-1447-561-B-1 / IRBB 60 / 11 // IR 96321-1447-561-B-1 / Aganni // IR 96321-1447-561-B-1 / Abhaya /// IR 96321-1447-561-B-1 / Rathu Heenathi // IR 96321-1447-561-B-1 / IR BL 9	LS
3611	29775	RP 6112- MS-M-4-11-5-3-7-9-4-1	BPT 5204 Mutant	MB
3612	29776	MTU 1374	MTU 1156 / MTU 7029	MS
3613	29777	NLR 3561	NLR 34449 / NLR 30491	MS
3614	29778	NVSR 3169	GR 7 / Jaya	LB
3615	29779	NWGR 16033	Gurjari / NWGR 6047 (36-2-1-1-1-1-1)	MB
3616	29780	ORJ 1310 (RP-5388-B-12-1)	Sampada / IRGC 25966 // RP Bio 226	LB
3617	29781	PAU 6707-33-6-1-1-1-3 (RYT 3936)	PR 121 / IR 84678-25-5-B	LS
3618	29782	CR 4121-36-24-1	CR 3856-44-22-2-1-11*3 / IRBB 60 / Swarna Sub1	LB
3619	29783	R 2341-289-1-344-1	Indira Barani Dhan-1 / Guang jianr-1	MB
3620	Gontra Bidhan-3 (NC)			
3621	29784	RP 6519-IR 16A5053 (IR 107989-B-B RGA-B RGA-205)	IR11N 202 / IRR1 168	LS
3622	29785	Til Kormel Mutant-1	Tilkormel	LS
3623	29786	TRC H2N 2010-B-B-4-1	Hakuchuk 2 / Naveen	MB
3624	29787	UPR 4430-9-1-1-1	Govind / UPR 3739	LS
3625	29788	WGL 1413	APMS 6B / 80155 B	LS
3626	29789	RNR 29325	TME 80518 / BPT 5204	LS
3627	29790	RDR 1930	HKR-08-62 / WGL-697	LS
3628	29791	RCPR 85-IR 102860-10:6-B-B	IR 97012 / 3* IRR1 154	LS
3629	29792	RP 6519-IR16A5038 (IR 107989-B-B RGA-B RGA-141)	IR11N 202 / IRR1 168	LS
3630	29793	NLR 3613	MDT 6 / NLR 34449	LS
3631	29794	KNM 11547	KNM 118 / CT 1865-1-5-1-25-4	LS
3632	29795	KJT 3-21	IR 36 / KJT 35-3	SB
3633	29796	JR 11	MTU 1010 / NPT 7 / MTU 1010	MS
3634	29797	CR 4368-1-IR 143207-158-917-45-10-10-66B	Lalat / IR 96321-1447-561-B-1 // Lalat / IRBB 60 /// Lalat / IR 11L101 // Lalat / IRBL 9	MS
3635	29304	R 2454-1-R1-10	KM / IRBB 59	MB
3636	29798	NVSR 538	(Sampada / IRGC44455) / RP Bio-226	LB
3637	PR 113-Northern, Lalat-Eastern and North Eastern, MTU 1010-Central and Southern, Karjat 7-Western-- ZC			
3638	29799	AS 15024	ASD 16 / Manjalsaradai	SB
3639	29188	WGL 1355	WGL-347 / HKR-06-47	LS

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Entry No.	IET No.	Designation	Cross Combination	GT
3640	29800	CR 3945-18 (ODR 1-2-18)	Zhu 11-26 / Geetanjali	LS
3641	29801	RP 6486-MAID-IR 143214-12-25-5-3-7-1-B	Naveen / IR 96321-1447-561-B-1 // Naveen / IR 87707-445-B-B //// Naveen / IRBL9 // Naveen / Aganni / 6 // Naveen / IRBB 60	SB
3642	29802	RNR 29316	NDR 359 / Bhadrakali	LS
3643	29803	Pusa 1824-12-90-1	Pusa 44 / PAU 201	LS
3644	29804	UPR 4424-1-1-1-1	HKR47 / UPR 3743-1-2-1	LS
3645	29805	RP 5976-78-26-6-2	Improved Samba Mahsuri / Wazuhophek	SB
3646	29806	BRR 2136	S.Shree / KL-3 / Sampada / TJP-27 // MTU 1081	LS
3647	29807	Bhata Mahsuri Mutant-1	Bhata Mahsuri	MS
3648	29808	RP 6317-RMS-S35-BC ₂ F ₄ -49-25-12-24	MTU 1121* 2 / Swarna	LS
3649	29809	RP 5364-674-1-1-1-1-1	Improved Samba Mahsuri / IRGC 39050 // MTU 1081	LS
3650	29810	CR 4343-5-2-2-1	MTU 1001 / Pusa 44 / IR 102698-1-47-57-102-1-B	LS
3651	29811	RP 5507-JBB-B-689-1-1-1-1	Swarna / IRGC 63248 // Swarna Sub 1	MS
3652	29812	KJT 1107-2-8-12-10-8-9-7	KJT 1106 / KJT 184	LS
3653	29813	HURS 19-4	CR 2407 / IR 64	SB
3654	29814	CRAC 3998-104-2-1	Doubled haploid of 27P 63	MB
3655	29815	RP 6325-312-12-1-1	IR64 / Binam // CR 691-1	LB
3656	29816	Daftari-621	Daftari 2311 / Daftari Khushboo 9	SS
3657	29817	CR 3439-10-M-3-B-2-1	Naveen / Chettivirippu (AC 39394)	LS
3658	29818	NVSR 3163	GR 7 / Jaya	LB
3659	29819	NDR 9449	IR 73707-45-3-2-3	LS
3660	29820	OR 2517-8	OR 2006-25 / IR 65629-22-1	MS
3661	29821	NVSR 476	(CST-7-1 / IRGC 26872) / CSR-36	LS
3662	29822	ORJ 1342 (TP 29409)	IR 10M300	MB
3663	29823	PAU 6707-73-1-1-2-1 (RYT 3959)	PR 121 / IR 84678-25-5-B	LS
3664	Local Check			

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Table No. 1.23: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN																			
		ODISHA									BIHAR									WEST BENGAL	
		ICAR-NRRI (Cuttack)			JEYPORE			CHIPLIMA			BIKRAMGANJ (Dhangain)			Patna-ICAR			CHINSURAH				
	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE			
3601	29765	3329		121	5591	6	111	5679		115	3640		102	4741		117	6378		109		
3602	29766	5913	7	107	3184		91	6468		95	7107	7	80	7790		90	6955		99		
3603	29767	3057		107	3097		94	5263		97	5217		71	4220		85	5481		91		
3604	29768	5002		99	4034		95	6904	7	97	6638		82	5520		92	6987		96		
3605	29769	5926	6	106	6697	1	94	4942		100	5800		73	7810		86	5929		92		
3606	29770	6474	2	105	4409		92	6276		100	5889		76	8140	9	91	6635		94		
3607	29771	2343		91	4655		86	4750		95	5065		67	6100		77	5545		87		
3608	29772	5763	10	111	3967		92	5673		99	6003		77	7710		91	6994		97		
3609	29773	5564		111	3476		106	6449		105	7056	9	82	5630		98	6506		102		
3610	29774	3415		102	2642		90	6571		95	4737		71	7080		88	6058		92		
3611	29775	3860		94	6132	4	91	6949	6	95	5426		71	7610		86	7051		91		
3612	29776	4034		122	3390		110	7032	5	106	4452		103	2440		118	6891		85		
3613	29777	5035		106	3419		90	5910		105	6416		82	7600		96	6378		99		
3614	29778	5377		105	3528		97	6635		99	5646		82	6100		97	7212	6	100		
3615	29779	3837		98	3091		92	6635		98	6789		74	6240		91	6378		91		
3616	29780	5500		109	3880		96	5545		102	6403		68	7270		97	6955		103		
3617	29781	4513		105	5259		93	5032		100	7466	2	80	8670	4	92	6558		99		
3618	29782	5125		105	3769		103	6410		93	6505		82	5870		92	5801		98		
3619	29783	4420		96	4202		85	6314		100	7295	3	82	8130	10	91	6571		95		
3620	Contra Bidhan-3 (NC)	4991		97	3652		98	5256		99	7564	1	72	6610		87	7058		92		
3621	29784	4430		110	4373		94	5192		102	3677		69	6190		90	5545		98		
3622	29785	4921		119	3850		94	5705		97	5481		72	8020		84	7147	9	95		
3623	29786	3564		111	4899		95	5872		99	6235		70	8500	5	98	6635		91		
3624	29787	4082		101	3469		95	6481		100	6425		75	4760		87	5417		98		
3625	29788	5676		115	4644		99	6744	8	102	5857		91	7010		101	7205	7	92		
3626	29789	4916		105	3597		96	4103		99	7147	5	72	8250	8	84	6154		98		
3627	29790	4104		101	3661		87	5654		95	4680		66	6020		78	5096		102		
3628	29791	5023		108	3764		96	5340		97	6196		67	7200		86	6282		106		
3629	29792	4379		110	3520		97	5231		99	5093		77	5430		90	6186		91		
3630	29793	4446		107	4621		92	6686		100				6440		87	7064		90		
3631	29794	5223		103	3889		96	5256		105	4566		74	7020		87	5801		92		
3632	29795	4016		111	4509		92	5744		100	6410		82	8830	2	90	6378		97		
3633	29796	3923		98	4288		94	5897		98	4830		73	8000		86	5417		93		
3634	29797	5528		103	4479		88	6423		102	6339		77	5040		91	5545		98		
3635	29304	5533		110	5513	8	106	4897		106	6706		82	8400	6	95	7224	5	101		
3636	29798	3536		99	5380		94	5449		99	6789		77	4910		91	6122		92		
3637	Zonal Check (ZC)	5810	9	108	3348		95	4904		100	4879		80	5690		93	6163		98		
3638	29799	4815		95	3405		100	6699	10	96	6480		82	9290	1	86	6199		93		
3639	29188	6278	3	109	3910		101	6365		100	7125	6	82	8760	3	101	7167	8	104		
3640	29800	4373		106	4274		89	5885		97	5297		70	5940		86	5673		91		
3641	29801	3989		101	5014		88	5256		99	4948		70	6680		83	5865		90		
3642	29802	4862		95	3675		90	2731		99	5877		72	7880		87	6763		86		
3643	29803	3370		107	4322		95	6519		106	6360		80	7870		92	6506		98		
3644	29804	4589		103	3664		95	5333		100	6283		75	4510		88	6058		93		
3645	29805	5261		107	6563	3	108	6410		105	6428		89	5190		110	7532	4	109		
3646	29806	4930		114	3903		106	7135	3	116	6112		81	7250		102	6378		103		
3647	29807	5859	8	100	6667	2	95	6090		107	7106	8	71	5200		86	6506		97		
3648	29808	5971	5	114	5783	5	104	6551		105	6481		82	8360	7	99	7628	2	105		
3649	29809	5696		106	2627		100	5763		106	5762		82	4720		91	6827		96		
3650	29810	3960		108	2785		108	3628		115	5135		80	6490		93	7019		92		
3651	29811	6482	1	103	4728		92	6545		109	5011		75	6380		93	6571		96		
3652	29812	5379		105	4225		90	5782		100	4520		80	6730		91	7019		98		
3653	29813	5433		122	3148		104	5147		114		4	91	7520		102	7647	1	108		
3654	29814	4513		106	3614		86	6712	9	96	5268		75	4470		88	6186		92		
3655	29815	3767		107	3682		88	7410	2	100	5084		73	5040		90	5558		91		
3656	29816	2255		101	2664		94	3878		95	4620		70	5140		95	5096		97		
3657	29817	4870		107	5392	10	97	7083	4	107	5135		82	5130		95	6186		100		
3658	29818	4933		103	4103		94	6250		100	6619		82	6860		92	7147	9	93		
3659	29819	4136		108	5575	7	103	5968		107	5748		78	6340		95	6058		102		
3660	29820	6004	4	111	5493	9	103	6192		99	7006		81	7620		99	6571		101		
3661	29821	2245		103	3625		96	5147		100	4397		75	6120		90	5417		93		
3662	29822	5085		124	5256		98	7782	1	100	7019	10	82	8010		105	7615	3	105		
3663	29823	5286		110	4359		98	5167		101	5802		80	7410		92	6122		99		
3664	Local Check (LC)	3909		97	4409		95	5128		103	4508		87	4880		105	5353		92		
Mean		4701		106	4230		96	5857		101	5869		78	6606		92	6412		96		
F Value		4.27(p<0.0001)S			8.09(p<0.0001)S			4.00(p<0.0001)S			9.95(p<0.0001)S			5.41(p<0.0001)S			9.78(p<0.0001)S				
CD		1348			967			1296			863			714			1022				
SEm				1			1			1			1			1		1			
CV%		14.35			11.43			11.07			7.35			5.41			7.97				
D/S		10-07-2021			09-07-2021			24-07-2021			24-07-2021			09-07-2021			08-07-2021				
D/P		19-08-2021			05-08-2021			29-08-2021			13-08-2021			03-08-2021			07-08-2021				
Local Check Name		Naveen			Manaswini			MTU-1156			R. Bhagwati			Rajendra Sweta			KHITISH				

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 1.23 Contd: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									ZONE-V - CENTRAL					
		WEST BENGAL			UTTAR PRADESH			Z3(8)			CHHATTISGARH			MAHARASHTRA 1		
		BANKURA			MASODHA			Mean			RAIPUR			SAKOLI		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
3601	29765	5313		104				4953		111			121	2851		108
3602	29766	4095		94	3324		102	5605		94	6429	5	89	4711		85
3603	29767	5721		107	5120		90	4647		93	2610		88	4911		78
3604	29768	6498	3	88	5319		102	5863		94	5417		89	5502	2	84
3605	29769	6082	6	83	3856		108	5880		93	3660		90	4781		79
3606	29770	6002	7	95	4987		102	6102	7 *	94	5523		95	3326		81
3607	29771	3958		84	2693		85	4389		84	2328		77	4081		73
3608	29772	3782		97	5585		104	5685		96	6191	7	95	4371		89
3609	29773	5152		97	5851		102	5711		100	4005		101	4021		91
3610	29774	5721		79	5918	8	92	5268		89	3771		90	4131		81
3611	29775	6090	5	80	4854		94	5997	8 *	88	4318		86	4321		79
3612	29776	5657		103				4842		106			115	4991		106
3613	29777	3662		88	5918	8	83	5542		93	3140		97	5154	9	91
3614	29778	4423		95	2992		104	5239		97	4105		97	4356		90
3615	29779	6619	2	94	4654		93	5530		91	4711		90	5071		85
3616	29780	3878		94	4987		102	5552		96	6174	8	94	4641		83
3617	29781	3942		90	5818		104	5907	10	95	6415	6	97	3361		97
3618	29782	4655		98	6184	2	91	5540		95	5413		91	3643		88
3619	29783	3670		96	4721		91	5665		92	5506		93	3537		92
3620	Gontra Bidhan-3 (NC)	3822		86	5319		92	5534		90	6718	2	92	3754		83
3621	29784	5457		90	3657		104	4815		95	4222		90	3581		81
3622	29785	3926		95	2992		96	5255		94	4642		88	3471		81
3623	29786	4880		97	5652		105	5780		96	4401		96	4871		90
3624	29787	4856		93	5785		96	5159		93	5417		89	2921		85
3625	29788	5553		102	3657		90	5793		99	6095	9	102	3851		99
3626	29789	5801	10	90	5452		89	5678		92	4528		87	3436		84
3627	29790	4087		83	5519		89	4853		88	3881		83	4281		75
3628	29791	5048		109	5851		92	5588		95	4780		85	3551		80
3629	29792	4439		94	4987		102	4908		95	5317		88	3869		83
3630	29793	5970	8	90	5785		91	5859		94	3309		94	3539		90
3631	29794	5112		87	5851		95	5340		92	4780		90	4382		85
3632	29795	4351		96	5585		94	5728		95	5420		92	3874		90
3633	29796	3710		91	4521		93	5073		91	3647		85	4624		81
3634	29797	5601		112	4588		88	5443		95	4301		94	3891		87
3635	29304	5721		107	5918	8	93	6239	4 *	100	5696	10	97	4022		89
3636	29798	5369		96	4388		91	5243		92	5489		92	4481		90
3637	Zonal Check (ZC)	4399		91	4787		102	4998		96	4112		85	5268	7	77
3638	29799	4351		90				5891		92	4886		89	4481		84
3639	29188	6779	1	96	4388		96	6347	2 *	99	4504		102	5341	5	96
3640	29800	5337		111	5785		92	5321		93	3802		84	4941		79
3641	29801	4311		85	5918	8	86	5248		88	3740		83	3721		72
3642	29802	4095		90	6051	4	82	5242		87	3919		85	3514		85
3643	29803	4776		95	4654		82	5547		94	4356		93	3541		90
3644	29804	5529		99	6250	1	93	5277		93	4862		90	3096		85
3645	29805	6098	4	108				6212	5 *	105	1997		107	3633		100
3646	29806	5008		97				5817		103	3650		97	4368		91
3647	29807	5817	9	88	5785		96	6129	6 *	92	6512	3	92	4569		81
3648	29808	4503		97	5984	5	96	6408	1 *	100	5441		98	4157		97
3649	29809	5024		90	5851		97	5284		96	4821		94	5188	8	89
3650	29810	4591		98	2527		102	4517		99	4229		87	4299		85
3651	29811	5409		90	5785		97	5864		94	3502		94	5373	4	83
3652	29812	5120		95	5718		101	5562		95	4576		91	5470	3	80
3653	29813	4415		100				5783		106				4738		100
3654	29814	4944		83	4721		98	5054		90	4845		90	3320		82
3655	29815	5296		90	6184	2	96	5253		92	2469		93	3591		80
3656	29816	3870		100	5718		102	4155		94	3196		93	3256		90
3657	29817	4455		107	4654		102	5363		99	3857		96	3824		92
3658	29818	5048		94	5918	8	92	5860		94	4876		93	4382		90
3659	29819	4054		102	2061		102	4993		99	5368		101	4505		95
3660	29820	4375		96	4388		113	5956	9 *	100	6808	1	97	5309	6	97
3661	29821	4167		92	5718		103	4605		94	3375		91	3451		82
3662	29822	5425		98	4189		93	6298	3 *	100	5465		104	5650	1	98
3663	29823	4511		99	5918	8	102	5572		97	6498	4	98	4704		100
3664	Local Check (LC)	5401		83	5386		102	4872		95	4663		96	5116	10	92
Mean		4933		95	5045		96	5463		95	4634		93	4234		87
F Value		14.39(p<0.0001)S			20.27(p<0.0001)S			14.63(p<0.0001)S			6.79(p<0.0001)S			5.90(p<0.0001)S		
CD		613			640			374			1255			826		
SEm				0			1			0			1			1
CV%		6.22			6.34			3.42			13.54			9.76		
D/S		09-07-2021			21-07-2021						12-07-2021			07-07-2021		
D/P		04-08-2021			21-08-2021						01-08-2021			28-07-2021		
Local Check Name		Lalat			NDR 3112-1						IGKV R2			PKV Ganesh		

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Table No. 1.23 Contd: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL									ZONE VI – WESTERN								
		MAHARASHTRA 1			ZS (3)			MAHARASHTRA 2(1)			GUJARAT								
		SINDEWAHI			Mean			KARJAT			NAVASARI			NAWAGAM			VYARA		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
3601	29765	3210		102	3031		110	6410	3	113	5077		88	4318		92	2362		114
3602	29766	3878		99	5006	10	91	5769	5	87	4958		88	5055	4	90	4690		83
3603	29767	3892		99	3804		88	3419		97	3584		88	3041		89	4523		82
3604	29768	5277	3	101	5399	3	91	3632		91	5583		89	3344		91	6205	3	83
3605	29769	4283		96	4241		88	4487		97	4985		84	3750		95	4888		83
3606	29770	4084		93	4311		89	4274		90	5032		87	3315		91	4347		92
3607	29771	3920		85	3443		78	3739		94	3381		82	3386		96	4387		72
3608	29772	5305	1	91	5289	4	91	2991		90	5283		92	3430		99	4650		91
3609	29773	4467		112	4164		101	3953		93	4958		94	4135		99	4867		92
3610	29774	4688		96	4197		89	3526		91	5382		84	3082		94	4411		85
3611	29775	4134		95	4258		86	3205		89	5402		81	3798		91	5812	7	83
3612	29776	3530		120	4261		114	7276	1 *	96	4261		109	4555	7	90	3911		114
3613	29777	3672		103	3989		97	3632		88	3841		92	3426		91	4280		86
3614	29778	3878		91	4113		92	4167		89	5158		88	3846		98	5565	9	89
3615	29779	4489		95	4757		90	5983	4	97	6047	6	84	3016		87	5221		84
3616	29780	4808		110	5208	6	95	4060		90	5997	7	88	3853		99	5182		88
3617	29781	4432		107	4736		100	3953		91	5848	8	88	3988		96	6551	1	91
3618	29782	3977		95	4344		91	3419		92	5440		88	3736		96	5071		88
3619	29783	4553		101	4532		95	3953		97	5012		88	3466		92	5757	8	87
3620	Gontra Bidhan-3 (NC)	5057	6	96	5176	7	90	4167		85	6116	5	83	4096		95	5434		83
3621	29784	4510		95	4104		88	4808		90	4443		86	4165		100	4219		84
3622	29785	3771		95	3961		88	4594		95	5464		85	4135		90	5452		80
3623	29786	4453		101	4575		95	5342	7	99	5401		92	3944		105	5170		86
3624	29787	3935		97	4091		90	4274		96	5555		82	4143		94	4047		81
3625	29788	3842		108	4596		103	3098		94	5632		94	4666	6	102	4693		97
3626	29789	4119		102	4028		91	3419		84	5064		83	4729	5	93	4787		83
3627	29790	4176		95	4113		84	4167		83	5745		79	3585		96	5074		77
3628	29791	4666		96	4332		87	3632		97	5327		80	4147		94	6173	4	76
3629	29792	4411		95	4532		88	3205		90	5352		82	3953		100	4953		81
3630	29793	5021	8	88	3956		91	3526		90	4337		84	3582		90	3674		85
3631	29794	5000		100	4721		91	5128	9	90	5119		85	3476		90	3483		83
3632	29795	4766		100	4687		94	4167		90	6295	3	88	4421	9	92	5212		85
3633	29796	4347		91	4206		85	3846		97	4990		85	3630		93	4544		83
3634	29797	5036	7	96	4409		92	4808		94	4961		88	3681		97	4376		86
3635	29304	3899		98	4539		95	3846		95	5132		91	4208		93	4771		92
3636	29798	5021	8	102	4997		95	5342	7	97	6384	1	81	4363		93	5026		86
3637	Zonal Check (ZC)	4311		93	4564		85	3419		85	4744		84	4286		94	4147		85
3638	29799	4233		93	4533		89	3739		97	5406		85	3573		91	6522	2	83
3639	29188	5298	2	107	5048	9	101	3419		101	5229		92	4013		92	6004	5	95
3640	29800	4141		85	4295		82	4060		85	5223		82	3760		88	3943		80
3641	29801	4027		79	3829		78	3269		90	3831		84	3615		94	2457		75
3642	29802	3920		101	3784		90	4060		90	5369		85	4275		95	4420		77
3643	29803	4063		90	3987		91	4808		92	6121	4	84	3389		101	4839		84
3644	29804	4553		95	4170		90	3632		90	4108		88	3860		97	3828		89
3645	29805	3239		114	2956		107	6517	2	99	3614		87	3966		113	5278		114
3646	29806	3608		99	3875		96	3846		90	3361		89	4076		105	4279		84
3647	29807	4702		99	5261	5	90	4594		85	5792	9	83	4330		95	5449		83
3648	29808	3565		106	4388		100	3632		91	5775	10	87	3852		106	5529	10	94
3649	29809	5199	5	97	5069	8	93	3312		90	5261		81	4193		95	4884		83
3650	29810	3878		99	4135		90	4487		97	5128		92	4039		107	4496		84
3651	29811	3892		98	4256		91	3953		90	3922		87	4313		96	3943		83
3652	29812	4368		96	4805		89	4380		97	5080		85	4422	8	92	3430		77
3653	29813	4205		101	4472		100	4380		102	4933		93	5122	3	110	5911	6	94
3654	29814	4048		102	4071		91	4167		85	4980		88	4231		94	4902		83
3655	29815	4006		98	3355		90	3205		89	5455		81	4137		93	3862		78
3656	29816	3196		97	3216		93	3237		91	3815		88	3897		94	3022		91
3657	29817	3956		102	3879		96	3739		92	5133		91	3739		103	3457		92
3658	29818	4389		98	4549		94	3312		89	5016		85	3456		92	4247		86
3659	29819	3750		107	4541		101	4380		92	6358	2	87	4318		103	4775		92
3660	29820	4922		103	5680	1	99	4808		95	4667		93	5643	2	106	5168		94
3661	29821	3786		84	3537		85	4487		97	3792		81	4085		96	4112		83
3662	29822	5249	4	104	5455	2	102	2991		102	4159		98	3994		80	4676		96
3663	29823	3686		99	4963		99	4060		92	5040		89	4412	10	91	4263		89
3664	Local Check (LC)	5007	10	110	4929		99	5449	6	97	5042		83	5898	1	87	4982		87
Mean		4277		98	4370		93	4165		92	5045		86	4005		95	4697		86
F Value		2.80(p<0.0001)S			6.41(p<0.0001)S			3.62(p<0.0001)S			5.57(p<0.0001)S			3.91(p<0.0001)S			4.64(p<0.0001)S		
CD		915			649			1313			884			771			1125		
SEm				2			1			1			0			1		1	
CV%		10.71			7.43			15.77			8.77			9.63			11.98		
D/S		06-07-2021						09-07-2021			09-07-2021			15-07-2021			09-07-2021		
D/P		30-07-2021						06-08-2021			31-07-2021			26-08-2021			22-07-2021		
Local Check Name		PKV Ganesh						Karjat-3			GNR-3			Mahisagar			GNR-3		

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Table No. 1.23 Contd: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN						ZONE VII – SOUTHERN												
		Z6 (4)			ANDHRA PRADESH (1)			TELANGANA						TAMIL NADU						
		Mean			MARUTERU			RAJENDRANAGAR			WARANGAL			ADUTHURAI			COIMBATORE			
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	
3601	29765	4542		102	6371		116	7183		97	4278		92	6458	7	88	5932		110	
3602	29766	5118	3	87	7818		9	83	5129		88	7708	2	90	5149		85	5828		93
3603	29767	3642		89	8783		6	82	4167		88	4398		89	4286		86	6927	3	86
3604	29768	4691		88	5793			89	6828		90	7333	4	92	5060		92	5587		88
3605	29769	4528		89	7163			83	6258		90	5245		92	6637	5	90	6880	7	93
3606	29770	4242		90	6118			89	7192		90	5455		96	4762		93	5180		99
3607	29771	3723		86	6655			74	5641		84	4203		82	3690		86	4823		81
3608	29772	4089		93	5904			89	6912		96	4797		101	5357		87	6978	2	93
3609	29773	4478		94	4581			93	8105	8	100	7589	3	102	5208		85	5337		102
3610	29774	4100		88	4616			83	7657		92	5920		89	4256		91	5125		93
3611	29775	4554		86	4739			82	7740		86	4805		94	4226		91	5292		88
3612	29776	4996	10	102	5822			115	6843		113	6006		96	5060		90	6877	8	105
3613	29777	3795		89	5043			89	7175		95	4154		91	3988		95	6984	1	87
3614	29778	4684		91	6269			91	7710		92	4407		102	4018		92	4944		93
3615	29779	5067	7	88	5118			83	7599		90	4602		88	7452	1	93	6141		92
3616	29780	4773		91	9491	3 *		89	8394	4	90	4941		102	4762		96	5495		91
3617	29781	5085	5	91	5174			90	8280	6	100	6612	10	95	4018		95	5741		98
3618	29782	4417		91	5333			90	6788		98	6440		99	6071		98	6891	4	100
3619	29783	4547		91	5476			86	6774		92	4927		92	4464		97	6076		82
3620	Gontra Bidhan-3 (NC)	4953		86	7329			85	9443	1	86	7150	5	88	5000		92	5037		97
3621	29784	4409		90	4368			84	6559		90	6500		97	3869		97	4891		92
3622	29785	4911		87	6917			82	8374	5	90	6698	9	88	4464		96	5423		93
3623	29786	4964		95	4306			91	6421		89	4829		95	4911		98	5346		92
3624	29787	4505		88	7570			84	5314		90	4390		90	4256		96	5977		96
3625	29788	4522		96	5973			102	6670		104	6289		107	5417		98	4866		96
3626	29789	4500		85	9987	1 *		82	6841		92	5302		89	4464		93	5396		96
3627	29790	4643		83	5346			82	7184		82	4686		86	4970		96	4563		96
3628	29791	4820		86	4505			86	8145	7	88	5213		95	6310	9	95	4423		92
3629	29792	4366		88	5772			89	7276		92	7124	6	96	5506		98	4188		91
3630	29793	3780		87	9376	4 *		85	7226		92	4057		89	6161		96	6885	5	92
3631	29794	4302		87	6543			86	7453		90	6239		94	4018		95	5416		90
3632	29795	5024	9	88	5083			86	8973	2	90	5813		97	5357		91	6823	9	93
3633	29796	4253		89	6187			82	7174		92	6482		94	5506		93	5494		91
3634	29797	4457		91	6820			86	6434		90	5122		98	4762		94	4876		96
3635	29304	4489		93	4843			91	6954		101	5083		104	3571		93	4777		102
3636	29798	5279	2	89	7818		9	82	8098	9	90	4374		88	5357		96	4640		97
3637	Zonal Check (ZC)	4149		87	5386			89	6802		90	6763	8	91	4435		98	6805	10	87
3638	29799	4810		89	5855			84	8065	10	94	4766		91	4911		96	5506		95
3639	29188	4666		95	7342			100	8970	3	101	8545	1	103	5952		98	6703		97
3640	29800	4247		84	4409			81	4129		86	4325		91	4196		100	6189		83
3641	29801	3293		86	5828			82	6140		86	4350		86	3988		96	4376		83
3642	29802	4531		87	6268			83	7602		90	4765		89	6875	4	92	4330		92
3643	29803	4789		90	5972			89	7039		92	5057		93	4018		96	5595		96
3644	29804	3857		91	7521			86	7125		96	4512		93	6250		99	4506		95
3645	29805	4844		103	4511			107	6849		107	5763		110	6577	6	98	5417		100
3646	29806	3891		92	7246			94	5230		98	4311		92	4077		98	3884		105
3647	29807	5041	8	86	5470			82	7837		94	6807	7	91	4464		93	4654		99
3648	29808	4697		95	9905	2 *		94	7679		104	4116		107	7232	3	93	4758		96
3649	29809	4413		87	5925			78	7580		90	4211		89	4762		99	4862		91
3650	29810	4538		95	7680			87	5072		94	4138		96	3869		91	3940		93
3651	29811	4033		89	5022			84	6823		92	4114		95	6280	10	97	4730		89
3652	29812	4328		87	6124			86	7006		94	3675		98	4196		101	4326		93
3653	29813	5087	4	100	7363			103	6191		100	4780		113	5208		96	6360		94
3654	29814	4570		87	8782		7	85	7593		98	4772		95	5357		94	5926		89
3655	29815	4165		85	5615			82	3527		90	4699		84	3690		97	6502		92
3656	29816	3493		91	4573			89	4506		96	4390		97	3571		99	5727		93
3657	29817	4017		94	9354	5 *		90	5991		104	4114		102	6369	8	99	3972		100
3658	29818	4008		88	5028			85	4933		90	4602		94	4762		92	6545		89
3659	29819	4958		93	7260			93	7093		103	5059		96	7292	2	98	4571		111
3660	29820	5072	6	97	4704			94	6884		100	5740		105	5357		94	4313		95
3661	29821	4119		89	5235			83	5230		86	4642		91	4762		93	4022		92
3662	29822	3955		94	6454			101	6519		103	5236		108	5506		94	6728		93
3663	29823	4444		90	7886		8	91	7401		100	5979		98	3452		100	6489		98
3664	Local Check (LC)	5343	1	88	6660			102	6842		90	6016		96	5357		94	6885	5	91
Mean		4478		90	6319		88	6868		93	5303		95	5025		94	5479		94	
F Value		7.06(p<0.0001)S			4.54(p<0.0001)S			3.44(p<0.0001)S			6.91(p<0.0001)S			8.47(p<0.0001)S			7.16(p<0.0001)S			
CD		478			1948			1801			1199			968			978			
SEm				0			1			2			1			1			1	
CV%		5.34			15.43			13.12			11.31			9.64			8.93			
D/S					09-07-2021			10-07-2021			06-07-2021			04-09-2021			03-08-2021			
D/P					05-08-2021			09-08-2021			07-08-2021			03-10-2021			31-08-2021			
Local Check Name					MTU1121			JGL 24423			RNR 15048			ADT 39			CO 47			

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Table No. 1.23 Contd: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN											
		KERALA						KARNATAKA					
		MONCOMPU			PATTAMBI			MANDYA			BRAHMAVAR		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
3601	29765	4962		96	4333		100	4792		113	5802	4	86
3602	29766	5212		92	4019		101	5246		89	5051		84
3603	29767	4371		93	4400		100	3304		86	5821	2	94
3604	29768	6351		95	4100		101	5067		91	4356		79
3605	29769	5948		95	4171		100	3847		88	5682		94
3606	29770	5712		99	4286		101	4621		103	5739	9	96
3607	29771	3351		81	4557		101	3348		83	2816		87
3608	29772	7295	4	96	4524		100	4673		95	5341		83
3609	29773	5052		98	5910	8	99	4442		102	5429		86
3610	29774	4545		95	5129		101	4792		94	5519		85
3611	29775	5920		93	5995	6	101	4606		92	5676		96
3612	29776	6552		100	4505		100	4539		105	5398		78
3613	29777	6024		96	3967		101	4613		97	5764	6	94
3614	29778	5989		95	4386		100	4561		95	5253		79
3615	29779	6226		93	4629		101	4435		96	2727		84
3616	29780	6871	8	94	4557		101	6354		93	2241		85
3617	29781	7753	2	98	4290		101	5632		103	3441		89
3618	29782	5920		95	4914		101	4792		93	2986		95
3619	29783	5976		91	4667		102	4747		93	3043		84
3620	Gontra Bidhan-3 (NC)	5219		95	4219		100	7396	1	95	5688		82
3621	29784	6885	6	95	4514		101	4330		91	3049		99
3622	29785	6774		93	4424		99	4598		95	5808	3	94
3623	29786	5892		95	4219		100	4680		89	5265		87
3624	29787	3545		88	4167		101	4323		97	5694	10	93
3625	29788	5614		114	4386		101	5580		103	4830		85
3626	29789	6663		95	4205		100	4271		95	5309		86
3627	29790	4663		99	4076		102	3906		87	4110		84
3628	29791	5830		90	4352		101	4375		86	5625		94
3629	29792	6205		91	4610		100	4598		91	3147		87
3630	29793	5496		94	4881		100	5915		97	4091		85
3631	29794	4851		95	4567		100	5246		89	5391		86
3632	29795	6885	6	95	4862		99	6399		98	5271		85
3633	29796	6059		94	4076		100	5134		94			
3634	29797	4989		98	4567		100	7083	2	93	4059		88
3635	29304	6482		97	4319		100	5975		103	5745	8	94
3636	29798	5531		93	4567		100	5074		102			
3637	Zonal Check (ZC)	4698		95	4410		101	6049		91			
3638	29799	6420		95	4843		100	6674	9	95	4987		89
3639	29188	7371	3	102	5986	7	102	3720		101	5568		90
3640	29800	4774		87	5448		100	4077		88	4798		87
3641	29801	3670		88	6395	3	100	4077		89	5688		94
3642	29802	6573		92	6457	2	100	4576		91	5366		92
3643	29803	5927		100	5352		100	4464		102	3731		95
3644	29804	6614		99	5133		100	3512		101	5379		87
3645	29805	4774		100	4538		101	4717		104	5442		89
3646	29806	4726		100	5224		102	3467		103	5751	7	93
3647	29807	6385		95	6238	4	100	6711	8	101	5663		91
3648	29808	7191	5	100	6552	1	101	5521		100	3194		87
3649	29809	6816	10	95	6143	5	101	5290		102	3554		88
3650	29810	5205		95	5843	9	102	4405		96	3169		89
3651	29811	4892		104	4933		101	4933		102	5410		90
3652	29812	5510		90	4157		100	4531		91	5852	1	95
3653	29813	6719		102	4590		101	6987	4	97	5177		96
3654	29814	5837		95	4886		102	5603		96	4609		95
3655	29815	4476		96	4505		101	4821		96	5322		87
3656	29816	4906		95	4981		100	5238		97	5669		90
3657	29817	5295		102	5052		100	5506		105	5556		89
3658	29818	5677		96	4333		100	4174		103	5777	5	96
3659	29819	6094		102	4633		100	6734	7	111	5388		93
3660	29820	6830	9	100	5076		101	6525	10	103	5303		88
3661	29821	5038		95	4881		101	5030		94	4104		89
3662	29822	8941	1	104	5467	10	101	7009	3	104	5303		92
3663	29823	5482		97	5371		100	6868	5	103	5631		92
3664	Local Check (LC)	5309		96	5114		100	6778	6	104	4154		90
Mean			5778	96		4826	100		5083	96		4864	89
F Value		4.63(p<0.0001)S			2.00(p=0.0032)S			13.58(p<0.0001)S			6.88(p<0.0001)S		
CD		1344			1320			778			1083		
SEm			0			1				1			1
CV%		11.64			13.69			7.66			11.13		
D/S		15-07-2021			16-07-2021			09-07-2021			18-07-2021		
D/P		12-08-2021			10-08-2021			02-08-2021			19-08-2021		
Local Check Name		MO 16 (UMA)			JYOTHI			Thanu			KCP-1		

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Table No. 1.23 Contd: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						Overall Mean (25)		
		PUDUCHERRY (1)			Z7 (10)					
		KURUMBAPET						Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE
3601	29765	8693		112	5880		101	5118		105
3602	29766	7922		97	5908		90	5576		91
3603	29767	5041		108	5150		91	4586		91
3604	29768	6636		96	5711		91	5559		91
3605	29769	6893		96	5872		92	5464		91
3606	29770	5967		96	5503		96	5350		94
3607	29771	9671	4	99	4876		86	4363		84
3608	29772	9671	4	100	6145	9	94	5566		94
3609	29773	8128		95	5978		96	5435		98
3610	29774	8642		99	5620		92	5093		90
3611	29775	7716		95	5672		92	5427		89
3612	29776	10031	3	109	6163	8	101	5393		104
3613	29777	6893		98	5461		94	5044		93
3614	29778	9619	6	96	5716		93	5206		94
3615	29779	5041		99	5397		92	5310		91
3616	29780	7922		96	6103		93	5606		94
3617	29781	9105	8	98	6005		96	5674	9	96
3618	29782				5571		96	5215		94
3619	29783	6739		95	5289		91	5200		92
3620	Gontra Bidhan-3 (NC)	8282		101	6476	3	92	5775	6	90
3621	29784	6790		97	5176		94	4809		93
3622	29785	5453		100	5893		93	5300		92
3623	29786	7253		95	5312		93	5318		94
3624	29787	8282		98	5352		93	5003		92
3625	29788	5658		97	5528		101	5340		100
3626	29789	4835		96	5727		92	5311		91
3627	29790	4218		98	4772		91	4698		88
3628	29791	7253		96	5603		92	5320		92
3629	29792	8693		98	5712		93	5098		92
3630	29793	3755		99	5784		93	5243		92
3631	29794	5607		100	5533		92	5177		91
3632	29795	9053	9	96	6452	5	93	5780	5	93
3633	29796	6687		100	5867		93	5126		91
3634	29797	10391	1 *	95	5910		94	5348		93
3635	29304	7562		108	5531		99	5472		98
3636	29798	6687		97	5794		94	5425		92
3637	Zonal Check (ZC)	7150		98	5833		93	5115		92
3638	29799				5781		93	5483		91
3639	29188				6684	1	99	6031	1 *	98
3640	29800	4578		97	4692		90	4774		89
3641	29801	8282		99	5279		90	4777		87
3642	29802	8076		96	6089		92	5292		89
3643	29803	6224		109	5338		97	5155		94
3644	29804	9053	9	100	5961		95	5190		93
3645	29805	8385		108	5697		102	5362		104
3646	29806	6739		99	5066		98	4940		98
3647	29807				6025		94	5800	4	92
3648	29808	8539		102	6469	4	98	5916	2	98
3649	29809	6584		100	5573		93	5234		93
3650	29810				4813		93	4584		95
3651	29811	9259	7	108	5640		96	5288		94
3652	29812	7870		98	5325		94	5179		93
3653	29813	7562		97	6094		100	5683	8	102
3654	29814	8333		95	6170	7	94	5305		91
3655	29815	6893		96	5005		92	4752		90
3656	29816	7253		95	5081		95	4307		94
3657	29817	10082	2 *	111	6129	10	100	5276		98
3658	29818	7819		93	5365		94	5208		93
3659	29819	6224		105	6035		101	5350		99
3660	29820	6790		108	5752		99	5700	7	99
3661	29821	5607		100	4855		92	4499		91
3662	29822	7819		92	6498	2	99	5902	3	99
3663	29823	8385		99	6294	6	98	5607	10	96
3664	Local Check (LC)	6327		95	5944		96	5383		95
Mean		7400		99	5686		94	5263		94
F Value		6.01(p<0.0001)S			10.78(p<0.0001)S			25.38(p<0.0001)S		
CD		1795			388			206		
SEm				1			0			0
CV%		12.11			3.41			1.96		
D/S		18-10-2021								
D/P		23-11-2021								
Local Check Name		CO (R) 52								

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Entry No	IET No	ODISHA (3)			BIHAR (2)			WEST BENGAL (2)			UTTAR PRADESH (1)			CHHATTISGARH (1)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
3601	29765	4866		115	4191		109	5846		107						121
3602	29766	5188		97	7449	9	85	5525		96	3324		102	6429	5	89
3603	29767	3806		99	4719		78	5601		99	5120		90	2610		88
3604	29768	5313		97	6079		87	6743	3 *	92	5319		102	5417		89
3605	29769	5855	7 *	100	6805		79	6006	*	88	3856		108	3660		90
3606	29770	5720	9 *	99	7015		83	6319	10 *	95	4987		102	5523		95
3607	29771	3916		91	5583		72	4752		85	2693		85	2328		77
3608	29772	5134		101	6857		84	5388		97	5585		104	6191	7	95
3609	29773	5163		107	6343		90	5829		99	5851		102	4005		101
3610	29774	4209		96	5909		80	5890		85	5918	8	92	3771		90
3611	29775	5647	*	93	6518		78	6571	4 *	86	4854		94	4318		86
3612	29776	4819		112	3446		110	6274	*	94						115
3613	29777	4788		100	7008		89	5020		93	5918	8	83	3140		97
3614	29778	5180		100	5873		90	5818		97	2992		104	4105		97
3615	29779	4521		96	6515		83	6499	7 *	93	4654		93	4711		90
3616	29780	4975		102	6837		82	5417		98	4987		102	6174	8	94
3617	29781	4935		99	8068	1 *	86	5250		95	5818		104	6415	6	97
3618	29782	5101		100	6188		87	5228		98	6184	2 *	91	5413		91
3619	29783	4979		93	7713	4 *	87	5121		96	4721		91	5506		93
3620	Gontra Bidhan-3 (NC)	4633		98	7087		79	5440		89	5319		92	6718	2	92
3621	29784	4665		102	4934		80	5501		94	3657		104	4222		90
3622	29785	4825		103	6751		78	5537		95	2992		96	4642		88
3623	29786	4778		102	7368		84	5758		94	5652		105	4401		96
3624	29787	4677		99	5593		81	5137		95	5785		96	5417		89
3625	29788	5688	10 *	105	6434		96	6379	9 *	97	3657		90	6095	9	102
3626	29789	4205		100	7699	5 *	78	5978		94	5452		89	4528		87
3627	29790	4473		94	5350		72	4592		93	5519		89	3881		83
3628	29791	4709		100	6698		77	5665		107	5851		92	4780		85
3629	29792	4377		102	5262		83	5313		93	4987		102	5317		88
3630	29793	5251		100	6440		87	6517	6 *	90	5785		91	3309		94
3631	29794	4789		101	5793		80	5457		90	5851		95	4780		90
3632	29795	4756		101	7620	6	86	5365		97	5585		94	5420		92
3633	29796	4703		97	6415		79	4564		92	4521		93	3647		85
3634	29797	5477	*	98	5690		84	5573		105	4588		88	4301		94
3635	29304	5314		107	7553	7	88	6473	8 *	104	5918	8	93	5696	10	97
3636	29798	4788		97	5850		84	5746		94	4388		91	5489		92
3637	Zonal Check (ZC)	4687		101	5285		86	5281		95	4787		102	4112		85
3638	29799	4973		97	7885	3 *	84	5275		92				4886		89
3639	29188	5518	*	103	7943	2 *	91	6973	1 *	100	4388		96	4504		102
3640	29800	4844		97	5619		78	5505		101	5785		92	3802		84
3641	29801	4753		96	5814		76	5088		88	5918	8	86	3740		83
3642	29802	3756		95	6879		79	5429		88	6051	4 *	82	3919		85
3643	29803	4737		102	7115		86	5641		97	4654		82	4356		93
3644	29804	4529		99	5397		81	5794		96	6250	1 *	93	4862		90
3645	29805	6078	3 *	107	5809		99	6815	2 *	108				1997		107
3646	29806	5323		112	6681		91	5693		100				3650		97
3647	29807	6205	1 *	100	6153		78	6162	*	93	5785		96	6512	3	92
3648	29808	6102	2 *	108	7421	10	90	6066	*	101	5984	5	96	5441		98
3649	29809	4695		104	5241		86	5926		93	5851		97	4821		94
3650	29810	3458		110	5813		86	5805		95	2527		102	4229		87
3651	29811	5918	5 *	101	5696		84	5990	*	93	5785		97	3502		94
3652	29812	5129		98	5625		85	6070	*	96	5718		101	4576		91
3653	29813	4576		113	7345		96	6031	*	104						
3654	29814	4946		96	4869		81	5565		87	4721		98	4845		90
3655	29815	4953		98	5062		81	5427		91	6184	2 *	96	2469		93
3656	29816	2932		97	4880		82	4483		98	5718		102	3196		93
3657	29817	5782	8 *	104	5133		88	5321		104	4654		102	3857		96
3658	29818	5095		99	6740		87	6098	*	94	5918	8	92	4876		93
3659	29819	5226		106	6044		86	5056		102	2061		102	5368		101
3660	29820	5896	6 *	104	7313		90	5473		98	4388		113	6808	1	97
3661	29821	3672		100	5259		82	4792		92	5718		103	3375		91
3662	29822	6041	4 *	107	7515	8	93	6520	5 *	101	4189		93	5465		104
3663	29823	4937		103	6606		86	5317		99	5918	8	102	6498	4	98
3664	Local Check (LC)	4482		98	4694		96	5377		87	5386		102	4663		96
Mean		4929		101	6242		85	5673		95	5045		96	4634		93
F Value		6.07(p<0.0001)		8	21.99(p<0.0001)		16.38(p<0.0001)	16.38(p<0.0001)		20.27(p<0.0001)	20.27(p<0.0001)		6.79(p<0.0001)	6.79(p<0.0001)		
CD		741			603			546			640			1255		
SEm				1			0			0			1			1
CV%		7.52			4.83			4.82			6.34			13.54		

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Entry No	IET No	MAHARASHTRA1 (2)			MAHARASHTRA 2(1)			MAHARASHTRA (3)			GUJARAT (3)			ANDHRA PRADESH (1)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
3601	29765	3031		105	6410	3	113	4157		107	3919		98	6371		116
3602	29766	4295		92	5769	5	87	4786	9	90	4901		87	7818	9	83
3603	29767	4402		88	3419		97	4074		91	3716		86	8783	6	82
3604	29768	5390	2	92	3632		91	4804	8	92	5044		87	5793		89
3605	29769	4532		87	4487		97	4517		90	4541		87	7163		83
3606	29770	3705		87	4274		90	3894		88	4231		90	6118		89
3607	29771	4001		79	3739		94	3914		84	3718		83	6655		74
3608	29772	4838	8	90	2991		90	4223		90	4454		94	5904		89
3609	29773	4244		101	3953		93	4147		99	4653		95	4581		93
3610	29774	4410		88	3526		91	4115		89	4292		87	4616		83
3611	29775	4228		87	3205		89	3887		87	5004		85	4739		82
3612	29776	4261		113	7276	1 *	96	5265	1	107	4236		104	5822		115
3613	29777	4413		97	3632		88	4153		94	3849		89	5043		89
3614	29778	4117		90	4167		89	4134		90	4856		92	6269		91
3615	29779	4780	10	90	5983	4	97	5181	3	92	4761		85	5118		83
3616	29780	4725		96	4060		90	4503		94	5011		91	9491	3 *	89
3617	29781	3897		102	3953		91	3915		98	5462	1	91	5174		90
3618	29782	3810		91	3419		92	3680		91	4749		90	5333		90
3619	29783	4045		96	3953		97	4014		96	4745		89	5476		86
3620	Contra Bidhan-3 (NC)	4406		89	4167		85	4326		88	5215	7	87	7329		85
3621	29784	4046		88	4808		90	4300		89	4276		90	4368		84
3622	29785	3621		88	4594		95	3945		90	5017		85	6917		82
3623	29786	4662		95	5342	7	99	4889	6	96	4838		94	4306		91
3624	29787	3428		91	4274		96	3710		92	4582		86	7570		84
3625	29788	3847		104	3098		94	3597		100	4997		97	5973		102
3626	29789	3778		93	3419		84	3658		90	4860		86	9987	1 *	82
3627	29790	4229		85	4167		83	4208		84	4801		84	5346		82
3628	29791	4109		88	3632		97	3950		91	5216	6	83	4505		86
3629	29792	4140		89	3205		90	3828		89	4753		87	5772		89
3630	29793	4280		89	3526		90	4029		89	3864		86	9376	4 *	85
3631	29794	4691		92	5128	9	90	4837	7	91	4026		86	6543		86
3632	29795	4320		95	4167		90	4269		93	5309	3	88	5083		86
3633	29796	4486		86	3846		97	4272		89	4388		87	6187		82
3634	29797	4464		91	4808		94	4578		92	4339		90	6820		86
3635	29304	3961		94	3846		95	3922		94	4704		92	4843		91
3636	29798	4751		96	5342	7	97	4948	5	96	5258	5	86	7818	9	82
3637	Zonal Check (ZC)	4790	9	85	3419		85	4333		85	4392		87	5386		89
3638	29799	4357		88	3739		97	4151		91	5167	9	86	5855		84
3639	29188	5320	3	101	3419		101	4686		101	5082		93	7342		100
3640	29800	4541		82	4060		85	4380		83	4309		83	4409		81
3641	29801	3874		75	3269		90	3672		80	3301		84	5828		82
3642	29802	3717		93	4060		90	3831		92	4688		86	6268		83
3643	29803	3802		90	4808		92	4137		91	4783		90	5972		89
3644	29804	3825		90	3632		90	3760		90	3932		91	7521		86
3645	29805	3436		107	6517	2	99	4463		104	4286		105	4511		107
3646	29806	3988		95	3846		90	3941		93	3905		92	7246		94
3647	29807	4636		90	4594		85	4622		88	5190	8	87	5470		82
3648	29808	3861		101	3632		91	3785		98	5052		96	9905	2 *	94
3649	29809	5194	4	93	3312		90	4566		92	4779		86	5925		78
3650	29810	4089		92	4487		97	4221		94	4554		94	7680		87
3651	29811	4633		90	3953		90	4406		90	4059		88	5022		84
3652	29812	4919	7	88	4380		97	4739	10	91	4311		84	6124		86
3653	29813	4472		100	4380		102	4441		101	5322	2	99	7363		103
3654	29814	3684		92	4167		85	3845		89	4704		88	8782	7	85
3655	29815	3799		89	3205		89	3601		89	4485		84	5615		82
3656	29816	3226		93	3237		91	3230		93	3578		91	4573		89
3657	29817	3890		97	3739		92	3840		95	4110		95	9354	5 *	90
3658	29818	4386		94	3312		89	4028		92	4240		88	5028		85
3659	29819	4128		101	4380		92	4212		98	5150		94	7260		93
3660	29820	5116	5	100	4808		95	5013	4	98	5159	10	98	4704		94
3661	29821	3619		83	4487		97	3908		87	3996		86	5235		83
3662	29822	5450	1	101	2991		102	4630		101	4276		91	6454		101
3663	29823	4195		100	4060		92	4150		97	4572		90	7886	8	91
3664	Local Check (LC)	5062	6	101	5449	6	97	5191	2	99	5307	4	85	6660		102
Mean		4255		93	4165		92	4225		93	4582		89	6319		88
F Value		5.33(p<0.0001)			3.62(p<0.0001)			3.58(p<0.0001)			8.53(p<0.0001)			4.54(p<0.0001)		
CD		628			1313			647			482			1948		
SEm				1			1			1			1			1
CV%		7.39			15.77			7.663			5.26			15.43		

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Entry No	IET No	TELANGANA (2)			TAMIL NADU (2)			KERALA (2)			KARNATAKA (2)			PUDUCHERRY (1)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
3601	29765	5731		94	6195	6	99	4648		98	5297		99	8693		112
3602	29766	6419		89	5489		89	4616		96	5149		87	7922		97
3603	29767	4283		89	5607		86	4386		96	4563		90	5041		108
3604	29768	7081	9	91	5324		90	5226		98	4712		85	6636		96
3605	29769	5752		91	6759	2	91	5060		97	4765		91	6893		96
3606	29770	6324		93	4971		96	4999		100	5180		100	5967		96
3607	29771	4922		83	4257		83	3954		91	3082		85	9671	4	99
3608	29772	5855		99	6168	7	90	5910	10	98	5007		89	9671	4	100
3609	29773	7847	3	101	5273		93	5481		99	4936		94	8128		95
3610	29774	6789		91	4691		92	4837		98	5156		90	8642		99
3611	29775	6273		90	4759		89	5958	8	97	5141		94	7716		95
3612	29776	6425		104	5969		97	5529		100	4969		92	10031	3	109
3613	29777	5665		93	5486		91	4996		98	5189		96	6893		98
3614	29778	6059		97	4481		92	5188		98	4907		87	9619	6	96
3615	29779	6101		89	6797	1 *	92	5428		97	3581		90	5041		99
3616	29780	6668		96	5129		93	5714		97	4298		89	7922		96
3617	29781	7446	5	97	4880		96	6022	7	99	4537		96	9105	8	98
3618	29782	6614		98	6481	4	99	5417		98	3889		94			
3619	29783	5851		92	5270		89	5322		96	3895		88	6739		95
3620	Gontra Bidhan-3 (NC)	8297	2	87	5019		94	4719		97	6542	1	88	8282		101
3621	29784	6530		93	4380		94	5700		98	3690		95	6790		97
3622	29785	7536	4	89	4944		94	5599		96	5203		94	5453		100
3623	29786	5625		92	5129		95	5056		98	4973		88	7253		95
3624	29787	4852		90	5117		96	3856		94	5009		95	8282		98
3625	29788	6480		105	5142		97	5000		108	5205		94	5658		97
3626	29789	6072		90	4930		94	5434		98	4790		90	4835		96
3627	29790	5935		84	4767		96	4370		101	4008		85	4218		98
3628	29791	6679		92	5367		93	5091		95	5000		90	7253		96
3629	29792	7200	8	94	4847		94	5408		95	3873		89	8693		98
3630	29793	5642		91	6523	3	94	5189		97	5003		91	3755		99
3631	29794	6846	10	92	4717		93	4709		97	5319		88	5607		100
3632	29795	7393	6	93	6090	10	92	5874		97	5835	10	91	9053	9	96
3633	29796	6828		93	5500		92	5068		97	5134		94	6687		100
3634	29797	5778		94	4819		95	4778		99	5571		90	10391	1 *	95
3635	29304	6019		102	4174		98	5401		98	5860	9	98	7562		108
3636	29798	6236		89	4999		96	5049		96	5074		102	6687		97
3637	Zonal Check (ZC)	6783		91	5620		92	4554		98	6049	7	91	7150		98
3638	29799	6416		92	5209		96	5632		98	5831		92			
3639	29188	8758	1	102	6328	5	97	6679	3 *	102	4644		95			
3640	29800	4227		89	5193		91	5111		93	4438		87	4578		97
3641	29801	5245		86	4182		90	5033		94	4883		91	8282		99
3642	29802	6184		89	5603		92	6515	4 *	96	4971		92	8076		96
3643	29803	6048		92	4807		96	5640		100	4098		98	6224		109
3644	29804	5819		95	5378		97	5874		99	4446		94	9053	9	100
3645	29805	6306		108	5997		99	4656		100	5080		97	8385		108
3646	29806	4771		95	3981		102	4975		101	4609		98	6739		99
3647	29807	7322	7	93	4559		96	6312	6 *	97	6187	3	96			
3648	29808	5898		105	5995		95	6872	2 *	101	4358		93	8539		102
3649	29809	5896		89	4812		95	6480	5 *	98	4422		95	6584		100
3650	29810	4605		95	3905		92	5524		98	3787		93			
3651	29811	5469		94	5505		93	4913		102	5172		96	9259	7	108
3652	29812	5341		96	4261		97	4834		95	5192		93	7870		98
3653	29813	5486		106	5784		95	5655		101	6082	5	96	7562		97
3654	29814	6183		97	5642		92	5362		98	5106		95	8333		95
3655	29815	4113		87	5096		94	4491		98	5072		92	6893		96
3656	29816	4448		97	4649		96	4944		98	5454		93	7253		95
3657	29817	5053		103	5171		99	5174		101	5531		97	10082	2 *	111
3658	29818	4768		92	5654		91	5005		98	4976		99	7819		93
3659	29819	6076		99	5932		104	5364		101	6061	6	102	6224		105
3660	29820	6312		102	4835		94	5953	9	101	5914	8	95	6790		108
3661	29821	4936		88	4392		92	4960		98	4567		91	5607		100
3662	29822	5878		105	6117	9	94	7204	1 *	103	6156	4	98	7819		92
3663	29823	6690		99	4971		99	5427		99	6250	2	97	8385		99
3664	Local Check (LC)	6429		93	6121	8	92	5212		98	5466		97	6327		95
Mean		6086		94	5252		94	5302		98	4986		93	7400		99
F Value		6.71(p<0.0001)S			8.83(p<0.0001)			3.82(p<0.0001)			9.93(p<0.0001)			6.01(p<0.0001)		
CD		1031			647			925			634			1795		
SEm				1			1			0			1			1
CV%		8.48			6.16			8.73			6.36			12.11		

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Table No. 1.23 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - IME (Data Not Considered), Kharif 2021

Entry No	IET No	UTTARAKHAND (0)			PUNJAB (0)			BIHAR			JHARKHAND (0)			WEST BENGAL				
		@PANTNAGAR			@LUDHIANA			@SABOUR			@RANCHI			@MALDA				
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE		
3601	29765									2644		104	2394		93	5083		102
3602	29766	1988		85	4134		93	3750		118	2128		87	6925		89		
3603	29767	3909		81	2338		87	3892		109	2593		90	5975		85		
3604	29768	4668	10	88	3189		95	3359		99	2460		92	4500		91		
3605	29769	5078	5	82	4300	10	88	1662		99	2660		90	5425		89		
3606	29770	2848		87	4646	5	94	4464	7	103	2926		95	4792		91		
3607	29771	3040		72	2727		83	3328		113	3324		82	3567		80		
3608	29772	5448	3	87	3312		96	4063		108	5186		96	7608	9	93		
3609	29773	4660		98	3290		97	4410	8	102	5386	9	98	5508		91		
3610	29774	4258		82	2532		90	3047		97	3923		91	5583		85		
3611	29775	3616		79	3571		88	1910		101	5851	3	85	6317		84		
3612	29776	331		120				2972		100	2793		82	6250		92		
3613	29777	3515		91	3658		93	3477		102	4920		98	6192		92		
3614	29778	2416		93	3975		96	2735		103	3391		94	6467		93		
3615	29779	4697	8	85	3586		87	3797		109	3457		90	6642		87		
3616	29780	2431		83	4141		96	3686		107	6715	1	91	7175		98		
3617	29781	4519		92	4307	9	95	3547		106	6449	2	100	7208		92		
3618	29782	2795		81	3283		89	4598	4	106	4521		98	6683		91		
3619	29783	4767	6	89	3059		91	3586		97	4920		98	5942		89		
3620	Gontra Bidhan-3 (NC)	4669	9	81	4589	6	88	4221		115	3923		93	7258		87		
3621	29784	2793		82	3636		91	2982		109	2992		90	6017		84		
3622	29785	4283		79	4177		88	3394		104	5120		91	6350		83		
3623	29786	3683		88	3182		97	3852		97	3923		91	6325		94		
3624	29787	2496		82	3290		90	3973		108	1330		93	7400		94		
3625	29788	2132		101	2576		104	3958		104	5319		104	7125		89		
3626	29789	4620		80	3593		88	3606		93	5386	9	93	5958		85		
3627	29790	3836		78	4012		85	2700		98	2926		85	4525		86		
3628	29791	2572		81	3889		88	3411		103	3191		86	5433		85		
3629	29792	5221	4	82	4315	8	89	4063		102	4654		92	6133		88		
3630	29793	2616		84	3665		90	2660		104	3790		98	5983		93		
3631	29794	4535		83	3975		91	2601		102	5785	5	94	5508		91		
3632	29795	4211		89	3651		93	5040	1	118	5851	3	97	8067	2	96		
3633	29796	3885		80	3052		90	4504	6	103	3790		91	6325		85		
3634	29797	2260		85	4069		91	3199		101	4455		95	6650		98		
3635	29304	4078		91	4683	4	97	3489		103	2194		100	7658	8	98		
3636	29798	4486		83	3348		89	3313		107	3324		94	8217	1	92		
3637	Zonal Check (ZC)	3619		90	3658		95	1587		103	3923		98	6167		89		
3638	29799	6201	1	80	4192		88	4916	2	102	4122		94	7700	7	85		
3639	29188	3657		100	3355		103	3819		96	5452	7	100	6592		96		
3640	29800	3619		79	3608		87	2770		102	2859		90	5142		85		
3641	29801	3547		79	3543		85	4147		103	2460		90	6433		87		
3642	29802	5655	2	80	3651		87	3216		114	5253		93	7350		85		
3643	29803	3873		86	3622		91	2993		104	3856		98	7483	10	95		
3644	29804	2716		85	3160		91	3497		114	2992		97	7733	6	85		
3645	29805	1572		107				2727		97	2660		107	6500		97		
3646	29806	1812		85	2857		96	3234		103	4920		101	7800	5	87		
3647	29807	4749	7	83	4553	7	86	3150		95	5652	6	99	7867	4	86		
3648	29808	2068		100	3304		102	3323		101	2394		99	7883	3	93		
3649	29809	3125		86	3903		91	2763		102	3590		97	6167		91		
3650	29810	3675		86	2778		91	4367	9	101	4987		93	6117		85		
3651	29811	4028		86	3593		92	2946		110	3524		96	5233		92		
3652	29812	3260		82	3543		92	3548		109	3923		91	4700		89		
3653	29813	763		102	2042		104	4193		109	4322		101	6517		99		
3654	29814	3639		82	3081		91	3708		99	1463		93	6433		88		
3655	29815				2792		87	3161		110	2261		85	6292		87		
3656	29816	3402		92	2771		95	3993		104	2194		96	4158		93		
3657	29817	1962		91	2071		95	3155		110	3524		97	5533		96		
3658	29818	3519		73	4942	1	94	3770		105	2327		97	4983		91		
3659	29819	3049		97	3911		97	4588	5	95	3657		102	4892		96		
3660	29820	1157		102	3304		101	4246	10	107	3457		99	5050		96		
3661	29821	3671		83	2193		88	4704	3	111	2726		91	6475		90		
3662	29822	3578		80				4152		100	4920		101	5758		95		
3663	29823	3721		94	4733	3	95	3493		109	5386	9	97	6175		96		
3664	Local Check (LC)	3522		80	4798	2	87	3651		99	3059		97	4767		88		
Mean		3492		86	3562		92	3527		104	3841		94	6229		90		
F Value		4.34(p<0.0001)			4.70(p<0.0001)			7.06(p<0.0001)			10.54(p<0.0001)			23.11(p<0.0001)				
CD		1785			898			764			1101			610				
SEm				2			1			1			1			1		
CV%		25.56			12.606			10.83			14.35			4.9				

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Table No. 1.23 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - IME (Data Not Considered), Kharif 2021

Entry No	IET No	UP			ASSAM (0)			TRIPURA (0)			CHHATTISGARH		
		@VARANASI			@TITABAR			@LEMBUCHERRA			@JAGADALPUR		
		GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD
3601	29765				4720		121	6190	6	85	3555		111
3602	29766	4648	3	88	5250		96	5932	10	77	3678		96
3603	29767	1654		84	3570		94	3720		69	3633		94
3604	29768	4414	10	123	5130		99	4363		73	4512		93
3605	29769	4026		92	5850	4	95	3735		75	3789		95
3606	29770	4013		92	3750		95	4826		84	3783		100
3607	29771	2115		86	3150		93	3347		63	3711		85
3608	29772	4180		90	3720		99	5020		77	4440		96
3609	29773	4258		102	6150	2	101	6963	1	82	4173		102
3610	29774	4115		85	4920		93	4721		76	3672		94
3611	29775	2607		87	4500		92	2912		74	3594		90
3612	29776				3750		100	4183		86	3704		111
3613	29777	4021		98	4950		98	5214		77	4355		99
3614	29778	4010		95	5220		98	4811		78	5280	9	100
3615	29779	4003		91	4590		90	6768	3	73	3717		96
3616	29780	5182	2	95	5700	6	102	5498		75	5254	10	94
3617	29781	4115		98	5880	3	96	3824		78	6191	3	100
3618	29782	4349		92	4920		97	5887		81	3809		96
3619	29783	4141		93	5070		91	5947	9	79	5566	7	96
3620	Gontra Bidhan-3 (NC)	5404	1	86	4230		93	3556		77	3633		92
3621	29784	4010		88	5250		98	4960		76	4303		94
3622	29785	4005		90	4110		95	4841		76	4375		94
3623	29786	4206		94	5160		105	4243		75	3503		95
3624	29787	4000		94	4830		93	2884		80	3730		95
3625	29788	4016		101	6840	1	106	4721		77	3626		102
3626	29789	4000		92	3420		94	4975		74	4805		95
3627	29790	4003		85	4680		93	4408		74	3548		90
3628	29791	4297		86	4050		96	4493		76	6576	2	89
3629	29792	4000		91	5160		96	4482		77	4069		92
3630	29793	4596	4	93	4080		96	4781		78	3678		100
3631	29794	4000		90	3630		96	4706		78	5033		96
3632	29795	4453	9	95	4230		96	5379		69	4141		92
3633	29796	4021		87	4260		94	5110		78	5007		102
3634	29797	4505	7	88	4620		97	6096	7	82	5371	8	96
3635	29304	4581	5	96	4890		103	4796		81	3789		102
3636	29798	4573	6	94	5310	9	91	5678		81	3646		95
3637	Zonal Check (ZC)	4456	8	91	3720		100	5573		73	3503		95
3638	29799	2044		93	4890		91	6425	4	76	4147		94
3639	29188	4206		100	5730	5	109	4482		74	5898	5	103
3640	29800	4000		96	5220		94	4408		75	3555		90
3641	29801	4000		82	1740		90	5050		72	3743		85
3642	29802	4036		83	3900		92	4781		82	6003	4	95
3643	29803	1654		98	2880		95	3959		79	3848		100
3644	29804	4000		88	3570		95	6081	8	82	3600		98
3645	29805				5370	8	88	5857		81	3698		109
3646	29806	4000		96	4260		99	4945		78	3633		103
3647	29807	4258		87	5280	10	93	6858	2	82	5664	6	96
3648	29808	4115		101	4650		108	4751		82	4727		100
3649	29809	4234		91	4890		93	4378		70	3581		95
3650	29810	4000		89	3420		99			69	4948		94
3651	29811	4036		93	3420		96	3347		80	3587		96
3652	29812	4010		96	3150		99	5752		80	4967		94
3653	29813	4010		95	4440		110	4467		75	3555		102
3654	29814	2292		93	3750		95	4931		75	3509		94
3655	29815	4000		91	3780		92	4258		77	3581		94
3656	29816	3094		103	3720		98	2958		74	3418		96
3657	29817	4141		96	3180		101	5483		77	3678		102
3658	29818	4010		92	3870		98	4378		83	3698		98
3659	29819	4208		100	5100		98	5678		84	3822		103
3660	29820	4258		101	4650		106	4751		78	6966	1	102
3661	29821	4000		92	3840		96	4975		78	3711		95
3662	29822	4036		97	5280	10	111	6260	5	75	4635		104
3663	29823	4068		96	4050		97	5020		77	4577		100
3664	Local Check (LC)	4063		95	5520	7	101	4408		81	3607		93
Mean		3963		93	4481		97	4892		77	4236		97
F Value		8.49(p<0.0001)			33.63(p<0.0001)			0.84(p=0.7475)N			1.50(p=0.0551)S		
CD		689			439			2877			2120		
SEm				1			1			3			0
CV%		8.7			4.9			29.42			25.04		

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Table No. 1.24: Plant Height (cm) & Panicles/m² of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN											
		ODISHA						BIHAR				WEST BENGAL	
		CAR-NRRI (Cuttack)		JEYPORE		CHIPLIMA		BIKRAMGANJ (Dhangain)		Patna-ICAR		CHINSURAH	
PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP		
3601	29765	96	284	106	350	79	281	99	302	93	289	118	264
3602	29766	96	276	93	289	84	247	107	213	123	308	114	347
3603	29767	80	295	84	277	74	309	97	273	124	324	105	215
3604	29768	92	314	99	265	78	257	101	237	105	311	117	231
3605	29769	86	285	97	251	80	281	101	235	104	289	111	214
3606	29770	92	279	97	422	83	276	102	318	101	258	117	248
3607	29771	71	310	101	275	75	323	101	362	115	238	103	198
3608	29772	92	261	95	321	79	257	111	240	119	209	116	347
3609	29773	95	297	110	365	97	304	117	272	125	310	119	281
3610	29774	89	289	106	351	83	342	97	259	107	290	113	264
3611	29775	98	285	112	355	82	243	109	253	130	255	122	330
3612	29776	101	284	100	255	81	209	98	292	93	278	110	314
3613	29777	77	290	91	283	68	319	100	419	96	304	110	248
3614	29778	97	264	104	260	75	224	125	349	108	287	132	330
3615	29779	86	281	100	268	80	290	103	280	111	251	116	281
3616	29780	88	294	101	317	83	224	107	315	120	226	127	330
3617	29781	89	317	97	403	66	233	106	340	106	253	120	297
3618	29782	104	269	97	244	93	190	120	270	120	242	123	248
3619	29783	79	376	92	294	79	309	104	390	105	310	107	281
3620	Gontra Bidhan-3 (NC)	88	208	91	244	78	243	100	254	105	279	114	330
3621	29784	100	248	107	338	98	371	106	263	124	313	116	248
3622	29785	88	276	87	494	70	214	97	281	95	234	103	347
3623	29786	89	290	95	386	76	352	106	318	114	359	109	281
3624	29787	95	262	92	670	83	219	100	332	123	261	125	215
3625	29788	96	257	105	317	97	186	127	281	125	229	145	330
3626	29789	76	284	96	294	67	309	86	251	88	252	102	248
3627	29790	91	259	105	450	87	342	107	316	122	230	103	215
3628	29791	103	299	108	400	81	309	90	302	114	272	125	264
3629	29792	91	277	98	396	90	399	108	268	119	282	127	264
3630	29793	91	340	100	339	79	342			127	312	116	314
3631	29794	96	274	104	423	84	252	99	230	119	217	103	231
3632	29795	77	365	88	323	72	276	90	447	102	327	101	281
3633	29796	86	257	96	499	72	281	104	381	110	285	117	215
3634	29797	91	277	91	441	75	330	114	379	115	317	112	264
3635	29304	87	290	103	316	67	182	110	272	116	335	117	330
3636	29798	85	297	107	332	81	275	106	225	110	283	127	264
3637	Zonal Check (ZC)	102	266	104	238	73	321	110	409	111	262	114	264
3638	29799	84	287	97	332	84	275	101	307	116	252	109	248
3639	29188	105	271	128	377	101	265	121	272	127	236	135	297
3640	29800	102	318	118	273	97	326	109	305	134	253	134	264
3641	29801	107	299	105	289	92	265	109	332	131	262	127	264
3642	29802	82	317	91	316	71	298	92	303	103	220	101	281
3643	29803	73	285	100	354	72	284	90	345	113	272	107	281
3644	29804	86	342	95	300	77	223	100	359	102	244	118	264
3645	29805	88	292	97	290	86	261	96	321	101	320	123	363
3646	29806	82	284	100	344	73	196	111	198	102	257	116	281
3647	29807	89	264	97	316	85	254	101	302	111	249	122	281
3648	29808	85	309	108	355	83	250	118	278	108	206	113	297
3649	29809	93	368	94	272	90	303	118	262	113	316	111	281
3650	29810	76	243	94	266	67	227	94	291	93	314	99	297
3651	29811	94	337	102	277	262	263	104	303	104	292	113	281
3652	29812	101	351	117	416	95	276	121	508	119	308	132	314
3653	29813	91	244	98	296	82	307	105	304	117	280	129	363
3654	29814	99	241	120	431	92	280	120	314	125	292	127	264
3655	29815	97	267	97	400	99	294	107	314	120	296	110	248
3656	29816	82	318	88	305	65	267	100	369	114	297	111	231
3657	29817	110	289	138	300	106	250	129	350	123	276	140	281
3658	29818	93	266	102	349	88	178	116	179	133	258	103	330
3659	29819	109	337	120	355	97	210	122	389	138	249	151	264
3660	29820	105	323	108	437	89	228	120	300	123	229	135	281
3661	29821	92	284	98	389	85	293	91	319	123	258	121	248
3662	29822	96	276	107	230	80	198	107	195	113	256	126	347
3663	29823	78	299	93	350	74	273	103	281	106	310	103	281
3664	Local Check (LC)	110	279	93	366	81	257	113	220	91	300	114	248
Mean		91	290	101	339	85	270	106	302	113	274	117	279

PH: Plant Height (cm) NP: No. of Panicles/sqm

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Table No. 1.24 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE-V – CENTRAL							
		WEST BENGAL		UTTAR PRADESH		Z3(8)		CHHATTISGARH		MAHARASHTRA 1		Z5 (3)			
		BANKURA		MASODHA		Mean		RAIPUR		SAKOLI		SINDEWAHI		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3601	29765	100	347			99	302			115	161	89	262	102	211
3602	29766	120	380	94	230	104	286	115	154	104	182	84	234	101	190
3603	29767	100	314	80	252	93	282	97	96	97	216	96	269	97	194
3604	29768	105	248	98	263	99	265	114	163	115	230	109	278	113	223
3605	29769	100	198	92	211	96	245	91	89	104	202	91	236	95	176
3606	29770	115	347	104	245	101	299	110	119	106	241	103	207	106	189
3607	29771	95	215	104	197	96	265	127	213	93	178	82	297	101	229
3608	29772	100	347	102	271	102	281	116	135	95	191	118	227	110	184
3609	29773	115	330	94	237	109	299	110	127	106	216	100	250	105	198
3610	29774	105	297	95	240	99	291	91	97	95	201	105	284	97	194
3611	29775	125	314	105	220	110	282	106	167	113	209	105	267	108	214
3612	29776	120	347			100	283			106	257	81	258	94	257
3613	29777	90	314	88	271	90	306	98	168	84	198	83	249	88	205
3614	29778	105	248	88	183	104	268	113	148	104	295	97	305	105	249
3615	29779	125	380	90	233	101	283	114	122	115	196	111	264	113	194
3616	29780	100	314	98	221	103	280	119	172	111	301	106	263	112	245
3617	29781	105	231	105	271	99	293	102	124	95	189	103	194	100	169
3618	29782	105	248	98	263	107	247	117	90	98	157	109	232	108	160
3619	29783	100	314	93	242	95	314	109	130	85	177	104	274	99	194
3620	Gontra Bidhan-3 (NC)	105	347	92	282	96	273	108	139	96	207	99	236	101	194
3621	29784	115	281	93	214	107	284	112	133	102	172	99	238	104	181
3622	29785	110	248	80	177	91	284	105	134	95	159	85	196	95	163
3623	29786	115	281	88	255	99	315	105	112	94	254	112	275	104	214
3624	29787	125	248	107	271	106	309	125	111	104	167	121	239	117	172
3625	29788	130	248	98	210	115	257	129	198	115	171	119	251	121	207
3626	29789	90	314	88	241	87	274	101	121	96	179	87	244	95	181
3627	29790	105	347	91	242	101	300	200	124	104	238	93	222	132	194
3628	29791	120	248	91	252	104	293	111	223	111	203	109	254	110	226
3629	29792	115	314	90	230	105	304	110	120	106	204	111	256	109	193
3630	29793	110	248	100	268	103	309	104	143	95	229	101	231	100	201
3631	29794	105	215	94	256	100	262	113	118	115	211	119	240	116	189
3632	29795	110	314	93	256	92	323	102	204	97	240	90	243	96	229
3633	29796	105	248	95	228	98	299	100	150	102	251	112	270	105	224
3634	29797	100	462	101	234	100	338	111	131	95	222	114	293	107	215
3635	29304	105	281	86	247	99	281	101	135	115	230	89	224	102	196
3636	29798	120	281	86	224	103	272	110	122	115	207	111	318	112	215
3637	Zonal Check (ZC)	95	248	107	238	102	281	111	106	108	246	101	281	107	211
3638	29799	105	215			99	273	108	136	102	161	96	185	102	160
3639	29188	115	248	99	229	116	274	116	115	133	260	109	260	119	212
3640	29800	110	380	95	256	112	297	119	127	137	265	113	256	123	216
3641	29801	105	215	106	262	110	273	140	114	125	222	125	256	130	197
3642	29802	85	165	96	255	90	269	106	134	93	146	91	239	97	173
3643	29803	115	281	91	226	95	291	102	184	85	179	89	226	92	196
3644	29804	108	281	90	253	97	283	104	213	97	193	93	247	98	217
3645	29805	115	413			101	323	106	183	107	170	76	227	96	193
3646	29806	100	314			98	267	110	113	108	190	81	260	100	188
3647	29807	110	314	103	267	102	281	114	152	102	170	101	226	106	183
3648	29808	110	281	95	224	103	275	109	137	95	188	94	243	99	189
3649	29809	110	413	96	259	103	309	106	129	102	242	101	364	103	245
3650	29810	100	248	96	207	90	261	105	93	82	170	90	192	92	151
3651	29811	100	314	95	279	122	293	108	139	108	244	89	239	102	207
3652	29812	95	380	106	264	111	352	125	134	109	287	111	238	115	220
3653	29813	135	248			108	292			97	182	89	246	93	214
3654	29814	95	347	95	217	109	298	118	153	114	159	127	253	120	188
3655	29815	110	479	95	253	104	319	115	116	97	236	97	278	103	210
3656	29816	115	347	97	252	96	298	108	120	84	164	102	318	98	201
3657	29817	95	462	100	256	118	308	117	130	124	190	108	213	116	178
3658	29818	110	314	93	254	105	266	119	77	107	158	97	241	108	159
3659	29819	130	248	103	199	121	281	132	128	115	232	121	186	123	182
3660	29820	120	264	102	204	113	283	126	150	125	260	125	290	125	233
3661	29821	105	215	78	239	99	280	118	115	104	240	84	222	102	192
3662	29822	105	281	84	214	102	249	110	139	102	370	84	210	99	240
3663	29823	100	215	86	271	93	285	107	195	84	160	90	206	94	187
3664	Local Check (LC)	90	248	101	253	99	271	110	151	126	320	112	262	116	244
Mean		108	296	95	241	102	287	113	138	104	212	101	249	106	201

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Table No. 1.24 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IME, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN										ZONE VII – SOUTHERN	
		MAHARASHTRA 2(I)		GUJARAT						Z6 (4)		ANDHRA PRADESH (1)	
		KARJAT		NAVASARI		NAWAGAM		VYARA		Mean		MARUTERU	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3601	29765	119	241	122	434	90	292	117	323	112	322	138	300
3602	29766	121	235	111	183	103	265	126	344	115	257	136	241
3603	29767	114	210	103	266	90	217	115	291	106	246	117	300
3604	29768	124	242	123	173	101	263	127	310	119	247	130	281
3605	29769	112	235	124	199	90	250	120	340	111	256	120	310
3606	29770	120	222	111	173	88	244	123	304	111	235	137	300
3607	29771	108	217	96	277	91	230	114	347	102	267	124	297
3608	29772	117	239	112	221	93	243	131	353	113	264	126	274
3609	29773	135	246	119	193	104	239	124	344	120	255	129	274
3610	29774	124	220	119	213	95	249	125	310	116	248	125	271
3611	29775	125	229	115	293	95	233	133	353	117	277	139	287
3612	29776	123	233	97	191	88	213	107	297	104	233	137	287
3613	29777	98	237	89	238	76	236	109	330	93	260	109	360
3614	29778	116	239	100	202	90	233	120	297	106	243	131	290
3615	29779	121	234	105	223	94	232	126	337	111	256	129	330
3616	29780	120	236	109	190	87	244	126	274	110	236	131	287
3617	29781	104	235	105	189	84	194	107	340	100	240	123	287
3618	29782	128	235	121	178	95	190	138	307	121	228	135	353
3619	29783	104	223	98	236	94	275	120	383	104	279	121	350
3620	Gontra Bidhan-3 (NC)	113	232	105	198	85	231	118	343	105	251	114	287
3621	29784	130	231	112	231	98	204	122	340	116	251	142	284
3622	29785	96	217	94	189	79	268	106	304	94	244	109	350
3623	29786	125	232	106	230	84	256	115	363	107	270	127	317
3624	29787	133	235	120	225	97	214	138	278	122	238	134	356
3625	29788	131	233	139	178	109	239	144	297	131	237	161	297
3626	29789	104	224	97	204	88	199	111	290	100	229	104	340
3627	29790	123	239	116	237	90	253	129	317	114	261	119	271
3628	29791	133	222	118	172	94	273	139	370	121	259	138	307
3629	29792	125	229	122	238	101	276	127	310	119	263	140	317
3630	29793	113	240	119	236	87	244	132	337	113	264	125	325
3631	29794	119	225	115	198	99	248	121	310	113	245	123	330
3632	29795	108	232	99	309	82	266	117	352	101	290	118	340
3633	29796	113	226	111	263	85	290	124	297	108	269	128	284
3634	29797	115	240	110	321	95	241	119	326	110	282	135	300
3635	29304	123	220	107	242	92	194	119	327	110	246	135	317
3636	29798	123	225	116	208	87	214	132	363	114	253	134	294
3637	Zonal Check (ZC)	97	224	88	316	78	239	100	341	91	280	140	300
3638	29799	119	234	111	197	82	218	128	353	110	251	121	254
3639	29188	134	236	117	212	101	217	125	304	119	242	148	257
3640	29800	153	229	137	214	103	238	127	363	130	261	158	251
3641	29801	131	231	127	197	105	204	138	314	125	237	147	290
3642	29802	98	228	95	214	75	223	124	320	98	246	107	290
3643	29803	111	225	99	206	72	219	116	376	100	256	117	323
3644	29804	120	220	105	212	81	251	131	354	109	259	120	320
3645	29805	112	220	107	208	87	283	122	327	107	259	132	314
3646	29806	125	236	103	209	76	260	108	323	103	257	133	317
3647	29807	118	205	96	198	91	230	122	274	107	227	118	304
3648	29808	103	225	120	178	91	301	123	281	109	246	130	327
3649	29809	115	215	114	200	93	321	119	310	110	261	131	284
3650	29810	103	221	94	185	75	231	113	301	96	234	106	314
3651	29811	119	233	106	270	86	320	123	343	108	291	124	274
3652	29812	127	218	124	266	104	309	138	350	123	286	139	290
3653	29813	120	234	117	262	77	248	124	340	110	271	135	300
3654	29814	128	241	126	259	102	241	142	304	124	261	142	304
3655	29815	124	232	116	241	95	286	132	324	117	271	134	290
3656	29816	111	246	112	250	75	275	121	326	105	274	116	370
3657	29817	159	210	140	204	107	259	161	320	142	248	165	281
3658	29818	128	209	109	217	91	204	136	288	116	229	134	287
3659	29819	139	225	144	178	99	240	160	294	136	234	163	274
3660	29820	132	239	131	208	96	243	120	370	120	265	142	284
3661	29821	116	211	116	218	90	275	132	419	113	281	134	317
3662	29822	105	230	117	213	81	285	123	330	106	265	138	290
3663	29823	109	227	106	190	88	272	114	317	104	251	121	317
3664	Local Check (LC)	108	239	116	194	87	286	127	380	110	274	128	281
Mean		119	229	112	219	90	247	125	327	112	256	130	302

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Entry No	IET No	ZONE VII – SOUTHERN											
		TELANGANA				TAMIL NADU				KERALA			
		RAJENDRANAGAR		WARANGAL		ADUTHURAI		COIMBATORE		MONCOMPU		PATTAMBI	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3601	29765	97	450	111	398	95	289	103	285	105	323	90	403
3602	29766	96	460	111	365	96	288	106	349	106	283	87	394
3603	29767	90	517	115	391	93	224	93	306	102	380	83	423
3604	29768	101	437	124	381	86	309	96	279	108	297	88	325
3605	29769	102	463	112	389	85	261	96	318	103	250	97	300
3606	29770	100	670	112	388	93	273	98	328	112	318	92	410
3607	29771	95	440	103	388	65	217	98	340	100	213	101	374
3608	29772	96	583	113	370	75	258	104	299	113	247	88	272
3609	29773	116	463	132	373	97	371	112	318	116	280	103	385
3610	29774	103	467	120	386	85	302	103	276	110	250	80	412
3611	29775	104	477	115	386	88	315	99	268	115	313	88	406
3612	29776	99	687	113	380	97	243	103	315	106	260	80	385
3613	29777	87	667	100	375	88	269	89	353	105	277	88	354
3614	29778	101	633	114	368	97	313	107	278	108	283	90	455
3615	29779	101	627	111	391	76	246	94	311	115	320	94	366
3616	29780	97	730	118	384	94	338	105	330	112	293	98	322
3617	29781	94	517	102	386	85	340	99	323	107	327	89	407
3618	29782	100	487	125	401	108	238	109	323	130	320	96	421
3619	29783	99	757	88	381	81	293	99	413	114	277	85	370
3620	Gontra Bidhan-3 (NC)	102	530	107	381	81	332	97	381	115	293	92	415
3621	29784	103	660	119	370	92	331	111	356	110	307	88	421
3622	29785	96	473	97	388	76	313	98	321	117	323	92	435
3623	29786	101	503	107	380	85	326	98	290	115	313	97	410
3624	29787	113	520	115	384	95	322	112	300	126	247	89	365
3625	29788	117	497	135	386	93	377	109	296	154	270	87	360
3626	29789	98	517	94	375	67	240	93	265	108	443	102	405
3627	29790	102	587	116	381	84	298	92	325	111	340	94	370
3628	29791	103	530	111	393	97	362	98	348	113	297	102	410
3629	29792	108	670	120	375	91	352	97	323	114	370	87	371
3630	29793	100	547	116	383	75	340	107	333	110	350	98	375
3631	29794	104	617	118	373	94	293	100	360	109	310	89	371
3632	29795	90	690	99	373	75	252	103	460	109	307	82	415
3633	29796	94	553	111	398	86	336	100	335	109	290	88	385
3634	29797	98	687	109	389	85	202	103	395	117	397	95	385
3635	29304	101	637	111	373	95	199	99	305	108	293	98	344
3636	29798	95	540	107	380	91	296	93	275	113	225	93	405
3637	Zonal Check (ZC)	95	583	115	396	85	298	102	355	125	310	94	331
3638	29799	103	520	102	375	84	146	104	300	110	233	97	357
3639	29188	114	520	131	373	102	283	108	356	129	277	93	351
3640	29800	112	510	142	380	94	327	104	345	117	273	93	400
3641	29801	113	413	122	380	93	182	121	378	123	407	99	420
3642	29802	92	500	94	378	64	249	91	310	110	390	95	400
3643	29803	95	500	95	383	85	214	101	334	108	363	85	304
3644	29804	95	683	107	391	87	333	90	280	114	297	81	395
3645	29805	103	653	112	386	94	207	96	325	112	323	86	326
3646	29806	93	607	109	384	98	239	95	303	107	297	100	372
3647	29807	101	493	116	386	82	338	99	308	109	303	105	432
3648	29808	101	460	109	403	84	279	99	278	107	290	93	401
3649	29809	96	630	110	366	75	262	97	308	107	373	98	344
3650	29810	89	540	97	394	74	313	92	293	97	303	102	410
3651	29811	92	687	131	417	101	271	100	328	113	343	93	381
3652	29812	104	537	120	373	106	203	116	360	136	483	102	417
3653	29813	104	623	113	386	95	287	104	330	114	300	93	437
3654	29814	111	653	120	376	93	238	105	360	130	313	100	366
3655	29815	103	620	107	366	96	184	115	378	112	330	89	395
3656	29816	92	593	99	361	73	343	101	528	107	323	97	425
3657	29817	127	537	128	375	112	215	133	280	131	297	94	380
3658	29818	99	560	105	365	86	296	103	280	114	347	100	460
3659	29819	124	510	134	378	115	271	134	353	128	420	108	406
3660	29820	108	520	120	371	95	343	121	343	123	280	98	340
3661	29821	120	700	130	378	102	246	102	343	116	413	107	380
3662	29822	98	580	109	366	95	223	99	343	112	293	107	420
3663	29823	94	603	107	370	85	345	96	335	111	260	103	335
3664	Local Check (LC)	98	497	132	365	95	263	92	363	115	337	88	395
Mean		101	566	113	381	89	280	102	330	114	313	93	384

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Entry No	IET No	ZONE VII – SOUTHERN								Overall Mean (25)	
		KARNATAKA				(1)		Z7 (10)			
		MANDYA		BRAHMAVAR		KURUMBAPET		Mean		PH	NP
		PH	NP	PH	NP	PH	NP	PH	NP		
3601	29765	102	323	91	388	105	490	104	365	103	325
3602	29766	94	287	100	378	108	530	104	357	105	298
3603	29767	94	323	76	391	83	470	95	372	96	302
3604	29768	96	283	98	347	92	370	102	331	105	284
3605	29769	95	260	93	385	102	425	100	336	100	275
3606	29770	87	297	51	399	93	460	97	384	102	310
3607	29771	86	270	80	321	107	580	96	344	97	293
3608	29772	83	287	87	372	97	450	98	341	103	291
3609	29773	101	273	98	393	102	445	111	357	111	303
3610	29774	96	273	91	378	102	480	102	349	103	296
3611	29775	95	267	90	395	98	415	103	353	108	301
3612	29776	95	287	92	385	110	530	103	376	102	312
3613	29777	73	297	78	397	80	420	89	377	90	315
3614	29778	95	273	74	385	100	460	101	374	103	304
3615	29779	95	277	92	344	87	400	99	361	104	299
3616	29780	91	317	93	350	83	340	102	369	105	304
3617	29781	84	340	74	337	94	470	95	373	98	302
3618	29782	100	263	96	341			111	350	111	271
3619	29783	93	290	82	332	83	475	94	394	97	326
3620	Gontra Bidhan-3 (NC)	95	300	83	395	97	480	98	379	99	303
3621	29784	92	290	101	340	102	375	106	373	108	302
3622	29785	84	267	76	392	100	460	94	372	93	298
3623	29786	90	273	84	390	92	455	100	366	101	316
3624	29787	103	257	98	392	117	430	110	357	112	301
3625	29788	111	290	106	390	120	370	119	353	120	286
3626	29789	90	253	73	397	82	390	91	362	91	291
3627	29790	94	290	80	360	95	450	99	367	106	308
3628	29791	101	260	100	391	98	430	106	373	108	311
3629	29792	96	290	98	387	102	415	105	387	108	317
3630	29793	95	340	85	344	108	425	102	376	104	316
3631	29794	93	273	91	396	105	385	102	371	105	294
3632	29795	86	287	92	394	87	420	94	394	95	335
3633	29796	85	303			97	410	100	366	101	310
3634	29797	93	290	87	375	97	500	102	392	103	336
3635	29304	86	273	87	366	102	435	102	354	102	295
3636	29798	86	290			90	390	100	344	105	289
3637	Zonal Check (ZC)	83	273			92	485	104	370	101	305
3638	29799	95	230	92	379			101	310	102	269
3639	29188	100	273	100	390			114	342	116	287
3640	29800	104	273	100	392	108	500	113	365	117	309
3641	29801	97	250	106	389	107	375	113	348	116	288
3642	29802	85	217	67	357	97	515	90	360	92	290
3643	29803	93	253	87	299	95	430	96	340	96	294
3644	29804	91	267	91	389	98	440	97	379	99	310
3645	29805	101	270	89	351	102	590	103	374	102	317
3646	29806	86	267	94	395	92	385	101	356	100	293
3647	29807	102	240	88	392			102	355	103	287
3648	29808	95	230	91	360	97	375	101	340	102	286
3649	29809	84	280	81	351	93	605	97	380	102	322
3650	29810	84	290	82	338			91	355	92	278
3651	29811	94	267	81	385	98	545	103	390	110	321
3652	29812	102	293	99	370	112	440	114	377	114	335
3653	29813	100	273	77	392	98	365	103	369	105	315
3654	29814	109	283	106	352	103	375	112	362	114	305
3655	29815	109	327	78	386	110	440	105	372	106	319
3656	29816	88	360	78	388	86	515	94	421	97	332
3657	29817	132	277	109	388	130	510	126	354	125	301
3658	29818	101	297	90	397	98	465	103	375	106	291
3659	29819	115	290	105	360	120	465	124	373	125	298
3660	29820	105	280	92	378	102	450	111	359	115	304
3661	29821	93	270	85	342	102	355	109	374	106	307
3662	29822	103	253	83	392	93	335	104	349	103	291
3663	29823	95	283	82	352	87	485	98	368	97	301
3664	Local Check (LC)	112	290	91	328	96	495	105	361	105	304
Mean		95	280	88	372	99	446	103	365	104	302

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Table No. 1.24 contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IME (State Means), Kharif 2021

Entry No	IET No	ODISHA (3)		BIHAR (2)		WEST BENGAL (2)		UTTAR PRADESH (1)		CHHATTISGARH (1)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3601	29765	93	305	96	295	109	305				
3602	29766	91	271	115	260	117	363	94	230	115	154
3603	29767	79	294	111	298	103	264	80	252	97	96
3604	29768	89	278	103	274	111	239	98	263	114	163
3605	29769	88	272	103	262	105	206	92	211	91	89
3606	29770	91	325	102	288	116	297	104	245	110	119
3607	29771	82	303	108	300	99	206	104	197	127	213
3608	29772	89	280	115	225	108	347	102	271	116	135
3609	29773	100	322	121	291	117	305	94	237	110	127
3610	29774	93	327	102	274	109	281	95	240	91	97
3611	29775	97	294	120	254	124	322	105	220	106	167
3612	29776	94	249	95	285	115	330				
3613	29777	79	297	98	361	100	281	88	271	98	168
3614	29778	92	249	116	318	118	289	88	183	113	148
3615	29779	89	279	107	265	120	330	90	233	114	122
3616	29780	90	278	113	270	114	322	98	221	119	172
3617	29781	84	318	106	296	112	264	105	271	102	124
3618	29782	98	234	120	256	114	248	98	263	117	90
3619	29783	83	326	104	350	104	297	93	242	109	130
3620	Gontra Bidhan-3 (NC)	85	232	102	267	109	338	92	282	108	139
3621	29784	101	319	115	288	115	264	93	214	112	133
3622	29785	82	328	96	257	106	297	80	177	105	134
3623	29786	86	343	110	338	112	281	88	255	105	112
3624	29787	90	383	111	296	125	231	107	271	125	111
3625	29788	99	253	126	255	138	289	98	210	129	198
3626	29789	80	296	87	251	96	281	88	241	101	121
3627	29790	94	350	115	273	104	281	91	242	200	124
3628	29791	97	336	102	287	122	256	91	252	111	223
3629	29792	93	357	113	275	121	289	90	230	110	120
3630	29793	90	340	127	312	113	281	100	268	104	143
3631	29794	94	316	109	224	104	223	94	256	113	118
3632	29795	79	321	96	387	106	297	93	256	102	204
3633	29796	84	346	107	333	111	231	95	228	100	150
3634	29797	86	349	114	348	106	363	101	234	111	131
3635	29304	86	263	113	303	111	305	86	247	101	135
3636	29798	91	301	108	254	124	272	86	224	110	122
3637	Zonal Check (ZC)	93	275	111	335	104	256	107	238	111	106
3638	29799	88	298	108	279	107	231			108	136
3639	29188	111	304	124	254	125	272	99	229	116	115
3640	29800	106	306	122	279	122	322	95	256	119	127
3641	29801	101	284	120	297	116	239	106	262	140	114
3642	29802	81	310	98	261	93	223	96	255	106	134
3643	29803	82	308	101	309	111	281	91	226	102	184
3644	29804	86	288	101	301	113	272	90	253	104	213
3645	29805	90	281	98	320	119	388			106	183
3646	29806	85	274	106	227	108	297			110	113
3647	29807	91	278	106	275	116	297	103	267	114	152
3648	29808	92	304	113	242	112	289	95	224	109	137
3649	29809	92	314	115	289	110	347	96	259	106	129
3650	29810	79	245	93	302	100	272	96	207	105	93
3651	29811	153	292	104	298	106	297	95	279	108	139
3652	29812	104	348	120	408	113	347	106	264	125	134
3653	29813	90	282	111	292	132	305				
3654	29814	104	317	123	303	111	305	95	217	118	153
3655	29815	97	320	114	305	110	363	95	253	115	116
3656	29816	78	297	107	333	113	289	97	252	108	120
3657	29817	118	279	126	313	117	371	100	256	117	130
3658	29818	94	264	124	218	106	322	93	254	119	77
3659	29819	109	300	130	319	141	256	103	199	132	128
3660	29820	101	329	121	264	127	272	102	204	126	150
3661	29821	92	322	107	288	113	231	78	239	118	115
3662	29822	94	234	110	225	116	314	84	214	110	139
3663	29823	82	307	104	296	101	248	86	271	107	195
3664	Local Check (LC)	95	301	102	260	102	248	101	253	110	151
Mean		92	300	110	288	112	288	95	241	113	138

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Table No. 1.24 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IME (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA1 (2)		MAHARASHTRA 2(1)		MAHARASHTRA (3)		GUJARAT (3)		ANDHRA PRADESH (1)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3601	29765	102	211	119	241	108	221	110	350	138	300
3602	29766	94	208	121	235	103	217	113	264	136	241
3603	29767	97	243	114	210	102	232	103	258	117	300
3604	29768	112	254	124	242	116	250	117	249	130	281
3605	29769	98	219	112	235	102	224	111	263	120	310
3606	29770	105	224	120	222	110	223	108	240	137	300
3607	29771	88	238	108	217	94	231	100	284	124	297
3608	29772	107	209	117	239	110	219	112	272	126	274
3609	29773	103	233	135	246	114	237	116	259	129	274
3610	29774	100	243	124	220	108	235	113	257	125	271
3611	29775	109	238	125	229	114	235	114	293	139	287
3612	29776	94	257	123	233	103	249	97	233	137	287
3613	29777	84	224	98	237	88	228	91	268	109	360
3614	29778	101	300	116	239	106	279	103	244	131	290
3615	29779	113	230	121	234	116	231	108	264	129	330
3616	29780	109	282	120	236	112	266	107	236	131	287
3617	29781	99	192	104	235	101	206	98	241	123	287
3618	29782	104	194	128	235	112	208	118	225	135	353
3619	29783	95	225	104	223	98	224	104	298	121	350
3620	Gontra Bidhan-3 (NC)	98	221	113	232	103	225	103	257	114	287
3621	29784	101	205	130	231	110	214	111	258	142	284
3622	29785	90	177	96	217	92	190	93	254	109	350
3623	29786	103	265	125	232	110	254	101	283	127	317
3624	29787	113	203	133	235	119	213	118	239	134	356
3625	29788	117	211	131	233	122	218	130	238	161	297
3626	29789	92	211	104	224	96	215	99	231	104	340
3627	29790	99	230	123	239	107	233	111	269	119	271
3628	29791	110	228	133	222	118	226	117	272	138	307
3629	29792	109	230	125	229	114	230	117	274	140	317
3630	29793	98	230	113	240	103	233	113	272	125	325
3631	29794	117	225	119	225	118	225	112	252	123	330
3632	29795	94	242	108	232	98	238	99	309	118	340
3633	29796	107	260	113	226	109	249	107	283	128	284
3634	29797	105	257	115	240	108	252	108	296	135	300
3635	29304	102	227	123	220	109	224	106	254	135	317
3636	29798	113	262	123	225	116	250	111	262	134	294
3637	Zonal Check (ZC)	105	263	97	224	102	250	89	299	140	300
3638	29799	99	173	119	234	106	193	107	256	121	254
3639	29188	121	260	134	236	125	252	114	244	148	257
3640	29800	125	260	153	229	134	250	122	271	158	251
3641	29801	125	239	131	231	127	236	123	238	147	290
3642	29802	92	192	98	228	94	204	98	252	107	290
3643	29803	87	202	111	225	95	210	96	267	117	323
3644	29804	95	220	120	220	103	220	106	272	120	320
3645	29805	92	198	112	220	98	206	105	272	132	314
3646	29806	95	225	125	236	105	229	96	264	133	317
3647	29807	102	198	118	205	107	200	103	234	118	304
3648	29808	95	215	103	225	97	218	111	253	130	327
3649	29809	102	303	115	215	106	274	109	277	131	284
3650	29810	86	181	103	221	92	194	94	239	106	314
3651	29811	99	241	119	233	105	238	105	311	124	274
3652	29812	110	262	127	218	116	247	122	308	139	290
3653	29813	93	214	120	234	102	220	106	283	135	300
3654	29814	121	206	128	241	123	218	123	268	142	304
3655	29815	97	257	124	232	106	249	114	283	134	290
3656	29816	93	241	111	246	99	243	102	284	116	370
3657	29817	116	201	159	210	130	204	136	261	165	281
3658	29818	102	199	128	209	111	202	112	236	134	287
3659	29819	118	209	139	225	125	214	134	237	163	274
3660	29820	125	275	132	239	127	263	116	273	142	284
3661	29821	94	231	116	211	101	224	113	304	134	317
3662	29822	93	290	105	230	97	270	107	276	138	290
3663	29823	87	183	109	227	94	198	103	259	121	317
3664	Local Check (LC)	119	291	108	239	115	274	110	286	128	281
Mean		102	230	119	229	108	230	109	264	130	302

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Table No. 1.24 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IME (State Means), Kharif 2021

Entry No	IET No	TELANGANA (2)		TAMIL NADU (2)		KERALA (2)		KARNATAKA (2)		PUDUCHERRY (1)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3601	29765	104	424	99	287	98	363	96	356	105	490
3602	29766	104	412	101	318	96	338	97	332	108	530
3603	29767	103	454	93	265	93	401	85	357	83	470
3604	29768	112	409	91	294	98	311	97	315	92	370
3605	29769	107	426	91	289	100	275	94	322	102	425
3606	29770	106	529	95	300	102	364	69	348	93	460
3607	29771	99	414	81	278	100	293	83	295	107	580
3608	29772	104	476	89	278	100	259	85	329	97	450
3609	29773	124	418	104	344	110	332	99	333	102	445
3610	29774	112	426	94	289	95	331	93	326	102	480
3611	29775	110	431	93	291	101	359	92	331	98	415
3612	29776	106	533	100	279	93	322	93	336	110	530
3613	29777	93	521	88	311	96	315	75	347	80	420
3614	29778	107	501	102	295	99	369	84	329	100	460
3615	29779	106	509	85	278	105	343	93	310	87	400
3616	29780	108	557	100	334	105	307	92	333	83	340
3617	29781	98	451	92	331	98	367	79	338	94	470
3618	29782	112	444	108	280	113	370	98	302		
3619	29783	93	569	90	353	100	323	87	311	83	475
3620	Gontra Bidhan-3 (NC)	105	456	89	357	103	354	89	347	97	480
3621	29784	111	515	101	343	99	364	96	315	102	375
3622	29785	97	431	87	317	104	379	80	329	100	460
3623	29786	104	441	92	308	106	362	87	332	92	455
3624	29787	114	452	103	311	108	306	100	324	117	430
3625	29788	126	441	101	337	121	315	108	340	120	370
3626	29789	96	446	80	253	105	424	81	325	82	390
3627	29790	109	484	88	311	102	355	87	325	95	450
3628	29791	107	461	97	355	108	353	100	325	98	430
3629	29792	114	522	94	337	100	370	97	338	102	415
3630	29793	108	465	91	336	104	362	90	342	108	425
3631	29794	111	495	97	326	99	340	92	334	105	385
3632	29795	94	531	89	356	95	361	89	340	87	420
3633	29796	103	475	93	335	98	337	85	303	97	410
3634	29797	104	538	94	298	106	391	90	332	97	500
3635	29304	106	505	97	252	103	319	87	320	102	435
3636	29798	101	460	92	286	103	315	86	290	90	390
3637	Zonal Check (ZC)	105	490	93	326	110	320	83	273	92	485
3638	29799	102	447	94	223	103	295	93	304		
3639	29188	123	446	105	319	111	314	100	332		
3640	29800	127	445	99	336	105	337	102	333	108	500
3641	29801	118	396	107	280	111	413	101	319	107	375
3642	29802	93	439	78	279	103	395	76	287	97	515
3643	29803	95	441	93	274	97	334	90	276	95	430
3644	29804	101	537	89	307	97	346	91	328	98	440
3645	29805	108	520	95	266	99	325	95	310	102	590
3646	29806	101	496	96	271	104	334	90	331	92	385
3647	29807	108	440	91	323	107	367	95	316		
3648	29808	105	431	91	278	100	345	93	295	97	375
3649	29809	103	498	86	285	102	359	82	315	93	605
3650	29810	93	467	83	303	99	357	83	314		
3651	29811	112	552	100	299	103	362	87	326	98	545
3652	29812	112	455	111	281	119	450	101	332	112	440
3653	29813	108	505	99	309	104	368	88	332	98	365
3654	29814	116	515	99	299	115	340	107	318	103	375
3655	29815	105	493	105	281	100	362	93	356	110	440
3656	29816	95	477	87	435	102	374	83	374	86	515
3657	29817	127	456	123	247	112	338	120	332	130	510
3658	29818	102	462	94	288	107	403	95	347	98	465
3659	29819	129	444	124	312	118	413	110	325	120	465
3660	29820	114	446	108	343	111	310	98	329	102	450
3661	29821	125	539	102	294	112	397	89	306	102	355
3662	29822	104	473	97	283	109	357	93	322	93	335
3663	29823	101	486	90	340	107	297	88	318	87	485
3664	Local Check (LC)	115	431	94	313	101	366	101	309	96	495
Mean		107	473	95	305	104	349	92	324	99	446

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Table No. 1.24 contd.: Plant Height (cm) & Panicles/m² of entries in IVT-IME (Data Not Considered), Kharif 2021

Entry No	IET No	UTTARAKHAND (0)		PUNJAB (0)		BIHAR		JHARKHAND (0)		WEST BENGAL	
		@PANTNAGAR		@LUDHIANA		@SABOUR		@RANCHI		@MALDA	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3601	29765	107				82	166	93	263	119	398
3602	29766	117	382	102	228	96	154	85	219	101	310
3603	29767	106	268	94	191	86	259	84	216	105	329
3604	29768	113	279	101	185	97	152	192	177	97	304
3605	29769	111	246	95	215	85	123	95	232	110	405
3606	29770	115	312	101	215	91	265	90	282	106	307
3607	29771	96	336	101	264	88	147	87	212	108	395
3608	29772	116	270	105	178	99	137	93	174	120	298
3609	29773	133	347	107	221	121	263	99	226	119	402
3610	29774	115	293	106	191	89	215	99	230	112	309
3611	29775	125	266	107	257	93	153	100	233	113	407
3612	29776	94	310			79	225	81	272	103	300
3613	29777	113	298	86	218	85	165	80	317	111	398
3614	29778	117	252	101	221	75	155	92	245	102	307
3615	29779	110	274	100	178	92	182	95	261	126	415
3616	29780	112	339	97	234	98	278	92	293	123	299
3617	29781	99	265	95	205	95	188	84	270	13	371
3618	29782	116	196	101	165	100	208	98	159	120	308
3619	29783	105	318	94	211	83	223	93	306	110	369
3620	Gontra Bidhan-3 (NC)	107	277	96	224	86	205	84	242	129	300
3621	29784	116	273	105	218	97	196	97	264	130	397
3622	29785	103	249	94	208	89	168	80	237	101	312
3623	29786	104	287	97	261	88	243	84	212	116	401
3624	29787	118	265	115	178	93	188	101	220	114	302
3625	29788	127	242	117	155	110	250	106	203	121	409
3626	29789	85	259	97	198	87	203	85	241	97	305
3627	29790	105	267	100	248	99	196	100	221	106	365
3628	29791	129	256	117	264	101	166	110	241	130	405
3629	29792	118	287	114	231	86	218	98	260	130	303
3630	29793	118	309	103	234	94	248	100	301	111	384
3631	29794	103	243	106	208	96	126	98	238	110	311
3632	29795	107	396	94	257	84	249	90	303	106	410
3633	29796	116	301	98	261	85	165	92	280	121	348
3634	29797	121	333	100	281	95	326	89	319	130	368
3635	29304	115	257	99	182	90	245	79	206	106	380
3636	29798	172	220	101	185	92	180	97	287	115	302
3637	Zonal Check (ZC)	100	280	85	234	90	158	101	302	129	414
3638	29799	118	253	105	155	88	161	85	247	106	338
3639	29188	131	303	109	155	101	205	98	235	131	311
3640	29800	142	242	115	231	101	183	108	238	125	407
3641	29801	127	192	116	224	104	145	100	209	131	313
3642	29802	101	294	92	135	80	220	79	224	99	379
3643	29803	102	318	95	178	78	172	92	213	95	351
3644	29804	100	317	95	224	87	125	88	209	105	368
3645	29805	104	303			90	258	86	207	123	334
3646	29806	108	283	91	175	84	150	88	257	114	307
3647	29807	109	214	106	172	92	208	90	248	113	403
3648	29808	116	202	96	188	96	121	85	146	119	308
3649	29809	108	312	96	274	95	170	87	236	111	410
3650	29810	104	242	91	182	77	228	84	254	100	311
3651	29811	104	268	100	244	95	293	91	228	112	407
3652	29812	124	309	114	234	105	237	104	268	131	330
3653	29813	117	274	96	198	91	175	93	201	122	392
3654	29814	140	302	115	234	116	219	95	214	126	302
3655	29815			101	178	101	290	103	262	121	415
3656	29816	110	386	89	231	75	161	85	301	101	363
3657	29817	144	293	121	175	123	163	114	273	131	313
3658	29818	118	221	100	175	92	198	95	252	110	400
3659	29819	157	266	118	178	109	235	106	241	128	307
3660	29820	122	236	107	205	106	186	100	168	121	410
3661	29821	138	303	101	215	92	170	96	230	123	373
3662	29822	124	318			87	232	96	241	105	310
3663	29823	102	308	96	201	85	200	90	312	116	403
3664	Local Check (LC)	107	333	94	221	89	234	92	239	128	297
Mean		115	283	101	210	92	199	95	242	113	352

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Table No. 1.24 contd.: Plant Height (cm) & Panicles/m² of entries in IVT – IME (Data Not Considered), Kharif 2021

Entry No	IET No	UTTAR PRADESH		ASSAM (0)		TRIPURA (0)		CHHATTISGARH	
		@VARANASI		@TITABAR		@LEMBUCHERRA		@JAGADALPUR	
		PH	NP	PH	NP	PH	NP	PH	NP
3601	29765			98	245	104	300	90	124
3602	29766	99	232	104	278	93	275	80	165
3603	29767	87	149	101	268	101	313	71	155
3604	29768	94	196	113	275	98	213	91	238
3605	29769	83	188	98	193	96	313	82	198
3606	29770	93	209	107	240	107	288	90	181
3607	29771	86	163	109	308	95	350	79	251
3608	29772	96	198	108	250	100	213	99	187
3609	29773	100	138	117	340	109	238	101	236
3610	29774	99	195	113	325	94	263	99	186
3611	29775	90	162	118	328	99	238	105	165
3612	29776			93	255	102	250	94	168
3613	29777	90	248	88	280	100	275	80	150
3614	29778	92	202	110	243	103	338	107	195
3615	29779	96	182	108	318	101	288	89	100
3616	29780	103	267	101	265	103	275	105	152
3617	29781	91	207	102	280	108	175	84	172
3618	29782	109	160	119	233	111	288	104	213
3619	29783	90	230	95	260	97	275	100	249
3620	Gontra Bidhan-3 (NC)	93	181	99	248	97	288	86	179
3621	29784	98	161	107	298	99	325	111	192
3622	29785	90	213	85	255	97	238	79	174
3623	29786	95	202	105	275	101	275	90	160
3624	29787	100	153	112	215	114	188	83	171
3625	29788	105	156	131	240	101	313	95	162
3626	29789	81	169	88	243	93	250	73	191
3627	29790	90	145	98	260	103	300	95	184
3628	29791	104	179	111	285	108	275	98	153
3629	29792	98	197	104	283	106	300	103	156
3630	29793	97	219	115	323	104	238	79	186
3631	29794	90	154	112	233	96	325	106	178
3632	29795	82	235	98	363	96	313	82	163
3633	29796	93	193	104	265	100	313	97	187
3634	29797	103	268	117	335	105	225	96	231
3635	29304	93	185	105	228	105	225	85	178
3636	29798	97	172	109	248	110	300	83	181
3637	Zonal Check (ZC)	100	179	116	395	102	175	92	231
3638	29799	89	133	102	243	107	238	91	165
3639	29188	104	203	111	178	110	250	101	155
3640	29800	96	181	126	280	106	225	115	191
3641	29801	100	156	123	220	96	288	104	180
3642	29802	84	192	90	303	87	213	92	182
3643	29803	79	158	95	270	91	213	76	187
3644	29804	92	223	106	278	99	300	84	161
3645	29805			100	253	93	213	78	130
3646	29806	87	158	103	295	100	263	86	230
3647	29807	99	157	106	235	98	250	80	170
3648	29808	92	167	104	243	97	313	103	143
3649	29809	99	242	110	353	95	213	93	166
3650	29810	82	131	98	243	95	250	90	209
3651	29811	91	182	109	303	104	250	88	166
3652	29812	101	251	120	218	102	288	101	208
3653	29813	84	170	88	273	101	275	93	122
3654	29814	89	125	126	243	111	238	113	168
3655	29815	102	192	125	263	104	338	104	189
3656	29816	78	127	95	248	111	263	75	156
3657	29817	121	138	131	290	102	275	112	191
3658	29818	92	140	106	235	104	225	101	200
3659	29819	110	176	131	223	114	288	113	168
3660	29820	103	157	107	250	109	313	108	181
3661	29821	94	160	103	355	99	300	97	169
3662	29822	92	191	102	318	103	300	102	229
3663	29823	88	197	101	250	97	300	89	213
3664	Local Check (LC)	86	245	115	270	95	300	95	174
Mean		94	184	107	271	101	268	93	181

ADVANCED VARIETY TRIAL 2 & 1 - IRRIGATED MEDIUM (AVT 2 & AVT 1-IM)

Locations: 44

Test Entries: 30

Checks: NDR 359-National; PR 121 (Northern), CR Dhan 300 (Eastern and North Eastern), Karma Mahsuri (Central), Akshyadhan (Western), Jaya (Southern)-Zonal; HRI 174 (Hybrid) and Local check. Table:1.25

AVT1-IM trial constituted with 34 entries (30 test entries and 4 checks) was sent to 44 locations covering 6 zones (II, III, IV, V, VI and VII) across the country with three entries in 3rd year of testing and remaining 27 entries in 2nd year of testing. Among the total test entries, 14 are hybrid entries and 16 are varietal entries and checks included NDR359 as national check (NC), PR121 in northern, CR Dhan 300 in eastern and north eastern, Karma Mahsuri in central, Akshayadhan in western and Jaya in southern as zonal checks (ZC), HRI-174 as hybrid check (HC) and a local check (LC). Trial failed at Arundhutinagar and trial at Aduthurai was vitiated due to heavy rains and continuous submergence. Data was not received Bhubaneswar, Sabour, and Waraseoni. Data from Pantnagar due to low experimental mean, Patna-ICAR and Masodha due to low CV % and Gerua-ICAR and ICAR-NRRI due to high CV % was not included in the analysis. Thus, acceptable quality of data in the AVT1-IM trial for analysis was available from 34 locations during *kharif* 2021.

Experimental mean across the locations ranged from 3552 kg/ha at Pantnagar to 8903 kg/ha at Rajendranagar and overall mean varied from 4736 kg/ha (IET 29278) to 6321 kg/ha (IET 28160). CV ranged from as low as 4.36 % at Masodha to as high as 31.62% at Gerua-ICAR. Days to fifty percent flowering (DFF) ranged from 96 days for IET 29006 to 113 days for IET 29263, plant height from 101 cm (IET 29257) to 118cm (IET 29268 and IET 29278) and panicles/m² from 264 (IET 29006) to 307 (Zonal Check). The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 1.26, 1.27, 1.28, 1.29 and 1.30 respectively.

AVT-2 (Entries which are in 3rd Year of Testing)

Three entries are in third year of testing and performance of these entries are discussed below.

IET 28160 (HRI-202), a hybrid entry has completed three years of testing from 2019, 2020, 2021 *kharif* season. In 2019, it recorded a mean grain yield of 10233, 8233, 12927 and 9124 kg/ha in Haryana, Madhya Pradesh, Karnataka and Tamil Nadu with yield advantage of 36 and 24, 12 and 20, 37 and 18 and 30 and 5 % over the BVC and HC respectively. In 2020, the recorded grain yield was 6285, 5468, 6695 and 13656 kg/ha in Odisha, Chhattisgarh, Andhra Pradesh and Puducherry with yield advantage of 15 and 24, 10 and 29, 10 and 23 and 38 and 63 % over the BVC and HC respectively. In 2021, it recorded 7451, 9356, 5489, 6219, 6490, 7170 and 6600 kg/ha in Punjab, Haryana, Jammu & Kashmir, Chhattisgarh, Tamil Nadu, Karnataka and Puducherry with yield advantage of 63 and 58, 14 and 26, 36 and 7, 18 and 15, 9 and 19, 20 and 23 and 7 and 13 % over the BVC and HC respectively. However, in Tamil Nadu and Puducherry IET 28160 didn't show required yield advantage of 10% over the BVC in 2021. Also, despite its superior performance over the BVC and HC in

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several states across the years, consistent performance at least in two years with required yield advantage over BVC and HC was observed only in three states viz., Haryana, Odisha, Karnataka and Chhattisgarh. Further, IET 28160 recorded desirable grain quality with MS grain type, high HRR of 71.4%, intermediate AC of 23.96 %, soft GC of 60 mm and an ASV of 4.0. *Hence, the hybrid entry IET 28160 is considered promising for the states of Haryana, Odisha, Chhattisgarh and Karnataka.*

Three years performance of the entries in AVT-IM during Kharif of 2019, 2020 & 2021

IET No/ Designation/ Cross combination	Year	Zonal performance			Performance across the States			
		Overall/ Zone	Yield/Rank	%YA BC/HC	State	Yield/Rank	%Y BC/HC	Remarks
IET 28160 (H) HRI-202	2021	O	6321 (1)	15, 12	PU	7451 (1)	63, 58	Promising for Haryana, Odisha Chhattisgarh and Karnataka
		II	7342 (2)	25, 38	HA	9356 (4)	14, 26	
		III	6700 (3)	12, 17	JK	5489 (5)	7, 36	
		V	5515 (3)	11, 12	CH	6219 (1)	18, 15	
		TN	6490 (1)	9, 19	KA	7170 (3)	20, 23	
		KA	7170 (3)	20, 23	PUD	6600 (8)	7, 13	
		PUD	6600 (8)	7, 13				
	2020	O	6114 (1)	15, 15	OD	6285 (1)	15, 24	
		III	6133 (1)	16, 17	CH	5468 (1)	10, 29	
		VII	7337 (2)	19, 22	AP	6695 (2)	10, 23	
2019	PUD	13656 (1)	38, 63					
	O	7482 (1)	19, 5	HA	10233 (1)	36, 24		
	III	7456 (3)	15, 5	MP	8233 (1)	12, 20		
	VII	8869 (1)	26, 7	KA	12927 (1)	37, 18		
	TN	9124 (1)	30, 5	OD	7410 (4)	16, 12		
	OD	7410 (4)	16, 12	UP	7853 (2)	13, 8		
	UP	7853 (2)	13, 8					
IET 28171 (H) RNE-0122	2021	O	6055 (4)	10, 7	PU	5982 (5)	31, 27	Promising for Telangana
		V	5509 (4)	11, 12	JH	5932 (3)	33, 20	
		VI	7228 (1)	34, 20	CH	6089 (3)	15, 12	
		MA	5992 (1)	10, 21	GU	6821 (1)	26, 12	
		GU	6821 (1)	26, 12				
	2020	VII	7431 (1)	21, 24	TE	6141 (3)	18, 14	
		TN	7315 (1)	37, 116	KA	8650 (1)	21, 15	
		KA	8650 (1)	21, 15	PUD	11722 (8)	18, 40	
		PUD	11722 (8)	18, 40				
	2019	II	7309 (4)	13, 6	HA	8900 (11)	19, 8	
		UP	7653 (3)	10, 5	WB	8557 (4)	10, 11	
		WB	8557 (4)	10, 11	MP	8239 (1)	12, 20	
MP		8239 (1)	12, 20	TE	8910 (4)	11, 15		
TE		8910 (4)	11, 15	OD	7544 (2)	18, 13		
OD		7544 (2)	18, 13	UP	7653 (3)	10, 5		
UP		7653 (3)	10, 5					
27900 (V) [MTU 1276 (MTU 2578-56- 1)] MTU 1156/ MTU 1081	2021	O	5803 (11)	6	JH	5556 (4)	25	Promising for Tamil Nadu
		IV	6579 (2)	27, 41	AS	6428 (2)	18	
		TR			TR	6729 (3)	22	
		TN			TN	6335 (3)	6	
	2020	VI	5668 (2)	12, 17	GU	6223 (4)	9	
		TN			TN	6667 (3)	25	
	2019	O	6532 (1)	10	OD	6951 (5)	13	
		III	6773 (2)	18	BI	7714 (2)	29	
		V	6587 (1)	22	MP	8378 (1)	63	
VII		7299 (2)	6	CH	6893 (1)	14		
AP		8116 (1)	10	TE	7518 (5)	10		
TE		7518 (5)	10	KA	8294 (9)	7		

IET 28171 (RNE-0122), a hybrid entry has completed three years of testing from 2019 to 2021. In 2019, it recorded a mean grain yield of 8900, 7653, 8557, 8239 and 8910 kg/ha in Haryana, Uttar Pradesh, West Bengal, Madhya Pradesh and Telangana with yield advantage of 19 and 8, 10 and 5, 10 and 11, 12 and 20 and 11 and 15 % over the BVC and HC respectively. In 2020, it recorded grain yield of 6141, 7315, 8650 and 11722 kg/ha in Telangana, Tamil Nadu, Karnataka and Puducherry with yield advantage of 18 and 14, 37 and 116, 21 and 15 and 18 and 40% over the BVC and HC respectively. In 2021, it recorded grain yield of 5982, 5932, 6089, 5992 and 6821 kg/ha in Punjab, Jharkhand, Chhattisgarh, Maharashtra and Gujarat with yield advantage of 31 and 27, 33 and 20, 15 and 12, 10 and 21 and 26 and 1 2% over the BVC and HC respectively. Also, despite its superior performance over the BVC and HC in several states across the years, consistent performance at least in two years with required yield advantage over BVC and HC was observed only in a single state, Telangana. Further, IET 28171 recorded acceptable grain quality with MS grain type, HRR of 60%, AC of 20.01 %, GC of 42 mm and an ASV of 4.0. **Hence, the varietal entry IET 28171 is considered promising for the state of Telangana only.**

IET 27900 [MTU 1276 (MTU 2578-56-1)] derived from the cross of MTU 1156/MTU1081, has completed three years of testing from 2019 to 2021. In 2019 the entry recorded mean yield of 6951, 7714, 8378, 6893, 8116, 7518 and 8294 kg/ha in Odisha, Bihar, Madhya Pradesh, Chhattisgarh, and Andhra Pradesh, Telangana and Karnataka with the yield advantage of 13, 29, 63, 14, 10, 10 and 7% over the BVC respectively. In 2020 it recorded the grain yield of 6223 and 6667 in Gujarat and Tamil Nadu with yield advantage of 9 and 25% over BVC respectively. In 2021 it recorded the yield of 5556, 6428, 6729 and 6335 kg/ha in Jharkhand, Assam, Tripura and Tamil Nadu with the yield advantage of 25, 18, 22 and 6 % over BVC respectively. Also, despite its superior performance over the BVC and HC in several states across the years, consistent performance at least in two years with required yield advantage over BVC and HC was observed only in the state of Tamil Nadu. Further, IET 27900 recorded desirable grain quality with LB grain type, high HRR of 69.5%, intermediate AC of 24.11%, GC of 22 mm and an ASV of 4.0. **Hence, the varietal entry IET 27900 is considered promising for the state of Tamil Nadu only.**

AVT-1 (Entries in 2nd Year of Testing)

On overall basis, LC is the best varietal check (BVC) with an overall mean grain yield of 5487 kg/ha. Among 27 entries which are in second year of testing, on overall basis, one hybrid entry (IET 28997) recorded required yield superiority over both best varietal check (BVC) and HC and four varietal entries (IET 27908, IET 29268, IET 28489 and IET 27900) over BVC. The performance of the top two entries is described in below.

Performance of promising entries at the Northern, Eastern, Central, Western and Southern Zones in Advance variety Trial 1- Irrigated Medium (AVT 1-IM) *khari*2021

IET No/ Designation/ Cross combination	GY (kg/ha)	% Yld Adv	GY (kg/ha)	% Yld Adv	GY (kg/ha)	% Yld Adv	GY (kg/ha)	% Yld Adv	GY (kg/ha)	% Yld Adv	GY (kg/ha)	% Yld Adv	GY (kg/ha)	% Yld Adv
	DTF/ GT	over NC/ ZC/ LC/ HC	DTF/ GT	over NC/ ZC/ LC/ HC	DTF/ GT	over NC/ ZC/ LC/ HC	DTF/ GT	over NC/ ZC/ LC/ HC	DTF/ GT	over NC/ ZC/ LC/ HC	DTF/ GT	over NC/ ZC/ LC/ HC	DTF/ GT	over NC/ ZC/ LC/ HC
	Overall		Northern		Eastern		North Eastern		Central		Western		Southern	
IET 28997 (H) HRI-204	6268 100 LB	15.13 14.46 14.23 11.21	6703 103 LB	25.24 19.52 12.80 24.24	6818 105 LB	26.44 13.74 30.93 19.40			5617 100 LB	13.22 16.82 22.80 14.21	-	-	-	-
IET 27908 (V) MTU 1275 [MTU 2385- 123-1-2-3] MTU 1075/ MTU 1081// MTU 1121	5839 110 MS	7.25 6.6 6.4 4	8074 113 MS	51 44 36 50			7098 102 MS	76.39 37 60 52.51						
NDR 359 (NC)	5444 99 LB		5352 103 LB		5392 105 LB		4024 84 LB		4961 100 LB		5077 95 LB		6044 98 LB	
Zonal Check (ZC)	5476 109 MS		5608 107 MS		5994 117 MS		5195 103 MS		4808 104 MS		5391 96 MS		5585 112 MS	
Local Check (LC)	5487 103		5942 105		5207 106		4429 96		4574 101		4818 96		6300 105	
HRI 174 (HC)	5636 101 LB		5395 107 LB		5710 104 LB		4654 86 LB		4918 105 LB		6026 98 LB		6019 99 LB	

The hybrid entry IET 28997 (HRI-204) with an overall mean grain yield of 6268 kg/ha, DFF of 100 days, long bold grain type and yield advantage of 14 and 11% over the BVC and HC respectively ranked second on overall basis. It also outperformed both BVC and HC in three zones with 12 and 24, 14 and 19 and 13 and 14 % respectively in Northern, Eastern and Central zones. It out yielded the BVC and HC and ranked first in three states viz., Odisha, Jharkhand, and Chhattisgarh with state mean yield of 7540, 6337, and 6219 kg/ha and yield advantage of 65 and 18, 28 and 42 and 12 and 18 % over the BVC and HC respectively.

The hybrid entry IET 29000 (HRI-205) with long bold grains recorded ranked third on overall basis with a mean grain yield of 6061 kg/ha, DFF of 108 days and yield advantage of 10 and 7 % over the BVC and HC respectively. It outperformed BVC and HC in Eastern zone with 13 and 28% yield advantage respectively. It ranked first in two states viz., Uttar Pradesh and Karnataka with state mean yield of 8499 and 7763 kg/ha and yield advantage of 20 and 10, and 30 and 34 over the BVC and HC respectively.

Further on zonal basis, eight hybrid entries (IETs 29009, 29002, 29014, 29006, 29008, 29006, 29001 and 29004) outperformed the respective BVCs and HC and seven varietal entries (IETs 29301, 29290, 29301, 29263, 29256, 29257 and 29284) outperformed the respective BVCs. Overall/zonal performance of the total 22 entries is summarized in the following table.

Summary table of the performance of the entries in AVT 1-IM during *kharif* 2021

IET No.	GY (Kg/ha) (% Yield advantage over BVC, HC)							Grain Quality HRR/GT/ASV/AC/GC	Remarks
	Overall	II	III	IV	V	VI	VII		
28997 (H)	6268 (14, 11)	6703 (13, 24)	6818 (14, 19)		5617 (13, 14)			70.6/LB/4/22.49/48	Promoted
29000 (H)	6061 (10, 7)		6764 (13, 18)					66/LB/4/26.92/40	Promoted
27908 (V)	5839 (6)	8074 (36)		7098 (37)				61.7/MS/4/26.60/22	Dropped
29268 (V)	5815 (6)					5672 (5)		68.5/LS/4/26.84/22 (Avg. AC 24.67)	Promoted
28489 (V)	5809 (6)	6489 (9)	6296 (5)		5451 (10)			67/MS/4/27.81/45 (Avg. AC 25.7; GC 45)	Promoted
29009 (H)		6928 (17, 28)						69/LB/7/26.66/22	Promoted
29301 (V)		6901 (16)		5765 (11)	5315 (7)			59.5/SB/4/26.89/22 (Avg. AC 24.97)	Promoted
29002 (H)		6624 (11, 22)						54.71/LB/4/27.69/22 (Avg. AC 25.37)	Promoted
29014 (H)		6610 (11, 23)						68.2/SB/4/26.66/40	Promoted
29006 (H)		6513 (10, 21)			5459 (10, 11)	6313 (17, 5)		62.1/LB/4/23.58/45	Promoted
29290 (V)		6425 (8)			5248 (6)			64.5/SB/7/26.78/28	Promoted
29263 (V)				6433 (24)				67.2/MS/4/26.28/22	Dropped
29256 (V)				5630 (8)		5839 (8)		66.5/LB/4/24.46/22	Promoted
29008 (H)					5545 (12, 13)			70.4/LB/4/21.47/22	Promoted
29001 (H)						6715 (25, 11)		66.2/LB/7/25.87/22	Promoted
29004 (H)						6438 (19, 7)		70.4/LB/4/25.78/22 (Avg. AC 25.0)	Promoted
29284 (V)							6598 (5)	72.9/MS/4/23.26/24	Promoted
29257 (V)		6352 (7)						73.6/LB/4/21.94/50	Promoted
BVC	5487 (LC)	5942 (LC)	5994 (ZC)	5195 (ZC)	4961 (NC)	5391 (ZC)	6300 (LC)		
HC	5636	5395	5710	4654	4918	6026	6019		

Entries promoted to third year of testing: A total of 16 entries viz., 28997, 29000, 29268*, 28489*, 29009, 29301*, 29002*, 29014, 29006, 29290, 29256, 29008, 29001, 29004*, 29284 and 29257 are promoted to third year of testing

* *Quality data of AC based on average of ICAR-IIRR, ICAR- IARI & ICAR- NRRI; GC based on average of ICAR- IIRR and ICAR- NRRI.*

INITIAL VARIETY TRIAL -IRRIGATED MEDIUM (IVT-IM)**Locations: 45****Test Entries: 61**

Checks: NDR 359-National; PR 121 (Northern), CR Dhan 300 (Eastern and North Eastern), Karma Mahsuri (Central), Akshaydhan (Western), Jaya (Southern)- Zonal and Local check. Table:1.31

IVT-IM trial constituted with 64 entries was sent to 45 locations across the country. The 64 entries included 61 test entries and 3 checks. NDR 359 served as national check, while PR121 in Northern, CR Dhan 300 in Eastern and North Eastern, Karma Mahsuri in central, Akshaydhan in Western and Jaya in Southern as zonal checks and a local check was included. The data pertaining to yield, days to 50% flowering, plant height, and panicles/m² are presented in the tables 1.32, 1.33 respectively. Zone-wise performance of entries is as follows:

Zone II: It includes four locations- Pantnagar, Ludhiana, Kaul, and, and Chatha. The data was either not received (PNT and KUL) or returned (CHT and LDN) from all these locations.

Zone III: It includes twelve locations- Bhubaneswar, Cuttack, Jeypore, Chiplima, Bikrmaganj, Sabour, Patna, Ranchi, Chinsurah, Malda, Masodha, and Varanasi. Except Bhubaneswar, the data was collected from all the locations. Performance of 24 entries showing significant higher yield than the best check is given below:

Performance of 24 entries showing significant higher yield than the best check in Zone III

Rank	Entry	IET No	Cross combination	Yield kg/ha	DFF	GT
1	3841	29860	IR 7396-86-1-5-2-2 / CR 2324-1	5838*	104	LB
2	3816	29837	CT 9993-5-10-1-M /2 / BPT 5204	5731*	102	MB
3	3840	29859	Krishna Hamsa / IRBB60 // Krishna Hamsa / Tetep /// Krishna Hamsa / DSB2	5698*	102	LS
4	3851	29870	Selection from IIRON-34	5677*	102	LS
5	3812	29834	Krishna Hamsa / IRBB60 // Krishna Hamsa / Pi9	5653*	98	MS
6	3836	29855	Jyothi / KPR-1 (Back cross derivative)	5641*	102	MB
7	3802	29825	OR 2006-23 / PSBRC 68	5640*	102	MB
8	3850	29869	NPG 10 / NPG 6	5614*	100	SB
9	3862	29878	Safri-17 / RP Bio 226	5600*	99	SB
10	3823	29843	Pant Dhan 16 / UPR 3778-17-2-1	5437*	99	LS
11	3859	29875	IR 11 A 257-Sel.	5394*	105	MS
12	3825	29845	Bhadrakali / NSA 20894	5349*	103	LB
13	3838	29857	GR 7 / GAR 13	5302*	100	MS
14	3809	29831	IR 10F559 / IRRI 119	5192*	103	MS
15	3855	29287(R)	RP 5405:Swarna / IRGC 4105 // Swarna	5144*	110	SB
16	3856	29873	BPT 5204*2 / <i>O.longistaminata</i> // B95-1/ Swarna Sub-1	5128*	103	LS
17	3830	29850	HKR 48 / IRRI-DS-12	5102*	97	LS
18	3842	29861	PR 122 / PR 123	5101*	105	LS
19	3803	29826	ADT (R)46 / AD 09495	5060*	110	MS
20	3863	29879	TNAU CO 50 / JGL 17183	5048*	95	MS
21	3846	29865	Hakuchuk 2 / Tripura Sarat	5017*	102	LS

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Rank	Entry	IET No	Cross combination	Yield kg/ha	DFF	GT
22	3849	29868	KMR 3 / CR 2711-76 (10-1-B)	4972*	102	MB
23	3808	28523(R)	Vijetha / N22	4965*	102	MS
24	3811	29833	JGL 20171 / MTU 1075	4958*	104	LS
	3820	NDR 359 (NC)		4558	99	
	3835	Zonal Check (ZC)		4529	112	
	3864	Local Check (LC)		4524	104	
		CD		392		

Zone IV: It includes four locations- Titabar, Gerua, Arundhatinagar and Lembucherra. In this zone, data was received only from Lembucherra. Therefore, it is not included for analysis.

Zone V: It includes seven locations-Waraseoni, Raipur, Ambikapur, Jagdalpur, Bilaspur, Sakoli, and Sindewahi. Except Ambikapur and Bilaspur, the data was received from other five locations. Performance of 3 entries showing significant higher yield than the best check is given below:

Performance of 3 entries showing significant higher yield than the best check in Zone V

Rank	Entry	IET No	Cross combination	Yield kg/ha	DFF	GT
1	3861	29877	CR 3511-32 / CR 3561-31	5967*	94	MB
2	3802	29825	OR 2006-23 / PSBRC 68	5924*	94	MB
3	3836	29855	Jyothi / KPR-1 (Back cross derivative)	5795*	97	MB
	3820	NDR 359 (NC)		4652	88	
	3835	Zonal Check (ZC)		4802	92	
	3864	Local Check (LC)		5229	93	
		CD		482		

Zone VI and VII- Both the zones included 18 locations (Karjat, Shirgaon, Navagam, Navsari, Maruteru, Ragolu, Rajendranagar, Kunaram, Warangal, Jagtial, Aduthurai, Coimbatore, Tirur, Pattambi, Mandya, Brahmavar, Gangavati, and Kurumbapet). Among these centers, data was not received from Shirgaon, Kunaram and Jagtial while trial was failed in Aduthurai. In all these centers, none of the nominated entries showed better performance against best check.

In summary, the following five entries showed significant higher yield than the best check across the zones:

Performance of 5 entries showing significant higher yield than the best check across zones

Rank	Entry	IET No	Cross combination	Yield kg/ha	DFF	GT
1	3802	29825	OR 2006-23 / PSBRC 68	6208*	98	MB
2	3836	29855	Jyothi / KPR-1 (Back cross derivative)	5994*	98	MB
3	3841	29860	IR 7396-86-1-5-2-2 / CR 2324-1	5918*	100	LB
4	3851	29870	Selection from IIRON-34	5819*	98	LS
5	3861	29877	CR 3511-32 / CR 3561-31	5749*	97	MB
	3820	NDR 359 (NC)		4717	95	
	3835	Zonal Check (ZC)		5212	106	
	3864	Local Check (LC)		5442	100	
		CD		230		

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IET 29879 was dropped due to 95 days DFF.

Promoted to AVT1-IM: IET Nos 29860, 29837, 29859, 29870, 29834, 29855, 29825, 29869, 29878, 29843, 29875, 29845, 29857, 29831, 29287(R), 29873, 29850, 29861, 29826, 29865, 29868, 28523(R), 29833 and 29877.

Table No. 1.25: Composition of entries in Advance Variety Trial 2 & 1-Irrigated Medium (AVT 2 & AVT 1-IM), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
2nd year of testing:				
3701	29268	OROI-8- IR 88228-33-3-5-2	IR 80410-B-197-4 / IR 64-Sub 1 // NCIC RC 158	LS
3702	29263	MTU 1347 (MTU 2414-5-1-1-1-1)	MTU 2077 / IR 72	MS
3703	28489 (R)	BRR 2141	TTB 680-2-35-2 Selection	MS
3704	29002	<i>PHI-20106 (Hybrid)</i>	-	LB
3705	29011	<i>MEPH-158 (Hybrid)</i>	-	LB
3rd year of testing:				
3706	27900	MTU 1276 (MTU 2578-56-1)	MTU 1156 / MT U 1081	LB
2nd year of testing:				
3707	29284	MTU 1348 (MTU 2689-45-1-1)	MTU 1010 / MTU 7029	MS
3708	27908	MTU 1275 (MTU 2385-123-1-2-3)	MTU 1075 / MTU 1081 // MTU 1121	MS
3709	29278	NWGR 8001	GR 3 / NWGR-97011 (5-1-1-1)	LS
3710	28998	<i>KAVERI-7425 (Hybrid)</i>	-	LB
3711	29006	<i>PHI-20108 (Hybrid)</i>	-	LB
3712	29014	<i>MEPH-159 (Hybrid)</i>	-	SB
3713	NDR 359 (NC)			
3rd year of testing:				
3714	28160	<i>HRI-202 (Hybrid)</i>	-	MS
2nd year of testing:				
3715	28383	OR 2573-11	Birupa / IR 76561-AC-8-8	LB
3716	29257	RNR 28399	BPT 5204 / IR 79216-141-1-3-3-3	LB
3717	29301	AD 16124	CO (R) 50 /AD 08132	SB
3718	28997	<i>HRI-204 (Hybrid)</i>	-	LB
3719	29008	<i>PHI-20109 (Hybrid)</i>	-	LB
3720	PR121-Northern, CR Dhan 300- Eastern and North Eastern, Karma Mahsuri-Central, Akshyadhan-Western, Jaya- Southern--ZC			
3721	29012	<i>NRH-30 (Hybrid)</i>	-	LB
3rd year of testing:				
3722	28171	<i>RNE-0122 (Hybrid)</i>	-	MS
2nd year of testing:				
3723	29256	BPT 3050	BPT 5204 / BPT 3291	LB
3724	29264	KJT 2010-3	KJT 2 / RP BIO -226	LS
3725	29290	HURS 19-3	CR 2407 / IR 64	SB
3726	29001	<i>S-7004 (Hybrid)</i>	-	LB
3727	29004	<i>PHI-20107 (Hybrid)</i>	-	LB
3728	29009	<i>US-375 (Hybrid)</i>	-	LB
3729	HRI 174 (HC)			
3730	29260	WGL 1377	WGL 14 / NLR 34449	MS
3731	29276	WGL 1380	BPT 5204 / NR 950	MS
3732	29302	TRC 2020-9	Tripura Sharat / Hakuchuk 2	LS
3733	29000	<i>HRI-205 (Hybrid)</i>	-	LB
3734	Local Check			

(R): Repeat

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Table No. 1.26: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN													
		UTTARAKHAND		PUNJAB (1)		HARYANA (1)			JAMMU KASHMIR (1)			Z2(3)			
		@PANTNAGAR		LUDHIANA		KAUL			CHATHA			Mean			
3701	29268	1909					8047			3267			5657		
3702	29263	1641					5892						5892		
3703	28489 (R)	3779					9111	6 * 11%	# 22%	3867			6489	9 * 9% # 20%	
3704	29002	4773	3	5536	7 * 21%	# 17%	9493	2 * 16%	# 27%	4844	9 # 20%	6624	6 * 11%	# 23%	
3705	29011	4341	8	4648			8538		# 15%	4800	# 19%	5995		# 11%	
3706	27900 ^	1112					6165					6165		# 14%	
3707	29284	3574		5229	15%	11%	9520	1 * 16%	# 28%	3711		6153		# 14%	
3708	27908	923					8074					8074	1 * 36%	# 50%	
3709	29278	2969		4552			7529			4244		5442			
3710	28998	4842	1	5498	8 * 20%	# 17%	8320		# 12%	4578	14%	6132		# 14%	
3711	29006	4327	9	3914			9247	5 * 13%	# 24%	6378	2 * 24%	# 59%	6513	8 * 10%	# 21%
3712	29014	4828	2	4298			9111	6 * 11%	# 22%	6422	1 * 25%	# 60%	6610	7 * 11%	# 23%
3713	NDR 359 (NC)	3646		4133			8211			3711		5352			
3714	28160 ^	3714		7451	1 * 63%	# 58%	9356	4 * 14%	# 26%	5489	5 7% # 36%	7432	2 * 25%	# 38%	
3715	28383	2622		5344	* 17%	13%	7392			4822	# 20%	5853			
3716	29257	3647		5486	9 * 20%	# 16%	8592		# 15%	4978	8 # 24%	6352		7% # 18%	
3717	29301	2552					6901					6901	4 * 16%	# 28%	
3718	28997	4653	6	6528	2 * 43%	# 38%	9002	9 10%	# 21%	4578	14%	6703	5 * 13%	# 24%	
3719	29008	3627		4410			7665			5600	3 9% # 39%	5892			
3720	Zonal Check (ZC)	3505		3895			8156			4773		5608			
3721	29012	3879		3814			7529			4822	# 20%	5388			
3722	28171 ^	4732	4	5982	5 * 31%	# 27%	7174			4622	15%	5926			
3723	29256	1172		2999			6819			2956		4258			
3724	29264	3778		4837	6%		7420			3089		5115			
3725	29290	4644	7				8783	10 7%	# 18%	4067		6425	10 8%	# 19%	
3726	29001	4210		6128	4 * 34%	# 30%	7010			4111		5750			
3727	29004	4325	10	4621						4844	9 # 20%	4733			
3728	29009	4026		6244	3 * 37%	# 32%	9029	8 10%	# 21%	5511	4 7% # 37%	6928	3 * 17%	# 28%	
3729	HRI 174 (HC)	4713	5	4717			7447			4022		5395			
3730	29260	3878		4356			7529			5333	6 # 33%	5739			
3731	29276	4146		5644	6 * 24%	# 20%	6819			4067		5510			
3732	29302	3323		5359	10 * 17%	14%	8429		# 13%	4400		6063		# 12%	
3733	29000	3068		4710			9438	3 * 15%	# 27%	3882		6010		# 11%	
3734	Local Check (LC)	3917		4564			8129			5133	7	5942			
Exp. Mean		3553		4996			8057			4564		6030			
CD		1296		690			872			656		541			
CV%		22.37		8.42			6.63			8.8		5.51			
D/S		17-06-2021		16-06-2021			21-06-2021			16-06-2021					
D/P		15-07-2021		17-07-2021			21-07-2021			14-07-2021					
Local Check Name		Pant Dhan4		PR 121			HKR-128			SJR 5					

^ 3rd year of testing. *Superior to best check #Superior over hybrid check %superior over best check

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Table No. 1.26 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN											
		BIHAR				BIHAR (1)		WEST_BENGAL (1)			JHARKHAND (1)		
		BIKRAMGANJ DHANGAIN	@PATNA ICAR	Mean		CHINSURAH			RANCHI				
3701	29268	6530		7673		6530		6875	7	19%	5324	6	19%
3702	29263	6740	7	6820		6740	7	6293			4601		
3703	28489 (R)	7916	1 * #	8130	5	7916	1 *13% #19%	6795		18%	4948		11%
3704	29002	6392		7997	10	6392		6871	8	19%	5006	9	12%
3705	29011	4150		8563	2	4150		5669			4803		8%
3706	27900 ^	6735	8	5883		6735	8	6841	10	18%	5556	4	*25% 12%
3707	29284	6483		6157		6483		6349			4919		10%
3708	27908	7157	3	6050		7157	3	6829	18%		3906		
3709	29278	3036		6460		3036		5669			3559		
3710	28998	5849		8127	6	5849		7041	6	#22%	5411	5	*21%
3711	29006	6525		7980		6525		6236			4745		6%
3712	29014	5906		7980		5906		7075	5	#22%	4167		
3713	NDR 359 (NC)	5202		8303	4	5202		6803			4282		
3714	28160 ^	6960	5	7603		6960	5	7200	2	#25%	4659		
3715	28383	5367		7767		5367		6349			3993		
3716	29257	5719		6797		5719		5631			2546		
3717	29301	6267		2540		6267		6508		13%	5237	7	18%
3718	28997	6116		8060	7	6116		6519		13%	6337	1 *	42% #28%
3719	29008	7192	2	6540		7192	2	6406		11%	5237	7	18%
3720	Zonal Check (ZC)	6996	4	5577		6996	4	7086	4		4456		
3721	29012	6199		7010		6199		6576	14%		4890		10%
3722	28171 ^	6417		8650	1	6417		7154	3	#24%	5932	3 *	33% #20%
3723	29256	5907		7300		5907		6364		10%	5006	9	12%
3724	29264	5241		5237		5241		6463		12%	3646		
3725	29290	6305		8013	9	6305		5556			3993		
3726	29001	6893	6	8043	8	6893	6	5782			3414		
3727	29004	6686	9	8503	3	6686	9	6803		18%	4861	9%	
3728	29009	5720		7160		5720		6009			4514		
3729	HRI 174 (HC)	6673	10	7743		6673	10	5782			4948		
3730	29260	6037		5777		6037		6576		14%	3819		
3731	29276	5320		6613		5320		7230	1	#25%	4196		
3732	29302	5436		6933		5436		6519		13%	4022		
3733	29000	6210		7573		6210		6859	9	19%	6163	2 *	38% #25%
3734	Local Check (LC)	4576		4903		4576		5620			4196		
Exp. Mean		6084		7073		6084		6480			4626		
CD		524		539		524		1167			890		
CV%		5.28		4.68		5.28		11.04			11.8		
D/S		25-06-2021		17-06-2021				25-06-2021			25-06-2021		
D/P		26-07-2021		13-07-2021				28-07-2021			02-08-2021		
Local Check Name		R Sweta		Rajendra Sweta				PRATIKHYA			BVD-203		
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check					

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Table No. 1.26 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		UTTAR PRADESH					UTTAR PRADESH (1)			Z3 (6)	
		@MASODHA		VARANASI			Mean			Mean	
3701	29268	5865		7032		7032			5803		
3702	29263	5125		5767		5767			5791		
3703	28489 (R)	5622		8346	2 *	8346	2 *	18%	6296	5 5% #10%	
3704	29002	6077	1	7194	10	7194	10		5696		
3705	29011	3833		5889		5889			5303		
3706	27900 ^	3983		6648		6648			6057	8	
3707	29284	5947	10	6318		6318			5996		
3708	27908	3380		5213		5213			5582		
3709	29278	3573		4579		4579			4246		
3710	28998	5851		6905		6905			6009	10	
3711	29006	6001	4	7674	7	7674	7	9%	5648		
3712	29014	6015	2	7521	8	7521	8	7%	5700		
3713	NDR 359 (NC)	5979	6	6701		6701			5392		
3714	28160 ^	5974	8	7963	3 *	7963	3 *	13%	6700	3 * 12% #17%	
3715	28383	3437		6692		6692			5309		
3716	29257	4146		6671		6671			4958		
3717	29301	5974	8	2071		2071			5123		
3718	28997	5109		6858		6858			6818	1 * 14% #19%	
3719	29008	5974	8	7900	5 *	7900	5 *	12%	5958		
3720	Zonal Check (ZC)	3464		4634		4634			5994		
3721	29012			7912	4 *	7912	4 *	12%	6243	6 #	
3722	28171 ^	5947	10	5259		5259			6199	7 #	
3723	29256	4504		6441		6441			5761		
3724	29264	5401		6854		6854			5288		
3725	29290	3628		6386		6386			5164		
3726	29001	6001	4	7245	9	7245	9		5738		
3727	29004	5919		6522		6522			6346	4 6% #11%	
3728	29009	5646		7164		7164			6020	9	
3729	HRI 174 (HC)	6001	4	7738	6	7738	6	10%	5710		
3730	29260	5837		6378		6378			5240		
3731	29276	4010		6815		6815			5416		
3732	29302	5824		6492		6492			5404		
3733	29000	5783		8499	1 *	8499	1 *	20%	6764	2 * 13% #18%	
3734	Local Check (LC)	5537		7058		7058			5207		
Exp. Mean		5193		6628		6628			5732		
CD		369		761		761			358		
CV%		4.36		7.05		7.05			3.84		
D/S		19-06-2021		16-06-2021							
D/P		17-07-2021		13-07-2021							
Local Check Name		NDR 2065		HUR-105							
^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check			%superior over best check				

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Table No. 1.26 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 – IM, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN							ZONE-V - CENTRAL							
		ASSAM (1)			TRIPURA (1)			ZA (2)		CHHATTISGARH						
		Mean			LEMBUCHERRA			Mean		RAIPUR		AMBIKHAPUR		JAGADALPUR		
3701	29268	4845			4765	9	23%	4805			4714	8	4415		5828	*
3702	29263	6080	4 *	12% #12%	6785	2	23% #76%	6433	3 *	24% #38%	3894		3742		6004	8 *
3703	28489 (R)	5130			3794			4462			4438		5727	4 #	6031	7 *
3704	29002	5858	6	8%	4751	10	23%	5305	7	14%	3543		5273	10	5398	
3705	29011	5162			5100	7	32%	5131	9	10%	3037		4424		5200	
3706	27900 ^	6428	2 *	18% #18%	6729	3	22% #74%	6579	2 *	27% #41%	5170	3	4297		6055	5 *
3707	29284	5605	9.5		3794			4700			4861	7	4424		4909	
3708	27908	6428	2 *	18% #18%	7767	1 *	41% #101%	7098	1 *	37% #53%	5646	1 * #	4455		5954	9 *
3709	29278	3768			3315			3542			3322		4273		4514	
3710	28998	5067			4207			4637			4087		5515	6	5676	*
3711	29006	5668	8		3850			4759			4307		5242		5264	
3712	29014	5985	5 *	10% #	4712		22%	5349	6	15%	4449		4788		4789	
3713	NDR 359 (NC)	5447			2600			4024			4163		5061		4752	
3714	28160 ^	5225			4609		19%	4917			4998	5	6273	1 * #	6370	3 * #
3715	28383	5130			3482			4306			3996		5394	9	5935	10 *
3716	29257	4433			5279	6	37%	4856			3510		4970		4452	
3717	29301	5035			6495	4	18% #68%	5765	4	11% #24%	5152	4	4364		5873	*
3718	28997	5605	9.5		4431		15%	5018	10		4706	10	6061	3 * #	6474	2 * #
3719	29008	5478			4263		10%	4871			4317		5091		5793	*
3720	Zonal Check (ZC)	4877			5513	5		5195	8		4330		4273		3534	
3721	29012	5003			3884			4444			4117		4515		6055	5 *
3722	28171 ^	5447			4364		13%	4906			4711	9	6091	2 * #	5903	*
3723	29256	6428	2 *	18% #18%	4832	8	25%	5630	5	8% #21%	5261	2	4606		5780	*
3724	29264	3832			4096			3964			4373		5515	6	4936	
3725	29290	5162			4174			4668			4640		5048		5200	
3726	29001	5732	7	5%	3839			4786			4061		5667	5 #	6076	4 *
3727	29004	4528			3605			4067			4193		5512	8	5326	
3728	29009	3958			3512			3735			4175		4455		4810	
3729	HRL 174 (HC)	5447			3861			4654			4572		4758		5345	
3730	29260	3515			4643		20%	4079			4287		4667		4157	
3731	29276	4433			4497		16%	4465			4188		4452		3966	
3732	29302	4338			4152			4245			4236		4030		4522	
3733	29000	4655			4717		22%	4686			4944	6	5212		7011	1 * #
3734	Local Check (LC)	4307			4550			4429			3748		4030		3969	
Exp. Mean		5119			4558			4923			4357		4901		5349	
CD		526			1610			757			946		886		874	
CV%		6.31			17.36			9.44			13.32		11.09		10.02	
D/S					19-07-2021						19-06-2021		01-07-2021		28-06-2021	
D/P					08-08-2021						23-07-2021		03-08-2021		20-07-2021	
Local Check Name					Tripura Nirog						IGKV R 1244		IR 64		IGKVR 1244	
			^ 3rd year of testing.			*Superior to best check		#Superior over hybrid check		%superior over best check						

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Table No. 1.26 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL												
		CHHATTISGARH		CHHATTISGARH (4)		MAHARASHTRA1		MAHARASHTRA1 (2)		Z5 (6)				
		BILASPUR	Mean	Mean	Mean	SAKOLI	SINDEWAHI	Mean	Mean	Mean	Mean			
3701	29268	5867		5206		4255	#	5390	5	4823	7	#24%	5078	
3702	29263	4567		4552		4255	#	4237		4246			4450	
3703	28489 (R)	6033		5557	5%	5401	3 #	5076	10	5239	3	#34%	5451	6 * 10% #11%
3704	29002	8067	3 #	5570	10 5%	3696		5108	8	4402		13%	5181	
3705	29011	6667		4832		3451		4659		4055			4573	
3706	27900 ^	6033		5389		5074	4 #	3855		4465	10	15%	5081	
3707	29284			4731		3968	#	4499		4234			4532	
3708	27908	5667		5431		4255	#	3858		4057			4973	
3709	29278	5917		4507		3451		4379		3915			4309	
3710	28998	7633	7	5728	8 8%	3205		4097		3651			5036	
3711	29006	7967	4 #	5695	9 8%	4569	7 #	5402	4	4986	5	#28%	5459	5 * 10% #11%
3712	29014	7367	10	5348		3873	#	4662		4268			4988	
3713	NDR 359 (NC)	7150		5282		4023		4615		4319			4961	
3714	28160 ^	7233		6219	1 * 18% #15%	3723		4490		4107			5515	3 * 11% #12%
3715	28383	5920		5311		3682		4205		3944			4855	
3716	29257	5617		4637		3914	#	4172		4043			4439	
3717	29301	5233		5156		5783	2 #	5487	2	5635	1	#45%	5315	8 * 7% #
3718	28997	7633	7	6219	1 * 18% #15%	3642		5186	7	4414		13%	5617	1 * 13% #14%
3719	29008	8433	1 * #	5909	4 * 12% #	4283	9 #	5355	6	4819	8	#24%	5545	2 * 12% #13%
3720	Zonal Check (ZC)	5900		4509		5919	1	4889		5404	2		4808	
3721	29012	7117		5451		3246		4572		3909			4937	
3722	28171 ^	7650	6	6089	3 * 15% #12%	3246		5452	3	4349		12%	5509	4 * 11% #12%
3723	29256	5450		5274		4364	8 #			4364		12%	5092	
3724	29264	6500		5331		4910	5 #	4557		4734	9	#21%	5132	
3725	29290	6933		5455		4787	6 #	4878		4833	6	#24%	5248	9 6%
3726	29001	7800	5	5901	5 * 12% #	3205		4624		3915			5239	10 6%
3727	29004	8333	2 * #	5841	6 * 11%	3996	#	4767		4382		12%	5355	7 * 8% #
3728	29009	7467	9	5227		3041		4857		3949			4801	
3729	HRI 174 (HC)	7033		5427		3151		4647		3899			4918	
3730	29260	5833		4736		3860	#	4647		4254			4575	
3731	29276	5800		4602		3778		5084	9	4431		14%	4545	
3732	29302	6100		4722		3137		4627		3882			4442	
3733	29000	6100		5817	7 * 10%	3369		4621		3995			5210	5%
3734	Local Check (LC)	5567		4329		4255		5874	1	5065	4		4574	
Exp. Mean		6624		5294		4023		4752		4382			4992	
CD		928		446		677		946		603			349	
CV%		8.59		5.17		10.33		12.2		8.44			4.29	
D/S		17-06-2021				23-06-2021		16-06-2021						
D/P		13-07-2021				28-07-2021		26-07-2021						
Local Check Name		Rajeshwari				PDKV Kisan		SYE-2001						

^ 3rd year of testing *Superior to best check #Superior over hybrid check %superior over best check

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Table No. 1.26 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN																			
		MAHARASHTRA2			MAHARASHTRA2 (2)			MAHARASHTRA (4)			GUJARAT		GUJARAT (2)								
		KARJAT	SHIRGAON	Mean	Mean	Mean	NAVSARI	NAWAGAM	Mean												
3701	29268	6160	5741	10 *	5951	10	9%	5387	8	4032	6755	5394									
3702	29263	4630	3457		4044			4145		1998	7391	5	4695								
3703	28489 (R)	6078	3728		4903			5071		3972	6819		5396								
3704	29002	6209	3568		4889			4645		6095	2 * #	5886	5991	6	11%						
3705	29011	6100	4247		5174			4614		5156	5	6079		5618	9						
3706	27900 ^	4575	3198		3887			4175		2879	6641		4760								
3707	29284	5011	3185		4098			4166		2595	7228	8	4912								
3708	27908	5882	2926		4404			4230		2949	7217	9	5083								
3709	29278	4630	3778		4204			4059		3012	5221		4117								
3710	28998	6590	7	5160	5875	8%		4763		4273			4273								
3711	29006	6264		5951	6 *	6108	7	12%	5546	4	5527	3	7510	2	6519	3 *	21%				
3712	29014	6427		5617	*	6022	8	10%	5145		4878	10	5916		5397						
3713	NDR 359 (NC)	5447		4049		4748			4534		5022	8	5791		5407						
3714	28160 ^	6427		5963	5 *	6195	6	14%	5151		4123	6739		5431							
3715	28383	5343		3235		4289			4116		4444	5576		5010							
3716	29257	6155		4346		5251			4647		3193	5918		4556							
3717	29301	6645	6	4296		5471			5553	3	12.37%	2862	3551		3207						
3718	28997	6373		6494	4 * #	6434	5 *	18%	5424	7	9.76%	4353	6119		5236						
3719	29008	6481	10	4370		5426			5122		5156	5	5712		5434						
3720	Zonal Check (ZC)	6536	8	4370		5453			5429	6	4698	5961		5330							
3721	29012	6536	8	4272		5404			4656		4491	6820		5656	8						
3722	28171 ^	8061	1 *	7209	1 * #	7635	1 *	40%	#28%	5992	1 *	10.37%	#21%	6209	1 * #	7432	3	6821	1 *	26%	12%
3723	29256	5882		5778	8 *	5830	7%		5342	9	4410	7287	7	5849	7	8%					
3724	29264	4739		3321		4030			4382		3323	5776		4550							
3725	29290	7081	4	3160		5121			4976		3718	4719		4219							
3726	29001	6427		6980	2 * #	6704	4 *	23%	12%	5309	10	5193	4	8261	1 *	6727	2 *	24%	11%		
3727	29004	7734	2	5765	9 *	6750	3 *	24%	13%	5566	2	#12.63%	4889	9	7362	6	6126	4	13%		
3728	29009	7190	3	6864	3 * #	7027	2 *	29%	#17%	5488	5	11.06%	4434		6684		5559	10			
3729	HRI 174 (HC)	6917	5	5049		5983	9		4941		5149	7	6989	10	6069	5					
3730	29260	4847		3247		4047			4150		3290	6816		5053							
3731	29276	6046		3062		4554			4492		2946	5502		4224							
3732	29302	5447		5049		5248			4565		4063	6252		5158							
3733	29000	5882		5852	7 *	5867	8%		4931		3203	7402	4	5303							
3734	Local Check (LC)	5507		3420		4464			4764		4136	6209		5173							
Exp. Mean		6066		4609		5338			4867		4137	6410		4884							
CD		1217		1144		799			508		846	1517		1033							
CV%		12.31		15.23		9.18			6.40		12.55	11.62		12.98							
D/S		15-06-2021		17-06-2021							16-06-2021	17-06-2021									
D/P		10-07-2021		22-07-2021							08-07-2021	27-07-2021									
Local Check Name		Karjat-5		ratnagiri - 6							GNR-5	GAR 13									

^ 3rd year of testin *Superior to best check #Superior over hybrid check %superior over best check

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Table No. 1.26 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN				ZONE VII - SOUTHERN							
		Z6 (4)		ANDHRA_PRADESH		ANDHRA_PRADESH (2)		TELANGANA					
		Mean		MARUTERU	RAGOLU	Mean		RAJENDRANAGAR	KUNARAM	WARANGAL	JAGTIAL		
3701	29268	5672	5%	5247	5564	5406	9825	7	8744	2 #	5177	5111	
3702	29263	4369		4450	5744	5097	8952		4997		5703	4758	
3703	28489 (R)	5149		4187	5863	5025	8106		8687	3 #	4806	7418 1* #	
3704	29002	5440		6420	5679	6050	8825		4931		6735	7 # 4570	
3705	29011	5396		4867	5393	5130	8928		6859	9 #	5097	6127 4 #	
3706	27900 ^	4323		7253	5015	6134	9648	9	5887		5838	5778 10 #	
3707	29284	4505		7500	5766	6633	9127	3* 10%			7270	1 # 5036	
3708	27908	4744		5863	5239	5551	8658		6442	#	7017	2 # 4789	
3709	29278	4160		4360	4919	4640	6875		5537		5156	4648	
3710	28998	5341		4457	5828	5143	9436	10			5144	3871	
3711	29006	6313	4* 17%	3740	5898	4819	8546		6196	#	6489	9 # 5773 #	
3712	29014	5710	10 6%	2930	5599	4265	8001		5174		5101	3847	
3713	NDR 359 (NC)	5077		3843	5187	4515	9314		9162	1	5556	5510	
3714	28160 ^	5813	9 8%	5223	5235	5229	11292	1* #	5176		5076	6063 5 #	
3715	28383	4650		2533	5569	4051	9117		6218	#	4921	5431 #	
3716	29257	4903		6620	4655	5638	8534		4857		5686	4413	
3717	29301	4339		6300	3013	4657	8407		6540	10 #	4719	7097 2* #	
3718	28997	5835	8 8%	7743	5560	6652	10698	2* 10%	6002	#	6934	4 # 5428 #	
3719	29008	5430		6867	6249	6558	9170	4* 8%	7016	7 #	5052	5431 #	
3720	Zonal Check (ZC)	5391		6747	5072	5910	3842	9	4424		6970	3 4414	
3721	29012	5530		4357	5292	4825	9756	8	4333		3786	5095	
3722	28171 ^	7228	1* 34% #20%	5873	5569	5721	10502	4	4135		4684	4574	
3723	29256	5839	7 8%	4393	4910	4652	8365		6153	#	4857	5828 8 #	
3724	29264	4290		5717	5709	5713	8260		6182	#	5646	5805 9 #	
3725	29290	4670		5813	4229	5021	8011		8624	4 #	5232	6029 6 #	
3726	29001	6715	2* 25% #11%	5253	5635	5444	9982	6	4878		5034	5928 7 #	
3727	29004	6438	3* 19%	4113	6157	5135	10649	3	6122	#	5269	6479 3* #	
3728	29009	6293	5* 17%	5673	5722	5698	9270		4924		5192	4464	
3729	HRI 174 (HC)	6026	6	7067	6012	6540	9121	5	5146		5106	4334	
3730	29260	4550		6897	6908	6903	7109	1* 14%	5540		6626	8 # 5328 #	
3731	29276	4389		3417	4967	4192	8610		7487	5 #	6826	6 # 5039	
3732	29302	5203		3907	4901	4404	8431		6965	8 #	6417	10 # 3731	
3733	29000	5585			4866	4866	10062	5	4847		6919	5 # 4814	
3734	Local Check (LC)	4818		6230	5859	6045	9302	8	7316	6	5585	4614	
Exp. Mean		5179		5329	5405	5360	8904		6109		5636	5223	
CD		613		741	521	448	1795		834		798	913	
CV%		7.27		8.52	5.91	5.12	12.36		8.37		8.68	10.73	
D/S				09-07-2021	09-07-2021		23-06-2021		01-07-2021		22-06-2021	02-07-2021	
D/P				03-08-2021	08-08-2021		20-07-2021		03-08-2021		21-07-2021	31-07-2021	
Local Check Name				MTU 1239	MTU 1210		MTU 1001		MTU 1001		SOMNATH (WGL 347)	JGL 11470	
			^ 3rd year of testing.		*Superior to best check	#Superior over hybrid check	%superior over best check						

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Table No. 1.26 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN																	
		TELANGANA (4)				TAMIL_NADU				TAMIL_NADU (2)				KERALA (1)		KARNATAKA			
		Mean		COIMBATORE		TIRUR		Mean		PATTAMBI		MANDYA		BRAHMAVAR					
3701	29268	7214	4	#22%	6038	10	5458		5748						8851	2 * #	3425		
3702	29263	6103			5941		5964	9	5953	10		6863			7552	5 *	3782		
3703	28489 (R)	7254	3	#22%	5561		5753		5657			6378			5724		3580		
3704	29002	6265			5809		5825		5817			7244			6325		4120	#	
3705	29011	6753		#14%	6059	8 #	6008	8	6034	6	#10%	6743			7338	6	6167	3 #	
3706	27900 ^	6788	10	#15%	6747	4 #	5922	10	6335	3	6%	#16%	6841		5963		3739		
3707	29284	7144	5	#21%	5889		5697		5793			7225			5821		6119	5 #	
3708	27908	6727		#13%	7408	1 * #	5378		6393	2	7%	#17%	7117		6055		4611	#	
3709	29278	5554			4085		5381		4733			7343			5449		4011		
3710	28998	6150			5601		5481		5541			7165			5368		6167	3 #	
3711	29006	6751		#14%	5417		5861		5639			7295			5011		4875	#	
3712	29014	5531			5137		5753		5445			7238			7099	9	3538		
3713	NDR 359 (NC)	7386	1		4201		6392	1	5297			7476			5103		5756	6	
3714	28160 ^	6902	9		7126	2 * #	5853		6490	1 *	9%	#19%	7098		7644	4 *	6590	1 * #	
3715	28383	6422			5088		5594		5341			7610	8		5750		4011		
3716	29257	5873			4488		5589		5039			6927			5821		5397	8 #	
3717	29301	6691			6529	5 #	5419		5974	7		7511	10		6890	10	3052		
3718	28997	7266	2		5624		6250	3 #	5937			6962			6783		3418		
3719	29008	6667			4915		5689		5302			7949	1	10%	6468		3752		
3720	Zonal Check (ZC)	4913			4191		5578		4885			7657	7		5154		5464	7	
3721	29012	5743			6368	6 #	6086	7	6227	5	#14%	7667	6		6758		6271	2 #	
3722	28171 ^	5974			5645		6131	6	5888			7168			7832	3 *	4309	#	
3723	29256	6301			5269		5433		5351			7730	3		5317		4145	#	
3724	29264	6473			5492		5367		5430			7095			6193		3930		
3725	29290	6974	8		5514		6136	5	5825			7238			6014		3152		
3726	29001	6456			5660		6283	2 #	5972	9		7117			6646		3984		
3727	29004	7130	6		7049	3 * #	5511		6280	4	5%	#15%	7305		7140	8	3398		
3728	29009	5963			4911		6206	4	5559			7559	9		5520		4816	#	
3729	HRI 174 (HC)	5927			5224		5717		5471			7222			7293	7	3325		
3730	29260	6151			6040	9	5361		5701			7070			5475		3681		
3731	29276	6991	7		5819		5519		5669			7670	5		5536		3912		
3732	29302	6386			5063		5547		5305			7416			6045		3960		
3733	29000	6661			4913		5700		5307			7867	2		10017	1 * #	4946	10 #	
3734	Local Check (LC)	6704			6171	7	5775		5973	8		7711	4		6565		5117	9	
Exp. Mean		6476			5617		5753		5685			7287			6427		4427		
CD		549			832		515		510			1343			784		692		
CV%		5.2			9.08		5.49		5.5			11.3			7.48		9.59		
D/S					14-07-2021		30-07-2021					19-07-2021			28-06-2021		23-07-2021		
D/P					11-08-2021		27-08-2021					12-08-2021			18-07-2021		11-08-2021		
Local Check Name					CO 50		CO 52					SWETHA			BR-2655		MO-4		
					^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check			%superior over best check							

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Table No. 1.27: Days to 50%flowering of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN			
		UTTARAKHAND	PUNJAB (1)	HARYANA (1)	JAMMU_KASHMIR (1)	Z2(3)	ODISHA			ODISHA (2)
		@PANTNAGAR	LUDHIANA	KAUL	CHATHA	Mean	@ICAR NRRI CUTTACK	JEYPORE	CHIPLIMA	Mean
3701	29268	117		108	119	113	112	93	109	101
3702	29263	125		112		112	125	114	127	121
3703	28489 (R)	121		112	123	117	119	109	115	112
3704	29002	97	102	93	105	100	106	103	111	107
3705	29011	95	102	93	99	98	106	106	121	114
3706	27900	126		114		114	120	102	121	112
3707	29284	116	119	111	121	117	112	110	121	115
3708	27908	123		113		113	120	102	121	111
3709	29278	97	104	93	101	99	109	101	123	112
3710	28998	100	108	99	105	104	106	98	120	109
3711	29006	97	102	96	103	100	104	93	108	101
3712	29014	99	102	100	103	102	104	102	107	104
3713	NDR 359 (NC)	101	107	97	106	103	105	110	114	112
3714	28160	106	105	102	109	105	110	100	120	110
3715	28383	104	103	100	106	103	105	99	109	104
3716	29257	102	104	97	109	103	103	98	116	107
3717	29301	127		102		102	125	110	121	116
3718	28997	98	107	97	106	103	107	95	122	109
3719	29008	102	102	96	105	101	100	97	108	102
3720	Zonal Check (ZC)	103	106	100	116	107	122	113	126	120
3721	29012	106	112	100	106	106	108	96	117	107
3722	28171	99	106	99	105	103	106	103	121	112
3723	29256	122	117	108	122	116	119	113	119	116
3724	29264	110	111	106	113	110	110	107	109	108
3725	29290	109		112	117	114	113	109	116	112
3726	29001	100	107	100	102	103	106	98	116	107
3727	29004	101	106		107	106	107	100	121	111
3728	29009	96	109	100	106	105	109	94	109	101
3729	HRI 174 (HC)	102	111	103	108	107	109	99	122	110
3730	29260	109	109	104	119	111	112	102	125	113
3731	29276	110	107	105	118	110	113	102	120	111
3732	29302	98	107	101	105	104	107	103	108	105
3733	29000	117	120	110	121	117	112	111	114	113
3734	Local Check (LC)	96	105	101	109	105	102	100	114	107
	Exp. Mean	107	107	103	110	107	110	103	117	110

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Table No. 1.27 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR		BIHAR (1)	WEST_BENGAL (1)	JHARKHAND (1)	UTTAR_PRADESH		UTTAR_PRADESH (1)
		BIKRAMGANJ_DHANGAIN	@PATNA ICAR	Mean	CHINSURAH	RANCHI	@MASODHA	VARANASI	Mean
3701	29268	108	111	108	116	111	117	104	104
3702	29263	119	122	119	111	123	115	117	117
3703	28489 (R)	105	115	105	115	116	116	114	114
3704	29002	96	99	96	92	101	109	98	98
3705	29011	97	95	97	93	101	107	95	95
3706	27900	115	123	115	102	120	118	118	118
3707	29284	99	118	99	113	116	103	112	112
3708	27908	118	102	118	114	118	109	121	121
3709	29278	95	97	95	110	106	107	95	95
3710	28998	96	102	96	109	105	103	96	96
3711	29006	96	100	96	105	101	102	97	97
3712	29014	95	100	95	97	102	106	99	99
3713	NDR 359 (NC)	98	100	98	105	102	104	98	98
3714	28160	97	102	97	105	107	108	97	97
3715	28383	97	101	97	97	106	109	96	96
3716	29257	100	103	100	93	105	108	101	101
3717	29301	124	137	124	112	118	121	125	125
3718	28997	100	101	100	109	105	105	99	99
3719	29008	95	103	95	98	103	102	98	98
3720	Zonal Check (ZC)	115	122	115	111	120	119	116	116
3721	29012	96	105	96	109	108		101	101
3722	28171	96	100	96	102	109	103	98	98
3723	29256	116	114	116	111	117	107	117	117
3724	29264	98	107	98	107	113	109	107	107
3725	29290	105	104	105	103	111	102	103	103
3726	29001	97	101	97	100	105	102	99	99
3727	29004	97	103	97	102	101	105	96	96
3728	29009	102	101	102	101	102	105	95	95
3729	HRI 174 (HC)	96	102	96	102	107	99	101	101
3730	29260	105	115	105	112	109	107	108	108
3731	29276	98	111	98	111	108	97	114	114
3732	29302	97	103	97	102	104	104	99	99
3733	29000	108	116	108	109	115	101	105	105
3734	Local Check (LC)	107	106	107	115	99	107	103	103
Exp. Mean		102	107	102	106	109	107	104	104

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Table No. 1.27 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN						ZONE-V - CENTRAL				
		Z3 (6)	ASSAM		ASSAM (1)	TRIPURA (1)	Z4 (2)	CHHATTISGARH				CHHATTISGARH (4)
		Mean	TITABAR	@GERUA ICAR	Mean	LEMBUCHERRA	Mean	RAIPUR	AMBIKHAPUR	JAGADALPUR	BILASPUR	Mean
3701	29268	107	114	112	114	77	96	115	110	104	105	109
3702	29263	119	123	121	123	86	104	126	119	115	116	119
3703	28489 (R)	112	121	119	121	79	100	120	118	106	113	114
3704	29002	100	97	97	97	76	87	104	100	96	96	99
3705	29011	102	99	99	99	74	86	102	99	96	95	98
3706	27900	113	118	121	118	79	99	123	118	110	115	116
3707	29284	112	114	112	114	77	96	116	110	106		111
3708	27908	116	121	120	121	83	102	121	118	112	115	117
3709	29278	105	95	100	95	80	87	105	100	106	96	102
3710	28998	104	105	98	105	75	90	105	103	98	99	101
3711	29006	100	98	95	98	73	85	102	99	97	95	98
3712	29014	100	97	95	97	70	83	102	100	97	96	99
3713	NDR 359 (NC)	105	98	95	98	70	84	104	103	102	97	102
3714	28160	104	102	102	102	74	88	109	107	103	101	105
3715	28383	101	105	96	105	73	89	109	104	103	99	104
3716	29257	102	99	95	99	82	90	105	105	103	100	103
3717	29301	118	126	125	126	81	103	124	113	113	118	117
3718	28997	105	101	102	101	74	87	103	104	103	96	102
3719	29008	100	99	99	99	71	85	102	100	101	97	100
3720	Zonal Check (ZC)	117	121	121	121	84	103	108	109	99	103	105
3721	29012	104	112	102	112	75	94	106	111	102	100	105
3722	28171	105	106	102	106	76	91	107	103	103	97	103
3723	29256	115	110	119	110	79	95	118	111	108	110	112
3724	29264	107	106	109	106	77	91	116	110	105	105	109
3725	29290	108	113	112	113	74	93	114	110	106	105	109
3726	29001	103	101	102	101	74	88	103	104	99	99	101
3727	29004	103	101	99	101	76	88	103	104	101	97	101
3728	29009	101	95	99	95	75	85	103	106	95	96	100
3729	HRI 174 (HC)	104	102	103	102	71	86	105	104	104	99	103
3730	29260	110	114	108	114	76	95	116	110	104	106	109
3731	29276	109	113	108	113	78	95	114	110	105	105	109
3732	29302	102	103	95	103	77	90	106	104	103	97	102
3733	29000	111	115	112	115	79	97	118	110	112	109	112
3734	Local Check (LC)	106	114	95	114	79	96	105	95	106	99	101
Exp. Mean		107	108	106	108	76	92	110	107	104	102	106

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Table No. 1.27 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL				ZONE VI - WESTERN				
		MAHARASHTRA 1		MAHARASHTRA 1 (2) Z5 (6)		MAHARASHTRA2		MAHARASHTRA2 (2)	MAHARASHTRA (4)	GUJARAT
		SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON	Mean	Mean	NAVSARI
3701	29268	107	101	104	107	100	111	106	105	97
3702	29263	120	112	116	118	118	116	117	116	110
3703	28489 (R)	114	110	112	113	111	120	116	114	90
3704	29002	101	101	101	100	98	109	104	102	86
3705	29011	104	100	102	99	94	100	97	100	85
3706	27900	114	110	112	115	117	115	116	114	108
3707	29284	111	109	110	110	103	111	107	109	98
3708	27908	114	111	113	115	109	115	112	112	108
3709	29278	101	99	100	101	99	102	101	100	86
3710	28998	101	103	102	101	98	101	100	101	87
3711	29006	96	87	92	96	94	100	97	94	87
3712	29014	100	99	100	99	98	101	100	100	87
3713	NDR 359 (NC)	94	100	97	100	97	100	98	98	86
3714	28160	106	107	107	106	100	101	101	104	91
3715	28383	98	106	102	103	93	101	97	100	86
3716	29257	101	97	99	102	99	106	102	101	90
3717	29301	121	104	113	116	107	124	115	114	107
3718	28997	104	90	97	100	99	99	99	98	86
3719	29008	101	98	99	100	99	90	95	97	91
3720	Zonal Check (ZC)	105	101	103	104	99	99	99	101	90
3721	29012	109	96	103	104	103	102	103	103	91
3722	28171	111	97	104	103	105	110	108	106	87
3723	29256	113		113	112	106	113	109	111	88
3724	29264	111	108	110	109	98	103	100	105	97
3725	29290	110	105	108	108	97	100	98	103	92
3726	29001	104	106	105	103	99	103	101	103	87
3727	29004	104	97	101	101	95	101	98	99	87
3728	29009	106	100	103	101	95	99	97	100	85
3729	HRI 174 (HC)	114	101	107	105	104	100	102	105	91
3730	29260	111	107	109	109	104	101	103	106	93
3731	29276	112	96	104	107	104	111	108	106	98
3732	29302	109	95	102	102	100	100	100	101	85
3733	29000	114	112	113	112	107	89	98	106	98
3734	Local Check (LC)	106	97	102	101	95	98	97	99	86
Exp. Mean		107	102	105	105	101	104	103	104	92

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Table No. 1.27 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN			ZONE VII - SOUTHERN					
		GUJARAT	GUJARAT (2)	Z6 (4)	ANDHRA_PRADESH		ANDHRA_PRADESH (2)	TELANGANA		
		NAWAGAM	Mean	Mean	MARUTERU	RAGOLU	Mean	RAJENDRANAGAR	KUNARAM	WARANGAL
3701	29268	107	102	104	98	98	98	110	103	109
3702	29263	109	110	113	111	105	108	115	119	114
3703	28489 (R)	115	103	109	107	99	103	112	110	112
3704	29002	102	94	99	92	90	91	93	98	97
3705	29011	99	92	95	86	91	89	102	100	100
3706	27900	116	112	114	97	104	101	111	118	117
3707	29284	105	101	104	99	100	100	104		110
3708	27908	89	98	105	106	105	106	111	117	115
3709	29278	87	87	94	86	87	87	96	99	97
3710	28998		87	95	93	92	93	101		100
3711	29006	101	94	95	89	88	89	97	100	97
3712	29014	100	93	96	88	90	89	97	102	99
3713	NDR 359 (NC)	99	92	95	94	88	91	101	100	99
3714	28160	103	97	99	95	94	95	105	103	104
3715	28383	99	92	95	94	92	93	103	96	101
3716	29257	100	95	99	96	91	94	105	98	100
3717	29301	108	107	111	110	100	105	114	116	116
3718	28997	102	94	96	111	92	101	95	102	101
3719	29008	98	94	94	91	95	93	108	99	101
3720	Zonal Check (ZC)	96	93	96	109	112	111	111	123	122
3721	29012	97	94	98	98	96	97	102	101	102
3722	28171	102	94	101	95	94	95	106	104	104
3723	29256	110	99	104	103	100	102	104	104	111
3724	29264	108	102	101	100	100	100	106	104	111
3725	29290	104	98	98	99	94	96	102	101	106
3726	29001	99	93	97	90	92	91	100	99	101
3727	29004	103	95	97	90	92	91	99	98	99
3728	29009	97	91	94	93	90	91	97	99	100
3729	HRI 174 (HC)	97	94	98	95	94	95	102	98	103
3730	29260	109	101	102	100	98	99	101	104	103
3731	29276	110	104	106	101	96	99	105	101	105
3732	29302	87	86	93	91	92	91	99	96	98
3733	29000	108	103	101		105	105	110	105	112
3734	Local Check (LC)	104	95	96	105	104	105	106	105	108
	Exp. Mean	102	97	100	97	96	97	104	104	105

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Table No. 1.27 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		TELANGANA	TELANGANA (4)	TAMIL_NADU		TAMIL_NADU (2)	KERALA (1)
		JAGTIAL	Mean	COIMBATORE	TIRUR	Mean	PATTAMBI
3701	29268	102	106	101	97	99	
3702	29263	113	115	112	106	109	98
3703	28489 (R)	108	111	101	102	102	112
3704	29002	99	97	99	94	97	99
3705	29011	97	100	98	95	97	99
3706	27900	111	114	106	106	106	99
3707	29284	106	107	105	103	104	102
3708	27908	105	112	107	104	105	99
3709	29278	100	98	103	99	101	101
3710	28998	100	100	101	99	100	106
3711	29006	98	98	99	96	98	99
3712	29014	98	99	93	97	95	96
3713	NDR 359 (NC)	98	100	99	97	98	101
3714	28160	101	103	106	99	102	99
3715	28383	96	99	100	93	96	101
3716	29257	100	101	106	97	102	99
3717	29301	108	113	106	101	103	99
3718	28997	100	99	101	101	101	98
3719	29008	99	102	94	96	95	99
3720	Zonal Check (ZC)	114	118	114	105	109	102
3721	29012	100	101	101	99	100	99
3722	28171	100	103	107	99	103	98
3723	29256	109	107	107	105	106	111
3724	29264	108	107	108	102	105	102
3725	29290	99	102	94	99	97	99
3726	29001	100	100	102	93	97	101
3727	29004	98	98	100	96	98	101
3728	29009	95	98	94	95	94	99
3729	HRI 174 (HC)	97	100	101	96	99	101
3730	29260	101	102	105	105	105	101
3731	29276	103	104	107	106	107	102
3732	29302	99	98	101	98	100	103
3733	29000	107	108	110	106	108	103
3734	Local Check (LC)	102	105	112	103	108	99
Exp. Mean		102	104	103	100	101	101

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Table No. 1.27 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN						Overall Mean (34)
		KARNATAKA			KARNATAKA (3)	PUDUCHERRY (1)	Z7 (13)	
		MANDYA	BRAHMAVAR	GANGAVATI	Mean	KURUMBAPET	Mean	
3701	29268	113	96	106	105	94	102	104
3702	29263	113	99	110	107	104	109	113
3703	28489 (R)	105	101	106	104	103	106	109
3704	29002	105	95	99	100		97	98
3705	29011	105	94	97	99	94	97	97
3706	27900	119	94	106	106	104	107	110
3707	29284	122	96	108	109	94	104	107
3708	27908	119	93	108	107	102	107	110
3709	29278	105	91	96	98	105	97	99
3710	28998	105	97		101	96	99	100
3711	29006	104	92	96	97	89	96	96
3712	29014	105	90	97	97	88	96	97
3713	NDR 359 (NC)	115	96	97	103	92	98	99
3714	28160	115	101	102	106	102	102	102
3715	28383	117	92	101	103	93	98	99
3716	29257	113	98	106	106	104	101	101
3717	29301	114	97	110	107	107	107	111
3718	28997	105	93	100	99	96	100	100
3719	29008	105	97	98	100	94	98	98
3720	Zonal Check (ZC)	124	98	119	114	106	112	109
3721	29012	117	98		107	104	101	102
3722	28171	118	96	110	108	110	103	102
3723	29256	122	99	104	108	102	106	109
3724	29264	121	101	106	109	104	106	105
3725	29290	117	98	99	105	103	101	103
3726	29001	108	94	100	101	93	98	99
3727	29004	105	96	100	100	97	98	99
3728	29009	104	93	97	98	90	96	97
3729	HRI 174 (HC)	107	96	99	101	102	99	101
3730	29260	112	96	100	103	105	102	105
3731	29276	112	95	108	105	103	103	105
3732	29302	105	96	109	103	93	98	99
3733	29000	113	95	111	106	104	107	108
3734	Local Check (LC)	110	103	110	108	96	105	103
Exp. Mean		112	96	103	104	99	102	103

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Table No. 1.28: Plant Height (cm) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN			
		UTTARAKHAND	PUNJAB (1)	HARYANA (1)	JAMMU KASHMIR (1)	Z2(3)	ODISHA			ODISHA (2)
		@PANTNAGAR	LUDHIANA	KAUL	CHATHA	Mean	@ICAR NRRI CUTTACK	JEYPORE	CHIPLIMA	Mean
3701	29268	128.80		137.00	116.14	126.57	116.30	98.60	89.42	94.01
3702	29263	116.60		121.00		121.00	121.20	102.30	99.25	100.78
3703	28489 (R)	115.60		121.00	91.28	106.14	116.40	91.80	81.00	86.40
3704	29002	124.40	119.00	124.00	119.96	120.99	121.30	109.50	81.75	95.63
3705	29011	115.60	115.00	128.00	105.46	116.15	111.00	102.90	97.00	99.95
3706	27900	125.20		122.00		122.00	118.90	109.60	94.25	101.93
3707	29284	125.80	120.00	126.00	94.17	113.39	122.00	108.60	95.92	102.26
3708	27908	112.60		122.00		122.00	118.70	95.30	91.33	93.32
3709	29278	121.60	113.67	126.00	115.76	118.48	123.00	100.40	102.00	101.20
3710	28998	114.20	110.33	131.00	107.26	116.20	110.50	95.00	86.92	90.96
3711	29006	127.80	116.00	122.00	114.40	117.47	117.10	98.20	81.33	89.77
3712	29014	128.60	116.67	130.00	110.86	119.18	116.70	96.40	86.00	91.20
3713	NDR 359 (NC)	103.40	102.33	121.00	100.00	107.78	104.50	102.00	88.42	95.21
3714	28160	111.60	115.33	129.00	109.00	117.78	117.60	98.90	94.33	96.62
3715	28383	123.20	119.00	118.00	95.40	110.80	110.80	102.80	96.08	99.44
3716	29257	111.40	100.00	122.00	94.86	105.62	106.40	94.90	90.42	92.66
3717	29301	118.40		110.00		110.00	115.20	101.90	95.50	98.70
3718	28997	117.60	111.67	127.00	11.96	83.54	118.70	104.90	90.92	97.91
3719	29008	127.40	118.67	132.00	114.90	121.86	123.40	96.20	94.50	95.35
3720	Zonal Check (ZC)	93.40	86.00	103.00	84.64	91.21	117.70	112.90	95.42	104.16
3721	29012	125.00	112.33	128.00	109.06	116.46	126.50	96.60	88.00	92.30
3722	28171	111.60	116.00	120.00	110.88	115.63	117.60	98.10	92.33	95.22
3723	29256	118.60	107.00	131.00	104.30	114.10	120.00	102.50	90.83	96.67
3724	29264	117.60	110.67	137.00	109.88	119.18	124.00	106.10	95.08	100.59
3725	29290	123.00		131.00	113.26	122.13	107.60	91.70	87.25	89.48
3726	29001	116.60	116.33	130.00	105.32	117.22	117.20	105.00	93.17	99.08
3727	29004	121.80	111.00		109.32	110.16	115.30	97.40	88.17	92.78
3728	29009	105.40	113.00	136.00	110.34	119.78	119.30	99.30	86.83	93.07
3729	HRI 174 (HC)	119.40	115.67	130.00	111.82	119.16	115.20	102.10	92.67	97.38
3730	29260	124.00	127.00	121.00	112.93	120.31	133.40	104.50	93.00	98.75
3731	29276	120.80	107.00	121.00	111.48	113.16	119.30	97.50	90.17	93.83
3732	29302	120.60	99.67	122.00	91.14	104.27	110.10	98.00	85.83	91.92
3733	29000	128.00	111.67	132.00	97.26	113.64	121.60	100.50	87.92	94.21
3734	Local Check (LC)	96.00	96.00	124.00	118.64	112.88	106.50	90.60	89.58	90.09
Exp. Mean		117.99	111.37	125.30	103.39	114.30	117.09	100.38	90.96	95.67

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Table No. 1.28 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR		BIHAR (1)	WEST_BENGAL (1)	JHARKHAND (1)	UTTAR_PRADESH		UTTAR_PRADESH (1)
		BIKRAMGANJ_DHANGAIN	@PATNA ICAR	Mean	CHINSURAH	RANCHI	@MASODHA	VARANASI	Mean
3701	29268	107.83	110.89	107.83	134.00	106.60	135.00	124.40	124.40
3702	29263	101.16	115.50	101.16	145.00	101.13	125.00	114.80	114.80
3703	28489 (R)	98.83	120.00	98.83	128.00	96.87	124.00	112.90	112.90
3704	29002	106.50	124.11	106.50	133.50	100.00	122.00	122.00	122.00
3705	29011	92.16	117.61	92.16	134.00	97.67	110.00	114.00	114.00
3706	27900	98.16	120.83	98.16	128.50	99.47	118.00	114.60	114.60
3707	29284	111.33	131.28	111.33	135.00	103.20	136.00	124.40	124.40
3708	27908	104.16	115.22	104.16	144.50	101.60	112.00	113.60	113.60
3709	29278	110.16	121.44	110.16	140.00	104.27	130.00	120.70	120.70
3710	28998	94.33	117.61	94.33	133.50	101.67	115.00	105.70	105.70
3711	29006	106.66	129.89	106.66	140.00	101.93	118.00	123.10	123.10
3712	29014	101.50	120.89	101.50	128.50	102.73	125.00	121.50	121.50
3713	NDR 359 (NC)	100.83	112.78	100.83	122.00	94.60	115.00	108.10	108.10
3714	28160	100.66	115.44	100.66	129.50	101.27	116.00	110.20	110.20
3715	28383	92.62	117.39	92.62	118.50	102.80	115.00	114.90	114.90
3716	29257	91.66	112.94	91.66	118.00	94.87	107.00	107.60	107.60
3717	29301	90.83	103.00	90.83	144.00	94.67	106.00	110.90	110.90
3718	28997	100.00	125.06	100.00	133.50	99.93	118.00	110.90	110.90
3719	29008	110.00	129.94	110.00	136.00	102.20	117.00	122.10	122.10
3720	Zonal Check (ZC)	94.00	121.61	94.00	145.00	99.53	125.00	114.70	114.70
3721	29012	103.83	125.33	103.83	141.00	102.73		117.40	117.40
3722	28171	100.33	114.00	100.33	130.50	98.53	122.00	110.10	110.10
3723	29256	100.83	117.39	100.83	123.00	98.33	120.00	111.60	111.60
3724	29264	101.66	126.67	101.66	134.00	100.40	125.00	115.20	115.20
3725	29290	103.66	116.78	103.66	129.00	97.00	115.00	103.70	103.70
3726	29001	98.66	117.72	98.66	127.50	98.33	120.00	109.00	109.00
3727	29004	107.33	119.11	107.33	124.00	99.40	121.00	107.80	107.80
3728	29009	112.00	107.78	112.00	139.50	103.13	128.00	114.40	114.40
3729	HRI 174 (HC)	91.33	128.33	91.33	135.50	101.73	125.00	113.30	113.30
3730	29260	124.33	130.39	124.33	140.00	101.87	142.00	130.30	130.30
3731	29276	97.16	117.22	97.16	123.00	100.47	120.00	111.20	111.20
3732	29302	80.33	115.00	80.33	122.00	94.93	110.00	112.10	112.10
3733	29000	88.00	131.17	88.00	134.00	100.33	130.00	118.70	118.70
3734	Local Check (LC)	93.66	106.78	93.66	140.50	98.80	126.00	105.10	105.10
Exp. Mean		100.49	119.33	100.49	132.78	100.09	121.00	114.44	114.44

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Table No. 1.28 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	Z3 (6)	ZONE IV- NORTH EASTERN					ZONE-V - CENTRAL				
			ASSAM		ASSAM (1)	TRIPURA (1)	Z4 (2)	CHHATTISGARH				CHHATTISGARH (4)
			Mean	TITABAR	@GERUA ICAR	Mean	LEMBUCHERRA	Mean	RAIPUR	AMBIKHAPUR	JAGADALPUR	BILASPUR	Mean
3701	29268	110.14	139.13	134.60	139.13	118.50	128.82	126.64	96.67	124.80	129.00	119.28
3702	29263	110.61	126.73	122.60	126.73	109.00	117.87	111.20	94.20	123.60	123.00	113.00
3703	28489 (R)	101.57	122.47	117.40	122.47	102.00	112.23	110.79	88.20	113.40	110.00	105.60
3704	29002	108.88	126.87	125.80	126.87	111.00	118.93	132.68	92.80	111.80	117.00	113.57
3705	29011	106.29	121.07	120.60	121.07	106.00	113.53	129.52	102.07	119.60	116.00	116.80
3706	27900	107.43	126.93	120.00	126.93	110.00	118.47	117.81	95.07	120.00	115.00	111.97
3707	29284	113.07	132.53	129.20	132.53	116.00	124.27	135.11	106.67	126.80		122.86
3708	27908	108.42	125.33	118.80	125.33	100.00	112.67	124.83	91.73	119.60	111.00	111.79
3709	29278	112.92	134.80	139.00	134.80	121.00	127.90	125.64	103.20	122.20	118.00	117.26
3710	28998	102.85	125.13	120.00	125.13	101.00	113.07	122.08	92.33	112.00	118.00	111.10
3711	29006	108.54	125.73	127.00	125.73	118.00	121.87	123.10	96.53	115.80	125.00	115.11
3712	29014	106.11	130.40	117.20	130.40	112.50	121.45	124.85	96.27	104.40	124.00	112.38
3713	NDR 359 (NC)	102.66	116.07	104.60	116.07	95.00	105.53	111.33	87.93	102.20	111.00	103.12
3714	28160	105.81	121.20	115.20	121.20	104.00	112.60	125.09	95.47	113.80	119.00	113.34
3715	28383	104.62	136.93	107.00	136.93	103.50	120.22	121.19	87.60	124.00	122.00	113.70
3716	29257	99.57	111.53	115.00	111.53	97.50	104.52	112.77	89.53	92.80	104.00	99.78
3717	29301	106.30	117.13	113.80	117.13	100.00	108.57	116.29	91.20	113.80	116.00	109.32
3718	28997	106.69	118.80	119.40	118.80	102.50	110.65	133.25	98.60	117.60	121.00	117.61
3719	29008	110.17	129.73	13.60	129.73	122.50	126.12	128.75	98.00	119.80	117.00	115.89
3720	Zonal Check (ZC)	110.26	124.53	133.00	124.53	107.00	115.77	110.18	79.53	93.40	107.00	97.53
3721	29012	108.26	129.13	123.40	129.13	110.00	119.57	129.84	94.93	116.20	120.00	115.24
3722	28171	104.98	128.07	118.80	128.07	112.50	120.28	117.41	94.60	114.60	113.00	109.90
3723	29256	104.52	133.00	124.80	133.00	103.50	118.25	120.29	97.00	120.20	122.00	114.87
3724	29264	108.74	133.53	114.40	133.53	111.50	122.52	120.92	97.07	116.60	125.00	114.90
3725	29290	102.05	120.93	110.80	120.93	98.50	109.72	123.59	96.13	121.20	121.00	115.48
3726	29001	105.28	126.00	117.00	126.00	109.50	117.75	123.29	98.13	117.40	113.00	112.96
3727	29004	104.02	122.47	113.80	122.47	100.50	111.48	128.31	94.73	113.20	109.00	111.31
3728	29009	109.19	118.93	122.40	118.93	105.50	112.22	132.41	101.00	121.60	119.00	118.50
3729	HRI 174 (HC)	106.11	121.47	121.60	121.47	105.00	113.23	125.88	96.47	103.80	115.00	110.29
3730	29260	115.67	140.53	137.20	140.53	119.00	129.77	133.06	99.87	114.00	131.00	119.48
3731	29276	103.25	130.87	130.00	130.87	109.00	119.93	125.52	90.60	107.80	112.00	108.98
3732	29302	98.87	126.53	122.60	126.53	110.50	118.52	116.61	91.13	107.40	112.00	106.79
3733	29000	104.91	130.00	135.80	130.00	111.50	120.75	117.75	91.20	119.40	120.00	112.09
3734	Local Check (LC)	103.04	147.53	136.00	147.53	107.50	127.52	115.06	89.73	115.40	115.00	108.80
Exp. Mean		106.52	127.12	118.89	127.12	107.97	117.55	122.74	94.59	114.71	117.27	112.37

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Table No. 1.28 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL				ZONE VI - WESTERN					
		MAHARASHTRA1		MAHARASHTRA 1 (2)	Z5 (6)	MAHARASHTRA 2		MAHARASHTRA 2 (2)	MAHARASHTRA (4)	GUJARAT	
		SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON	Mean	Mean	NAVSARI	NAWAGAM
3701	29268	103.00	114.00	108.50	115.68	125.00	109.73	117.37	112.93	135.00	119.90
3702	29263	92.00	101.00	96.50	107.50	119.00	103.33	111.17	103.83	127.90	122.70
3703	28489 (R)	98.00	104.00	101.00	104.07	126.00	93.60	109.80	105.40	129.60	112.00
3704	29002	86.00	105.00	95.50	107.55	126.00	102.00	114.00	104.75	136.50	122.30
3705	29011	94.00	102.00	98.00	110.53	128.00	101.13	114.57	106.28	125.50	117.30
3706	27900	96.00	103.00	99.50	107.81	123.00	99.27	111.13	105.32	128.20	123.80
3707	29284	105.00	122.00	113.50	119.11	138.00	102.07	120.03	116.77	139.10	130.10
3708	27908	104.00	102.00	103.00	108.86	115.00	97.33	106.17	104.58	123.10	122.10
3709	29278	94.00	113.00	103.50	112.67	126.00	97.53	111.77	107.63	134.00	130.40
3710	28998	119.00	102.00	110.50	110.90	129.00	94.53	111.77	111.13	124.10	
3711	29006	95.00	93.00	94.00	108.07	129.00	87.93	108.47	101.23	138.70	124.60
3712	29014	97.00	92.00	94.50	106.42	128.00	94.73	111.37	102.93	127.20	126.70
3713	NDR 359 (NC)	76.00	98.00	87.00	97.74	114.00	91.73	102.87	94.93	116.80	113.10
3714	28160	83.00	103.00	93.00	106.56	128.00	101.00	114.50	103.75	126.30	127.60
3715	28383	97.00	114.00	105.50	110.96	115.00	102.40	108.70	107.10	124.50	114.50
3716	29257	85.00	84.00	84.50	94.68	104.00	93.13	98.57	91.53	111.30	112.70
3717	29301	95.00	91.00	93.00	103.88	125.00	104.53	114.77	103.88	134.40	104.90
3718	28997	96.00	98.00	97.00	110.74	124.00	105.40	114.70	105.85	127.30	120.20
3719	29008	95.00	106.00	100.50	110.76	130.00	90.40	110.20	105.35	132.20	124.70
3720	Zonal Check (ZC)	105.00	94.00	99.50	98.19	137.00	99.53	118.27	108.88	143.30	135.00
3721	29012	107.00	102.00	104.50	111.66	137.00	91.60	114.30	109.40	134.50	134.20
3722	28171	97.00	101.00	99.00	106.27	119.00	101.67	110.33	104.67	125.70	127.00
3723	29256	96.00		96.00	111.10	115.00	105.53	110.27	105.51	123.80	122.80
3724	29264	116.00	117.00	116.50	115.43	130.00	96.13	113.07	114.78	128.80	128.70
3725	29290	102.00	104.00	103.00	111.32	118.00	98.93	108.47	105.73	124.60	113.10
3726	29001	95.00	105.00	100.00	108.64	125.00	102.87	113.93	106.97	125.30	125.00
3727	29004	96.00	111.00	103.50	108.71	119.00	100.40	109.70	106.60	126.90	116.10
3728	29009	102.00	113.00	107.50	114.84	114.00	101.27	107.63	107.57	121.80	129.50
3729	HRI 174 (HC)	66.00	112.00	89.00	103.19	120.00	99.33	109.67	99.33	131.50	126.30
3730	29260	105.00	106.00	105.50	114.82	126.00	98.60	112.30	108.90	135.60	126.50
3731	29276	95.00	101.00	98.00	105.32	120.00	92.80	106.40	102.20	128.40	122.20
3732	29302	85.00	104.00	94.50	102.69	125.00	97.80	111.40	102.95	125.80	117.60
3733	29000	93.00	93.00	93.00	105.73	138.00	89.47	113.73	103.37	137.90	131.80
3734	Local Check (LC)	106.00	93.00	99.50	105.70	116.00	89.47	102.73	101.12	131.00	125.70
Exp. Mean		96.35	103.12	99.63	108.18	123.85	98.15	111.00	105.39	129.02	122.76

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Table No. 1.28 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN		ZONE VII - SOUTHERN							
		GUJARAT (2)	Z6 (4)	ANDHRA_PRADESH		ANDHRA_PRADESH (2)	TELANGANA				TELANGANA (4)
		Mean	Mean	MARUTERU	RAGOLU	Mean	RAJENDRANAGAR	KUNARAM	WARANGAL	JAGTIAL	Mean
3701	29268	127.45	122.41	141.33	137.00	139.17	141.07	116.37	134.47	118.00	127.48
3702	29263	125.30	118.23	136.47	117.00	126.73	130.47	109.93	134.47	103.80	119.67
3703	28489 (R)	120.80	115.30	126.13	119.00	122.57	115.20	120.80	124.27	109.80	117.52
3704	29002	129.40	121.70	130.00	118.00	124.00	115.93	118.50	141.33	119.70	123.87
3705	29011	121.40	117.98	132.80	115.00	123.90	125.47	102.37	133.27	117.40	119.63
3706	27900	126.00	118.57	139.80	120.00	129.90	130.93	103.33	136.00	106.50	119.19
3707	29284	134.60	127.32	142.67	120.00	131.33	134.80		140.33	120.00	131.71
3708	27908	122.60	114.38	135.73	115.00	125.37	120.40	99.30	133.27	101.60	113.64
3709	29278	132.20	121.98	133.93	140.00	136.97	137.27	122.00	132.00	131.50	130.69
3710	28998	124.10	115.88	134.80	113.00	123.90	131.07		136.20	102.50	123.26
3711	29006	131.65	120.06	137.80	114.00	125.90	115.13	102.87	136.00	116.00	117.50
3712	29014	126.95	119.16	132.20	119.00	125.60	111.53	106.53	131.73	109.70	114.88
3713	NDR 359 (NC)	114.95	108.91	122.73	109.00	115.87	120.73	108.05	129.33	97.70	113.96
3714	28160	126.95	120.73	134.00	114.00	124.00	117.20	96.31	132.27	112.10	114.47
3715	28383	119.50	114.10	129.40	125.00	127.20	120.60	105.50	129.40	107.20	115.68
3716	29257	112.00	105.28	127.00	110.00	118.50	105.53	107.40	126.27	96.10	108.83
3717	29301	119.65	117.21	134.80	117.00	125.90	130.60	101.87	130.53	107.50	117.63
3718	28997	123.75	119.23	137.73	116.00	126.87	133.67	97.57	132.67	108.10	118.00
3719	29008	128.45	119.33	128.87	122.00	125.43	124.13	118.92	134.20	126.90	126.04
3720	Zonal Check (ZC)	139.15	128.71	139.13	132.00	135.57	136.27	108.30	131.60	128.40	126.14
3721	29012	134.35	124.33	135.13	122.00	128.57	128.73	101.77	132.20	116.70	119.85
3722	28171	126.35	118.34	131.60	122.00	126.80	115.33	86.40	126.20	99.30	106.81
3723	29256	123.30	116.78	136.80	123.00	129.90	112.27	94.53	132.47	108.40	111.92
3724	29264	128.75	120.91	136.53	121.00	128.77	140.67	107.53	140.33	114.40	125.73
3725	29290	118.85	113.66	131.60	111.00	121.30	111.07	102.93	129.80	113.10	114.23
3726	29001	125.15	119.54	133.13	121.00	127.07	115.60	103.47	127.33	119.90	116.58
3727	29004	121.50	115.60	131.13	119.00	125.07	107.73	97.73	133.60	106.70	111.44
3728	29009	125.65	116.64	132.73	122.00	127.37	111.47	98.60	130.73	102.90	110.93
3729	HRI 174 (HC)	128.90	119.28	128.73	116.00	122.37	116.80	89.05	130.07	112.20	112.03
3730	29260	131.05	121.68	140.40	121.00	130.70	133.73	111.53	138.13	121.50	126.23
3731	29276	125.30	115.85	138.27	112.00	125.13	110.33	104.53	134.93	120.60	117.60
3732	29302	121.70	116.55	137.93	121.00	129.47	106.60	100.30	131.77	109.70	112.09
3733	29000	134.85	124.29		127.00	127.00	125.47	87.91	136.73	101.00	112.78
3734	Local Check (LC)	128.35	115.54	140.00	117.00	128.50	105.73	113.33	135.73	116.20	117.75
Exp. Mean		125.91	118.40	134.28	119.62	126.84	121.75	104.55	132.93	111.86	118.11

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Table No. 1.28 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN										Overall Mean (34)
		TAMIL_NADU		TAMIL_NADU (2)	KERALA (1)	KARNATAKA			KARNATAKA (3)	PUDUCHERRY (1)	Z7 (13)	
		COIMBATORE	TIRUR	Mean	PATTAMBI	MANDYA	BRAHMAVAR	GANGAVATI	Mean	KURUMBAPET	Mean	
3701	29268	113.50	102.80	108.15		108.53	98.67	126.00	111.07	101.00	119.89	118.57
3702	29263	131.00	102.00	116.50	87.00	111.93	87.33	110.00	103.09	113.00	113.42	112.90
3703	28489 (R)	127.00	97.60	112.30	99.20	102.93	86.00	104.00	97.64	96.00	109.84	107.87
3704	29002	116.33	103.20	109.77	98.30	100.00	90.00	107.00	99.00		113.19	113.47
3705	29011	114.67	102.00	108.33	96.20	104.93	87.33	119.50	103.92	98.00	111.46	111.69
3706	27900	110.67	102.60	106.63	95.60	99.87	85.00	109.50	98.12	98.00	110.60	111.33
3707	29284	115.67	91.60	103.63	106.00	112.13	91.00	118.00	107.04	101.00	116.10	117.66
3708	27908	113.67	105.20	109.43	89.10	96.93	82.67	109.50	96.37	105.00	108.26	109.87
3709	29278	136.00	111.40	123.70	100.20	109.07	92.00	128.50	109.86	110.00	121.84	118.72
3710	28998	108.67	101.80	105.23	82.30	101.47	94.33		97.90	101.00	109.74	110.07
3711	29006	112.00	104.00	108.00	89.00	102.60	85.33	106.00	97.98	82.00	107.90	111.14
3712	29014	109.67	98.60	104.13	79.00	96.47	87.00	109.50	97.66	98.00	106.84	110.03
3713	NDR 359 (NC)	102.00	83.20	92.60	102.00	94.60	82.00	91.50	89.37	93.00	102.76	103.19
3714	28160	111.00	104.40	107.70	100.00	103.20	81.33	113.00	99.18	105.00	109.52	110.57
3715	28383	125.33	93.60	109.47	88.00	105.00	91.00	121.00	105.67	102.00	111.00	110.76
3716	29257	103.00	92.00	97.50	95.00	97.80	66.00	103.00	88.93	85.00	101.08	100.78
3717	29301	103.67	124.40	114.03	90.00	103.40	93.67	105.50	100.86	103.00	111.23	109.47
3718	28997	120.67	95.20	107.93	96.00	102.53	85.33	112.50	100.12	105.00	111.00	108.72
3719	29008	125.00	101.80	113.40	80.00	109.20	92.00	118.50	106.57	98.00	113.81	114.71
3720	Zonal Check (ZC)	136.67	124.40	130.53	88.00	120.33	101.00	123.50	114.94	115.00	121.89	113.39
3721	29012	113.67	104.40	109.03	87.00	108.20	85.00		96.60	107.00	111.82	113.55
3722	28171	104.33	104.40	104.37	95.60	95.33	71.67	109.00	92.00	103.00	104.94	108.60
3723	29256	112.33	102.40	107.37	89.00	98.93	83.67	117.00	99.87	103.00	108.75	110.37
3724	29264	113.00	100.20	106.60	95.00	109.20	83.33	116.50	103.01	115.00	114.82	115.41
3725	29290	112.00	84.40	98.20	95.00	104.80	84.00	116.50	101.77	102.00	107.55	108.99
3726	29001	112.33	96.00	104.17	106.00	96.33	80.00	119.00	98.44	99.00	109.93	111.11
3727	29004	115.67	103.60	109.63	80.00	105.80	79.67	107.50	97.66	97.00	106.55	108.10
3728	29009	123.33	95.60	109.47	100.00	112.80	91.67	116.00	106.82	99.00	110.53	112.69
3729	HRI 174 (HC)	121.67	95.00	108.33	80.00	106.47	83.00	113.50	100.99	99.00	107.04	109.07
3730	29260	122.67	114.80	118.73	75.00	111.00	86.00	110.00	102.33	106.00	114.75	117.11
3731	29276	113.00	108.00	110.50	80.00	104.20	103.67	106.00	104.62	90.00	109.66	109.40
3732	29302	113.67	103.20	108.43	100.00	101.20	85.67	102.50	96.46	98.00	108.58	106.97
3733	29000	121.33	102.40	111.87	100.00	109.53	85.67	116.00	103.73	100.00	109.42	110.80
3734	Local Check (LC)	122.33	111.60	116.97	96.15	121.53	71.67	85.50	92.90	94.00	110.06	109.97
Exp. Mean		116.40	101.99	109.20	92.11	104.95	86.28	111.59	100.66	100.64	110.76	111.09

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Table No. 1.29: Panicles/m² of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN				
		UTTARAKHAND	PUNJAB (1)	HARYANA (1)	JAMMU_KASHMIR (1)	Z2(3)	ODISHA			ODISHA (2)	
		@PANTNAGAR	LUDHIANA	KAUL	CHATHA	Mean	@ICAR NRRI CUTTACK	JEYPORE	CHIPLIMA	Mean	
3701	29268	368		365	279	322	204	297	171	234	
3702	29263	314		254		254	181	244	165	205	
3703	28489 (R)	315		323	333	328	204	382	176	279	
3704	29002	297	295	280	312	295	189	402	183	292	
3705	29011	302	257	303	314	291	239	370	175	272	
3706	27900	317		311		311	169	301	193	247	
3707	29284	256	268	263	269	267	168	378	179	279	
3708	27908	321		335		335	206	438	189	314	
3709	29278	380	282	307	335	308	135	325	235	280	
3710	28998	303	279	326	311	305	212	357	209	283	
3711	29006	230	284	266	324	291	195	299	141	220	
3712	29014	272	273	284	335	297	193	329	192	261	
3713	NDR 359 (NC)	292	293	302	314	303	177	255	187	221	
3714	28160	367	268	342	345	318	230	315	256	286	
3715	28383	272	308	269	314	297	180	245	216	230	
3716	29257	371	286	330	355	323	233	249	232	241	
3717	29301	370		321		321	224	326	280	303	
3718	28997	317	326	258	305	296	239	315	244	280	
3719	29008	289	275	316	297	296	208	251	204	227	
3720	Zonal Check (ZC)	361	304	266	329	300	182	355	225	290	
3721	29012	294	297	325	323	315	197	248	232	240	
3722	28171	278	301	268	297	289	220	300	209	255	
3723	29256	306	312	300	313	309	237	227	212	219	
3724	29264	303	264	264	306	278	231	270	180	225	
3725	29290	269		286	283	285	184	247	217	232	
3726	29001	290	310	302	313	308	234	326	219	272	
3727	29004	279	315		299	307	207	352	236	294	
3728	29009	273	282	271	314	289	232	252	211	231	
3729	HRI 174 (HC)	300	271	321	294	295	268	298	223	260	
3730	29260	354	306	258	297	287	198	251	220	235	
3731	29276	271	251	281	290	274	214	327	185	256	
3732	29302	279	312	283	283	293	246	229	188	209	
3733	29000	259	275	345	308	309	243	317	201	259	
3734	Local Check (LC)	313	297	308	331	312	248	322	218	270	
Exp. Mean		305	289	298	311	300	210	306	206	256	

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Table No. 1.29 contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR		BIHAR (1)	WEST_BENGAL (1)	JHARKHAND (1)	UTTAR_PRADESH		UTTAR_PRADESH (1)
		BIKRAMGANJ DHANGAIN	@PATNA ICAR	Mean	CHINSURAH	RANCHI	@MASODHA	VARANASI	Mean
3701	29268	276	246	276	253	183	254	227	227
3702	29263	285	222	285	220	146	272	193	193
3703	28489 (R)	366	242	366	253	181	314	186	186
3704	29002	282	196	282	231	123	303	207	207
3705	29011	276	255	276	209	118	273	206	206
3706	27900	303	174	303	253	147	233	208	208
3707	29284	355	263	355	220	105	314	167	167
3708	27908	349	218	349	286	169	238	219	219
3709	29278	303	217	303	209	151	231	195	195
3710	28998	361	268	361	308	143	287	200	200
3711	29006	327	183	327	220	151	353	171	171
3712	29014	291	219	291	308	151	325	173	173
3713	NDR 359 (NC)	249	274	249	264	133	335	186	186
3714	28160	363	227	363	319	152	365	247	247
3715	28383	277	225	277	220	121	227	215	215
3716	29257	353	184	353	198	169	275	214	214
3717	29301	285	305	285	231	152	342	230	230
3718	28997	363	247	363	242	187	275	221	221
3719	29008	292	263	292	231	147	332	215	215
3720	Zonal Check (ZC)	369	222	369	319	157	244	177	177
3721	29012	265	231	265	242	163		206	206
3722	28171	320	228	320	341	167	331	214	214
3723	29256	321	209	321	220	153	256	216	216
3724	29264	325	226	325	231	152	289	230	230
3725	29290	322	270	322	209	138	233	219	219
3726	29001	289	290	289	220	152	342	214	214
3727	29004	331	180	331	275	145	364	168	168
3728	29009	293	240	293	220	145	343	193	193
3729	HRI 174 (HC)	318	311	318	209	160	353	218	218
3730	29260	325	281	325	231	169	364	181	181
3731	29276	321	280	321	264	153	262	188	188
3732	29302	326	241	326	242	177	287	235	235
3733	29000	329	289	329	275	155	333	216	216
3734	Local Check (LC)	273	250	273	231	175	276	312	312
Exp. Mean		314	240	314	247	153	298	208	208

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Table No. 1.29 contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	Z3 (6)	ZONE IV- NORTH EASTERN					ZONE-V - CENTRAL				
			ASSAM		ASSAM (1)	TRIPURA (1)	Z4 (2)	CHHATTISGARH			CHHATTISGARH (3)	
			Mean	TITABAR	@GERUA ICAR	Mean	LEMBUCHERRA	Mean	RAIPUR	AMBIKHAPUR	JAGADALPUR	Mean
3701	29268	234	247	216	247	275	261	195	218	286	233	
3702	29263	209	272	233	272	325	298	207	195	226	209	
3703	28489 (R)	257	263	974	263	350	307	183	233	275	230	
3704	29002	238	267	218	267	288	277	136	197	201	178	
3705	29011	226	262	224	262	350	306	163	210	245	206	
3706	27900	234	253	221	253	338	295	189	215	276	227	
3707	29284	234	225	197	225	275	250	190	181	220	197	
3708	27908	275	247	242	247	325	286	190	192	236	206	
3709	29278	236	313	236	313	263	288	141	250	265	218	
3710	28998	263	227	220	227	363	295	189	205	273	222	
3711	29006	218	243	209	243	238	240	184	171	186	180	
3712	29014	241	255	206	255	238	246	185	159	213	186	
3713	NDR 359 (NC)	212	247	212	247	400	323	169	209	197	192	
3714	28160	275	285	235	285	363	324	199	225	245	223	
3715	28383	216	212	231	212	325	268	195	196	223	205	
3716	29257	236	308	260	308	500	404	143	236	282	220	
3717	29301	251	242	254	242	375	308	241	251	281	258	
3718	28997	262	307	235	307	313	310	201	224	252	226	
3719	29008	223	270	234	270	300	285	202	177	200	193	
3720	Zonal Check (ZC)	267	275	229	275	250	263	224	213	253	230	
3721	29012	226	260	228	260	375	318	154	202	217	191	
3722	28171	259	282	217	282	413	347	166	204	175	182	
3723	29256	225	235	221	235	300	268	201	201	226	210	
3724	29264	231	267	228	267	250	258	176	166	240	194	
3725	29290	225	242	236	242	375	308	158	188	204	183	
3726	29001	237	258	223	258	338	298	185	203	226	205	
3727	29004	251	247	216	247	325	286	172	173	201	182	
3728	29009	219	295	218	295	375	335	195	215	222	211	
3729	HRI 174 (HC)	238	278	233	278	350	314	197	207	253	219	
3730	29260	229	255	214	255	338	296	181	226	239	215	
3731	29276	240	257	219	257	338	297	193	188	230	204	
3732	29302	233	255	221	255	338	296	173	207	229	203	
3733	29000	249	270	225	270	325	298	176	199	250	208	
3734	Local Check (LC)	255	270	244	270	488	379	139	208	222	190	
Exp. Mean		239	261	248	261	335	298	182	204	234	207	

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Table No. 1.29 contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL				ZONE VI - WESTERN					
		MAHARASHTRA 1		MAHARASHTRA 1 (2)	Z5 (5)	MAHARASHTRA 2		MAHARASHTRA 2 (2)	MAHARASHTRA (4)	GUJARAT	
		SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON	Mean	Mean	NAVSARI	NAWAGAM
3701	29268	264	221	243	237	215	163	189	216	206	267
3702	29263	184	187	186	200	217	145	181	183	212	332
3703	28489 (R)	251	225	238	233	208	175	191	215	241	260
3704	29002	187	259	223	196	208	119	163	193	238	280
3705	29011	138	194	166	190	185	132	158	162	249	267
3706	27900	262	154	208	219	208	141	175	191	243	273
3707	29284	143	185	164	184	242	150	196	180	207	254
3708	27908	163	186	175	193	223	170	197	186	226	312
3709	29278	162	196	179	203	200	161	181	180	271	267
3710	28998	154	195	175	203	196	155	176	175	229	
3711	29006	211	241	226	199	213	120	166	196	196	260
3712	29014	167	184	175	182	220	131	176	176	229	260
3713	NDR 359 (NC)	184	199	192	192	207	168	187	189	187	247
3714	28160	164	154	159	197	220	150	185	172	245	312
3715	28383	152	213	183	196	224	130	177	180	197	241
3716	29257	183	253	218	220	202	124	163	191	274	273
3717	29301	349	202	276	265	197	143	170	223	306	325
3718	28997	167	161	164	201	200	155	178	171	243	286
3719	29008	188	204	196	194	211	123	167	181	219	254
3720	Zonal Check (ZC)	368	246	307	261	207	147	177	242	221	280
3721	29012	130	188	159	178	201	135	168	164	223	325
3722	28171	133	197	165	175	224	148	186	175	229	325
3723	29256	178		178	202	210	180	195	189	221	358
3724	29264	263	198	230	209	201	158	179	205	200	358
3725	29290	186	179	183	183	206	136	171	177	175	351
3726	29001	214	179	197	201	222	164	193	195	205	293
3727	29004	145	174	160	173	185	136	161	160	226	325
3728	29009	177	201	189	202	191	160	175	182	190	260
3729	HRI 174 (HC)	134	221	178	202	205	167	186	182	266	312
3730	29260	117	233	175	199	213	180	197	186	224	299
3731	29276	132	204	168	189	194	159	177	172	233	325
3732	29302	176	219	198	201	203	178	190	194	226	267
3733	29000	147	175	161	189	211	131	171	166	239	293
3734	Local Check (LC)	190	286	238	209	230	173	201	219	217	299
Exp. Mean		187	203	195	202	209	150	180	187	227	292

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Table No. 1.29 contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN		ZONE VII - SOUTHERN							
		GUJARAT (2)	Z6 (4)	ANDHRA_PRADESH		ANDHRA_PRADESH (2)	TELANGANA				TELANGANA (4)
		Mean	Mean	MARUTERU	RAGOLU	Mean	RAJENDRANAGAR	KUNARAM	WARANGAL	JAGTIAL	Mean
3701	29268	236	213	284	350	317	567	205	385	272	357
3702	29263	272	226	317	338	327	631	233	358	281	376
3703	28489 (R)	251	221	271	302	286	718	290	431	292	433
3704	29002	259	211	282	345	313	596	178	364	261	350
3705	29011	258	208	262	352	307	627	191	358	270	361
3706	27900	258	216	310	303	306	640	220	400	250	378
3707	29284	230	213	286	292	289	411		430	252	364
3708	27908	269	233	288	284	286	438	176	340	277	308
3709	29278	269	225	266	261	263	598	205	384	289	369
3710	28998	229	194	310	246	278	538		348	248	378
3711	29006	228	197	255	265	260	482	194	354	257	322
3712	29014	245	210	275	257	266	604	136	345	258	336
3713	NDR 359 (NC)	217	202	315	262	288	584	189	332	263	342
3714	28160	279	232	299	298	299	680	180	355	287	376
3715	28383	219	198	308	306	307	589	220	377	267	363
3716	29257	274	218	304	298	301	691	224	364	280	390
3717	29301	315	243	290	304	297	667	268	394	296	406
3718	28997	265	221	308	250	279	693	240	389	290	403
3719	29008	236	202	306	352	329	587	183	356	261	347
3720	Zonal Check (ZC)	250	214	350	423	386	549	191	411	272	356
3721	29012	274	221	310	289	300	618	165	388	251	356
3722	28171	277	232	317	236	276	716	117	371	243	361
3723	29256	289	242	365	265	315	576	183	385	242	346
3724	29264	279	229	317	295	306	629	147	399	296	368
3725	29290	263	217	310	335	323	487	180	371	260	324
3726	29001	249	221	288	323	306	582	205	364	248	350
3727	29004	276	218	286	265	276	480	158	340	262	310
3728	29009	225	200	301	300	301	571	139	402	275	347
3729	HRI 174 (HC)	289	238	301	362	332	611	143	406	289	362
3730	29260	262	229	293	249	271	562	176	399	272	352
3731	29276	279	228	284	291	288	496	191	381	252	330
3732	29302	246	218	286	356	321	616	194	364	255	357
3733	29000	266	218		291	291	562	174	356	251	336
3734	Local Check (LC)	258	230	343	254	299	691	240	352	251	384
Exp. Mean		259	219	300	300	300	591	192	375	267	359

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Table No. 1.29 contd.: Panicles/m² of entries in AVT 2 & AVT 1 - IM, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN										Overall Mean (33)
		TAMIL_NADU		TAMIL_NADU (2)	KERALA (1)	KARNATAKA			KARNATAKA (3)	PUDUCHERRY (1)	Z7 (13)	
		COIMBATORE	TIRUR	Mean	PATTAMBI	MANDYA	BRAHMAVAR	GANGAVATI	Mean	KURUMBAPET	Mean	
3701	29268	333	282	308		258	211	351	273	330	319	272
3702	29263	300	307	303	471	304	346	384	345	440	362	281
3703	28489 (R)	292	263	277	483	291	223	330	281	413	354	296
3704	29002	283	291	287	506	269	221	325	271		327	269
3705	29011	317	319	318	512	329	382	414	375	403	364	284
3706	27900	300	317	308	525	264	213	370	282	383	346	283
3707	29284	292	305	298	547	262	403	347	337	367	349	271
3708	27908	342	317	329	528	278	306	394	326	400	336	285
3709	29278	292	285	289	479	367	312	392	357	713	372	293
3710	28998	325	281	303	518	302	391		346	427	357	287
3711	29006	283	288	286	514	316	352	387	351	308	327	264
3712	29014	308	289	299	515	302	219	358	293	423	330	269
3713	NDR 359 (NC)	275	324	299	461	289	381	354	341	463	345	275
3714	28160	367	322	344	525	311	394	334	346	397	365	301
3715	28383	342	260	301	507	291	302	319	304	513	354	276
3716	29257	358	299	329	470	282	357	458	366	363	365	300
3717	29301	317	312	314	476	329	209	351	296	458	359	303
3718	28997	350	346	348	421	320	305	359	328	382	358	292
3719	29008	342	317	329	505	311	301	360	324	457	357	279
3720	Zonal Check (ZC)	358	327	343	530	336	402	362	367	433	380	307
3721	29012	283	349	316	561	331	411		371	623	382	290
3722	28171	275	356	316	485	304	344	391	346	319	344	284
3723	29256	342	276	309	508	322	360	354	346	400	352	286
3724	29264	350	280	315	501	287	277	345	303	407	348	280
3725	29290	292	354	323	527	311	342	340	331	443	350	277
3726	29001	292	337	314	486	322	333	360	339	407	350	284
3727	29004	317	307	312	499	260	266	387	304	527	335	274
3728	29009	350	345	348	475	309	355	429	364	339	353	280
3729	HRI 174 (HC)	325	281	303	497	296	281	369	315	532	361	291
3730	29260	325	268	297	484	300	246	384	310	517	344	279
3731	29276	317	258	287	426	291	319	402	337	447	335	275
3732	29302	292	286	289	427	291	277	356	308	503	346	280
3733	29000	308	322	315	430	276	358	407	347	395	344	280
3734	Local Check (LC)	333	334	334	485	300	395	436	377	390	370	303
Exp. Mean		317	306	311	493	300	317	372	330	434	351	284

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Table No. 1.30: Grain yield characteristics of entries in AVT 2 & AVT 1 - IM, Kharif 2022

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
3701	29268	78.7	72.9	68.5	7.29	2.31	3.15	LS	VOC	4.0	26.84	22
3702	29263	79.4	71.8	67.2	5.84	2.27	2.57	MS	VOC	4.0	26.28	22
3703	28489	79.3	71.2	67.0	5.68	2.14	2.65	MS	VOC	4.0	27.81	45
3704	29002	81.1	70.0	54.7	6.43	2.44	2.63	LB	VOC	4.0	27.69	22
3705	29011	81.1	69.4	55.2	6.81	2.33	2.92	LB	VOC	4.0	27.69	22
3706	27900	80.9	73.3	69.5	6.13	2.16	2.83	LB	VOC	4.0	24.11	22
3707	29284	80.4	74.5	72.9	5.61	2.20	2.55	MS	VOC	4.0	23.26	24
3708	27908	79.4	71.3	61.7	5.78	2.15	2.68	MS	VOC	4.0	26.60	22
3709	29278	78.7	68.2	59.7	7.93	1.92	4.13	LS	VOC	3.5	26.19	63
3710	28998	82.8	75.9	73.5	6.49	2.25	2.88	LB	VOC	7.0	25.69	38
3711	29006	82.0	73.0	62.1	6.75	2.37	2.84	LB	VOC	4.0	23.58	45
3712	29014	81.6	70.7	68.2	5.60	2.43	2.30	SB	VOC	4.0	26.66	40
3713	NDR -359 (NC)	82.5	75.9	71.5	6.89	2.53	2.72	LB	VOC	4.0	24.49	32
3714	28160	81.5	73.4	71.4	5.73	2.20	2.60	MS	VOC	4.0	23.96	60
3715	28383	80.5	74.4	70.5	6.83	2.40	2.84	LB	VOC	4.0	26.81	22
3716	29257	81.5	74.8	73.6	6.33	2.16	2.93	LB	VOC	4.0	21.94	50
3717	29301	79.3	65.9	59.5	5.22	2.13	2.45	SB	VOC	4.0	26.89	22
3718	28997	81.3	74.5	70.6	6.19	2.28	2.71	LB	VOC	4.0	22.49	48
3719	29008	81.3	74.6	70.4	6.78	2.31	2.93	LB	VOC	4.0	21.47	22
3720	Jaya (ZC)	80.8	72.2	70.5	5.40	2.23	2.42	SB	VOC	7.0	26.54	22
3721	29012	79.7	69.2	59.1	6.15	2.28	2.69	LB	VOC	4.0	24.02	49
3722	28171	78.3	69.3	60.0	5.72	2.19	2.61	MS	VOC	4.0	26.01	42
3723	29256	78.4	71.4	66.5	6.07	2.25	2.69	LB	VOC	4.0	24.46	22
3724	29264	79.2	72.7	70.2	7.05	2.25	3.13	LS	VOC	4.0	23.34	30
3725	29290	78.3	67.6	64.5	5.33	2.48	2.14	SB	VOC	7.0	26.78	28
3726	29001	80.1	72.2	66.2	6.47	2.31	2.80	LB	VOC	7.0	25.87	22
3727	29004	82.6	75.8	70.4	6.61	2.32	2.84	LB	VOC	4.0	25.78	22
3728	29009	79.2	71.6	69.0	6.40	2.28	2.80	LB	VOC	7.0	26.66	22
3729	HRI-174 (HC)	81.9	72.7	68.2	6.28	2.16	2.90	LB	VOC	4.0	25.69	49
3730	29260	79.3	70.9	66.4	5.11	1.92	2.66	MS	VOC	4.0	26.07	22
3731	29276	79.1	72.0	70.4	5.39	1.94	2.77	MS	VOC	4.0	24.87	22
3732	29302	80.4	74.2	72.4	6.78	2.14	3.16	LS	VOC	7.0	24.58	28
3733	29000	80.3	70.8	66.3	6.10	2.21	2.76	LB	VOC	4.0	26.92	40
3734	Local Check											

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length(mm); KB: Kernel Breadth(mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB: Long Bold; SB:Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

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Table No. 1.31: Composition of entries in Initial Variety Trial -Irrigated Medium (IVT-IM), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
1st year of testing:				
3801	29824	BPT 3085	BPT 5204 / MTU 1075	MB
3802	29825	OR 2546-5-1	OR 2006-23 / PSBRC 68	MB
3803	29826	AD 17746	ADT (R)46 / AD 09495	MS
3804	29827	SJR 6949	Secondary Selection from 1HNZ-1-Y4-Y1	MS
3805	29828	CB 18156	CB 05022 / CO 40	MB
3806	29829	Pusa 1824-12-17-4-8	Pusa 44 / PAU 201	LS
3807	29830	BMR-MS-1-2-1	Variant Selection from MO4	MB
3808	28523 (R)	CR 3564-1-1-4-2-2-1	Vijetha / N22	MS
3809	29831	RP 6520-IR16A 4938 (R 107982-B-B RGA-B RGA-134	IR 10F559 / IRR1 119	MS
3810	29832	JR 11	Kranti / Danteshwari	MB
3811	29833	JGL 34560	JGL 20171 / MTU 1075	LS
3812	29834	RP 6487- MAID-471-47-23-3-2-2-1	Krishna Hamsa / IRBB60 // Krishna Hamsa / Pi9	MS
3813	29835	KNM 10155	GP 33 / BPT 5204 // RNR 15048 / GNV 10-89 // WGL 580	MS
3814	29623	Gontra Bidhan-8	GB-1 / MTU 7029	MS
3815	29836	ORJ 1339 (TP 30430)	IIRON 42 Ent 21	MB
3816	29837	TRC CTSM 1723-B-B-32-1	CT 9993-5-10-1-M / 2 / BPT 5204	MB
3817	29838	PAU 7002-13-2-1(RYT 3941)	PR 121 / PR 114 (Xa38)	LS
3818	29839	MSN 114	IET 20919 / MSN 99 (3-1-1-1-3-2-1-B)	MB
3819	29840	NWGR 16009	GR-7 / P-203 (15-3-2-1-1-1-1)	MS
3820	NDR 359 (NC)			
3821	29841	CR 4212-12-17-1-1-2-1-1-1	Sahabgaidhan / IR 20	LB
3822	29842	MTU 1345	MTU 1010 / SRAC 34997 // MTU 1010	LS
3823	29843	UPR 4397-10-1-1-1	Pant Dhan 16 / UPR 3778-17-2-1	LS
3824	29844	R 1762-198-1-132-1	R 979-67-44-1 / IR 64	MS
3825	29845	RNR 28359	Bhadrakali / NSN 20894	LB
3826	29846	CRAC 3998-252-1	Doubled haploid of 27 P 63	MB
3827	29847	RP 6112-MS-M-13-55-7-5-1-7-5	BPT 5204 Mutant	LS
3828	29848	KNM 10150	GP 33 / BPT 5204 // RNR 15048 / GNV 10-89 // WGL 580	MS
3829	29849	RP 6167-R 58	Swarna / O. rufipogon	SB
3830	29850	HKR 16-58	HKR 48 / IRR1-DS-12	LS
3831	29851	RP 6334-201-9-4-3	JGL 3844 / KAUM 166-2	MS
3832	29852	CR 4205-3-1-2-1	MTU 1010*2 / ST 12	LS
3833	29853	NVSR 805	NVSR-303-14 / IET 22121	LB
3834	29854	RCPR 88-RP 5535-22	RP Bio 226 / IRGC 48493 // Sonasali	MS
3835	PR121-Northern, CR Dhan 300- Eastern and North Eastern, Karma Mahsuri-Central, Akshyadhan-Western, Jaya- Southern--ZC			
3836	29855	SahydriKempumukthi	Jyothi / KPR-1 (Back cross derivative)	MB
3837	29856	RNR 31664	TME 80518 / BPT 5204	LS
3838	29857	NVSR 2968	GR 7 / GAR 13	MS
3839	29858	WGL 1543	WGL 32100 / MTU 1936-12-1-2-1 // JGL3844 / Radha Krishna	LS
3840	29859	RP 6488-MAID-1-180-119-1-1-1-1	Krishna Hamsa / IRBB60 // Krishna Hamsa / Tetep /// Krishna Hamsa / DSB2	LS
3841	29860	CR 3856-44-22-2-1-11-4-1-1	IR 73963-86-1-5-2-2 / CR 2324-1	LB
3842	29861	PAU 7021-10-1-1(RYT 3951)	PR 122 / PR 123	LS
3843	29862	CR 4342-12-3-2-1	MTU 1001 / Pusa 44 // Samba Mahsuri / Wita 12	LS

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Entry No.	IET No.	Designation	Cross Combination	GT
3844	29863	MTU 1346	MTU 1010 / BL 10	MS
3845	29864	RP 6112-MS-M-166-7-11-3-6-4-3	BPT 5204 Mutant	MS
3846	29865	TRC H2TS 208-B-B-33-6	Hakuchuk 2 / Tripura Sarat	LS
3847	29866	RP 5976-210-5-12-20	Improved Samba Mahsuri / Wazuhophek	SB
3848	29867	CR 4349-208-1-2-2	CRMS32B / CRMS24B	LS
3849	29868	MSN 116	KMR 3 / CR 2711-76 (10-1-B)	MB
3850	29869	YNPG 114	NPG 10 / NPG 6	SB
3851	29870	RTN 18-IR-30	Selection from IIRON-34	LS
3852	29871	RP 6516-140-3-10-3	JGL 3844 / PHS 17 (KAUM 168-1)	MS
3853	28503 (R)	PAU 8442-2K14-3583-422-1 (RYT 3784)	Pusa 44 / IL 274 (O. glaberrima)	LS
3854	29872	CRAC 3998-243-1	Doubled haploid of 27 P 63	SB
3855	29287 (R)	RP 5405-13-1-3-1-1-1-1	RP 5405: Swarna / IRGC 4105 // Swarna	SB
3856	29873	BPT 3152	BPT 5204*2 / O.longistaminata // B95-1 / Swarna Sub-1	LS
3857	29289 (R)	CR 4315 -3-1-1-2-1	CR 3553-151 / CR 3755-131	MS
3858	29874	CN 2230	PSBRC 102 / IR 66876-11-WDR-1-1	MS
3859	29875	BRR 2074	IR 11 A 257-Sel.	MS
3860	29876	Pusa 2070-10-2-3	BPT 5204 / Swarna	MS
3861	29877	CR 4313-1-1-2-1-1-1	CR 3511-32 / CR 3561-31	MB
3862	29878	IGKV DH 105	Safri-17 / RP Bio 226	SB
3863	29879	WGL 1513	TNAU CO 50 / JGL 17183	MS
3864	Local Check			

(R): Repeat

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Table No. 1.32: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN																	
		ODISHA									BIHAR						JHARKHAND		
		ICAR-NRRI (Cuttack)			JEYOORE			CHIPLIMA			BIKRAMGANJ (Dhangain)			SABOUR			RANCHI		
GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF		
3801	29824	5903		127	3477		108	4276		120	3965		110	1499		99	2992		90
3802	29825	6030	10	118	3492		105	5346		113	5071		100	6616	4	91	5452	9	100
3803	29826	5341		123	4159		103	4494		118	4887		111	5246		102	5519	7	100
3804	29827	4161		106	3621		127	5929		99	6237		96	4283		86	3856		83
3805	29828	6167	6	119	3010		104	6282		117	3497		111	5760		102	3723		99
3806	29829	3748		112	5179	7	103	1269		116	4303		100	6144	9	86	4189		98
3807	29830	5598		115	3982		100	5622		107	4327		101	5300		89	3457		105
3808	28523 (R)	5676		113	2885		100	5436		108	5240		102	6059		95	3989		95
3809	29831	5121		116	3967		96	4231		109	5644		100	6119	10	95	4322		100
3810	29832	3081		102	4244		108	4442		102	4856		98	4346		86	4255		90
3811	29833	6675	2	117	4659		102	5218		113	3908		101	6350	6	97	4189		98
3812	29834	5278		103	6018	3	105	6782	4	111	3917		99	5731		86	5120		87
3813	29835	5642		112	4992	8	111	3827		113	4529		100	5110		104	2394		113
3814	29623	3165		101	3490		110	3712		116	5212		96	5298		82	4654		90
3815	29836	4748		110	2787		101	5263		98	4960		98	4600		87	3324		90
3816	29837	4905		108	4479		104	6314		128	5751		97	5034		88	6383	4 *	92
3817	29838	3907		108	3472		114	4891		126	6282	10	99	5276		87	3790		99
3818	29839	4437		129	4551		96	3481		115	3763		120	4673		105	2460		112
3819	29840	4489		104	3144		104	6276		109	5544		98	4924		94	3191		92
3820	NDR 359 (NC)	4739		108	2667		106	4923		112	5521		98	4938		89	4920		94
3821	29841	6172	5	120	5672	4	114	596		126	4422		111	5615		91	3258		104
3822	29842	6129	7	121	4538		100	4929		119	4378		111	6028		105	2859		103
3823	29843	4203		113	4515		108	6378		104	6351	8	98	4795		87	5984	5 *	94
3824	29844	5462		117	4033		100	7000	3	104	5154		99	5468		93	2926		92
3825	29845	5765		118	3521		97	4962		112	5585		105	6670	3	92	5585	6	98
3826	29846	4167		115	3718		109	3237		114	3977		97	3829		90	3059		92
3827	29847	2903		99	3710		126	5359		110	5704		89	3090		80	3790		84
3828	29848	5430		117	4805		103	4096		126	5278		100	4860		106	2460		105
3829	29849	3945		131	4005		101	6372		118	3731		105	4971		104	3191		102
3830	29850	4216		99	3885		105	7077	1	106	5871		98	6075		91	3524		94
3831	29851	4258		113	4151		101	6058		112	4716		99	4878		91	4322		93
3832	29852	4632		100	4074		117	5308		127	5458		96	3775		84	3989		86
3833	29853	3864		107	4610		102	2635		126	4441		100	4848		88	4056		90
3834	29854	4763		115	4667		115	1699		115	3504		100	5938		92	3856		103
3835	Zonal Check (ZC)	6127	8	126	4044		101	1058		120	4653		120	5076		107	3457		102
3836	29855	5407		115	3821		103	7058	2	111	6490	5	101	5978		94	5519	7	96
3837	29856	2102		100	3821		108	4064		105	4122		96	4858		84	3258		90
3838	29857	5273		105	3500		103	6603	8	113	5044		96	4589		96	5319		93
3839	29858	5722		101	3787		114	5436		113	5044		97	3499		84	4122		90
3840	29859	5652		109	4064		126	6673	5	116	7298	1	98	5096		91	4854		92
3841	29860	5981		119	3915		111	6474	10	110	6655	3	104	5931		103	5319		101
3842	29861	5686		123	4292		107	994		105	6439	6	99	5485		91	6848	2 *	100
3843	29862	5297		115	4010		102	3718		117	4293		95	4543		94	3923		101
3844	29863	6328	3	123	2138		103	4551		118	6256		100	5863		105	2992		105
3845	29864	5568		100	3608		102	6282		99	4350		96	3329		88	2194		90
3846	29865	5695		119	7382	1	113	6628	7	112	4372		98	4119		85	4388		90
3847	29866	5259		112	4705		94	3013		117	5442		100	5570		94	2061		99
3848	29867	5188		120	4667		113	3731		118	5215		96	4591		88	4721		99
3849	29868	6042	9	119	4013		100	5276		109				6073		93	4388		90
3850	29869	5231		110	3590		103				6528	4	98	6773	2	89	6915	1 *	99
3851	29870	5871		113	4921	10	116	6526	9	102	7159	2	100	6273	7	89	5386	10	98
3852	29871	4545		109	4923	9	100	5833		106	4283		92	4359		86	3258		90
3853	28503 (R)	4432		124	5590	5	125	5192		116	3933		99	5291		88	3790		100
3854	29872	4121		112	4182		109	4083		109	4205		101	4161		93	3059		90
3855	29287 (R)	7165	1	129	4300		99	6263		111	4414		108	6091		107	3125		111
3856	29873	5455		115	4236		103	5705		109	6383	7	100	5149		103	5319		98
3857	29289 (R)	5036		112	4264		100	2372		118	5550		101	4726		95	2394		102
3858	29874	3684		104	3867		103	4423		95	4378		106	4928		101	1995		113
3859	29875	6235	4	114	7074	2	101	3667		112	5227		99	6959	1	100	5053		101
3860	29876	5456		119	4197		102	4910		115	3813		99	6465	5	96	4920		99
3861	29877	3491		103	3897		100	6635	6	110	6338	9	99	6159	8	95	4721		100
3862	29878	5731		108	5277	6	100	6301		105	6212		100	5381		89	4787		92
3863	29879	3856		101	4054		101	5756		99	4946		96	4083		86	6649	3 *	90
3864	Local Check (LC)	4222		104	2951		103	5481		110	3965		104	4704		102	3457		92
Exp. Mean		5009		113	4176		106	4896		112	5063		100	5160		93	4113		96
F Value		6.87(P<0.0001)S		5.70(P<0.0001)S		24.28(P<0.0001)S		16.06(P<0.0001)S		8.28(P<0.0001)S		13.88(P<0.0001)S							
CD		1072		1062		922		681		964		895							
SEm			2			1			1			1				0			1
CV%		10.71		12.73		9.42		6.73		9.35		10.89							
D/S		15-07-2021		22-07-2021		13-08-2021		17-07-2021		17-07-2021		17-07-2021		06-08-2021		20-07-2021			
D/P		28-08-2021		23-08-2021		19-09-2021		14-08-2021		14-08-2021		06-08-2021		08-08-2021					
Local Check Name		Tapaswini		Pratikshya		Pratikshya		R.Sweta		Rajendra Sweta		BVS-1							

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 1.32 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN												ZONE-V - CENTRAL								
		WEST BENGAL			UTTAR PRADESH						MADHYA PRADESH			CHHATTISGARH								
		CHINSURAH			MASODHA			VARANASI			Z3 (9)			WARASEONI			RAIPUR					
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF			
3801	29824	5595		108								3958		109		2031		108		3373		113
3802	29825	7121	9	102				5990	9	93		5640	7 *	102		7423	2 *	92		6264	2	94
3803	29826	6577		111				4260		111		5060	*	110		5066		94		5703	8	105
3804	29827	5521		99	5585		96	4232		84	4825		97	6407	8	86		3004				80
3805	29828	5662		110	2360		104	4177		100	4515		107	3598		95		5623	9			101
3806	29829	6786		104				5638		91	4657		101	5795		90		4482				93
3807	29830	7165	8	110	1995		116	4948		101	4710		104	5017		99		5000				99
3808	28523 (R)	5744		109	4854		99	4805		96	4965	*	102	6109		87		5062				95
3809	29831	7240	6	108	5785	6	94	4297		109	5192	*	103	4305		91		4870				96
3810	29832	6414		103	5851	3	98	5573		93	4785		97	4625		86		5225				94
3811	29833	7515	4	110	1868		102	4240		101	4958	*	104	6440	7	98		3236				95
3812	29834	7530	3	104				4844		93	5653	5 *	98	4890		90		3493				88
3813	29835	5588		110	5851	3	79	4219		107	4684		105	5563		105		4562				105
3814	29623	5804		97	4987		80	6484	1	83	4756		95	3008		79		4261				84
3815	29836	5506		101	4455		93	5339		92	4554		96	5430		84		3837				87
3816	29837	6637		102				6341	4	96	5731	2 *	102	6446	6	86		4551				92
3817	29838	6138		104	3657		120	4263		101	4631		106	6026		89		5250				94
3818	29839	5923		106				4177		106	4183		111	4768		114		4261				109
3819	29840	5484		103	2128		102	5065		94	4472		100	5254		86		4736				91
3820	NDR 359 (NC)	5469		98	4255		100	3594		89	4558		99	5717		87		4217				89
3821	29841	5454		109	2301		94	4250		93	4193		107	3240		90		4460				100
3822	29842	5781		109				2318		115	4620		110	4570		101		6359	1			106
3823	29843	5595		101	5652	10	98	5456		89	5437	10 *	99	3609		87		4960				93
3824	29844	5476		104	3059		113	5508		91	4898		101	7031	4	91		4620				93
3825	29845	5595		105	3989		102	6471	2	98	5349	*	103	6060		91		4812				94
3826	29846	5491		102	3657		105	4753		85	3988		101	4691		87		3830				88
3827	29847	5670		102	5785	6	85	4260		86	4475		95	3582		85		1518				77
3828	29848	5744		108				4258		101	4616		108	5585		106		3728				106
3829	29849	5528		109				4229		107	4497		109	4194		101		3880				99
3830	29850	6116		102	4388		90	4766		95	5102	*	97	4305		89		3826				92
3831	29851	5818		102	4455		98	4583		94	4804		100	6402	9	87		4533				94
3832	29852	5536		97	4920		84	4185		81	4653		97	5110		78		2435				78
3833	29853	5707		104	2261		113	4167		102	4065		103	4029		91		3297				93
3834	29854	6563		106	1795		121	4219		104	4112		108	3913		94		4562				93
3835	Zonal Check (ZC)	7619	1	114				4198		105	4529		112	4923		89		4652				91
3836	29855	5446		109	4654		96	6393	3	93	5641	6 *	102	7494	1 *	94		5043				94
3837	29856	7083	10	102	5386		80	4479		91	4353		95	5083		82		3612				83
3838	29857	5528		104	6051	1	98	5807		90	5302	*	100	5740		89		5380				95
3839	29858	5513		102	4920		82	4232		89	4697		97	3946		86		3348				85
3840	29859	5818		101	5785	6	96	6042	7.5	95	5698	3 *	102	6391	10	88		6123	4			93
3841	29860	7262	5	109	5718	8	86	5286		96	5838	1 *	104	6711	5	95		6022	5			101
3842	29861	5476		105	5386		116	5299		100	5101	*	105	5055		97		4746				99
3843	29862	5558		108				4240		105	4448		104	4156		88		3609				104
3844	29863	5930		111				5208		108	4908		109	5607		98		5920	6			101
3845	29864	5722		104	4721		94				4472		96	4934		88		3482				95
3846	29865	5618		103	1862		100	5091		98	5017	*	102	4857		86		4094				87
3847	29866	5536		109	3790		103	4232		96	4401		102	4233		88		4319				101
3848	29867	6153		103	2992		104	4688		90	4661		103	4884		87		3413				92
3849	29868	7232	7	105	2493		102	4260		97	4972	*	102	6358		95		5449				95
3850	29869	5818		104	5851	3	104	4203		93	5614	8 *	100	5320		94		6167	3			100
3851	29870	5595		108	3324		97	6042	7.5	99	5677	4 *	102	5530		95		4949				94
3852	29871	5521		103	3989		118	4948		86	4629		99	5894		85		3417				88
3853	28503 (R)	6972		108	4189		98	4219		105	4845		107	5342		93		4004				99
3854	29872	5528		103	3258		84	4271		93	4096		99	4801		81		3880				92
3855	29287 (R)	5565		113				4229		107	5144	*	110	4928		104		5366				107
3856	29873	6823		108	2859		92	4219		101	5128	*	103	4012		95		4388				97
3857	29289 (R)	5573		108	3059		104	4466		97	4160		104	6137		98		4367				94
3858	29874	7589	2	107				4167		101	4379		104	5188		102		3891				106
3859	29875	5521		109	2926		116	5885	10	99	5394	*	105	4233		106		4819				100
3860	29876	5446		110	1862		104	5677		92	4750		104	6054		91		4663				94
3861	29877	5499		104	2121		104	5417		96	4920		101	7401	3 *	91		5507	10			94
3862	29878	5595		108	4920		98	6198	5	95	5600	9 *	99	5535		91		5873	7			92
3863	29879	5528		103	5718	8	102	4844		83	5048	*	95	4950		88		4192				90
3864	Local Check (LC)	5506		109	4255		110	6172	6	107	4524		104	5971		84		4036				99
Exp. Mean		6017		105			4040	99		4844	96		4832	102		5186		91		4477		95
F Value		4.09(P<0.0001)S					36.80(P<0.0001)S			2.53(P<0.0002)			12.02(p<0.0001)S			6.23(P<0.0001)S				5.78(P<0.0001)S		
CD		952					642			1463			392			1246			1122			
SEm				1				1			1			102			1				1	
CV%		7.92					7.91			15.11			4.06			12.02			12.54			
D/S		16-07-2021					21-07-2021			19-07-2021					20-07-2021				16-07-2021			
D/P		14-08-2021					21-08-2021			17-08-2021					08-08-2021				03-08-2021			
Local Check Name		PRATIKHYA					NDR 2064			HUR-105					JR 206				IGKV R 1244			

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Table No. 1.32 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL									ZONE VI – WESTERN								
		MAHARASHTRA 1						Z5 (4)			MAHARASHTRA 2			GUJARAT					
		SAKOLI			SINDHEWAHI			Mean			KARJAT			NAVASARI			NAWAGAM		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
3801	29824	4258		106	3345		95	3252		105	4808		100	4512		81	3609		93
3802	29825	4811	10	94	5199	9	98	5924	2 *	94	7708	4	96	5876	10	92	4852		91
3803	29826	4723		94	3274		107	4692		100	7756	3	96	5696		95	5276	6	103
3804	29827	4066		80	4162		90	4410		84	4808		95	5568		82	4843		86
3805	29828	4864	9	98	3821		103	4477		99	3686		94	5952	8	94	6895	1	101
3806	29829	3270		88	4347		91	4474		90	6250		96	6464	1	90	3508		91
3807	29830	6004	1	95	5433	6	100	5364	6	98	6090		96	5591		96	4394		102
3808	28523 (R)	3860		90	4545		93	4894		91	6571		99	5898	9	90	5551	3	98
3809	29831	4146		91	3416		99	4184		94	4006		93	4594		93	3615		98
3810	29832	5460	6	91	4474		96	4946		91	3846		95	5021		79	4898		82
3811	29833	5303	7	94	4588		98	4892		96	6571		95	5160		97	4602		98
3812	29834	4126		89	3608		92	4029		89	5769		95	4118		82	4294		86
3813	29835	4116		100	3288		110	4382		105	7853	1	98	3459		90	4966		102
3814	29623	3563		83	5455	5	85	4072		82	4487		94	4814		81	4391		90
3815	29836	3840		77	4503		90	4403		84	5288		96	4256		82	4460		88
3816	29837	3679		82	4766		95	4861		89	6571		95	5386		85	4047		90
3817	29838	3113		90	4858		99	4812		93	5288		94	2904		83	3105		86
3818	29839	3437		90	3310		115	3944		107	5128		99	3644		102	5407	4	103
3819	29840	3243		89	4325		95	4390		90	6410		93	3607		83	3867		93
3820	NDR 359 (NC)	3283		84	5391	7	91	4652		88	5288		94	3325		93	4739		89
3821	29841	3713		92	4524		106	3984		97	4968		99	3187		99	4005		94
3822	29842	4345		89	3459		100	4683		99	4487		96	4968		101	5234	9	105
3823	29843	4046		87	4815		98	4358		91	6410		93	4423		86	3581		91
3824	29844	3669		94	5533	3	96	5213	10	93	7532	8	91	5267		90	4444		94
3825	29845	3502		95	3466		100	4460		95	7212		97	5610		92	3839		91
3826	29846	3699		86	3885		96	4026		89	5609		92	4200		90	3617		87
3827	29847	3604		76	3672		95	3094		83	5449		93	3317		80	2134		87
3828	29848	4471		100	2820		115	4151		106	5288		99	4917		94	4837		106
3829	29849	3522		99	2933		105	3632		101	4968		96	4463		93	3502		103
3830	29850	3739		90	3984		100	3964		93	6891		97	5307		83	4640		90
3831	29851	5534	5	91	5476	4	94	5486	4	91	5609		91	5575		84	3837		94
3832	29852	4116		78	4439		98	4025		83	7372		92	4419		80	4091		83
3833	29853	4136		94	4055		105	3879		96	3686		96	4872		86	3333		90
3834	29854	3565		102	3409		97	3862		96	5288		97	4947		93	5024		88
3835	Zonal Check (ZC)	4603		88	5028		102	4802		92	7532	8	95	6265	3	96	3344		94
3836	29855	5946	2	91	4695		109	5795	3 *	97	7692	5	95	6121	5	93	4477		100
3837	29856	3502		81	4403		100	4150		86	6571		94	3876		82	4329		86
3838	29857	4211		90	5810	2	98	5285	7	93	5449		91	5743		86	4159		90
3839	29858	3896		79	5107		96	4074		86	5449		93	2979		83	3496		89
3840	29859	3922		93	4411		100	5212		93	7292		92	4367		83	2519		85
3841	29860	4016		94	4751		103	5375	5	98	7532	8	97	6212	4	85	4177		101
3842	29861	3571		100	4141		104	4378		100	5769		100	4723		86	3206		90
3843	29862	3632		93	3459		101	3714		96	5609		97	5224		90	4436		103
3844	29863	3876		99	5078		111	5120		102	7212		99	5648		97	4985		103
3845	29864	5169	8	84	4119		93	4426		90	4167		91	3125		81	2262		86
3846	29865	3715		79	4254		90	4230		85	4968		95	6028	6	86	4552		88
3847	29866	3422		89	3537		105	3878		95	5288		95	3297		94	4049		96
3848	29867	3719		88	4212		98	4057		91	3526		96	3631		90	2569		92
3849	29868	3788		88	4766		97	5090		94	7051		91	4322		83	5251	8	99
3850	29869	3542		98	3700		101	4682		98	7051		96	5995	7	82	5274	7	91
3851	29870	4333		91	4815		100	4907		95	7692	5	97	3355		90	4563		87
3852	29871	5579	4	91	5071		95	4990		90	4968		91	2956		83	3504		81
3853	28503 (R)	3313		93	3750		101	4102		96	3686		94	2850		89	3195		85
3854	29872	3577		98	4368		98	4157		92	7532	8	95	3283		86	3321		94
3855	29287 (R)	3495		96	3047		118	4209		106	5288		100	4366		100	5356	5	103
3856	29873	3280		100	2997		104	3669		99	5769		97	3689		93	3380		94
3857	29289 (R)	3646		96	4411		102	4640		97	5449		96	3957		90	5163	10	95
3858	29874	3482		105	3111		111	3918		106	4006		99	4933		100	5579	2	106
3859	29875	3673		99	4098		108	4206		103	4647		96	4715		96	4522		99
3860	29876	3392		97	4361		96	4618		94	4327		92	4659		90	3712		95
3861	29877				4993		97	5967	1 *	94	7853	1	97	4999		84	4478		90
3862	29878	4146		91	5313	8	94	5217	9	92	7388		95	6329	2	88	4716		90
3863	29879	3923		89	5881	1	97	4737		91	3365		92	4200		83	3297		91
3864	Local Check (LC)	5753	3	91	5156	10	99	5229	8	93	5128		93	4667		83	4456		104
Exp. Mean		4047		91	4303		99	4511		94	5785		95	4654		88	4215		93
F Value		6.76(P<0.0001)	S		3.98(P<0.0001)	S		12.63(P<0.0001)	S		10.13(P<0.0001)			10.43(P<0.0001)			4.40(P<0.0001)		
CD		770			1093			482			1150			886			1186		
SEm				1			3			1			1			0			2
CV%		9.52			12.71			5.34			9.95			9.53			14.08		
D/S		15-07-2021			15-07-2021						27-07-2021			17-07-2021			20-07-2021		
D/P		05-08-2021			21-07-2021						20-08-2021			07-08-2021			19-08-2021		
Local Check Name		PDKV Kisan			PKV HMT						Karjat - 5			GNR-5			GAR 13		

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Entry No	IET No	ZONE VI – WESTERN									ZONE VII – SOUTHERN								
		Z6 (3)			ANDHRA PRADESH						TELANGANA						TAMIL NADU		
		Mean			MARUTERU			RAGOLU			RAJENDRANAGAR			WARANGAL			COIMBATORE		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
3801	29824	4310		91	3990		114	4383		109	5543		119	6282		115	6600		119
3802	29825	6145	2	93	5855		96	6288	7	92	6621		103	7308		100	7694	1	100
3803	29826	6243	1	98	5035		105	5043		106	5912		103	6015		108	4803		105
3804	29827	5073		88	3470		82	5628		81	5944		90	7874	6	90	5363		90
3805	29828	5511		96	7915	5	104	3496		94	8120	3	104	5176		101	5828		101
3806	29829	5407		92	4910		94	4448		88	6157		100	5967		94	7603	2	106
3807	29830	5358		98	5775		105	5065		92	4652		104	5374		98	5743		100
3808	28523 (R)	6007	6	95	7285		101	5628		92	6171		96	7236		91	7337	6	97
3809	29831	4072		94				5314		94	5614		98	4469		99	5123		102
3810	29832	4588		85				5184		83	5386		96	5540		92	2514		100
3811	29833	5444		97	7485		103	4535		90	7624	7	95	6889		100	2610		96
3812	29834	4727		87	3900		85	4654		84	5862		88	6154		90	6655		99
3813	29835	5426		96	6800		102	3907		97	5499		111	6238		106	7040		108
3814	29623	4564		88	4995		83	5000		78	6288		90	8714	3	85	3351		92
3815	29836	4668		88	6900		84	4535		82	5999		90	4997		95	3678		92
3816	29837	5335		90	4310		91	5130		86	5769		92	4810		100	2364		92
3817	29838	3766		87	5235		93	6591	3	87	5461		98	4628		99	4226		100
3818	29839	4726		101	7680	7	112	3745		106	5352		104	5100		112	4429		106
3819	29840	4628		89	3650		93	5173		85	5745		99	5043		101	3188		98
3820	NDR 359 (NC)	4451		92	2495		91	5076		85	6194		94	5041		101	2641		95
3821	29841	4053		97	5405		99	4675		94	4795		106	5775		110	7103		116
3822	29842	4896		100	5160		109	5195		101	4693		110	5576		114	5060		104
3823	29843	4805		90	5535		90	5390		96	5990		94	7138		100	5451		97
3824	29844	5748	10	91	7500	10	95	4686		88	5906		96	6760		94	3399		91
3825	29845	5554		93	4785		94	4913		81	5860		94	6639		104	3474		100
3826	29846	4475		89	6990		89	3485		84	5185		92	4589		93	4564		107
3827	29847	3633		86	4090		83	3128		77	6418		94	5833		92	5054		99
3828	29848	5014		99	6765		104	3528		102	5486		107	5716		105	6902		109
3829	29849	4311		97	5270		103	3615		96	6021		100	5994		98	5511		102
3830	29850	5613		90	5885		98	5801		87	6019		100	5575		92	6103		103
3831	29851	5007		89	5485		100	4307		86	5333		92	5421		91	4765		99
3832	29852	5294		85	3330		86	5303		79	6097		96	5987		87	5301		91
3833	29853	3964		90	3600		90	4978		88	6199		99	4753		92	6311		103
3834	29854	5086		92	3665		95	5065		90	6233		106	6348		95	7356	4	112
3835	Zonal Check (ZC)	5714		95	6455		113	3171		106	4605		117	7323		112	7599	3	111
3836	29855	6097	5	96	4530		98	5877	10	91	7560	9	103	8761	2	95	6267		95
3837	29856	4925		87	4755		86	6061	9	78	9991	1	90	5994		91	1491		91
3838	29857	5117		89	3000	3	93	5747		84	6966		96	6677		90	5171		98
3839	29858	3975		88	6915		87	5216		80	6227		97	6677		92	4237		91
3840	29859	4726		86	5170		92	3539		90	6558		96	6384		90	6515		101
3841	29860	5974	7	94	6425		100	6537	4	94	7279		100	7731	7	105	4269		100
3842	29861	4566		92	8150	1	98	5639		93	7145		104	5225		95	7255	8	105
3843	29862	5090		96	5605		108	5097		98	5195		100	5139		104	7349	5	112
3844	29863	5948	8	99	7590	8	104	5119		95	7746	5	107	7503	9	113	3632		102
3845	29864	3185		86	7010		91	4383		85	6674		92	4583		105	3269		97
3846	29865	5183		89	6705		89	4600		85	5243		94	4281		100	6267		101
3847	29866	4211		95	7940	4	99	3409		90	6095		106	6197		91	6267		108
3848	29867	3242		92	4065		91	4784		85	5962		101	4915		99	7217	9	110
3849	29868	5541		91	4115		93	5433		88	7437		94	4694		91	1691		94
3850	29869	6107	4	89	7150		96	6677	2	88	7615	8	104	4744		98	6859		102
3851	29870	5203		91	4720		98	6190	8	91	7878	4	100	6254		101	7325	7	96
3852	29871	3809		85	4075		89	6461	6	82	6567		94	4808		97	4505		91
3853	28503 (R)	3244		89	5265		99	4719		92	6103		99	5694		96	6674		104
3854	29872	4712		91	6130		92	4004		87	6842		100	4543		101	4669		96
3855	29287 (R)	5003		101	4705		110	4177		104	8541	2	104	9338	1	111	2376		104
3856	29873	4279		94	7525	9	101	4470		93	7005		98	4803		104	5433		97
3857	29289 (R)	4856		93	5120		102	4091		93	5985		101	5118		100	6483		111
3858	29874	4839		101	5725		107	4545		104	7666	6	110	7655	8	97	3837		82
3859	29875	4628		97	8030	2	106	5617		97	6631		107	6293		102	5865		106
3860	29876	4233		92	6705		99	6959	1	91	6658		98	5686		93	3521		100
3861	29877	5777	9	90	7800	6	101	4459		91	7450		98	8394	4	93	5780		98
3862	29878	6144	3	91	5965		98	4113		89	6721		98	7917	5	100	1472		93
3863	29879	3621		88	6940		91	5866		88	6859		94	7372		90	3066		90
3864	Local Check (LC)	4750		93	7020		107	6472	5	92	7507	10	100	7415	10	104	7189	10	110
Exp. Mean		4884		92	5765		97	4943	90	6357	99	6079	98	5136		100			
F Value		9.82(P<0.0001)S			8.89(P<0.0001)S			8.68(P<0.0001)S		3.81(P<0.0001)S			6.31(P<0.0001)S			15.50(P<0.0001)S			
CD		686			1365			885		1442			1359			1238			
SEm				1			1		0			3				1			0
CV%		7.05			11.84			8.96		11.35			11.19			12.06			
D/S					09-07-2021			16-07-2021		10-07-2021			21-07-2021			06-09-2021			
D/P					08-08-2021			08-08-2021		09-08-2021			18-08-2021			12-10-2021			
Local Check Name					MTU 1239			MTU 1121		MTU 1001			SOMNATH			CO 50			

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Table No. 1.32 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN																					Overall Mean (26)		
		TAMIL NADU			KARNATAKA									PUDUCHERRY (1)			Z7(10)								
		TIRUR			MANDYA			BRAHMAWAR			GANGAVATHI			KURUMBAPET			Mean			GY	R	DFF			
		GY	R	DFF	GY	R	DFF	GY	R	DFF	GY	R	DFF	GY	R	DFF	GY	R	DFF						
3801	29824	5250		110	9010	7	114	5177		114	4410		118			5627		115	4534		108				
3802	29825	5035		85	10276	2	105	6048		101	6397	2	107	6435		90	6796	1	98	6208	1*	98			
3803	29826	5400		99	10381	1	102	4097		102	3968		109	5833		83	5649		102	5379		104			
3804	29827	5200		82	7019		89	5486		99	3455		96	5139		76	5458		87	5033		90			
3805	29828	5545		101	8781	9	102	5934		102	5090		108	8102	2	101	6399	5	102	5349		102			
3806	29829	5825	5	86	6210		106	6155	6	104	2897		109	6528		93	5670		98	5123		97			
3807	29830	5325		97	5457		104	6326	1	102	3298		108	5833		85	5285		99	5107		101			
3808	28523 (R)	5140		93	6248		95	5240		104	4096		108	5833		79	6021		95	5481	10	97			
3809	29831	5875	4	100	5124		92	5063		102	3333		108	6620		81	5171		97	4889		98			
3810	29832	5110		91	8714	10	97	4021		112	3365		100	5556		80	5043		94	4880		94			
3811	29833	5375		92	9390	6	97	6067		109	5327		109	5000		83	6030	10	97	5416		99			
3812	29834	5020		82	6533		95	5947		111	3359		105	7130	9	80	5521		92	5229		93			
3813	29835	5370		107	6486		107	4798		112	4885		113	5556		91	5658		105	5098		104			
3814	29623	5735	7	84	9486	5	102	5448		104	5885	4	100	5278		77	6018		89	5114		90			
3815	29836	4710		91	7362		89	6136	8	105	3628		99	5046		83	5299		91	4830		91			
3816	29837	4347		91	8648		94	4943		105	3269		100	5000		79	4859		93	5195		95			
3817	29838	4275		84	6362		110	5593		113	3282		108	6019		80	5167		97	4765		98			
3818	29839	5435		99	7638		105	4744		107	4026		114	4676		98	5283		106	4650		107			
3819	29840	5430		95	6295		97	4040		101	4135		100	4630		72	4733		94	4578		95			
3820	NDR 359 (NC)	5930	3	91	8952	8	97	2835		102	3910		111	6574		87	4965		95	4717		104			
3821	29841	4575		101	6829		111	3119		106	3410		119	7176	7	98	5286		106	4565		105			
3822	29842	4550		101	6714		106	4091		104	5577	8	113	6898		94	5351		105	4956		105			
3823	29843	6135	2	95	8486		98	5492		104	3481		104	4630		91	5773		97	5327		96			
3824	29844	5495		95	3952		95	6136	8	102	4667		111	4491		82	5299		95	5199		96			
3825	29845	5620		95	6590		96	3479		113	5846	5	108	7176	7	83	5438		97	5270		98			
3826	29846	4470		96	4886		95	4855		100	3686		103	5000		79	4771		94	4351		95			
3827	29847	4235		83	6876		92	6126	10	98	3513		99	5880		82	5115		90	4412		90			
3828	29848	5615		107	4667		109	5650		100	4353		117	4398		80	5308		104	4866		105			
3829	29849	5635		106	4981		104	5335		102	4218		108	5278		96	5186		101	4612		103			
3830	29850	5250		102	3543		103	2766		112	6115	3	108	5093		90	5215		99	5029		96			
3831	29851	4550		95	7333		96	2279		103	5635	7	108	5972		81	5108		95	5049		95			
3832	29852	4530		83	8714	10	90	4076		102	4776		98	4074		71	5219		88	4848		90			
3833	29853	5080		102	5962		98	5795		104	3564		107	5926		86	5217		97	4468		98			
3834	29854	5325		93	4143		109	6225	4	109	4462		114	5694		91	5452		101	4701		102			
3835	Zonal Check (ZC)	4435		100	6762		109	4451		112	5417		117	7500	4	101	5772		110	5212		106			
3836	29855	5290		95	6352		96	6218	5	113	5391		104	7361	6	81	6361	6	97	5994	2*	98			
3837	29856	5285		91	6867		96	5840		112	4269		98	4954		78	5551		91	4848		91			
3838	29857	5470		98	5924		90	6282	2	112	3167		100	5185		80	5859		94	5492	9	95			
3839	29858	5350		92	5248		97	4369		111	5026		99	5185		80	5445		92	4806		92			
3840	29859	5710	9	98	6971		102	5566		111	5577	8	108	3981		82	5597		97	5472		97			
3841	29860	4565		96	7857		97	5652		108	4647		109	6944	10	88	6191	7	99	5918	3*	100			
3842	29861	6230	1	100	6705		108	3908		109	4051		113	6759		93	6107	9	102	5315		101			
3843	29862	5215		96	5390		105	4943		113	3391		111	5880		92	5320		104	4756		102			
3844	29863	5735	7	96	7257		100	5177		112	6410	1	112	5463		100	6163	8	104	5569	8	105			
3845	29864	5158		94	6038		95	3516		111	4821		107	4537		102	4999		98	4521		95			
3846	29865	4665		93	4648		92	5669		111	4224		101	5741		94	5204		96	4987		95			
3847	29866	5040		95	4971		105	5713		111	4308		114	6019		89	5596		101	4758		100			
3848	29867	5015		95	6114		101	1903		115	3878		112	5139		86	4899		99	4496		99			
3849	29868	5705	10	98	9724	3	99	3011		114	5135		112	6713		81	5366		96	5217		97			
3850	29869	4910		93	7286		103	3946		114	4929		111	4306		78	5842		98	5615	7	98			
3851	29870	5020		95	9533	4	100	6124		113	5667	6	110	6250		80	6496	3	98	5819	4*	98			
3852	29871	4675		97	6181		101	6150	7	112	3724		102	3935		97	5108		96	4774		95			
3853	28503 (R)	5015		98	5943		100	4653		106	4218		113	5000		74	5328		98	4732		100			
3854	29872	5260		91	5276		99	4896		105	3077		110	6343		93	5104		97	4564		96			
3855	29287 (R)	5155		103	6552		105	5574		104	5058		114	8380	1	87	5986		104	5314		106			
3856	29873	5780	6	95	7057		99	6042		113	3244		108	5602		96	5696		100	5024		100			
3857	29289 (R)	4453		97	6695		105	5574		112	4192		116	7870	3	73	5558		101	4852		100			
3858	29874	4680		97	6810		104	6256	3	113	3827		111	4167		93	5517		102	4816		103			
3859	29875	5055		98	4152		106	5158		111	3654		117	6481		94	5694		104	5238		104			
3860	29876	5425		96	6667		103	5722		112	3327		107	5417		83	5609		98	5000		99			
3861	29877	5248		96	8514		101	5713		108	4340		108	6528		80	6423	4	97	5749	5*	97			
3862	29878	5400		88	7667		93	5354		112	5436	10	103	7407	5	97	5745		97	5660	6	96			
3863	29879	5255		83	7171		95	5336		109	3468		108	3750		72	5508		92	5013		92			
3864	Local Check (LC)	5695		105	8590		102	5133		111	5231		109	5370		79	6562	2	102	5442		100			
Exp. Mean		5192		95	6859		100	5053		108	4350		108	5756		86	5547		98	5066		98			
F Value		4.421(P<0.0001)			19.21(P<0.0001)			7.01(P<0.0001)			8.91(P<0.0001)			2.84(P<0.0001)			9.74(P<0.0001)			25.22(P<0.0001)					
CD		629			1021			1145			867			1896			414.2			230					
SEm				1			1			1			1			2			0			0			
CV%		6.06			7.45			11.34			9.97			16.48			3.74			2.28					
D/S		30-07-2021			12-07-2021			08-07-2021			24-07-2021			18-09-2021											
D/P		28-08-2021			12-08-2021			28-07-2021																	

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Table No. 1.32 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - IM (State Means), Kharif 2021

Entry No	IET No	ODISHA (3)			BIHAR (2)			JHARKHAND (1)			WEST BENGAL (1)			UTTAR PRADESH (2)			MADHYA PRADESH (1)		
		Mean			Mean			Mean			Mean			Mean			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
3801	29824	4552		118	2732		104	2992		90	5595		108			2031		108	
3802	29825	4956	*	112	5844		95	5452	9	100	7121	9	102	5990	2	93	7423	2*	92
3803	29826	4665		114	5067		106	5519	7	100	6577		111	4260		111	5066		94
3804	29827	4570		111	5260		91	3856		83	5521		99	4909		90	6407	8	86
3805	29828	5153	*	113	4629		106	3723		99	5662		110	3269		102	3598		95
3806	29829	3399		110	5224		93	4189		98	6786		104	5638	7	91	5795		90
3807	29830	5067	*	107	4814		95	3457		105	7165	8	110	3472		108	5017		99
3808	28523 (R)	4666		107	5650		98	3989		95	5744		109	4830		97	6109		87
3809	29831	4440		107	5882	*	97	4322		100	7240	6	108	5041		101	4305		91
3810	29832	3922		104	4601		92	4255		90	6414		103	5712	6	95	4625		86
3811	29833	5517	7*	111	5129		99	4189		98	7515	4	110	3054		101	6440	7	98
3812	29834	6026	2*	106	4824		92	5120		87	7530	3	104	4844		93	4890		90
3813	29835	4820		112	4820		102	2394		113	5588		110	5035		93	5563		105
3814	29623	3456		109	5255		89	4654		90	5804		97	5736	5	81	3008		79
3815	29836	4266		103	4780		92	3324		90	5506		101	4897		92	5430		84
3816	29837	5233	*	113	5393		92	6383	4*	92	6637		102	6341	1*	96	6446	6	86
3817	29838	4090		116	5779		93	3790		99	6138		104	3960		110	6026		89
3818	29839	4156		113	4218		112	2460		112	5923		106	4177		106	4768		114
3819	29840	4636		106	5234		96	3191		92	5484		103	3597		98	5254		86
3820	NDR 359 (NC)	4110		109	5230		93	4920		94	5469		98	3925		94	5717		87
3821	29841	4147		120	5019		101	3258		104	5454		109	3276		93	3240		90
3822	29842	5199	*	113	5203		108	2859		103	5781		109	2318		115	4570		101
3823	29843	5032	*	108	5573		92	5984	5*	94	5595		101	5554	9	93	3609		87
3824	29844	5498	8*	107	5311		96	2926		92	5476		104	4284		102	7031	4	91
3825	29845	4749		109	6128	7*	98	5585	6	98	5595		105	5230		100	6060		91
3826	29846	3707		112	3903		93	3059		92	5491		102	4205		95	4691		87
3827	29847	3991		112	4397		84	3790		84	5670		102	5023		85	3582		85
3828	29848	4777		115	5069		103	2460		105	5744		108	4258		101	5585		106
3829	29849	4774		116	4351		104	3191		102	5528		109	4229		107	4194		101
3830	29850	5059	*	103	5973	*	94	3524		94	6116		102	4577		92	4305		89
3831	29851	4822		109	4797		95	4322		93	5818		102	4519		96	6402	9	87
3832	29852	4671		114	4617		90	3989		86	5536		97	4553		83	5110		78
3833	29853	3703		112	4645		94	4056		90	5707		104	3214		107	4029		91
3834	29854	3710		115	4721		96	3856		103	6563		106	3007		112	3913		94
3835	Zonal Check (ZC)	3743		116	4865		113	3457		102	7619	1	114	4198		105	4923		89
3836	29855	5429	*	110	6234	5*	97	5519	7	96	5446		109	5524	10	94	7494	1*	94
3837	29856	3329		104	4490		90	3258		90	7083	10	102	4933		85	5083		82
3838	29857	5125	*	107	4817		96	5319		93	5528		104	5929	3	94	5740		89
3839	29858	4982	*	109	4272		90	4122		90	5513		102	4576		85	3946		86
3840	29859	5463	9*	117	6197	6*	94	4854		92	5818		101	5914	4	95	6391	10	88
3841	29860	5457	10*	113	6293	3*	103	5319		101	7262	5	109	5502		91	6711	5	95
3842	29861	3657		111	5962	*	95	6848	2*	100	5476		105	5343		108	5055		97
3843	29862	4342		111	4418		94	3923		101	5558		108	4240		105	4156		88
3844	29863	4339		114	6060	10*	102	2992		105	5930		111	5208		108	5607		98
3845	29864	5153	*	100	3840		92	2194		90	5722		104	4721		94	4934		88
3846	29865	6568	1*	115	4246		91	4388		90	5618		103	3477		99	4857		86
3847	29866	4326		107	5506		97	2061		99	5536		109	4011		99	4233		88
3848	29867	4529		117	4903		92	4721		99	6153		103	3840		97	4884		87
3849	29868	5110	*	109	6073	9*	93	4388		90	7232	7	105	3377		99	6358		95
3850	29869	4411		107	6651	2*	93	6915	1*	99	5818		104	5027		98	5320		94
3851	29870	5773	4*	110	6716	1*	94	5386	10	98	5595		108	4683		98	5530		95
3852	29871	5100	*	105	4321		89	3258		90	5521		103	4469		102	5894		85
3853	28503 (R)	5071	*	122	4612		93	3790		100	6972		108	4204		101	5342		93
3854	29872	4129		110	4183		97	3059		90	5528		103	3765		88	4801		81
3855	29287 (R)	5909	3*	113	5253		107	3125		111	5565		113	4229		107	4928		104
3856	29873	5132	*	109	5766		101	5319		98	6823		108	3539		96	4012		95
3857	29289 (R)	3891		110	5138		98	2394		102	5573		108	3763		100	6137		98
3858	29874	3991		101	4653		103	1995		113	7589	2	107	4167		101	5188		102
3859	29875	5659	6*	109	6093	8*	99	5053		101	5521		109	4406		107	4233		106
3860	29876	4854	*	112	5139		97	4920		99	5446		110	3770		98	6054		91
3861	29877	4674		104	6249	4*	97	4721		100	5499		104	3769		100	7401	3*	91
3862	29878	5770	5*	104	5797		94	4787		92	5595		108	5559	8	96	5535		91
3863	29879	4555		100	4515		91	6649	3*	90	5528		103	5281		92	4950		88
3864	Local Check (LC)	4218		106	4335		103	3457		92	5506		109	5214		108	5971		84
Exp. Mean		4691		110	5120		96	4113		96	6017		105	4501		98	5186		91
F Value		9.48(p<0.0001)S			11.31(p<0.0001)S			13.88(P<0.0001)S			4.091(p<0.0001)S			5.51(P<0.0001)S			6.23(P<0.0001)S		
CD		634			634			895			952			1032			1246		
SEm				1			0			1			1			1			1
CV%		6.76			6.19			10.89			7.92			11.47			12.02		

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Table No. 1.32 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - IM (State Means), Kharif 2021

Entry No	IET No	CHHATTISGARH (1)			MAHARASHTRA 1 (2)			MAHARASHTRA 2(1)			MAHARASHTRA (3)			GUJARAT (2)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DDF	GY	R	DDF	GY	R	DDF	GY	R	DDF	GY	R	DDF
3801	29824	3373		113	3802		100	4808		100	4137		100	4061		87
3802	29825	6264	2 *	94	5005	7	96	7708	4	96	5906	3	96	5364	6	91
3803	29826	5703	8	105	3999		100	7756	3	96	5251		99	5486	5	99
3804	29827	3004		80	4114		85	4808		95	4345		88	5206		84
3805	29828	5623	9	101	4343		100	3686		94	4124		98	6424	1 *	97
3806	29829	4482		93	3809		89	6250		96	4622		91	4986		90
3807	29830	5000		99	5719	1	98	6090		96	5842	4	97	4993		99
3808	28523 (R)	5062		95	4203		91	6571		99	4992		94	5725	2 *	94
3809	29831	4870		96	3781		95	4006		93	3856		94	4105		95
3810	29832	5225		94	4967	9	93	3846		95	4593		94	4960		80
3811	29833	3236		95	4946	10	96	6571		95	5487	10	96	4881		97
3812	29834	3493		88	3867		90	5769		95	4501		92	4206		84
3813	29835	4562		105	3702		105	7853	1	98	5086		102	4213		96
3814	29623	4261		84	4509		84	4487		94	4501		87	4603		85
3815	29836	3837		87	4172		83	5288		96	4544		87	4358		85
3816	29837	4551		92	4223		89	6571		95	5005		91	4717		87
3817	29838	5250		94	3986		94	5288		94	4420		94	3005		84
3818	29839	4261		109	3374		102	5128		99	3958		101	4526		102
3819	29840	4736		91	3784		92	6410		93	4659		92	3737		88
3820	NDR 359 (NC)	4217		89	4337		88	5288		94	4654		90	4032		91
3821	29841	4460		100	4119		99	4968		99	4402		99	3596		96
3822	29842	6359	1 *	106	3902		94	4487		96	4097		95	5101		103
3823	29843	4960		93	4431		92	6410		93	5091		92	4002		88
3824	29844	4620		93	4601		95	7532	8	91	5578	8	93	4856		92
3825	29845	4812		94	3484		97	7212		97	4726		97	4725		91
3826	29846	3830		88	3792		91	5609		92	4398		91	3909		88
3827	29847	1518		77	3638		85	5449		93	4241		88	2726		83
3828	29848	3728		106	3646		107	5288		99	4193		104	4877		100
3829	29849	3880		99	3228		102	4968		96	3808		100	3983		98
3830	29850	3826		92	3862		95	6891		97	4871		95	4974		86
3831	29851	4533		94	5505	2	92	5609		91	5540	9	92	4706		89
3832	29852	2435		78	4278		88	7372		92	5309		89	4255		81
3833	29853	3297		93	4096		99	3686		96	3959		98	4103		88
3834	29854	4562		93	3487		99	5288		97	4088		98	4986		90
3835	Zonal Check (ZC)	4652		91	4816		95	7532	8	95	5721	5	95	4805		95
3836	29855	5043		94	5321	5	100	7692	5	95	6111	2	98	5299	8	96
3837	29856	3612		83	3953		90	6571		94	4825		91	4103		84
3838	29857	5380		95	5011	6	94	5449		91	5156		93	4951		88
3839	29858	3348		85	4502		87	5449		93	4817		89	3238		86
3840	29859	6123	4 *	93	4167		96	7292		92	5208		95	3443		84
3841	29860	6022	5 *	101	4384		98	7532	8	97	5433		98	5195		93
3842	29861	4746		99	3856		102	5769		100	4494		101	3965		88
3843	29862	3609		104	3546		97	5609		97	4233		97	4830		96
3844	29863	5920	6 *	101	4477		105	7212		99	5389		103	5317	7	100
3845	29864	3482		95	4644		89	4167		91	4485		89	2694		84
3846	29865	4094		87	3985		85	4968		95	4313		88	5290	9	87
3847	29866	4319		101	3480		97	5288		95	4082		96	3673		95
3848	29867	3413		92	3966		93	3526		96	3819		94	3100		91
3849	29868	5449		95	4277		92	7051		91	5201		92	4787		91
3850	29869	6167	3 *	100	3621		99	7051		96	4764		98	5635	3 *	86
3851	29870	4949		94	4574		95	7692	5	97	5613	7	96	3959		88
3852	29871	3417		88	5325	4	93	4968		91	5206		92	3230		82
3853	28503 (R)	4004		99	3532		97	3686		94	3583		96	3023		87
3854	29872	3880		92	3973		98	7532	8	95	5159		97	3302		90
3855	29287 (R)	5366		107	3271		107	5288		100	3944		104	4861		101
3856	29873	4388		97	3139		102	5769		97	4015		100	3535		93
3857	29289 (R)	4367		94	4029		99	5449		96	4502		98	4560		92
3858	29874	3891		106	3297		108	4006		99	3533		105	5256	10	103
3859	29875	4819		100	3886		103	6447		96	4139		101	4619		97
3860	29876	4663		94	3877		96	4327		92	4027		95	4186		92
3861	29877	5507	10	94	4993	8	97	7853	1	97	6423	1 *	97	4739		87
3862	29878	5873	7 *	92	4730		93	7388		95	5616	6	93	5523	4	89
3863	29879	4192		90	4902		93	3365		92	4390		93	3749		87
3864	Local Check (LC)	4036		99	5455	3	95	5128		93	5346		94	4562		93
Exp. Mean		4477		95	4182		95	5785		95	4724		95	4434		91
F Value		5.78(P<0.0001)S			6.41(P<0.0001)S			10.13(P<0.0001)			9.53(p<0.0001)S			9.43(p<0.0001)S		
CD		1122			670			1150			601			735		
SEm				1			1			1			1			1
CV%		12.54			8.02			9.95			6.37			8.29		

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Table No. 1.32 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - IM (State Means), Kharif 2021

Entry No	IET No	ANDHRA PRADESH (2)			TELANGANA (2)			TAMIL NADU (2)			KARNATAKA (3)			PUDUCHERRY (1)		
		Mean			Mean			Mean			Mean					
		GY	R	DFF	GY	R	DFF	GY	R	DFF	GY	R	DFF	GY	R	DFF
3801	29824	4187		112	5913		117	5925		114	6199	8	115			
3802	29825	6072		94	6965		101	6365	4	92	7574	1 *	104	6435		90
3803	29826	5039		105	5964		105	5102		102	6149		104	5833		83
3804	29827	4549		81	6909		90	5282		86	5320		95	5139		76
3805	29828	5706		99	6648		103	5687		101	6602	5	104	8102	2	101
3806	29829	4679		91	6062		97	6714	2	96	5087		106	6528		93
3807	29830	5420		98	5013		101	5534		98	5027		105	5833		85
3808	28523 (R)	6457	8	97	6704		93	6239	8	95	5195		102	5833		79
3809	29831	5314		94	5042		98	5499		101	4507		101	6620		81
3810	29832	5184		83	5463		94	3812		95	5367		103	5556		80
3811	29833	6010		96	7257		97	3993		94	6928	4 *	105	5000		83
3812	29834	4277		84	6008		89	5838		90	5280		103	7130	9	80
3813	29835	5354		100	5869		108	6205	9	107	5390		111	5556		91
3814	29623	4998		80	7501	8	87	4543		88	6940	3 *	102	5278		77
3815	29836	5718		83	5498		92	4194		91	5709		97	5046		83
3816	29837	4720		88	5290		96	3356		91	5620		100	5000		79
3817	29838	5913		90	5045		99	4251		92	5079		110	6019		80
3818	29839	5713		109	5226		108	4932		102	5469		109	4676		98
3819	29840	4412		89	5394		100	4309		96	4823		99	4630		72
3820	NDR 359 (NC)	3786		88	5618		97	4286		93	5232		103	6574		87
3821	29841	5040		96	5285		108	5839		108	4453		112	7176	7	98
3822	29842	5178		105	5135		112	4805		102	5461		108	6898		94
3823	29843	5463		93	6564		97	5793		96	5820		102	4630		91
3824	29844	6093		92	6333		95	4447		93	4918		102	4491		82
3825	29845	4849		88	6250		99	4547		97	5305		106	7176	7	83
3826	29846	5238		86	4887		92	4517		101	4476		99	5000		79
3827	29847	3609		80	6126		93	4645		91	5505		96	5880		82
3828	29848	5147		103	5601		106	6259	7	108	4890		108	4398		80
3829	29849	4443		100	6008		99	5573		104	4845		104	5278		96
3830	29850	5843		92	5797		96	5677		102	4141		107	5093		90
3831	29851	4896		93	5377		92	4658		97	5082		102	5972		81
3832	29852	4317		82	6042		91	4916		87	5855		97	4074		71
3833	29853	4289		89	5476		95	5696		102	5107		103	5926		86
3834	29854	4365		92	6291		100	6341	5	102	4943		111	5694		91
3835	Zonal Check (ZC)	4813		109	5964		115	6017		105	5543		112	7500	4	101
3836	29855	5204		94	8161	2	99	5779		95	5987		104	7361	6	81
3837	29856	5408		82	7993	3	91	3388		91	5659		102	4954		78
3838	29857	6874	3	89	6822		93	5321		98	5124		101	5185		80
3839	29858	6066		84	6452		94	4794		91	4881		102	5185		80
3840	29859	4355		91	6471		93	6113		99	6038		107	3981		82
3841	29860	6481	7	97	7505	7	102	4417		98	6052		104	6944	10	88
3842	29861	6895	2	95	6185		99	6743	1	102	4888		110	6759		93
3843	29862	5351		103	5167		102	6282	6	104	4575		109	5880		92
3844	29863	6355	10	100	7625	6	110	4684		99	6281	7	108	5463		100
3845	29864	5697		88	5629		99	4214		95	4792		104	4537		102
3846	29865	5653		87	4762		97	5466		97	4847		101	5741		94
3847	29866	5675		95	6146		98	5654		101	4997		110	6019		89
3848	29867	4425		88	5439		100	6116		102	3965		109	5139		86
3849	29868	4774		90	6066		92	3698		96	5957		108	6713		81
3850	29869	6914	1	92	6180		101	5885		97	5387		109	4306		78
3851	29870	5455		94	7066		100	6173	10	95	7108	2 *	108	6250		80
3852	29871	5268		85	5688		95	4590		94	5352		105	3935		97
3853	28503 (R)	4992		95	5899		97	5845		101	4938		106	5000		74
3854	29872	5067		89	5693		100	4965		93	4416		105	6343		93
3855	29287 (R)	4441		107	8940	1 *	108	3766		103	5728		108	8380	1	87
3856	29873	5998		97	5904		101	5607		96	5448		106	5602		96
3857	29289 (R)	4606		97	5552		100	5468		104	5487		111	7870	3	73
3858	29874	5135		106	7661	5	104	4259		89	5631		109	4167		93
3859	29875	6824	5	101	6462		104	5460		102	4321		111	6481		94
3860	29876	6832	4	95	6172		95	4473		98	5239		107	5417		83
3861	29877	6130		96	7922	4	95	5514		97	6189	9	105	6528		80
3862	29878	5039		94	7319	10	99	3436		90	6152	10	102	7407	5	97
3863	29879	6403	9	89	7116		92	4161		86	5325		104	3750		72
3864	Local Check (LC)	6746	6	99	7461	9	102	6442	3	107	6318	6	107	5370		79
Exp. Mean		5346		93	6218		99	5164		97	5421		105	5756		86
F Value		8.31(P<0.0001)S			5.65(P<0.0001)S			12.23(P<0.0001)S			10.99(P<0.0001)S			2.84(P<0.0001)		
CD		793			1071			715			610			1896		
SEm				0			1			0			1			2
CV%		7.42			8.62			6.93			5.63			16.48		

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Table No. 1.32: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - IM (Data Not Considered), Kharif 2021

Entry No	IET No	Bihar			West Bengal			Tripura			Chhatisgarh			Kerala		
		@Patna-ICAR			@MALDA			@LEMBUCHERRA			@JAGADALPUR			@PATTAMBI		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
3801	29824	1420		107	4933		109	4549		91	2930		117	4243		116
3802	29825	2770		103	4442		100	7225		72	5143	5	103	4133		99
3803	29826	2700		105	4067		101	7571	7	76	5234	4	107	4414		100
3804	29827	1260		85	4942		92	3927		65	3730		95	4224		97
3805	29828	1265		105	4917		99	5151		64	3737		112	4014		100
3806	29829	1338		93	5067		100	6813		76	3828		107	4295		101
3807	29830	2270		107	3792		96	5263		70	4570	6	108	4714	2	99
3808	28523 (R)	2435		98	5225		98	6534		72	3262		104	4162		101
3809	29831	1160		104	5375		97	6690		70	3359		107	4314		99
3810	29832	2720		94	4833		94	3108		66	3633		102	4633	3	103
3811	29833	1245		111	6125		95	6634		70	4173		114	3981		99
3812	29834	5200	2	92	5625		95	7281		74	3770		102	4319		98
3813	29835	1260		107	5225		103	7348		82	2507		112	4062		102
3814	29623	2835		87	7792	2	94	4873		64	3698		100	4005		102
3815	29836	4060	6	91	5250		93	4690		66	4277		102	4048		97
3816	29837	5460	1	94	5183		97	4795		70	5247	3	102	5086	1	97
3817	29838	3155		94	5325		96	6277		72	2806		107	4043		101
3818	29839	1815		114	6542		111	6467		81	3639		113	4300		103
3819	29840	1445		101	3583		97	5062		68	4512	8	102	4390		102
3820	NDR 359 (NC)	1990		91	7058	7	93	4244		68	3470		101	3962		103
3821	29841	1675		113	5750		93	6980		77	3405		113	4581	5	100
3822	29842	2430		97	7817	1	109	6902		83	4108		114	4319		109
3823	29843	1555		98	6100		97	4873		73	4251		102	4252		100
3824	29844	1945		95	5742		93	3837		68	2767		102	4324		96
3825	29845	3605	8	97	7592	3	98	5921		74	4258		107	4495	8	99
3826	29846	1100		93	4233		94	4047		68	3158		100	4167		100
3827	29847	1295		86	4083		86	2955		59	3021		96	4605	4	101
3828	29848	3065		105	4908		100	6545		75	3509		114	4029		101
3829	29849	1519		105	4600		95	4315		72	2546		107	4452	10	100
3830	29850	4485	4	94	5733		96	6969		75	2708		102	4471	9	106
3831	29851	1265		100	4625		95	9199	1	75	3971		102	4033		103
3832	29852	2225		90	5833		95	3599		71	4173		93	4000		98
3833	29853	2140		98	5225		95	5564		78	2702		103	3989		101
3834	29854	2655		103	6142		95	6356		83	2643		112	4217		102
3835	Zonal Check (ZC)	1310		114	6333		102	5385		75	3060		100	4581	5	107
3836	29855	1805		98	6400		92	4360		67	3730		106	4105		97
3837	29856	1125		89	4725		90	7485	8	79	3327		96	4181		98
3838	29857	1565		94	4400		94	6534		64	3490		102	4162		98
3839	29858	2865		87	4542		85	3613		68	4154		100	3986		101
3840	29859	4630	3	103	4908		96	7370	9	71	3730		101	4033		103
3841	29860	3275		105	7300	4	93	5040		76	3184		104	4110		101
3842	29861	3465	10	99	6125		95	7193		77	3724		112	4352		104
3843	29862	2610		108	6150		95	5129		78	2813		114	4519	7	98
3844	29863	1475		107	6417		108	6757		74	4551	7	114	3990		99
3845	29864	3670	7	87	4708		94			61	3991		102	4095		102
3846	29865	1870		91	4458		92	4522		68	2813		102	4019		107
3847	29866	1492		108	4775		97	6735		77	2760		101	4229		105
3848	29867	1060		104	4392		97	5245		68	4023		104	3805		103
3849	29868	1505		96	6850	8	101	6813		79	3867		114	4190		99
3850	29869	1354		103	6783	9	101	8697	3	77	3509		107	4276		99
3851	29870	1790		99	6725	10	100	9199	1	74	4303	10	107	4314		100
3852	29871	3570	9	91	5242		98	3077		70	3229		100	3819		106
3853	28503 (R)	1740		107	6583		98	8262	5	80	3685		114	4233		103
3854	29872	2205		97	5208		95	4594		69	3053		106	4176		100
3855	29287 (R)	1256		113	6442		103	6634		83	5286	2	112	4305		101
3856	29873	1640		103	4383		95	5319		75	3066		108	4319		101
3857	29289 (R)	1531		107	6042		97	7749	6	76	3939		112	4271		101
3858	29874	1465		109	7283	5	98	8340	4	71	3783		114	4193		104
3859	29875	3140		105	7067	6	99	5954		79	2897		112	3912		99
3860	29876	1555		101	6517		97	4527		77	4141		107	3981		98
3861	29877	1910		102	6283		96	7360	10	75	4355	9	106	4100		103
3862	29878	2345		102	5108		95	6110		65	4036		103	4005		103
3863	29879	2905		94	5142		92	2793		70	3613		103	4205		103
3864	Local Check (LC)	4235	5	102	5608		96	5857		77	5508	1	102	4305		102
Exp. Mean		2268		100	5572		97	5861		73	3693		106	4220		101
F Value		40.01(P<0.0001)S			48.39(P<0.0001)S			2.03(p=0.0029)S			1.97(P<0.0038)S			0.50 (0.996)NS		
CD		474			413			3127			1556			912		
SEm				1			2			3			0			3
CV%		10.47			3.71			26.69			21.08			10.81		

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Table No. 1.33: Plant Height (cm) & Panicles/m² of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN											
		ODISHA						BIHAR				JHARKHAND	
		ICAR-NRRI (Cuttack)		JEYOORE		CHIPLIMA		BIKRAMGANJ (Dhanganj)		SABOUR		RANCHI	
PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP		
3801	29824	105	246	83	292	86	248	102	305	102	190	101	158
3802	29825	99	265	106	327	88	276	107	363	117	228	98	228
3803	29826	102	267	106	323	91	274	101	344	117	305	101	260
3804	29827	93	228	105	366	78	260	110	320	112	196	93	176
3805	29828	103	151	97	360	79	260	100	318	122	463	84	287
3806	29829	74	207	99	272	70	246	93	282	105	335	79	231
3807	29830	79	252	85	272	63	314	81	365	95	383	98	282
3808	28523 (R)	100	254	82	400	79	290	115	336	126	308	77	266
3809	29831	86	242	87	282	68	298	97	331	109	349	100	267
3810	29832	97	155	87	396	84	218	114	262	130	253	93	249
3811	29833	99	246	88	294	78	234	86	250	122	295	85	225
3812	29834	91	262	93	233	84	296	87	246	116	361	85	278
3813	29835	98	207	100	305	77	260	81	260	112	284	99	237
3814	29623	89	183	83	277	82	204	109	365	114	235	92	228
3815	29836	93	202	79	266	81	278	107	298	119	227	79	182
3816	29837	86	244	86	361	76	314	106	281	103	363	81	287
3817	29838	77	227	94	322	72	324	99	341	105	353	108	269
3818	29839	106	210	87	260	92	232	75	325	135	253	87	243
3819	29840	92	264	85	333	76	272	110	299	111	297	93	223
3820	NDR 359 (NC)	80	214	85	270	74	252	109	262	109	252	86	183
3821	29841	113	221	83	289	87	234	101	299	124	296	85	208
3822	29842	105	294	95	326	89	244	96	369	120	308	93	221
3823	29843	86	217	89	250	83	222	118	264	119	295	85	246
3824	29844	87	260	88	436	78	314	84	258	117	365	89	222
3825	29845	90	210	85	438	82	294	96	324	113	365	96	220
3826	29846	100	210	83	367	88	324	105	313	115	305	104	197
3827	29847	93	163	85	346	79	292	119	333	103	210	109	245
3828	29848	96	255	86	380	77	276	109	317	109	407	89	208
3829	29849	84	183	84	228	64	308	109	333	103	325	92	268
3830	29850	91	229	93	250	79	266	98	285	115	362	86	229
3831	29851	91	268	95	283	74	314	101	282	114	266	95	243
3832	29852	94	203	84	361	86	310	106	348	104	300	107	241
3833	29853	90	198	97	294	81	174	113	359	109	313	93	223
3834	29854	95	270	101	296	85	284	117	290	118	380	84	243
3835	Zonal Check (ZC)	105	205	88	266	83	248	101	323	107	305	95	182
3836	29855	98	220	85	319	79	274	90	303	121	331	100	228
3837	29856	72	172	82	492	69	244	99	262	93	303	81	209
3838	29857	105	237	94	289	73	306	101	282	103	285	92	261
3839	29858	94	229	109	343	85	206	108	301	119	252	107	251
3840	29859	90	185	86	244	85	280	111	320	103	272	93	247
3841	29860	119	206	97	305	97	202	123	332	133	247	106	210
3842	29861	89	211	85	455	76	314	106	369	110	340	92	258
3843	29862	93	239	86	266	86	242	86	350	107	400	91	228
3844	29863	98	240	79	333	77	274	101	342	105	275	91	221
3845	29864	100	226	90	327	101	290	108	331	138	215	102	198
3846	29865	91	252	79	321	68	286	112	288	112	295	95	204
3847	29866	100	247	95	343	81	276	99	258	116	300	85	166
3848	29867	105	206	94	327	100	174	114	270	120	153	102	189
3849	29868	111	252	90	365	109	234			129	300	110	247
3850	29869	96	204	83	327		226	108	251	117	305	99	258
3851	29870	104	188	105	308	84	232	119	331	127	296	101	205
3852	29871	87	213	100	418	85	214	106	266	111	276	94	259
3853	28503 (R)	73	192	92	250	59	328	92	259	96	390	79	304
3854	29872	80	290	95	267	74	310	96	254	117	263	83	244
3855	29287 (R)	103	249	93	294	88	276	129	315	124	352	83	234
3856	29873	101	240	86	349	91	280	115	303	126	328	100	261
3857	29289 (R)	102	229	86	278	82	208	113	326	117	255	98	221
3858	29874	95	201	87	278	81	242	108	346	106	188	90	243
3859	29875	89	246	90	394	76	242	99	261	116	333	78	212
3860	29876	85	244	83	371	68	194	101	269	104	356	83	225
3861	29877	94	238	85	340	79	284	102	297	114	393	91	290
3862	29878	97	219	89	294	83	268	115	290	116	213	102	163
3863	29879	94	198	90	378	84	228	115	283	118	304	107	277
3864	Local Check (LC)	84	218	84	333	85	272	117	253	92	358	125	246
Mean		94	225	90	322	81	263	104	304	113	302	93	233

PH: Plant Height (cm) NP: No. of Panicles/sqm

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Table No. 1.33 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE III-EASTERN								ZONE-V – CENTRAL	
		WEST BENGAL		UTTAR PRADESH				Z3 (9)		MADHYA PRADESH	
		CHINSURAH		MASODHA		VARANASI		Mean		WARASEONI	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	121	182					100	231	115	228
3802	29825	129	281			96	185	105	269	125	302
3803	29826	128	215			94	217	105	275	123	233
3804	29827	100	198	107	246	88	216	98	245	113	292
3805	29828	117	215	105	187	79	219	98	273	106	258
3806	29829	108	198			83	216	89	248	112	285
3807	29830	98	314	108	218	84	254	88	295	97	399
3808	28523 (R)	114	215	107	231	100	227	100	280	126	252
3809	29831	104	330	115	271	77	215	94	287	107	263
3810	29832	119	215	95	270	102	192	102	245	116	233
3811	29833	105	347	80	205	81	166	91	251	121	328
3812	29834	104	363			85	208	93	281	104	285
3813	29835	110	215	113	246	86	194	97	245	97	308
3814	29623	110	215	111	239	94	163	98	234	113	275
3815	29836	105	198	97	231	94	204	95	232	111	332
3816	29837	105	248			88	286	91	298	96	329
3817	29838	93	231	95	260	76	207	91	281	87	323
3818	29839	132	215			101	179	102	239	113	278
3819	29840	110	198	100	207	87	224	96	257	98	248
3820	NDR 359 (NC)	105	182	99	210	88	171	93	221	126	305
3821	29841	109	182	105	193	93	164	100	231	106	255
3822	29842	103	215			86	209	98	273	104	269
3823	29843	116	215	108	256	95	187	100	239	123	256
3824	29844	108	215	94	206	93	259	93	282	106	355
3825	29845	100	198	92	233	91	210	94	277	116	283
3826	29846	122	198	94	223	104	221	102	262	117	284
3827	29847	92	198	81	263	95	257	95	256	108	270
3828	29848	114	264			90	183	96	286	114	329
3829	29849	111	231			73	202	90	260	102	240
3830	29850	97	248	68	249	89	265	91	264	115	312
3831	29851	116	231	103	231	86	198	97	257	114	287
3832	29852	87	182	95	249	91	221	95	268	106	311
3833	29853	106	231	124	249	88	160	100	244	105	302
3834	29854	121	281	100	224	83	192	100	273	107	289
3835	Zonal Check (ZC)	133	380			89	200	100	264	106	311
3836	29855	141	231	83	248	98	214	99	263	117	327
3837	29856	103	330	85	231	80	200	85	271	103	327
3838	29857	111	215	108	263	93	201	98	260	107	294
3839	29858	105	198	103	254	93	194	102	247	121	268
3840	29859	105	231	101	295	88	231	96	256	116	285
3841	29860	130	330	103	278	101	173	112	253	129	282
3842	29861	100	198	105	258	86	220	94	291	103	254
3843	29862	102	165			81	171	91	258	101	197
3844	29863	103	215			87	186	92	261	113	321
3845	29864	128	198	105	241			109	253	149	268
3846	29865	109	231	107	212	95	221	96	256	105	286
3847	29866	131	231	103	251	91	209	100	253	115	310
3848	29867	129	198	102	205	108	146	108	207	131	284
3849	29868	126	314	103	187	101	254	110	269	124	385
3850	29869	113	215	105	291	93	184	102	251	114	286
3851	29870	126	215	103	206	99	198	107	242	127	300
3852	29871	102	264	102	214	88	218	97	260	103	298
3853	28503 (R)	95	281	105	227	72	187	85	268	97	271
3854	29872	102	215	104	238	83	210	93	254	110	282
3855	29287 (R)	104	182			82	207	101	263	114	302
3856	29873	108	264	99	215	93	200	102	271	108	272
3857	29289 (R)	108	215	103	209	99	177	101	235	115	255
3858	29874	103	363			100	186	96	256	120	301
3859	29875	117	215	89	215	90	202	94	258	98	314
3860	29876	99	182	70	200	84	184	86	247	106	304
3861	29877	112	198	85	175	81	245	94	273	111	318
3862	29878	116	165	86	260	96	181	100	228	118	260
3863	29879	115	215	113	287	98	174	104	260	121	290
3864	Local Check (LC)	118	231	125	281	96	244	103	270	101	304
Mean		111	233	100	235	90	204	97	259	112	290

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Table No.1.33 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL								ZONE VI – WESTERN	
		CHHATTISGARH		MAHARASHTRA 1				Z5 (4)		MAHARASHTRA 2	
		RAIPUR		SAKOLI		SINDHEWAHI		Mean		KARJAT	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	115	138	91	133	88	208	102	177	117	220
3802	29825	116	187	97	258	126	130	116	219	118	217
3803	29826	118	208	98	188	119	194	115	205	128	228
3804	29827	113	207	74	231	117	207	104	234	126	216
3805	29828	122	201	73	184	110	190	103	208	109	230
3806	29829	94	201	60	143	94	163	90	198	110	216
3807	29830	101	273	96	415	89	339	96	356	99	214
3808	28523 (R)	122	186	86	185	89	223	106	211	104	205
3809	29831	110	208	81	235	84	180	96	221	108	224
3810	29832	121	174	96	321	119	173	113	225	118	209
3811	29833	115	201	108	238	113	213	114	245	127	245
3812	29834	109	211	82	186	70	177	91	215	114	210
3813	29835	108	207	86	200	110	242	100	239	110	232
3814	29623	115	143	96	186	105	162	107	191	120	209
3815	29836	117	216	88	198	117	203	108	237	119	226
3816	29837	111	254	74	145	95	236	94	241	114	206
3817	29838	103	216	63	147	88	204	85	222	100	212
3818	29839	134	198	94	173	126	160	117	202	133	229
3819	29840	118	263	82	154	107	207	101	218	111	232
3820	NDR 359 (NC)	108	177	83	170	92	148	102	200	115	218
3821	29841	118	196	85	179	115	195	106	206	119	218
3822	29842	117	204	84	150	86	189	98	203	117	215
3823	29843	114	212	84	203	121	182	111	213	130	215
3824	29844	110	220	85	195	98	266	100	259	106	224
3825	29845	112	187	83	170	108	160	105	200	109	220
3826	29846	117	202	99	187	119	197	113	217	103	213
3827	29847	118	111	83	220	115	178	106	194	118	216
3828	29848	118	196	103	236	100	187	109	237	115	227
3829	29849	101	226	65	128	85	161	88	189	104	221
3830	29850	117	203	85	238	100	205	104	239	111	214
3831	29851	110	203	108	294	108	223	110	251	112	230
3832	29852	119	152	82	219	109	208	104	222	110	255
3833	29853	120	183	72	288	116	246	103	254	108	215
3834	29854	121	236	94	168	117	140	110	208	117	215
3835	Zonal Check (ZC)	108	207	97	438	85	189	99	286	129	250
3836	29855	119	176	75	322	94	228	101	263	126	222
3837	29856	108	185	94	229	98	225	100	241	111	226
3838	29857	119	192	103	223	94	198	106	226	114	210
3839	29858	120	218	86	209	127	199	113	223	118	220
3840	29859	114	233	102	190	110	175	110	220	118	214
3841	29860	127	201	67	173	124	161	112	204	132	239
3842	29861	114	215	94	192	92	121	101	195	106	199
3843	29862	107	212	82	177	100	159	97	186	106	239
3844	29863	112	206	84	226	118	188	107	235	104	235
3845	29864	114	112	84	243	117	148	116	193	154	223
3846	29865	109	202	75	190	88	218	94	224	117	219
3847	29866	112	229	100	174	79	117	102	207	116	210
3848	29867	126	178	90	150	125	135	118	187	128	210
3849	29868	128	222	85	197	125	207	115	253	127	235
3850	29869	117	215	111	205	94	171	109	219	109	208
3851	29870	125	193	90	341	128	146	118	245	127	220
3852	29871	109	133	86	292	102	270	100	248	104	219
3853	28503 (R)	101	234	69	150	68	179	84	208	95	220
3854	29872	102	208	93	266	89	236	98	248	115	215
3855	29287 (R)	122	209	81	181	102	178	105	218	118	215
3856	29873	112	209	73	142	115	166	102	197	110	227
3857	29289 (R)	119	212	72	150	116	191	106	202	123	225
3858	29874	111	177	71	227	89	113	98	204	126	207
3859	29875	115	220	72	191	85	282	92	251	109	217
3860	29876	108	191	84	173	94	157	98	206	109	210
3861	29877	109	261			108	170	109	250	112	226
3862	29878	126	189	83	223	109	147	109	204	116	224
3863	29879	115	151	116	371	111	246	116	264	110	209
3864	Local Check (LC)	121	177	96	329	90	290	102	275	105	225
Mean		115	199	86	215	104	192	104	224	115	221

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Entry No	IET No	ZONE VI – WESTERN						ZONE VII – SOUTHERN			
		GUJARAT				Z6 (3)		ANDHRA PRADESH			
		NAVASARI		NAWAGAM		Mean		MARUTERU		RAGOLU	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	126	246	94	261	112	243	151	360	115	258
3802	29825	131	231	94	217	114	221	129	353	120	360
3803	29826	135	202	104	257	122	229	131	340	117	352
3804	29827	121	215	118	241	122	224	127	323	114	371
3805	29828	136	256	98	262	114	250	126	343	126	368
3806	29829	113	228	94	297	106	247	111	314	104	231
3807	29830	110	236	87	300	99	250	119	320	109	365
3808	28523 (R)	145	240	104	268	118	238	118	294	126	365
3809	29831	120	223	98	267	109	238			109	355
3810	29832	120	196	117	233	118	212			133	287
3811	29833	128	274	98	215	118	245	136	274	129	330
3812	29834	124	237	99	251	112	233	128	320	107	372
3813	29835	116	215	89	218	105	222	128	317	115	363
3814	29623	131	227	105	281	119	239	104	254	103	279
3815	29836	127	240	116	305	121	257	137	284	127	360
3816	29837	102	194	109	263	109	221	125	330	115	368
3817	29838	117	215	92	261	103	229	117	320	104	340
3818	29839	120	187	115	227	123	214	141	336	146	369
3819	29840	127	175	99	253	112	220	131	373	108	314
3820	NDR 359 (NC)	125	139	97	274	112	210	128	307	106	279
3821	29841	146	170	98	215	121	201	131	300	121	302
3822	29842	121	285	93	246	110	249	137	366	121	342
3823	29843	116	204	108	229	118	216	131	317	118	355
3824	29844	127	147	98	270	110	213	125	327	113	350
3825	29845	121	220	97	254	109	231	123	297	112	304
3826	29846	120	180	119	300	114	231	139	320	133	276
3827	29847	121	215	118	243	119	225	120	376	118	357
3828	29848	123	257	99	212	112	232	128	330	117	295
3829	29849	121	279	88	267	104	256	123	356	110	324
3830	29850	131	240	107	257	117	237	132	347	123	327
3831	29851	115	215	101	250	109	231	131	294	113	299
3832	29852	118	237	110	280	113	257	132	337	109	348
3833	29853	120	218	97	274	109	236	125	320	115	325
3834	29854	135	198	116	275	123	229	138	327	115	320
3835	Zonal Check (ZC)	145	280	121	255	131	262	133	353	135	329
3836	29855	126	224	101	255	118	234	138	337	127	353
3837	29856	111	202	98	263	107	230	113	343	96	373
3838	29857	121	187	98	226	111	207	122	287	111	363
3839	29858	132	175	105	252	118	216	128	310	116	264
3840	29859	119	200	103	264	113	226	124	380	115	376
3841	29860	130	167	118	244	127	217	150	310	140	304
3842	29861	109	212	97	242	104	217	130	297	116	355
3843	29862	113	199	91	253	103	230	126	297	108	322
3844	29863	118	173	95	229	106	212	135	353	116	296
3845	29864	115	188	112	220	127	210	125	343	142	359
3846	29865	113	199	103	288	111	235	126	386	111	358
3847	29866	125	147	102	248	115	201	135	333	113	337
3848	29867	121	175	111	240	120	208	141	304	123	329
3849	29868	132	209	119	270	126	238	142	317	145	368
3850	29869	121	214	103	278	111	233	135	314	124	334
3851	29870	129	231	117	247	125	232	140	274	135	325
3852	29871	112	231	109	265	108	238	127	271	109	301
3853	28503 (R)	97	242	82	286	91	249	113	271	92	370
3854	29872	124	227	108	273	116	239	122	307	104	327
3855	29287 (R)	119	261	100	306	112	260	141	363	122	377
3856	29873	117	225	102	294	110	249	124	317	116	327
3857	29289 (R)	123	187	110	286	119	232	138	366	137	201
3858	29874	113	209	103	229	114	215	149	356	145	354
3859	29875	107	223	83	260	100	233	127	314	113	269
3860	29876	107	200	92	263	102	224	126	314	107	370
3861	29877	124	204	98	258	111	229	124	347	120	365
3862	29878	131	184	108	239	119	215	144	287	130	297
3863	29879	122	179	109	220	114	202	134	294	121	340
3864	Local Check (LC)	144	164	107	284	119	224	136	294	116	354
Mean		122	212	103	257	113	230	130	323	118	331

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Table No. 1.33 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									
		TELANGANA				TAMIL NADU				KARNATAKA	
		RAJENDRANAGAR		WARANGAL		COIMBATORE		TIRUR		MANDYA	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	104	427	119	398	86	313	119	349	112	350
3802	29825	104	413	112	388	104	333	100	285	113	280
3803	29826	104	370	122	394	90	288	109	346	115	340
3804	29827	100	360	120	431	85	350	101	272	102	267
3805	29828	103	393	123	389	90	303	105	342	108	287
3806	29829	95	317	98	399	81	285	93	318	87	283
3807	29830	79	423	94	393	72	385	98	315	80	303
3808	28523 (R)	108	390	121	394	108	345	105	319	100	300
3809	29831	89	407	95	394	67	278	101	325	89	313
3810	29832	104	397	124	384	76	280	102	291	110	287
3811	29833	98	413	121	404	86	295	101	308	107	300
3812	29834	96	390	108	394	81	335	91	275	97	280
3813	29835	93	443	114	414	91	393	100	303	102	300
3814	29623	101	400	117	375	102	280	97	332	111	287
3815	29836	101	447	109	389	91	320	98	278	103	333
3816	29837	88	413	108	427	84	285	90	261	94	307
3817	29838	85	453	89	408	72	305	81	279	86	333
3818	29839	111	370	135	444	101	328	116	328	121	287
3819	29840	99	463	115	452	85	298	93	329	93	300
3820	NDR 359 (NC)	103	327	108	437	93	270	96	350	100	280
3821	29841	103	430	116	403	95	318	121	337	114	273
3822	29842	103	417	113	391	93	280	104	289	111	260
3823	29843	104	437	112	396	80	315	103	352	115	273
3824	29844	93	387	108	376	78	308	91	310	92	280
3825	29845	100	387	108	419	89	278	93	331	102	267
3826	29846	93	450	126	414	95	323	93	254	116	267
3827	29847	96	403	116	417	77	328	91	258	102	273
3828	29848	100	443	114	403	85	293	115	375	99	280
3829	29849	95	513	104	396	77	330	104	332	89	293
3830	29850	98	427	117	414	82	350	101	303	97	333
3831	29851	101	437	115	431	77	288	92	276	104	293
3832	29852	99	317	123	419	84	318	91	262	100	307
3833	29853	97	333	102	394	88	333	109	332	98	313
3834	29854	103	543	117	381	96	335	106	287	102	280
3835	Zonal Check (ZC)	111	477	127	389	101	290	113	274	113	280
3836	29855	103	417	123	406	77	305	116	316	107	273
3837	29856	97	413	95	416	75	270	89	312	91	307
3838	29857	97	327	114	396	84	315	93	308	110	287
3839	29858	102	380	125	409	76	315	89	288	100	307
3840	29859	99	373	106	398	77	293	96	325	102	247
3841	29860	109	330	143	416	105	270	123	300	113	267
3842	29861	104	323	107	401	80	345	114	354	97	287
3843	29862	100	460	108	437	90	298	102	274	98	287
3844	29863	103	427	106	416	87	360	103	340	92	247
3845	29864	125	347	132	416	94	290	103	276	120	313
3846	29865	97	377	106	450	79	285	106	298	101	287
3847	29866	109	343	115	409	97	305	110	269	100	273
3848	29867	105	387	129	417	97	313	106	288	106	287
3849	29868	124	397	133	429	96	350	103	346	119	273
3850	29869	100	350	109	424	103	300	113	288	99	280
3851	29870	105	370	122	409	103	293	94	301	105	280
3852	29871	99	350	111	366	85	338	94	280	94	293
3853	28503 (R)	89	460	91	399	67	303	91	273	84	307
3854	29872	100	383	99	424	93	333	94	308	83	267
3855	29287 (R)	104	450	115	398	86	278	103	298	93	253
3856	29873	104	393	110	398	91	275	106	324	95	300
3857	29289 (R)	104	397	113	401	95	283	110	257	102	280
3858	29874	105	340	129	439	85	360	116	263	112	300
3859	29875	94	367	102	411	82	333	92	291	92	293
3860	29876	98	430	102	394	73	283	102	307	99	287
3861	29877	102	363	110	404	93	338	100	295	89	260
3862	29878	108	403	118	376	84	295	90	313	101	287
3863	29879	105	460	118	399	94	278	91	321	104	293
3864	Local Check (LC)	97	403	127	408	99	398	114	339	128	280
Mean		101	401	114	407	87	312	101	305	102	289

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Table No. 1.33 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - IM, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN								Overall Mean (26)	
		KARNATAKA				PUDUCHERRY		Z7(10)			
		BRAHMAWAR		GANGAVATHI		KURUMBAPET		Mean		PH	NP
		PH	NP	PH	NP	PH	NP	PH	NP		
3801	29824	91	399	102	341			111	355	106	272
3802	29825	95	405	102	341	98	537	108	369	109	295
3803	29826	98	371	102	357	110	443	110	360	110	292
3804	29827	83	373	74	267	90	457	100	347	102	280
3805	29828	77	398	101	334	105	474	106	363	104	295
3806	29829	71	399	78	346	81	555	90	345	91	279
3807	29830	82	398	77	365	85	510	89	378	91	331
3808	28523 (R)	98	392	97	381	98	368	108	355	106	293
3809	29831	78	371	78	334	116	388	91	351	95	294
3810	29832	96	378	96	297	90	360	103	329	106	268
3811	29833	89	396	100	340	93	510	106	357	104	290
3812	29834	81	394	86	357	93	620	97	374	97	302
3813	29835	84	379	90	360	85	355	100	363	100	287
3814	29623	95	399	94	390	97	330	102	332	103	266
3815	29836	87	399	95	398	82	460	103	367	103	287
3816	29837	79	318	82	384	85	543	95	363	95	306
3817	29838	75	349	73	326	75	345	86	346	89	291
3818	29839	101	321	113	360	76	440	116	358	112	278
3819	29840	86	365	98	372	85	320	99	359	100	286
3820	NDR 359 (NC)	94	230	95	339	102	331	102	315	100	253
3821	29841	100	342	98	305	111	300	111	331	107	262
3822	29842	99	375	102	357	100	401	108	348	104	289
3823	29843	75	377	87	339	90	416	101	358	104	278
3824	29844	91	397	99	381	95	510	98	362	98	301
3825	29845	75	316	98	354	85	600	98	355	99	290
3826	29846	99	351	107	336	100	645	110	363	108	291
3827	29847	74	396	96	345	98	440	99	359	101	283
3828	29848	89	380	94	357	93	385	103	354	103	299
3829	29849	81	385	89	335	85	495	96	376	94	294
3830	29850	91	253	89	377	93	460	102	359	100	294
3831	29851	91	268	101	375	103	445	103	340	103	285
3832	29852	92	381	98	356	88	465	102	351	101	292
3833	29853	90	380	93	386	100	455	102	357	102	288
3834	29854	89	396	111	305	105	470	108	364	107	293
3835	Zonal Check (ZC)	101	389	112	390	100	495	114	367	109	308
3836	29855	97	393	101	362	95	575	108	374	105	302
3837	29856	87	346	82	367	75	368	90	351	92	293
3838	29857	88	397	86	345	91	387	99	341	101	280
3839	29858	85	388	102	369	93	463	102	349	106	279
3840	29859	80	397	99	351	95	490	99	363	101	288
3841	29860	104	372	112	330	115	350	121	325	117	269
3842	29861	89	348	85	360	120	310	104	338	100	286
3843	29862	92	379	94	332	95	259	101	334	98	274
3844	29863	105	388	91	352	93	495	103	367	101	293
3845	29864	95	352	101	362	108	557	114	361	114	282
3846	29865	84	388	87	346	91	595	99	377	99	295
3847	29866	95	387	97	334	111	505	108	350	105	277
3848	29867	100	221	106	288	88	580	110	341	112	256
3849	29868	96	322	111	354	103	380	117	353	115	296
3850	29869	87	325	98	271	105	325	107	321	106	271
3851	29870	100	392	113	384	96	325	111	335	112	277
3852	29871	97	387	97	380	96	325	101	329	100	282
3853	28503 (R)	82	380	78	332	70	426	86	352	86	289
3854	29872	100	379	110	337	95	375	100	344	99	286
3855	29287 (R)	92	388	101	360	103	458	106	362	105	295
3856	29873	98	395	99	328	108	330	105	339	104	283
3857	29289 (R)	95	398	109	369	110	325	111	328	108	265
3858	29874	114	387	101	330	85	365	114	349	106	280
3859	29875	94	379	88	352	85	365	97	337	95	284
3860	29876	85	358	78	319	93	355	96	342	94	275
3861	29877	85	351	86	348	86	425	99	350	100	296
3862	29878	91	364	105	359	101	454	107	343	106	267
3863	29879	92	327	99	333	99	360	106	340	107	285
3864	Local Check (LC)	78	355	87	372	91	610	107	381	106	308
Mean		90	366	95	348	95	436	103	352	103	286

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Entry No	IET No	ODISHA (3)		BIHAR (2)		JHARKHAND (1)		WEST BENGAL (1)		UTTAR PRADESH (2)		MADHYA PRADESH (1)	
		Mean		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	91	262	102	247	101	158	121	182			115	228
3802	29825	98	289	112	295	98	228	129	281	96	185	125	302
3803	29826	100	288	109	324	101	260	128	215	94	217	123	233
3804	29827	92	285	111	258	93	176	100	198	98	231	113	292
3805	29828	93	257	111	390	84	287	117	215	92	203	106	258
3806	29829	81	241	99	309	79	231	108	198	83	216	112	285
3807	29830	76	279	88	374	98	282	98	314	96	236	97	399
3808	28523 (R)	87	314	120	322	77	266	114	215	103	229	126	252
3809	29831	80	274	103	340	100	267	104	330	96	243	107	263
3810	29832	89	256	122	257	93	249	119	215	98	231	116	233
3811	29833	88	258	104	273	85	225	105	347	81	186	121	328
3812	29834	89	264	101	303	85	278	104	363	85	208	104	285
3813	29835	92	257	97	272	99	237	110	215	100	220	97	308
3814	29623	85	221	112	300	92	228	110	215	103	201	113	275
3815	29836	84	249	113	262	79	182	105	198	95	217	111	332
3816	29837	83	306	105	322	81	287	105	248	88	286	96	329
3817	29838	81	291	102	347	108	269	93	231	85	233	87	323
3818	29839	95	234	105	289	87	243	132	215	101	179	113	278
3819	29840	84	290	110	298	93	223	110	198	94	215	98	248
3820	NDR 359 (NC)	80	245	109	257	86	183	105	182	94	190	126	305
3821	29841	94	248	112	297	85	208	109	182	99	178	106	255
3822	29842	96	288	108	339	93	221	103	215	86	209	104	269
3823	29843	86	229	119	279	85	246	116	215	102	222	123	256
3824	29844	84	337	100	312	89	222	108	215	94	232	106	355
3825	29845	85	314	104	344	96	220	100	198	91	222	116	283
3826	29846	90	300	110	309	104	197	122	198	99	222	117	284
3827	29847	86	267	111	271	109	245	92	198	88	260	108	270
3828	29848	86	304	109	362	89	208	114	264	90	183	114	329
3829	29849	77	240	106	329	92	268	111	231	73	202	102	240
3830	29850	88	248	106	323	86	229	97	248	78	257	115	312
3831	29851	87	288	107	274	95	243	116	231	95	215	114	287
3832	29852	88	291	105	324	107	241	87	182	93	235	106	311
3833	29853	89	222	111	336	93	223	106	231	106	204	105	302
3834	29854	93	283	117	335	84	243	121	281	91	208	107	289
3835	Zonal Check (ZC)	92	240	104	314	95	182	133	380	89	200	106	311
3836	29855	87	271	105	317	100	228	141	231	91	231	117	327
3837	29856	74	303	96	282	81	209	103	330	83	215	103	327
3838	29857	91	277	102	284	92	261	111	215	100	232	107	294
3839	29858	96	259	113	276	107	251	105	198	98	224	121	268
3840	29859	87	236	107	296	93	247	105	231	94	263	116	285
3841	29860	104	238	128	289	106	210	130	330	102	225	129	282
3842	29861	83	326	108	354	92	258	100	198	95	239	103	254
3843	29862	88	249	96	375	91	228	102	165	81	171	101	197
3844	29863	85	282	103	308	91	221	103	215	87	186	113	321
3845	29864	97	281	123	273	102	198	128	198	105	241	149	268
3846	29865	79	286	112	291	95	204	109	231	101	217	105	286
3847	29866	92	289	107	279	85	166	131	231	97	230	115	310
3848	29867	99	236	117	211	102	189	129	198	105	176	131	284
3849	29868	103	284	129	300	110	247	126	314	102	220	124	385
3850	29869	89	252	112	278	99	258	113	215	99	237	114	286
3851	29870	97	243	123	313	101	205	126	215	101	202	127	300
3852	29871	91	282	108	271	94	259	102	264	95	216	103	298
3853	28503 (R)	75	257	94	324	79	304	95	281	88	207	97	271
3854	29872	83	289	106	258	83	244	102	215	94	224	110	282
3855	29287 (R)	95	273	126	333	83	234	104	182	82	207	114	302
3856	29873	93	290	120	316	100	261	108	264	96	207	108	272
3857	29289 (R)	90	238	115	291	98	221	108	215	101	193	115	255
3858	29874	88	240	107	267	90	243	103	363	100	186	120	301
3859	29875	85	294	107	297	78	212	117	215	90	209	98	314
3860	29876	79	270	102	313	83	225	99	182	77	192	106	304
3861	29877	86	287	108	345	91	290	112	198	83	210	111	318
3862	29878	90	260	115	251	102	163	116	165	91	220	118	260
3863	29879	89	268	116	294	107	277	115	215	106	230	121	290
3864	Local Check (LC)	84	274	105	305	125	246	118	231	111	262	101	304
Mean		88	270	109	303	93	233	111	233	94	216	112	290

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Entry No	IET No	CHHATTISGARH (1)		MAHARASHTRA 1 (2)		MAHARASHTRA 2(1)		MAHARASHTRA (3)		GUJARAT (2)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	115	138	90	170	117	220	99	187	110	254
3802	29825	116	187	111	194	118	217	114	201	113	224
3803	29826	118	208	109	191	128	228	115	203	119	229
3804	29827	113	207	95	219	126	216	106	218	120	228
3805	29828	122	201	92	187	109	230	97	201	117	259
3806	29829	94	201	77	153	110	216	88	174	104	262
3807	29830	101	273	93	377	99	214	95	322	98	268
3808	28523 (R)	122	186	87	204	104	205	93	204	125	254
3809	29831	110	208	83	207	108	224	91	213	109	245
3810	29832	121	174	108	247	118	209	111	234	118	214
3811	29833	115	201	110	225	127	245	116	232	113	244
3812	29834	109	211	76	181	114	210	89	191	112	244
3813	29835	108	207	98	221	110	232	102	224	102	216
3814	29623	115	143	101	174	120	209	107	186	118	254
3815	29836	117	216	102	200	119	226	108	209	121	272
3816	29837	111	254	85	190	114	206	95	196	106	228
3817	29838	103	216	75	175	100	212	83	188	104	238
3818	29839	134	198	110	166	133	229	118	187	117	207
3819	29840	118	263	94	180	111	232	100	198	113	214
3820	NDR 359 (NC)	108	177	87	159	115	218	96	178	111	206
3821	29841	118	196	100	187	119	218	106	197	122	192
3822	29842	117	204	85	169	117	215	96	184	107	266
3823	29843	114	212	102	193	130	215	112	200	112	216
3824	29844	110	220	92	231	106	224	96	228	113	208
3825	29845	112	187	95	165	109	220	100	183	109	237
3826	29846	117	202	109	192	103	213	107	199	120	240
3827	29847	118	111	99	199	118	216	105	204	119	229
3828	29848	118	196	102	211	115	227	106	217	111	235
3829	29849	101	226	75	144	104	221	85	170	104	273
3830	29850	117	203	93	221	111	214	99	219	119	248
3831	29851	110	203	108	258	112	230	109	249	108	232
3832	29852	119	152	96	213	110	255	100	227	114	258
3833	29853	120	183	94	267	108	215	99	249	109	246
3834	29854	121	236	105	154	117	215	109	174	126	236
3835	Zonal Check (ZC)	108	207	91	313	129	250	104	292	133	268
3836	29855	119	176	84	275	126	222	98	257	113	240
3837	29856	108	185	96	227	111	226	101	227	105	232
3838	29857	119	192	99	210	114	210	104	210	110	206
3839	29858	120	218	107	204	118	220	110	209	118	213
3840	29859	114	233	106	182	118	214	110	193	111	232
3841	29860	127	201	96	167	132	239	108	191	124	205
3842	29861	114	215	93	156	106	199	97	170	103	227
3843	29862	107	212	91	168	106	239	96	192	102	226
3844	29863	112	206	101	207	104	235	102	216	106	201
3845	29864	114	112	101	195	154	223	118	204	114	204
3846	29865	109	202	82	204	117	219	93	209	108	243
3847	29866	112	229	90	145	116	210	99	167	114	197
3848	29867	126	178	108	143	128	210	114	165	116	207
3849	29868	128	222	105	202	127	235	112	213	125	239
3850	29869	117	215	103	188	109	208	105	194	112	246
3851	29870	125	193	109	243	127	220	115	235	123	239
3852	29871	109	133	94	281	104	219	97	260	111	248
3853	28503 (R)	101	234	69	164	95	220	77	183	89	264
3854	29872	102	208	91	251	115	215	99	239	116	250
3855	29287 (R)	122	209	92	180	118	215	100	191	110	283
3856	29873	112	209	94	154	110	227	99	178	110	259
3857	29289 (R)	119	212	94	170	123	225	104	188	117	236
3858	29874	111	177	80	170	126	207	95	182	108	219
3859	29875	115	220	78	236	109	217	88	230	95	241
3860	29876	108	191	89	165	109	210	96	180	99	231
3861	29877	109	261	108	170	112	226	110	198	111	231
3862	29878	126	189	96	185	116	224	103	198	120	211
3863	29879	115	151	114	308	110	209	113	275	115	199
3864	Local Check (LC)	121	177	93	309	105	225	97	281	126	224
Mean		115	199	95	203	115	221	102	209	113	234

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Entry No	IET No	ANDHRA PRADESH (2)		TELANGANA (2)		TAMIL NADU (2)		KARNATAKA (3)		PUDUCHERRY (1)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	133	309	112	412	102	331	101	363		
3802	29825	124	357	108	401	102	309	103	342	98	537
3803	29826	124	346	113	382	100	317	105	356	110	443
3804	29827	120	347	110	395	93	311	86	302	90	457
3805	29828	126	356	113	391	97	322	95	339	105	474
3806	29829	107	272	96	358	87	302	79	343	81	555
3807	29830	114	343	86	408	85	350	79	355	85	510
3808	28523 (R)	122	329	114	392	107	332	98	357	98	368
3809	29831	109	355	92	401	84	301	81	339	116	388
3810	29832	133	287	114	391	89	285	101	320	90	360
3811	29833	133	302	110	409	94	302	98	345	93	510
3812	29834	118	346	102	392	86	305	88	343	93	620
3813	29835	122	340	103	429	95	348	92	346	85	355
3814	29623	104	267	109	387	100	306	100	358	97	330
3815	29836	132	322	105	418	94	299	95	377	82	460
3816	29837	120	349	98	420	87	273	85	336	85	543
3817	29838	110	330	87	430	77	292	78	336	75	345
3818	29839	144	352	123	407	109	328	112	322	76	440
3819	29840	119	343	107	458	89	313	92	346	85	320
3820	NDR 359 (NC)	117	293	106	382	94	310	96	283	102	331
3821	29841	126	301	109	416	108	327	104	307	111	300
3822	29842	129	354	108	404	99	285	104	330	100	401
3823	29843	124	336	108	416	92	334	92	330	90	416
3824	29844	119	338	101	381	85	309	94	353	95	510
3825	29845	118	300	104	403	91	304	92	312	85	600
3826	29846	136	298	109	432	94	288	107	318	100	645
3827	29847	119	366	106	410	84	293	90	338	98	440
3828	29848	123	313	107	423	100	334	94	339	93	385
3829	29849	116	340	100	455	90	331	86	338	85	495
3830	29850	127	337	108	420	92	326	92	321	93	460
3831	29851	122	296	108	434	84	282	98	312	103	445
3832	29852	121	343	111	368	87	290	97	348	88	465
3833	29853	120	323	100	364	98	332	93	360	100	455
3834	29854	127	323	110	462	101	311	100	327	105	470
3835	Zonal Check (ZC)	134	341	119	433	107	282	109	353	100	495
3836	29855	132	345	113	411	97	311	102	343	95	575
3837	29856	105	358	96	415	82	291	87	340	75	368
3838	29857	116	325	106	361	88	312	94	343	91	387
3839	29858	122	287	113	395	83	302	96	355	93	463
3840	29859	120	378	103	385	87	309	94	331	95	490
3841	29860	145	307	126	373	114	285	110	323	115	350
3842	29861	123	326	106	362	97	349	90	331	120	310
3843	29862	117	309	104	449	96	286	95	333	95	259
3844	29863	126	324	104	421	95	350	96	329	103	495
3845	29864	134	351	128	381	99	283	105	342	108	557
3846	29865	118	372	101	414	92	291	91	340	91	595
3847	29866	124	335	112	376	103	287	97	331	111	505
3848	29867	132	316	117	402	102	300	104	265	88	580
3849	29868	143	342	128	413	100	348	108	316	103	380
3850	29869	130	324	104	387	108	294	95	292	105	325
3851	29870	137	299	113	390	98	297	106	352	96	325
3852	29871	118	286	105	358	90	309	96	353	96	325
3853	28503 (R)	102	320	90	430	79	288	81	339	70	426
3854	29872	113	317	99	404	94	320	97	328	95	375
3855	29287 (R)	132	370	110	424	94	288	95	334	103	458
3856	29873	120	322	107	395	98	299	97	341	108	330
3857	29289 (R)	138	284	108	399	102	270	102	349	110	325
3858	29874	147	355	117	389	101	312	109	339	85	365
3859	29875	120	291	98	389	87	312	91	341	85	365
3860	29876	116	342	100	412	88	295	87	321	93	355
3861	29877	122	356	106	384	96	316	87	320	86	425
3862	29878	137	292	113	390	87	304	99	336	101	454
3863	29879	128	317	111	430	93	299	98	318	99	360
3864	Local Check (LC)	126	324	112	405	106	368	98	335	91	610
Mean		124	327	107	404	94	308	96	335	95	436

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Table No. 1.33: Plant Height (cm) & Panicles/m² of entries in IVT-IM (Data Not Considered), Kharif 2021

Entry No	IET No	BIHAR		WEST BENGAL		TRIPURA		CHHATISGARH		KERALA	
		@Patna-ICAR		@MALDA		@LEMBUCHERRA		@JAGADALPUR		@PATTAMBI	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
3801	29824	97	308	99	347	103	238	84	129	93	425
3802	29825	88	265	95	336	114	238	81	179	100	441
3803	29826	88	318	111	264	115	263	93	202	106	405
3804	29827	98	248	110	357	75	350	86	201	98	336
3805	29828	95	313	101	301	92	263	64	187	105	373
3806	29829	73	295	87	375	93	263	71	143	101	411
3807	29830	69	409	85	278	91	313	74	255	99	319
3808	28523 (R)	91	314	99	366	119	300	88	127	105	394
3809	29831	84	290	100	344	91	238	75	185	107	325
3810	29832	88	240	114	315	112	163	84	167	83	406
3811	29833	85	213	101	357	105	275	85	149	102	348
3812	29834	87	260	105	333	104	238	80	159	85	462
3813	29835	74	254	104	275	93	288	80	152	90	357
3814	29623	97	255	119	344	105	288	88	131	106	373
3815	29836	98	351	109	294	111	338	86	146	111	324
3816	29837	77	322	102	301	103	275	87	198	97	336
3817	29838	80	295	103	290	98	313	69	188	91	393
3818	29839	86	313	129	309	129	350	96	114	100	459
3819	29840	88	326	101	314	98	275	85	193	89	417
3820	NDR 359 (NC)	98	251	105	325	105	263	84	148	94	369
3821	29841	83	255	121	320	109	250	93	178	106	412
3822	29842	79	281	105	304	95	238	81	171	93	390
3823	29843	90	238	109	370	98	288	89	148	91	475
3824	29844	79	321	91	326	95	288	82	123	101	508
3825	29845	86	251	101	331	105	275	86	172	101	577
3826	29846	98	322	126	343	104	325	80	152	112	465
3827	29847	94	310	102	385	97	250	83	170	102	512
3828	29848	89	338	111	333	107	275	79	215	87	416
3829	29849	61	268	102	306	93	325	70	140	116	470
3830	29850	97	283	110	322	107	375	78	147	94	446
3831	29851	88	321	102	369	102	300	80	172	94	479
3832	29852	89	298	100	298	84	325	87	203	102	456
3833	29853	83	310	105	344	97	363	79	159	101	485
3834	29854	77	230	111	402	111	313	77	148	100	451
3835	Zonal Check (ZC)	86	275	105	316	107	288	66	171	103	431
3836	29855	83	320	115	380	113	250	86	130	109	367
3837	29856	80	217	91	353	96	275	76	156	97	332
3838	29857	87	253	95	394	71	338	83	135	101	378
3839	29858	106	219	104	330	100	325	95	167	102	360
3840	29859	84	337	96	308	108	213	80	176	101	397
3841	29860	97	268	131	362	126	263	103	114	101	448
3842	29861	80	256	100	307	97	275	80	160	104	462
3843	29862	75	260	98	332	94	288	79	142	98	546
3844	29863	85	285	99	380	101	250	83	210	99	539
3845	29864	124	233	124	310	129	200	113	136	100	342
3846	29865	88	308	99	363	92	338	71	177	107	428
3847	29866	79	390	89	386	107	263	81	122	98	471
3848	29867	80	268	124	377	91	163	93	174	95	450
3849	29868	99	231	119	314	104	338	87	187	99	408
3850	29869	77	268	112	366	101	238	86	113	98	455
3851	29870	89	320	119	307	122	350	95	148	100	459
3852	29871	85	320	108	391	109	188	70	153	105	420
3853	28503 (R)	74	305	71	334	92	363	69	145	97	367
3854	29872	80	357	41	357	96	263	83	136	85	332
3855	29287 (R)	77	350	106	307	101	275	80	141	102	412
3856	29873	89	315	105	402	97	200	82	145	97	434
3857	29289 (R)	81	296	105	330	106	263	87	212	96	373
3858	29874	87	310	108	319	110	300	83	131	84	438
3859	29875	81	332	105	389	95	313	70	154	99	407
3860	29876	75	243	107	363	102	250	73	168	98	456
3861	29877	81	303	99	314	106	275	75	189	79	350
3862	29878	92	231	101	360	103	238	90	134	86	423
3863	29879	79	291	93	403	103	325	87	165	87	434
3864	Local Check (LC)	86	324	102	296	97	425	93	120	83	397
Mean		86	290	104	338	102	282	83	160	98	417

ADVANCE VARIETY TRIAL 2 & 1-LATE (AVT 2 & AVT 1-L)

Locations: 28

Test Entries: 14

Checks: Swarna-National; NDR 8002 (Eastern & Central), Ranjeet (North-Eastern), Salivahana (Western), Pushyami (Southern)-Zonal; PA 6444 (Hybrid) and Local check **Table:1.34**

Advance Variety Trial 1-Late (AVT 1-L) consisted of 14 test entries and 4 checks: Swarna (National check), NDR 8002 (Eastern & Central), Ranjeet (North-Eastern), Salivahana (Western), Pushyami (Southern)-Zonal, PA 6444 (Hybrid) and Local check. Among 14 test entries, six entries (IET 28538, IET 28497, IET 28508, IET 28509, IET 28501 and IET 28544) are in third year of testing and the remaining eight entries are in second year of testing. The trial was sent to 35 locations covering 5 zones (III, IV, V, VI and VII). However, data was not received from 6 centres viz., Bhubaneswar, Gerua-ICAR, Nellore, Jagtial, Coimbatore and Moncompu. The trial was failed in one location (Aduthurai). Out of 28 locations from which data received, data from 4 centres was not considered for analysis due to low experimental mean viz., Varanasi (3752 kg/ha), Ponnampet (2949 kg/ha), Brahmavar (3314 kg/ha) and Sirsi (3428 kg/ha); data from Masodha was also not considered for analysis due to low CV (4.57%). Therefore, data from remaining 23 centres was considered for analysis. The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 1.35, 1.36, 1.37, 1.38 and 1.39 respectively.

Trial data/Status	Location/State/Zone	Total
Data not received	Bhubaneswar, Gerua-ICAR, Nellore, Jagtial, Coimbatore and Moncompu	6
Trial failed	Aduthurai	1
Data not included due to low CV%	Masodha	1
Data not included due to low experimental mean	Varanasi, Ponnampet, Brahmavar and Sirsi	4
Data included in the analysis	NRRI-Cuttack, Jeypore, Ranital, Bikramganj (Dhangain), ICAR-Patna, Sabour, Ranchi, Chinsurah, Pundibhari, Titabar, Lembucherra, Raipur, Jagadapur, Sakoli, Karjat, Pondaghat, Navsari, Maruteru, Ragolu, Bapatla, Warangal, Gangavati and Karaikal	23
Total number of locations		35

AVT-2 (Entries which are in 3rd year of testing):

Six entries are in third year of testing, performance of these entries are discussed below individually.

Performance of IET 28538 in 3rd year of testing in AVT Late during Kharif 2019, 2020 & 2021

IET No/ Designation	Year	Zone		State	
		Zone (Rank)	% BC	State (Rank)	% BC
IET 28538 OR 2436-10 Indravati / Namsagui 19	2019	Z III (1)	7	OD (1)	15
	2020	Z V (3)	25	CH (6) MH 1 (2)	17 6
	2021	Z VII (1)	9	AP (1)	5

IET 28538 (OR 2436-10) derived from the cross Indravati / Namsagui 19 possesses Short Bold grain type. The entry showed yield superiority over the best check in Zone III, Zone V, Zone VII during first, second and third year of testing respectively. The entry recorded HRR (69.5%), ASV (4.0), AC (23.93), and GC (22). **The entry did not perform consistently in any of the state tested; hence the entry IET 28538 is discontinued.**

Performance of IET 28497 in 3rd year of testing in AVT Late during Kharif 2019, 2020 & 2021

IET No/ Designation	Year	Zone		State	
		Zone (Rank)	% BC	State (Rank)	% BC
IET 28497 OR 2491-9 Vandana / Indravati	2019	Z VI (1)	37	MA 2 (1) GJ (3)	45 12
	2020	Z V (5)	19	CH (8)	10
	2021	-	-	-	-

IET 28497 (OR 2491-1) derived from the cross Vandana / Indravati possesses short Bold grain type. The entry showed yield superiority over the best check in Zone VI and Zone V during first and second year of testing respectively. The entry recorded HRR (64.2%), ASV (4.0), AC (26.60) and GC (55). **The entry did not perform consistently in any of the state tested and recorded poor grain quality, hence the entry IET 28497 is discontinued.**

Performance of IET 28508 in 3rd year of testing in AVT Late during Kharif 2019, 2020 & 2021

IET No/ Designation	Year	Zone		State	
		Zone (Rank)	% BC	State (Rank)	% BC
IET 28508 CR 2830-48-1 Swarna / ARC 10075	2019	Z V (3)	6	CH (4)	6
		Z VI (9)	14	MA 2 (6)	12
	2020	Z V (2)	33	CH (4) MH 1 (1)	20 20
		2021	Z VI (1)	5.08	MH 2 (1)	6

IET 28508 (CR 2830-48-1) derived from the cross Swarna/ARC 10075 possesses Short Bold grain type. The entry showed consistence yield superiority over the best check in Zone V (1st and 2nd year) and Zone VI (2nd and 3rd year). The entry showed consistence yield superiority for the states of Chhattisgarh (1st and 2nd year) and Maharashtra (1st, 2nd and 3rd year). The entry recorded HRR (70.4%), ASV (4.0), AC (24.55), and GC 49). **Based on yield consistency and grain quality parameters, the entry IET 28508 was found promising in the states of Chhattisgarh and Maharashtra in Zone V and Zone VI.**

Performance of IET 28509 in 3rd year of testing in AVT Late during Kharif 2019, 2020 & 2021

IET No/ Designation	Year	Zone		State	
		Zone (Rank)	% BC	State (Rank)	% BC
IET 28509 MTU 1317 (MTU 2404-25-2) MTU 1064 / MTU 1075	2019	Z V (2)	8	CH (3) MA 1 (8)	9 7
		Z VI (-)	8	-	-
	2020	Z V (8)	10	-	-
	2021	Z V (1)	19.49	CH (1) MA 1 (1)	21 15

IET 28509 (MTU 1317 or MTU 2404-25-2) derived cross MTU 1064 / MTU 1075 possesses Medium Slender grain type. The entry showed consistence yield superiority over the best check in Zone V (1st, 2nd and 3rd year of testing). The entry showed yield superiority

over best check in Zone VI in first year of testing. Among the states the entry showed consistent performance in Chhattisgarh and Maharashtra during 2019 and 2020. The entry recorded HRR (68.1%), ASV (4.0), AC (26.86), and GC 38). **Due to poor grain quality parameters, the entry IET 28509 is discontinued.**

Performance of IET 28501 in 3rd year of testing in AVT Late during Kharif 2019, 2020 & 2021

IET No/ Designation	Year	Zone		State	
		Zone (Rank)	% BC	State (Rank)	% BC
IET 28501 RP 5970-2-6-19-16-24-12 Improved Samba Mahsuri*2/ Swarna	2019	Z VI (-)	8	GU (6)	9
	2020	Z V (4)	22	CH (3)	21
	2021	-	-	-	-

IET 28501 (RP 5970-2-6-19-16-24-12) derived from the cross Improved Samba Mahsuri*2 /Swarna possesses Medium Slender grain type. The entry showed yield superiority over the best check in Zone VI and Zone V during first and second year of testing respectively. The entry recorded HRR (65.9%), ASV (4.0), AC (25.87) and GC (22). **The entry did not perform consistently in any of the state tested; Owing to its inconsistent performance and poor grain quality, the IET 28501 is discontinued.**

Performance of IET 28544 in 3rd year of testing in AVT Late during Kharif 2019, 2020 & 2021

IET No/ Designation	Year	Zone		State	
		Zone (Rank)	% BC	State (Rank)	% BC
IET 28544 CR 3969-17-2-2-1-1-1-1 IR 73907-753-2-3 / Pratiksyas	2019	Z VI (-)	9	GU (10)	6
	2020	Z V (7)	12	CH (9)	8
	2021	Z V (2)	10.63	CH (2)	15

IET 28544 (CR 3969-17-2-2-1-1-1-1) derived from the cross IR 73907-753-2-3 / Pratiksyas possesses Long Slender grain type. The entry showed consistency yield superiority over the best check in Zone V (2nd and 3rd year). The entry showed consistency yield superiority in the state of Chhattisgarh during 2nd and 3rd year. The entry recorded HRR (73.0%), ASV (4.0), AC (26.69) and GC 34). **Owing to its poor grain quality, the IET 28544 is discontinued.**

Performance of test entries and grain quality parameters

Sl. No.	IET No.	Year of testing	Yield superiority in Zone			Grain quality parameters				Remarks
			Z V	Z VI	Z VII	HRR	ASV	AC	GC	
1	28509	3 rd year	19.49	-	-	68.1	4.0	26.86	38	High AC Low GC
2	28544	3 rd year	10.63	-	-	73.0	4.0	26.69	34	High AC Low GC
3	28508	3 rd year	-	5.08	-	70.4	4.0	24.55	49	
4	28538	3 rd year	-	-	8.74	69.5	4.0	23.93	22	

AVT-1 (Entries which are 2nd Year of Testing):

Eight entries are in second year of testing, Performance of the entries on overall mean basis

Across the locations the mean yield ranged from 2949 kg/ha (Ponnampet) to 6897 kg/ha (Karaikal); while CV ranged from 4.57% (Masodha) to 18.45% (Lembucherra).

Overall mean yield of the entries ranged from 4554 kg/ha (IET 29347) to 5738 kg/ha (IET 28544); days to 50% flowering from 104 days (PA 6444, HC) to 122 days (IET 28538); plant height ranged from 100 cm (IET 29343) to 129 cm (IET 29351); number of panicles per meter square varied from 266 (IET 29345). Among the checks, Swarna (National check) was the highest yielder (5565 Kg/ha) followed by Zonal check (5456 kg/ha) and Local check (5170 kg/ha). Among 14 test entries, on overall mean basis, **none of the entries yielded higher than the best check. Hence no entry got promoted in AVT 1-L trial for third year of testing on overall mean basis.**

Zone wise performance of the entries:

Zone III

The trial was evaluated at 11 locations in 5 states viz., Odisha (ICAR-NRRI-Cuttack, Jeypore, Ranital), Bihar (Bikramganj-Dhangain, Sabour, Patna-ICAR), Jharkhand (Ranchi), West Bengal (Chinsurah, Pundibari), Uttar Pradesh (Masodha, Varanasi). The data from Varanasi (3752 kg/ha) recorded low experimental mean and data from Masodha recorded Low CV(4.57%), hence data from Varanasi and Masodha locations was not included in analysis and data from remaining nine locations (ICAR-NRRI Cuttack, Jeypore, Ranital, Bikramganj, Sabour, Patna-ICAR, Ranchi, Chinsurah and Pundibhari) was considered for analysis in Zone III. Zonal mean yield of the entries varied from 4291 kg/ha (IET 29347) to 5650 kg/ha (IET 28544); days to 50% flowering ranged from 109 days (PA 6444, HC) to 129 days (IET 28538); plant height ranged from 92 cm (IET 29343) to 113cm (IET 29345) and panicles per square meter ranged from 268 (IET 29347) to 325 (IET 29347). **None of the entries yielded better than the best check (Swarna, NC) in Zone III. Hence no entry got promoted in AVT 1 L trial for third year of testing.**

Zone IV

The trial was evaluated at 2 locations in Zone IV covering 2 states viz., Assam (Titabar) and Tripura (Lembucherra) and data from both the locations was considered for analysis. Zonal mean yield of the entries varied from 4270 kg/ha (IET 28509) to 5536 kg/ha (Ranjeet, ZC); days to 50% flowering ranged from 90 days (PA 6444, HC) to 113 days (IET 28538); plant height ranged from 96 cm (IET 29343 and IET 28509) to 133 cm (IET 29351); and panicles per square meter ranged from 265 (IET 28538 and IET 29345) to 374 (Local check). **None of the entries yielded better than the best check (Ranjeet, ZC) in Zone IV. Hence no entry got promoted in AVT 1 L trial for third year of testing.**

Zone V

The trial was evaluated at 3 locations in 2 states viz., Chhattisgarh (Raipur, Jagadapur) and Maharashtra 1 (Sakoli) and data from all 3 locations was considered for analysis in Zone V. Zonal mean yield of the entries varied from 4400 kg/ha (IET 29347) to 6455 kg/ha (IET 28509); days to 50% flowering ranged from 106 days (PA 6444, HC) to 125 days (IET 28538); plant height ranged from 87 cm (Swarna, NC) to 131 cm (IET 29351); and panicles per square meter ranged from 196 (IET 28524, IET 29328 and PA 6444,HC) to 238 (IET 28509). Among the checks, zonal check (NDR 8002) was the best check with yield of 5402 kg/ha. In Zone V, four entries viz., IET 28509 (19%), IET 28544 (11%), IET 29351 (8%) and IET 29349 (6%) recorded yield advantage of above 5%. Among these four entries, IET 28509 and IET 28544 were in 3rd year of testing and will be discussed separately. **Remaining two entries viz., IET 29351 and IET 29349 were found to be qualified for promotion to 3rd year of testing in AVT 2 Late.**

Performance of the entries in AVT 1-Late during Kharif 2021- Zone V

Rank	IET No/ Designation/ Cross Combination	GY/ DFF/ GT	% NC/ZC/ LC/HC	Performance across states		
				State/ Rank	Yield	%BVC
Promising in Zone-V (Central)						
1	28509 MTU 1317 (MTU 2404-25-2) MTU 1064 / MTU 1075	6455 118 MS	24.63 19.49 39.29	CH (1) MH (1)	6961 5442	21 15
2	28544 CR 3969-17-2-2-1-1-1-1 IR 73907-753-2-3 / Pratiksyta	5976 112 LS	15.39 10.63 28.96	CH (2)	6577	15
3	29351 WGL-1289 MTU 1081 / BM 71	5810 110 LB	12.18 7.55 25.38	CH (5)	6322	10
4	29349 OR 2573-4 Birupa / IR 76561-AC-8-8	5717 112 SB	10.39 5.83 23.37	CH (4)	6489	13
	Swarna (NC)	5179 113				
	NDR 8002 (ZC)	5402 109				
	Local Check (LC)	4634 113				

Zone VI

The trial was evaluated at three locations in two states viz., Maharashtra 2 (Karjat, Pondaghat) and Gujarat (Navsari). The data from all 3 locations was considered for analysis. Zonal mean yield of the entries varied from 4048 kg/ha (IET 28538) to 6146 kg/ha (IET 28508); days to 50% flowering ranged from 103 days (PH 6444, HC) to 118 days (IET 28509); plant height ranged from 105 cm (IET 29343 and IET 28524) to 131 cm (IET 28538) and panicles per square meter ranged from 175 (IET 28509) to 201 (Swarna, NC). In Zone VI, **only one entry IET 28508 out yielded the best varietal check**, Swarna (National check). Since the entry IET 28508 is in third year of testing, it will be discussed separately.

Performance of the entries in AVT 1-Late during Kharif 2021- Zone VI

Rank	IET No/ Designation/ Cross Combination	GY/ DFF/ GT	% NC/ZC/ LC/HC	Performance across states		
				State/ Rank	Yield	%BVC
Promising in Zone-VI (Western)						
1	28508 CR 2830-48-1 Swarna / ARC 10075	6146 110 SB	5.08 16.01 25.48	MH2(1)	5868	6
	Swarna (NC)	5849 112				
	Salivahana (ZC)	5298 110				
	Local Check (LC)	4898 110				

Zone VII

The trial was evaluated at nine Locations in three states and one union territory viz., Andhra Pradesh (Maruteru, Ragolu, Bapatla), Telangana (Warangal), Karnataka (Ponnampet,

Brahmavar, Gangavati and Sirsi), Puducherry (Karaikal). The data from Ponnampet (2949 kg/ha), Brahmavar (3314 kg/ha) and Sirsi (3428 kg/ha) locations recorded low experimental mean yield hence not considered for analysis. The data from remaining 6 locations (Maruteru, Ragolu, Bapatla, Warangal, Gangavati and Karaikal) was considered for analysis. Zonal mean yield of the entries varied from 4688 kg/ha (IET 29349) to 6666 kg/ha (IET 28538); days to 50% flowering ranged from 100 days (PA 6444, HC) to 119 days (IET 29347); plant height ranged from 110 cm (Swarna, NC) to 140 cm (IET 28538) and number of panicles per square meter ranged from 288 (IET 28508) to 355 (IET 29345). Among 14 test entries, only one entry IET 28538 out yielded the best varietal check Pushyami, ZC by 9%. This entry was in third year of testing, hence will be discussed separately.

Performance of the entries in AVT 1-Late during Kharif 2021- Zone VII

Rank	IET No/ Designation/ Cross Combination	GY/ DFE/ GT	% NC/ZC/ LC/HC	Performance across states		
				State/ Rank	Yield	%BVC
Promising in Zone-VII (Southern)						
1	28538 OR 2436-10 Indravati / Namsagui 19	6666 118 SB	17.34 8.74 13.43	AP (1)	6394	5
	Swarna (NC)	5681 106				
	Pushyami (ZC)	6130 106				
	Local Check (LC)	5877 112				

Performance of test entries and grain quality parameters

Sl. No.	IET No.	Year of testing	Yield superiority in Zone			Grain quality parameters				Remarks
			Z V	Z VI	Z VII	HRR	ASV	AC	GC	
3	29351	2 nd year	7.55	-	-	65.6	4.0	25.37	22	Promoted to 3 rd year
4	29349	2 nd year	5.83	-	-	70.1	4.0	23.99	45	Promoted to 3 rd year

Promotions:

- **Zone V: IET 29351 and IET 29349 are promoted to 3rd year of testing**

INITIAL VARIETY TRIAL-LATE (IVT-L)**Locations:**

Sent 36
Received 25
Considered 16

Test Entries: 60

Checks: **Swarna -National; NDR 8002 (Eastern & Central), Ranjeet (North Eastern), Salivahana (Western), Pushyami (Southern)-Zonal; PA 6444 (Hybrid) and Local check.** **Table: 1.40**

The IVT-L trial comprised 56 varietal and 4 hybrid test entries and 4 checks with Swarna as National Check (NC), NDR 8002 in the Eastern and Central, Ranjeet in the North Eastern, Salivahana in the Western and Pushyami in the Southern zones as zonal check, PA 6444 as hybrid check and a local check. The trial was sent to 36 locations; however, data was received from 25 locations and data was not received from 11 centers viz. Bhubaneswar, Pundibhari, Varanasi, Titabar, Gerua-ICAR, Pondaghat, Nellore, Jagtial, Coimbatore, Moncompu and Brahmavar. Data was not included in the analysis from 9 locations viz., Ranital (LEM: Low Experimental Mean <4000), Chinsurah (Low CV), Malda (Low CV), Lembucherra (High CV), Jagdalpur (High CV), Sakoli (LEM), Karjat (LEM), Ponnampet (LEM) and Sirsi (LEM).

CV% varied from as low as 0.007 at Chinsurah to as high as 27.64% at Jagdalpur, experimental mean from 1738 kg/ha at Sabour to 9293 kg/ha at Kariakal. Overall mean ranged from 3921 kg/ha (IET 29914) to 5851 kg/ha (IET 29891), days to 50% flowering from 88 days (IET 29925) to 117 days (IET 29915), plant height from 86.3 cm (IET 29903) to 124.6 cm (IET 29915) and panicles/m² from 224 (IET 29925) to 2872 (IETs 29884 and 29915). The data pertaining to yield, days to 50% flowering, plant height and number of panicles/m² are presented in tables 1.41 and 1.42.

On the basis of overall performance in 16 locations, none of the entries were found superior to Best check i.e. National check (Swarna) (5709 kg/ha) with days to 50% flowering of 106 days, **hence no entry is promoted on overall basis.** Hybrid (IET 29906) (5241 kg/ha) showed significant superiority over the hybrid check (PA 6444) (4886 kg/ha), while inferior to the Best check i.e. National check (Swarna) (5709 kg/ha), **hence not promoted on overall basis.**

Performance of the entries on zonal basis:**Zone III**

On the basis of zonal performance, none of the entries were found significant superior to Best check i.e. Local check (5485 kg/ha) with days to 50% flowering of 111 days, **hence no entry is promoted from zone III.**

Zone V

On the basis of zonal performance, none of the entries or hybrids were found significant superior to Best check i.e. National check (5982 kg/ha) and hybrid check PA 6444 (5087kg/ha), **hence no entry or hybrid is promoted in zone V.**

Zone VI

On the basis of zonal performance, none of the entries are found significant superior to Best check i.e. National check (5746 kg/ha) with days to 50% flowering of 102 days, **hence no entry is promoted from zone VI.**

Zone VII

On the basis of zonal performance, two entries were found significant superior to Best check i.e. Local check (6098 kg/ha) with days to 50% flowering of 113 days, **hence, IET Nos. 29891 and 29935 were promoted from zone VII for further evaluation in AVT-I.** Whereas, Hybrid (IET 29906) (5757 kg/ha) showed significant superiority over the hybrid check (PA 6444) (5104 kg/ha), but inferior to the Best check i.e. Local check (6098 kg/ha), **hence not promoted from Zone VII.**

Performance of the entries in Zone VII in IVT-L, Kharif 2021

Rank	IET No / Designation / Cross combination	Yield (kg/ha) / DFF/GT	Remarks
1	IET 29891 MTU 1376 MTU 2077/WGL 3962	7149* 111	Promoted to AVT-1 from Zone VII
2	IET 29935 MTU 1377 MTU 1075/MTU 1001	6741* 107	Promoted to AVT-1 from Zone VII
	Swarna (NC)	6007 105	
	Zonal check (ZC)	5599 106	
	PA 6444 (HC)	5104 102	
	Local check	6098 113	
	CD (at 5% level of significance)	583	

The following entries are promoted on overall or zonal basis to AVT1-L or shifted to appropriate duration trial

Promoted to AVT1-L

- **Overall basis: NIL**
- **Zone III: NIL**
- **Zone V: NIL**
- **Zone VI: NIL**
- **Zone VII: IET Nos. 29891 and 29935**

Table No. 1.34: Composition of entries in Advance Variety Trial 2 & 1-Irrigated Late (AVT 2 & AVT 1-L), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
3rd year of testing:				
3901	28538	OR 2436-10	Indravati / Namsagui 19	SB
2nd year of testing:				
3902	29347	TTB 1039-214-4	Ranjit / IRBB 52	MS
3rd year of testing:				
3903	28497	OR 2491-9	Vandana / Indravati	SB
2nd year of testing:				
3904	28440	AD 13280	CO (R) 50 / AD 08132	MS
3905	29349	R 2284-52-114-1	R 1670-3267-1-3920-1 / ARC 10550	SB
3906	Swarna (NC)			
3907	29343	MTU 1351 (MTU 2223-29-2-1-1)	IR64 / PLA99-1-3-1-3	LB
3rd year of testing:				
3908	28508	CR 2830-48-1	Swarna / ARC10075	SB
2nd year of testing:				
3909	28524	RP 6330-179-3-9-1	MTU 1121 / Vijetha	LS
3910	29345	OR 2573-4	Birupa / IR 76561-AC-8-8	LB
3rd year of testing:				
3911	28509	MTU 1317 (MTU 2404-25-2)	MTU 1064 / MTU 1075	MS
2nd year of testing:				
3912	29328	MSN 112	IET 21341 / MSN 54	SB
3913	29351	WGL-1289	MTU1081 / BM71	LB
3914	PA 6444 (HC)			
3915	NDR 8002-Eastern & Central, Ranjeet- North Eastern, Salivahana-Western, Pushyami –Southern--ZC			
3rd year of testing:				
3916	28501	RP 5970-2-6-19-16-24-12	Improved Samba Mahsuri*2 / Swarna	MS
3917	28544	CR 3969-17-2-2-1-1-1-1	IR 73907-753-2-3 / Pratiksyta	LS
3918	Local Check (LC)			

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Table No. 1.35: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN														
		ODISHA						ODISHA (3)				BIHAR				
		ICAR-NRRI (Cutback)		JEYPORE		Ranital		Mean		BIKRAMGANJ (Dhangain)		Sabour		Patna-ICAR		
3901	28538 ^	4376		6472	1 * #	4719	7	5189	3	6%	6831	8 #	2759		3445	
3902	29347	4404		3991		4042		4146			6430	#	3750		2787	
3903	28497 ^	3690		4336	8	4161		4062			7232	5 #	5714	3 #	6613	2 *
3904	28440	5901	2	3995	10	4380	9	4759	7		7324	4 #	5598	5 #	4840	7
3905	29349	4208		4623	7	4131		4321			4783		4705	9	3360	
3906	Swarna (NC)	6589	1	3277		3846		4571	10		8268	2	5893	2	4047	10
3907	29343	5453	6	3949		4388	8	4597	9		5988	#	3033		2483	
3908	28508 ^	5728	4	3570		3810		4369			8274	1 #	5619	4 #	4333	9
3909	28524	5731	3	5453	3	5556	1 * #	5580	1 * 14%	#	5675	#	4235		4513	8
3910	29345	4853		3932		5032	4	4606	8		6507	10 #	4539	10	5180	6
3911	28509 ^	4607		4779	6	5199	3	4862	6		6278	#	3863		3193	
3912	29328	3793		4255	9	4309	10	4119			4373		4464		6207	3
3913	29351	4933	10	3232		3561		3909			6931	7 #	5173	8 #	3627	
3914	PA 6444 (HC)	5280	8	5344	4	4821	6	5148	4		4737		4438		7587	1
3915	Zonal Check (ZC)	5632	5	3048		3704		4128			7467	3	5438	7	5727	5
3916	28501 ^	5129	9	2829		3315		3758			6465	#	4292		3420	
3917	28544 ^	5325	7	5292	5	5392	2 * #	5336	2 * 9%		7149	6 #	5560	6 #	6160	4
3918	Local Check (LC)	4263		5561	2	4850	5	4891	5		6669	9	6027	1	3660	
Exp. Mean		4994		4330		4401		4575			6521		4728		4510	
CD		875		624		450		349			560		612		816	
CV%		10.56		8.69		6.17		4.6			5.17		7.8		10.91	
D/S		15-07-2021		03-07-2021				24-06-2021		24-06-2021		28-06-2021		24-06-2021		
D/P		09-09-2021		31-07-2021				24-07-2021		17-07-2021		23-07-2021		21-07-2021		
Local Check Name		Mahamani		Hasanta				R. Mahsuri 1		Raiendra Mahsuri 1		Sambha Mahsuri		BPT 5204		
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check								

Table No. 1.35 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN																
		BIHAR (3)		JHARKHAND (1)		WEST BENGAL			WEST BENGAL (2)			UTTAR PRADESH			Z3 (9)			
		Mean		RANCHI		CHINSURAH	Pundibhari		Mean			@MASODHA	@VARANASI		Mean			
3901	28538 ^	4345		5932	8	5150		4111	8	4631				1552		4866		
3902	29347	4322		5150		5009		3056		4033			4255		4004		4291	
3903	28497 ^	6520	1 # 17%	6568	5	5538	10	2556		4047			4337	9	4038	6	5156	7
3904	28440	5921	6	6047	7	5750	5	5389	2 #	5570	2	# 26%	3737		4034	7	5469	3
3905	29349	4283		5787	9	5185		3389		4287			4474	6	4017	9	4463	
3906	Swarna (NC)	6069	5	6713	2	5009		6667	1	5838	1		4255		4000		5590	2
3907	29343	3835		5729		5044		4361	6	4703	9		4419	7	1962		4492	
3908	28508 ^	6075	4 #	5584		5538	15	4778	3	5158	4 # 17%		4610	5	4128	4	5248	5
3909	28524	4808		6655	4	5891	1 #	3444		4668			4201		4017	9	5239	6
3910	29345	5409	9	5093		5608	9	3778		4693	10		5128	3 #	4034	7	4947	10
3911	28509 ^	4445		6800	1	5326		3833		4580					1641		4875	
3912	29328	5015		6713	2	5750	55	3444		4597			5592	1 * #	4000		4812	
3913	29351	5244	10	5729		5714	7	4500	5	5107	5	16%	4283		4009		4822	
3914	PA 6444 (HC)	5587	7	6424	6	5150		3667		4409			4419	7	4624	2	5272	4
3915	Zonal Check (ZC)	6211	3	4514		5891	1	4111	8	5001	7		4965	4	4577	3	5059	8
3916	28501 ^	4726		4630		5785	4	4556	4	5171	3 # 17%		5401	2 * #	4128	4	4491	
3917	28544 ^	6290	2 # 13%	5787	9	5855	3 #	4333	7	5094	6	16%	3628		4774	1	5650	1 #
3918	Local Check (LC)	5452	8	4051		5644	8	3889	10	4767	8		4310	10	4000		4957	9
Exp. Mean		5253		5773		5491		4103		4797			4501		3752		4983	
CD		343		948		696		1178		707			343		839		284	
CV%		3.94		9.9		7.64		17.31		8.88			4.57		13.47		3.44	
D/S				02-07-2021		02-07-2021		25-06-2021				26-06-2021		03-07-2021				
D/P				11-08-2021		31-07-2021		24-07-2021				21-07-2021		04-08-2021				
Local Check Name				KAUSHALYA		MTU 1140		NDR 8002				HUR- 917		Ranjit Sub 1				
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check										

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Table No. 1.35 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN						ZONE-V - CENTRAL						
		ASSAM (1)		TRIPURA		Z4 (2)		CHHATTISGARH			CHHATTISGARH (2)			
		TITABAR		Lembucherra		Mean		RAIPUR		JAGADALPUR	Mean			
3901	28538 ^	5467	3 # 23%	5368	8	5418	3	3826		8352	1 * #	6089	6	6%
3902	29347	5333	5 # 20%	3951		4642		3572		6287		4930		
3903	28497 ^	5947	1 # 34%	4744		5346	5	5647	3	7399	4 *	6523	3 *	14% # 13%
3904	28440	4800	10	4486		4643		4641		7158	7	5900	9	
3905	29349	4400		4816		4608		5590	4	7388	5 *	6489	4 *	13% # 12%
3906	Swarna (NC)	4267		6261	1	5264	7	4617		6528		5573		
3907	29343	5333	5 # 20%	5378	7	5356	4	4861		7139	8	6000	7	
3908	28508 ^	5200	9 # 17%	5323	9	5262	8	4745		6712	10	5729		
3909	28524	3653		6127	2	4890		4319		6493		5406		
3910	29345	4560		5446	6	5003		5002	8	6838	9	5920	8	
3911	28509 ^	4187		4352		4270		5826	1 #	8096	2 * #	6961	1 *	21% # 20%
3912	29328	4453		4581		4517		4729		6675		5702		
3913	29351	5333	5 # 20%	5201	10	5267	6	5391	6	7252	6	6322	5 *	10%
3914	PA 6444 (HC)	4453		5580	5	5017	10	4972	9	6589		5781	10	
3915	Zonal Check (ZC)	5893	2	5178		5536	1	5163	7	6325		5744		
3916	28501 ^	4267		5636	4	4952		5578	5	5246		5412		
3917	28544 ^	5227	8 # 17%	5658	3	5443	2	5747	2	7407	3 * #	6577	2 *	15% # 14%
3918	Local Check (LC)	5333	5	5100		5217	9	4889	10	5411		5150		
Exp. Mean		4895		5177		4994		4951		6850		5900		
CD		647		2015		792		829		813		543		
CV%		7.97		18.45		9.56		10.09		7.15		5.55		
D/S		18-07-2021		24-06-2021				30-06-2021		23-06-2021				
D/P		18-07-2021		20-07-2021				22-07-2021		29-07-2021				
Local Check Name		Khowai		Jalubai				Jalubai		SKL-8				
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check						

Table No. 1.35 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL						ZONE VI - WESTERN							
		MAHARASHTRA 1 (1)		Z5 (3)		MAHARASHTRA 2		MAHARASHTRA 2 (2)		MAHARASHTRA (3)					
		SAKOLI		Mean		KARJAT	Pondaghat	Mean		Mean					
3901	28538 ^	4064	# 39%	5414	6 # 12%	4398	2708	3553		3724					
3902	29347	3341	14%	4400		4398	2922	3660		3554					
3903	28497 ^	3451	18%	5499	5 # 14%	5787	7	5621	2 *	5704	2	4953	5	# 9.69%	
3904	28440	3627	# 24%	5142		6481	2	4556	6	5519	4	4888	6		
3905	29349	4173	9 # 43%	5717	4 # 6% # 18%	6096	5	4079	10	5088	7	4783	8		
3906	Swarna (NC)	4392	6	5179		6867	1	4243	8	5555	3	5167	2		
3907	29343	4010	# 37%	5337	10 # 11%	5787	7	3425		4606		4407			
3908	28508 ^	4773	4 # 64%	5410	7 # 12%	6481	2	5254	3 *	5868	1	6% 10%	5503	1	6.49% # 21.9%
3909	28524	4146	10 # 42%	4986		5015		3968		4492		4377			
3910	29345	4337	7 # 49%	5392	9 # 12%	5710	9	4115	9	4913	10	4721	9		
3911	28509 ^	5442	1 * 15% # 86%	6455	1 * 19% # 34%	4552		3546		4049		4514			
3912	29328	3272	12%	4892		4012		5118	4 *	4565		4134			
3913	29351	4787	2 # 64%	5810	3 * 8% # 20%	6173	4	3984		5079	8	4981	4	#10.32%	
3914	PA 6444 (HC)	2919		4827		5556	10	5072	5	5314	6	4515			
3915	Zonal Check (ZC)	4719	5	5402	8	6019	6	3835		4927	9	4858	7		
3916	28501 ^	4283	8 # 47%	5036		5170		5698	1 *	5434	5	5050	3	# 11.8%	
3917	28544 ^	4774	3 # 64%	5976	2 * 11% # 24%	4630		4341	7	4486		4581	10		
3918	Local Check (LC)	3601		4634		5440		3807		4624		4282			
Exp. Mean		4117		5306		5476		4239		4857		4611			
CD		571		402		1001		713		574		422			
CV%		8.36		4.57		11.02		10.14		7.12		5.52			
D/S		22-06-2021				22-06-2021		22-06-2021		09-07-2021					
D/P		20-07-2021				17-07-2021		13-07-2021		09-08-2021					
Local Check Name		Kariat-2				Kariat-2		Mahsuri		MTU 1061					
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check							

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Table No. 1.35 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN						ZONE VII - SOUTHERN								
		GUJARAT (1)			Z6 (3)			ANDHRA PRADESH			ANDHRA PRADESH (3)					
		NAVSARI			Mean			MARUTERU	RAGOLU	BAPATLA	Mean					
3901	28538 ^	5039		4048			7467	1 #	6039	3	5675	2 #	6394	1	5% #	68%
3902	29347	5987	9 # 24%	4436			4791	#	5138		4994	6 #	4974	#	30%	
3903	28497 ^	6023	8 # 25%	5810	4 # 13%		5256	#	4967		5443	3 #	5222	10 #	37%	
3904	28440	6525	4 # 35%	5854	2 # 14%		6474	4 #	5090		4714	9 #	5426	6 #	42%	
3905	29349	5182		5119			5052	#	4150		2793		3998			
3906	Swarna (NC)	6438	5	5849	3		6268	5	5525	10	4349		5381	8		
3907	29343	6279	6 # 30%	5164	9		4978	#	6447	2	4602	10 #	5342	9 #	40%	
3908	28508 ^	6704	3 # 39%	6146	1 5% # 19%		5138	#	5762	8	4226	#	5042	#	32%	
3909	28524	6821	2 6% # 41%	5268	8		6005	6 #	5125		5443	3	5524	5 #	45%	
3910	29345	5497	14%	5107			4644	#	5797	5			5221	#	37%	
3911	28509 ^	6893	1 7% # 43%	4997			5793	7 #	5780	6	5724	1 #	5766	3 #	51%	
3912	29328	5708	18%	4946			4786	#	5687	9	4433	#	4969	#	30%	
3913	29351	5773	10 19%	5310	6		5338	9 #	6500	1	3704	#	5181	#	36%	
3914	PA 6444 (HC)	4835		5154	10		3673		5516		2256		3815			
3915	Zonal Check (ZC)	6040	7	5298	7		7271	3	5780	6	5163	5	6071	2		
3916	28501 ^	5680	17%	5516	5		5740	8 #	4321		4221	#	4761	#	25%	
3917	28544 ^	5538	15%	4836			7290	2 #	5037		4770	8 #	5699	4 #	49%	
3918	Local Check (LC)	5448		4898			5318	10	5872	4	4994	6	5395	7		
Exp. Mean		5912		5209			5627		5474		4559		5232			
CD		1097		550			510		1313		1267		579			
CV%		11.18		6.36			5.46		14.45		16.7		6.67			
D/S		09-07-2021					30-07-2021		22-06-2021							
D/P		08-08-2021							20-07-2021							
Local Check Name		MTU 1262							SIDDHI (WGL 44)							

^ 3rd year of testing.

*Superior to best check

#Superior over hybrid check

%superior over best check

Table No. 1.35 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN							
		TELANGANA (1)		KARNATAKA					
		WARANGAL	@PONNAMPET	@BRAHMAVAR	GANGAVATI				
3901	28538 ^	7069	5	2526		1812		6795	5 *#
3902	29347	4465		1926		3832	8	3962	
3903	28497 ^	6625	8	2714		2419		4891	
3904	28440	7413	2	3302	6	4764	2	7519	2 * #
3905	29349	4604		1238		3419	9	5301	
3906	Swarna (NC)	6006	10	2791		2085		5968	10 #
3907	29343	7031	6	2884	10	4069	7	7378	3 * #
3908	28508 ^	5513		2828		2733		6231	7 #
3909	28524	5297		3013	9	3207		6679	6 #
3910	29345	6832	7	3704	4 *	4592	4	7256	4 * #
3911	28509 ^	3901		3796	3 *	4686	3	6141	8 #
3912	29328	6255	9	2399		1602		4481	
3913	29351	4689		3979	2 *	1514		7865	1 * #
3914	PA 6444 (HC)	7179	4	4222	1	2053		4199	
3915	Zonal Check (ZC)	7415	1	3095	8	4138	6	3474	
3916	28501 ^	4598		1841		4525	5	6013	9 #
3917	28544 ^	7337	3	3558	5	3280	10	5904	#
3918	Local Check (LC)	5768		3265	7	4919	1	5115	
Exp. Mean		6000		2949		3314		5843	
CD		846		386		611		795	
CV%		8.5		7.88		11.1		6.45	
D/S				16-07-2021		23-07-2021		27-07-2021	
D/P				15-08-2021		11-08-2021		25-08-2021	
Local Check Name				Tunga		MO-4		BPT 5204	

^ 3rd year of testing.

*Superior to best check

#Superior over hybrid check

%superior over best check

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Table No. 1.35 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN										Overall Mean (23)		
		KARNATAKA		KARNATAKA (1)			PUDUCHERRY (1)		Z7 (6)					
		@SIRSI	Mean	Mean	Mean	KARAIKAL	Mean	Mean	Mean					
3901	28538 ^	2889	6795	5	* 14%	#6%	6950	6666	1 *	9%	# 33%	5348	9 #	
3902	29347	2744	3962				6986	5056				4554		
3903	28497 ^	3633	8	4891		16.50%	4849	5339				5350	8 #	
3904	28440	3011		7519	2 *	26%	#7%	7300	7	6418	2	# 29%	5653	2 # 11%
3905	29349	2744		5301		#26%	6229	4688				4784		
3906	Swarna (NC)	3300		5968	10		5967	5681				5565	3 #	
3907	29343	3433	9	7378	3 *	24%	# 76%	7823	2	6377	3	# 28%	5256	
3908	28508 ^	2944		6231	7		#48%	4708		5263			5391	5 #
3909	28524	2883		6679	6	12%	#59%	7031		5930	7	# 9%	5360	6 #
3910	29345	3356		7256	4	* 22%	#73%	7163	8	6338	4	# 27%	5351	7 #
3911	28509 ^	3661	7	6141	8		# 46%	7133	10	5745	9	# 15%	5271	
3912	29328	3733	5	4481				7591	5	5539		# 11%	5004	
3913	29351	4133	2	7865	1 *	32%	# 87%	6153		5708	10	# 14%	5284	10
3914	PA 6444 (HC)	4311	1	4199				7140	9	4994			5104	
3915	Zonal Check (ZC)	3878	4	3474				7675	4	6130	6		5456	4 #
3916	28501 ^	3400	10	6013	9		#43%	7804	3	5450			4986	
3917	28544 ^	3683	6	5904			# 41%	7458	6	6299	5	#26%	5738	1 # 12%
3918	Local Check (LC)	3967	3	5115				8192	1	5877	8		5170	
Exp. Mean		3428		5843				6897		5756			5251.4	
CD		870		795				1514		492			200	
CV%		12.033		6.45				13.23		5.15			2.29	
D/S		23-06-2021						18-08-2021						
D/P		16-07-2021						22-09-2021						
Local Check Name								CR 1009						
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check						

Table No. 1.36: Days to 50%flowering of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		ODISHA			ODISHA (3)	BIHAR			BIHAR (3)	JHARKHAND (1)	
		ICAR-NRRI (Cuttack)	JEYPORE	Ranital	Mean	BIKRAMGANJ (Dhangain)	Sabour	Patna-ICAR	Mean	RANCHI	
3901	28538	138	120	119	126	131	148	134	137	118	
3902	29347	135	119	120	125	126	138	131	132	117	
3903	28497	135	114	114	121	109	120	117	115	106	
3904	28440	135	115	113	121	117	119	115	117	110	
3905	29349	136	123	116	125	119	124	114	119	104	
3906	Swarna (NC)	130	122	120	124	117	118	114	116	106	
3907	29343	138	118	116	124	131	146	135	137	114	
3908	28508	135	123	121	126	117	118	116	117	108	
3909	28524	131	122	121	125	125	120	116	120	110	
3910	29345	127	114	114	118	107	112	112	110	104	
3911	28509	133	119	120	124	131	124	127	127	114	
3912	29328	135	119	119	124	113	114	109	112	106	
3913	29351	131	118	119	123	118	118	115	117	103	
3914	PA 6444 (HC)	130	110	105	115	101	113	105	106	96	
3915	Zonal Check (ZC)	132	104	105	114	122	120	116	119	100	
3916	28501	130	107	107	115	107	113	109	110	102	
3917	28544	133	107	108	116	119	120	116	118	105	
3918	Local Check (LC)	137	115	114	122	118	119	119	119	104	
Exp. Mean		133	116	115	122	118	122	118	119	107	

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Table No. 1.36 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE IV- NORTH EASTERN		
		WEST BENGAL		WEST BENGAL (2)	UTTAR PRADESH		Z3(9)	ASSAM (1)	TRIPURA	Z4 (2)
		CHINSURAH	Pundibhari	Mean	@MASODHA	@VARANASI	Mean	TITABAR	Lembucherra	Mean
3901	28538	131	121	126		133	129	124	102	113
3902	29347	124	113	118	122	133	125	123	99	111
3903	28497	118	118	118	114	112	117	121	79	100
3904	28440	118	112	115	110	117	117	119	80	99
3905	29349	114	112	113	114	104	118	124	81	102
3906	Swarna (NC)	120	115	117	119	122	118	113	83	98
3907	29343	127	114	121	122	133	127	123	89	106
3908	28508	128	117	123	122	118	120	118	81	99
3909	28524	116	114	115	113	122	119	120	86	103
3910	29345	117	114	116	114	109	113	116	75	95
3911	28509	111	123	117		129	122	123	92	108
3912	29328	119	117	118	116	111	117	116	90	103
3913	29351	114	114	114	115	123	117	120	83	102
3914	PA 6444 (HC)	116	107	112	116	105	109	108	72	90
3915	Zonal Check (ZC)	119	119	119	116	115	115	125	95	110
3916	28501	109	106	108	111	109	110	112	75	93
3917	28544	120	110	115	114	125	115	118	77	97
3918	Local Check (LC)	111	115	113	112	111	117	125	77	101
Exp. Mean		118	115	117	116	118	118	119	84	102

Table No. 1.36 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL					ZONE VI - WESTERN		
		CHHATTISGARH		CHHATTISGARH (2)	MAHARASHTRA 1 (1)	Z5 (3)	MAHARASHTRA 2		
		RAIPUR	JAGADALPUR	Mean	SAKOLI	Mean	KARJAT	Pondaghat	
3901	28538	125	122	123	128	125	109	124	
3902	29347	121	123	122	120	122	110	120	
3903	28497	110	113	112	112	112	114	115	
3904	28440	112	108	110	113	111	113	109	
3905	29349	111	114	113	110	112	112	112	
3906	Swarna (NC)	111	114	113	114	113	119	114	
3907	29343	120	116	118	120	119	110	118	
3908	28508	110	113	112	113	112	110	114	
3909	28524	115	116	116	119	117	109	111	
3910	29345	111	105	108	109	108	115	113	
3911	28509	118	115	117	121	118	119	119	
3912	29328	112	114	113	113	113	108	112	
3913	29351	111	108	109	112	110	113	110	
3914	PA 6444 (HC)	110	104	107	104	106	110	107	
3915	Zonal Check (ZC)	109	107	108	110	109	108	114	
3916	28501	111	104	108	106	107	110	109	
3917	28544	110	112	111	113	112	107	115	
3918	Local Check (LC)	114	112	113	113	113	114	109	
Exp. Mean		113	112	113	114	113	112	114	

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Table No. 1.36 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN				ZONE VII - SOUTHERN			
		MAHARASHTRA2 (2)	MAHARASHTRA (3)	GUJARAT (1)	Z6 (3)	ANDHRA PRADESH			ANDHRA PRADESH (3)
		Mean	Mean	NAVSARI	Mean	MARUTERU	RAGOLU	BAPATLA	Mean
3901	28538	116	120	119	117	122	121	106	116
3902	29347	115	117	112	114	121	117	106	115
3903	28497	114	113	104	111	98	105	100	101
3904	28440	111	112	100	108	100	104	98	101
3905	29349	112	112	101	108	109	105	97	104
3906	Swarna (NC)	117	116	102	112	102	104	101	102
3907	29343	114	116	116	115	112	113	105	110
3908	28508	112	112	105	110	104	104	98	102
3909	28524	110	113	103	108	110	108	98	105
3910	29345	114	112	94	107	97	104		101
3911	28509	119	119	115	118	120	115	107	114
3912	29328	110	111	100	107	100	102	102	101
3913	29351	112	112	105	109	100	104	97	101
3914	PA 6444 (HC)	109	107	91	103	95	94	99	96
3915	Zonal Check (ZC)	111	111	108	110	106	106	97	103
3916	28501	109	108	100	106	98	94	98	97
3917	28544	111	112	106	109	106	108	98	104
3918	Local Check (LC)	112	112	108	110	112	119	104	112
Exp. Mean		113	113	105	110	106	107	101	105

Table No. 1.36 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN							Overall Mean (23)	
		TELANGANA (1)	KARNATAKA				KARNATAKA(1)	PUDUCHERRY (1)		Z7 (6)
		WARANGAL	@PONNAMPET	@BRAHMAVAR	GANGAVATI	@SIRSI	Mean	KARAIKAL		Mean
3901	28538	126	126	99	115	126	115	115	118	122
3902	29347	139	124	92	116	128	116	117	119	120
3903	28497	112	111	91	111	115	111	105	105	111
3904	28440	120	105	96	103	110	103	110	106	111
3905	29349	119	105	94	111	111	111	108	108	112
3906	Swarna (NC)	111	111	99	111	117	111	109	106	112
3907	29343	131	109	91	112	117	112	114	115	119
3908	28508	115	109	98	116	111	116	108	107	113
3909	28524	123	108	93	109	115	109	106	109	113
3910	29345	114	106	96	107	110	107	106	105	108
3911	28509	125	108	99	116	113	116	112	116	118
3912	29328	108	117	101	116	112	116	107	106	111
3913	29351	111	101	94	105	112	105	103	103	110
3914	PA 6444 (HC)	105	105	93	104	113	104	104	100	104
3915	Zonal Check (ZC)	119	105	96	104	112	104	105	106	111
3916	28501	103	107	99	105	114	105	105	101	105
3917	28544	118	104	95	108	111	108	104	107	110
3918	Local Check (LC)	112	115	103	105	120	105	120	112	113
Exp. Mean		117	110	96	110	115	110	109	108	112

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Table No. 1.37: Plant Height (cm) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN								
		ODISHA			ODISHA (3)	BIHAR			BIHAR (3)	JHARKHAND (1)
		ICAR-NRRI (Cuttack)	JEYPORE	Ranital	Mean	BIKRAMGANJ (Dhangain)	Sabour	Patna-ICAR	Mean	RANCHI
3901	28538	86	105.72	108.10	100	98.50	119.00	109	109	137
3902	29347	86	97.42	96.42	93	116.66	116.67	99	111	104
3903	28497	68	94.96	95.70	86	109.83	110.33	105	108	101
3904	28440	87	94.87	99.04	94	109.16	114.00	108	110	96
3905	29349	81	96.44	96.46	91	97.83	118.00	108	108	96
3906	Swarna (NC)	76	94.71	97.53	89	100.50	102.33	93	99	91
3907	29343	77	85.54	88.51	84	90.50	89.67	87	89	89
3908	28508	75	91.58	93.02	87	89.33	109.67	101	100	92
3909	28524	81	97.00	98.04	92	112.00	110.67	113	112	103
3910	29345	91	98.67	99.10	96	121.16	131.00	119	124	108
3911	28509	75	96.49	101.14	91	97.00	101.33	100	99	101
3912	29328	76	100.78	100.74	93	93.00	115.00	113	107	104
3913	29351	76	107.99	107.47	97	127.66	141.67	137	135	124
3914	PA 6444 (HC)	78	96.00	97.67	91	128.50	111.33	112	117	101
3915	Zonal Check (ZC)	70	96.07	98.14	88	105.50	109.00	108	107	89
3916	28501	81	87.33	94.00	87	100.00	104.00	94	99	86
3917	28544	75	90.18	91.76	86	95.66	105.00	110	103	91
3918	Local Check (LC)	87	96.22	98.68	94	99.66	117.33	106	107	84
Exp. Mean		79	96	98	91	105	113	107	108	100

Table No. 1.37 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE IV- NORTH EASTERN		
		WEST BENGAL		WEST BENGAL (2)	UTTAR PRADESH		Z3 (9)	ASSAM (1)	TRIPURA	Z4 (2)
		CHINSURAH	Pundibhari	Mean	@MASODHA	@VARANASI	Mean	TITABAR	Lembucherra	Mean
3901	28538	134	112	123		93	112	113.07	120.5	117
3902	29347	122	100.2	111	98	98	104	113.00	107.0	110
3903	28497	115	90.2	103	91	88	99	107.07	98.0	103
3904	28440	120	111.8	116	105	92	104	112.00	110.5	111
3905	29349	105	99.8	102	102	96	100	113.67	113.5	114
3906	Swarna (NC)	127	93.4	110	92	85	97	103.80	99.5	102
3907	29343	112	105.6	109	84	83	92	98.80	93.0	96
3908	28508	120	98.2	109	98	94	97	105.80	106.0	106
3909	28524	135	106.2	121	107	94	106	112.13	110.0	111
3910	29345	126	120.8	123	138	100	113	124.80	123.5	124
3911	28509	116	97.2	107		80	98	100.80	92.0	96
3912	29328	109	94.4	102	130	96	101	119.27	106.0	113
3913	29351	141	131	136	145	110	121	134.33	131.5	133
3914	PA 6444 (HC)	131	99	115	125	100	106	114.73	107.0	111
3915	Zonal Check (ZC)	108	96.2	102	85	83	98	110.07	110.0	110
3916	28501	110	96.6	103	124	89	95	104.60	99.5	102
3917	28544	110	100.2	105	100	90	96	114.60	111.0	113
3918	Local Check (LC)	136	103.5	120	83	77	103	123.33	103.0	113
Exp. Mean		121	103	112	107	92	102	113	108	110

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Table No. 1.37 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL					ZONE VI - WESTERN				
		CHHATTISGARH		CHHATTISGARH (2)	MAHARASHTRA 1 (1)	Z5 (3)	MAHARASHTRA		MAHARASHTRA (2)	MAHARASHTRA (3)	
		RAIPUR	JAGDALPUR	Mean	SAKOLI	Mean	KARJAT	Pondaghat	Mean	Mean	
3901	28538	117.5	129.80	124	125	124	129	114.9	122	123	
3902	29347	101.9	113.40	108	98	104	114	103.5	109	105	
3903	28497	104.3	85.60	95	96	95	116	92.4	104	101	
3904	28440	107.8	105.00	106	108	107	122	101.6	112	111	
3905	29349	108.4	95.20	102	84	96	120	105.0	112	103	
3906	Swarna (NC)	86.2	97.60	92	76	87	132	88.0	110	99	
3907	29343	91.9	98.00	95	95	95	117	88.9	103	100	
3908	28508	101.8	92.20	97	97	97	123	90.7	107	104	
3909	28524	106.3	112.20	109	116	112	105	91.3	98	104	
3910	29345	124.6	114.80	120	126	122	140	114.6	127	127	
3911	28509	107.5	96.60	102	95	100	129	92.3	111	105	
3912	29328	124.6	111.40	118	75	104	123	106.8	115	102	
3913	29351	140.1	139.20	140	115	131	131	118.2	125	121	
3914	PA 6444 (HC)	107.5	107.60	108	93	103	118	94.6	106	102	
3915	Zonal Check (ZC)	106.7	96.80	102	85	96	122	109.9	116	106	
3916	28501	100.5	99.40	100	96	99	126	91.7	109	105	
3917	28544	107.9	100.00	104	93	100	126	96.3	111	105	
3918	Local Check (LC)	160.1	125.40	143	92	126	143	79.5	111	105	
	Exp. Mean	111	107	109	98	105	124	99	112	107	

Table No. 1.37 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN		ZONE VII - SOUTHERN						
		GUJARAT (1)	Z6 (3)	ANDHRA PRADESH			ANDHRA PRADESH (3)	TELANGANA (1)	KARNATAKA	
		NAVSARI	Mean	MARUTERU	RAGOLU	BAPATLA	Mean	WARANGAL	@PONNAMPET	@BRAHMAVAR
3901	28538	148.1	131	153.6	135	145	145	135.8	94.50	99.0
3902	29347	128.5	115	146.1	130	137	138	130.0	80.17	82.3
3903	28497	113.4	107	125.5	104	109	113	124.7	74.08	73.0
3904	28440	127.2	117	137.1	111	124	124	128.0	88.50	86.3
3905	29349	118.0	114	137.5	120	143	134	124.4	77.58	81.0
3906	Swarna (NC)	99.5	107	118.1	110	110	113	119.7	67.92	74.7
3907	29343	110.3	105	122.5	111	112	115	119.2	66.83	81.7
3908	28508	112.3	109	123.7	110	112	115	125.3	70.58	79.7
3909	28524	118.3	105	136.4	124	116	125	123.5	78.42	82.0
3910	29345	126.9	127	144.1	132		138	129.3	96.08	95.3
3911	28509	117.2	113	118.4	110	122	117	121.1	77.42	76.7
3912	29328	140.1	123	127.9	112	136	125	138.8	81.67	81.0
3913	29351	136.7	129	156.6	113	160	143	141.4	102.92	101.3
3914	PA 6444 (HC)	122.5	112	131.7	110	94	112	121.8	77.50	87.0
3915	Zonal Check (ZC)	116.4	116	127.6	121	116	122	127.9	82.58	75.0
3916	28501	120.3	113	127.0	105	114	115	123.1	72.00	76.7
3917	28544	116.2	113	126.9	115	112	118	120.5	75.58	88.3
3918	Local Check (LC)	156.3	126	128.8	106	104	113	118.8	91.50	81.3
	Exp. Mean	124	116	133	116	122	124	126	81	83

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Table No. 1.37 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					Overall Mean (23)
		KARNATAKA		KARNATAKA (1)	PUDUCHERRY (1)	Z7 (6)	
		GANGAVATI	@SIRSI	Mean	KARAIKAL	Mean	
3901	28538	133	109.8	133	138.07	140	124
3902	29347	110	86.6	110	129.20	130	113
3903	28497	101	91.1	101	117.47	114	104
3904	28440	104	96.1	104	111.67	119	111
3905	29349	113	100.5	113	116.13	126	109
3906	Swarna (NC)	94	79.1	94	105.27	110	101
3907	29343	95	91.9	95	124.33	114	100
3908	28508	97	88.6	97	115.27	114	104
3909	28524	109	90.7	109	126.43	122	111
3910	29345	126	101.7	126	133.43	133	122
3911	28509	100	93.1	100	110.87	114	104
3912	29328	109	108.3	109	132.73	126	112
3913	29351	125	115.3	125	124.43	137	129
3914	PA 6444 (HC)	100	93.6	100	107.70	111	108
3915	Zonal Check (ZC)	102	102.4	102	107.03	117	106
3916	28501	97	89.6	97	107.07	112	103
3917	28544	93	91.1	93	117.37	114	105
3918	Local Check (LC)	86	88.8	86	122.73	111	112
Exp. Mean		105	95	105	119	120	110

Table No. 1.38: Panicles/m² of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN								
		ODISHA			ODISHA (3)	BIHAR			BIHAR (3)	JHARKHAND (1)
		ICAR-NRRI (Cuttack)	JEYPORE	Ranital	Mean	BIKRAMGANJ (Dhangain)	Sabour	Patna-ICAR	Mean	RANCHI
3901	28538	313	360	354	343	334	277	217	276	179
3902	29347	327	431	425	394	355	230	300	295	193
3903	28497	287	336	330	317	304	252	307	288	193
3904	28440	404	375	353	378	353	220	250	274	179
3905	29349	288	358	346	331	277	220	297	264	203
3906	Swarna (NC)	432	342	327	367	303	261	309	291	253
3907	29343	397	325	330	351	266	206	322	265	173
3908	28508	414	364	350	376	268	256	283	269	179
3909	28524	412	345	347	368	287	211	358	285	168
3910	29345	366	324	325	338	276	192	268	245	143
3911	28509	332	370	364	355	318	178	315	271	201
3912	29328	285	346	353	328	297	185	302	261	203
3913	29351	366	325	337	343	241	218	306	255	158
3914	PA 6444 (HC)	390	342	320	351	255	224	306	262	180
3915	Zonal Check (ZC)	401	333	341	358	331	279	316	308	181
3916	28501	373	302	315	330	282	203	318	268	142
3917	28544	359	421	377	386	320	230	305	285	167
3918	Local Check (LC)	333	300	297	310	293	256	308	286	230
Exp. Mean		360	350	344	351	298	228	299	275	185

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Table No. 1.38 Contd.: Panicles/m2 of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE IV- NORTH EASTERN		
		WEST BENGAL		WEST BENGAL (2)	UTTAR PRADESH		Z3 (9)	ASSAM (1)	TRIPURA	Z4 (2)
		CHINSURAH	Pundibhari	Mean	@MASODHA	@VARANASI	Mean	TITABAR	Lembucherra	Mean
3901	28538	286	218	252		145	282	217	313	265
3902	29347	440	226	333	222	199	325	213	388	300
3903	28497	286	189	237	246	152	276	255	438	346
3904	28440	275	194	234	263	199	289	282	250	266
3905	29349	385	265	325	253	238	293	267	350	308
3906	Swarna (NC)	253	223	238	236	194	300	247	363	305
3907	29343	286	222	254	260	168	281	242	375	308
3908	28508	440	261	351	277	211	313	268	313	290
3909	28524	286	275	280	255	182	299	284	313	298
3910	29345	385	137	261	286	154	268	267	263	265
3911	28509	352	227	289		180	295	240	363	301
3912	29328	352	240	296	296	201	285	267	388	327
3913	29351	264	268	266	244	148	276	310	350	330
3914	PA 6444 (HC)	286	247	267	270	183	283	287	400	343
3915	Zonal Check (ZC)	308	250	279	275	214	304	270	350	310
3916	28501	363	191	277	299	163	276	345	375	360
3917	28544	352	263	308	205	162	311	225	363	294
3918	Local Check (LC)	352	228	290	255	204	289	285	463	374
Exp. Mean		331	229	280	259	183	291	265	356	311

Table No. 1.38 Contd.: Panicles/m2 of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL					ZONE VI - WESTERN			
		CHHATTISGARH		CHHATTISGARH (2)	MAHARASHTRA 1 (1)	Z5 (3)	MAHARASHTRA		MAHARASHTRA (2)	MAHARASHTRA (3)
		RAIPUR	JAGDALPUR	Mean	SAKOLI	Mean	KARJAT	PONDAGHAT	Mean	Mean
3901	28538	222	228	225	189	213	203	181	192	191
3902	29347	244	198	221	173	205	194	184	189	184
3903	28497	228	235	232	220	228	219	174	196	204
3904	28440	202	254	228	202	219	209	183	196	198
3905	29349	206	207	207	201	205	188	190	189	193
3906	Swarna (NC)	227	264	245	176	222	223	204	213	201
3907	29343	202	248	225	205	218	204	205	204	205
3908	28508	209	261	235	222	231	204	187	196	204
3909	28524	212	209	211	166	196	180	194	187	180
3910	29345	195	254	225	239	229	208	179	194	209
3911	28509	220	194	207	301	238	194	183	189	226
3912	29328	185	251	218	152	196	190	191	191	178
3913	29351	180	189	185	290	220	204	194	199	229
3914	PA 6444 (HC)	198	247	222	144	196	191	183	187	173
3915	Zonal Check (ZC)	206	254	230	234	232	182	205	194	207
3916	28501	190	213	202	205	203	186	189	188	194
3917	28544	219	281	250	251	250	197	188	192	212
3918	Local Check (LC)	207	211	209	212	210	208	205	206	208
Exp. Mean		208	233	221	210	217	199	190	194	200

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Table No. 1.38 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN		ZONE VII – SOUTHERN				
		GUJARAT (1)	Z6 (3)	ANDHRA PRADESH			ANDHRA PRADESH (3)	TELANGANA (1)
		NAVSARI	Mean	MARUTERU	RAGOLU	BAPATLA	Mean	WARANGAL
3901	28538	179	188	323	374	243	313	444
3902	29347	180	186	312	307	292	304	435
3903	28497	180	191	328	349	271	316	429
3904	28440	199	197	339	295	264	299	408
3905	29349	206	194	315	296	214	275	425
3906	Swarna (NC)	177	201	299	369	308	325	419
3907	29343	182	197	337	298	270	301	428
3908	28508	181	191	304	283	213	267	406
3909	28524	190	188	328	322	258	303	437
3910	29345	164	184	321	322		322	438
3911	28509	146	175	310	267	270	283	427
3912	29328	210	197	321	371	250	314	410
3913	29351	193	197	290	223	216	243	431
3914	PA 6444 (HC)	168	181	304	309	226	280	399
3915	Zonal Check (ZC)	175	188	297	300	274	290	441
3916	28501	190	188	282	302	254	279	388
3917	28544	211	199	330	308	253	297	453
3918	Local Check (LC)	177	197	348	298	305	317	392
Exp. Mean		184	191	316	311	258	296	423

Table No. 1.38 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Late, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN							Overall Mean (23)
		KARNATAKA				KARNATAKA(1)	PUDUCHERRY (1)	Z7 (6)	
		@PONNAMPET	@BRAHMAVAR	GANGAVATI	@SIRSI	MEAN	KARAIKAL	Mean	
3901	28538	312	251	372	251	372	173	322	270
3902	29347	363	377	345	310	345	190	313	286
3903	28497	297	360	345	278	345	162	314	275
3904	28440	286	395	394	268	394	184	314	273
3905	29349	345	374	351	258	351	171	295	271
3906	Swarna (NC)	389	295	342	291	342	153	315	281
3907	29343	315	397	366	317	366	210	318	274
3908	28508	330	207	375	310	375	150	288	278
3909	28524	348	358	366	268	366	245	326	278
3910	29345	275	382	348	284	348	246	335	266
3911	28509	323	332	348	281	348	266	315	278
3912	29328	326	283	340	261	340	287	330	277
3913	29351	264	295	412	340	412	267	307	271
3914	PA 6444 (HC)	341	346	367	344	367	281	314	272
3915	Zonal Check (ZC)	337	353	353	261	353	302	328	286
3916	28501	286	397	341	251	341	290	310	271
3917	28544	341	334	373	307	373	271	331	292
3918	Local Check (LC)	297	393	353	307	353	301	333	285
Exp. Mean		321	341	360	288	360	230	317	277

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Table No.1.39: Grain quality characteristics of entries in AVT 2 & AVT 1-Late kharif, 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
3901	28538	79.4	71.5	69.5	5.20	2.25	2.31	SB	OC	4.0	23.93	22
3902	29347	80.2	74.2	73.3	5.35	2.10	2.54	MS	VOC	4.0	23.14	22
3903	28497	81.3	69.6	64.2	5.40	2.30	2.34	SB	OC	4.0	26.60	55
3904	28440	79.7	73.0	71.0	5.60	2.19	2.55	MS	VOC	7.0	21.12	52
3905	29349	81.0	72.4	70.1	5.30	2.50	2.12	SB	OC	4.0	23.99	45
3906	Swarna (NC)	79.4	70.7	68.3	5.33	2.19	2.43	SB	VOC	4.0	24.55	22
3907	29343	80.6	70.0	63.7	6.23	2.12	2.93	LB	VOC	4.0	22.79	61
3908	28508	79.5	71.8	70.4	5.13	2.19	2.34	SB	A	4.0	24.55	49
3909	28524	79.9	72.1	67.8	7.14	2.30	3.10	LS	VOC	4.0	25.93	54
3910	29345	79.5	70.9	60.6	6.83	2.28	2.99	LB	VOC	4.0	26.54	46
3911	28509	79.3	71.2	68.1	5.30	2.05	2.58	MS	VOC	4.0	26.86	38
3912	29328	77.8	70.4	68.4	5.12	2.23	2.29	SB	A	4.0	22.96	41
3913	29351	79.8	71.4	65.6	6.30	2.22	2.83	LB	VOC	4.0	25.37	22
3914	PA 6444 (HC)	82.5	74.5	70.1	6.16	2.19	2.81	LB	VOC	4.0	23.14	49
3915	Pushyami (ZC)	80.9	67.9	62.9	5.62	2.06	2.72	MS	A	4.0	26.78	47
3916	28501	81.7	72.7	65.9	4.86	1.72	2.82	MS	VOC	4.0	25.87	22
3917	28544	80.9	74.1	73.0	6.32	2.05	3.08	LS	VOC	4.0	26.69	34
3918	Local Check											

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB: Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

Table No. 1.40: Composition of entries in Initial Variety Trial -Irrigated Late (IVT-L), Kharif 2021.

Entry No.	IET No.	Designation	Cross Combination	GT
1st year of testing:				
4001	29880	AD 18136	CR 1009 / MTU 1075	SB
4002	29881	BPT 2849	NLR 34449 / MTU 5249	MB
4003	29882	Pusa 5315-2-5-1-62-1-3-4	Pusa 5115-61-1-6 / Swarna	MS
4004	29883	RP 6354-RMS-5-11-13-43	Samba Mahsuri*2 / ST12	MS
4005	29884	RP Bio 4918-B2-NPK 65-2	Swarna / O. nivara	MS
4006	29885	OR 2658-1	IR 72 / OR 1920-3	MS
4007	29886	ANPK 7311	NPR 2 / NP 9534	LB
4008	29887	JMP 132	BPT 1235 / BPT 5204 // BPT 5204	MS
4009	29888	RP 6491-MAID-87-15-9-3-1-1-1	WGL14 / Improved Samba Mahsuri // WGL14 / Rathuheenati /// WGL14 / RP 5925-24 // WGL14 / IR 96321-1447-561-B-1 /// WGL14 / IR 81896-96-B-B-195	MS
4010	29889	OR (CZ)-40	Lalat Mutant	MS
4011	29890	KJT 2-21	RPW 6-17 / RP 4-14	LS
4012	29891	MTU 1376	MTU 2077 / WGL 3962	MS
4013	29892	NDR 9501	IR 70181-5-PMI-1-2-B-3-2	LB
4014	29893	NVSR 706	JGL 11470 / P-206	LB
4015	29894	NLR 3548	NLR 28523 / QR 16	MS
4016	29895	TRC SWK 1515-B-B-5-7	Swarna / Kataktara	LS
4017	29896	RP 6489-MAID-88-16-7-6-3-1-1	WGL 14 / Improved Samba Mahsuri // WGL 14 / Rathuheenati /// WGL14 / RP 5925-24 // WGL14 / IR 96321-1447-561-B-1 /// WGL14 / IR 81896-96-B-B-195	MS
4018	29897	MTU 1379	MTU 7029 / JGL 3828	MS
4019		Swarna (NC)		

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Entry No.	IET No.	Designation	Cross Combination	GT
4020	29898	CR 3580-1-2-4-2-1	Lalat / N22	MS
4021	29899	CRHR 143 (Hybrid)	CRMS 32A / CRL 351	LS
4022	29900	R 1624-61-2-60-1	Surekha / Madhuri	LS
4023	29901	RCPR 86-RP5480-41	Swarna / IRGC48960 // RP BIO 226	
4024	29902	CR 3856-44-22-2-1-11-4-1-2	IR 73963-86-1-5-2-2 / CR 2324-1	SB
4025	29903	RP 6490-MAID-100-25-9-3-3-1	WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-2 /// WGL14 / RP 5925-24 // WGL14 / IR74371-46-1-1-13 //// WGL14 / IR 81896-96-B-B-195 ///// WGL14 / RP 5925-23	SB
4026	29904	RP 6502-7-4-1-1 (GSY-7-4-1-1)	IET 27134 / IET 27296	MS
4027	29905	CR 3856-29-14-2-1-1-7-3	IR 73963-86-1-5-2-2 / CR 2324-1	LS
4028	29906	CRHR 159 (Hybrid)	CRMS 32A / CRL23-122-1	LS
4029	29907	WGL 1524	JGL-3844 / MTU-1936-12-1-2-1 /// JGL 3844	LS
4030	27152	PAU 6359-7-1-2-1-2 (RYT 3843)	MT 16 // IR 64 Sub 1 / PAU 3699-13-2-2-4	LS
4031	29909	CR 4350-7-5-1-1	CRL 22R / MTU 1071	MB
4032	29910	RP 6502-7-4-3-1 (GSY-7-4-3-1)	IET 27134 / IET 27296	MS
4033	29911	NDR 9081	IR77770-118-NDR-B-49-43 (IR 68087-78-1 / IR 69726-116-1-3 // IR 70175-51-2-1-1-2)	LB
4034	29912	MTU 1378	BPT 2231 / NLR 34449	MS
4035	29913	CR 4121-36-24-1-4-9-1-2	CR 3856-44-22-2-1-11*3 / IRBB 60 / Swarna Sub1	MS
4036	29914	CRAC 3998-131-2	Doubled haploid of 27P63	MB
4037	29915	OROI-12-IR88250-20-1-1-3	Savitri / 2* IR 64-Sub 1	MS
4038	29916	NLR 3644	NLR 28523 / NLR 3041	
4039	29917	CR 3954-607-116-541-117	Maudamani / Swarna-Sub1 // Swarna-Sub1*2	SB
4040	29918	NVSR 687	JGL 3855 / Z-31	LB
4041	NDR 8002-Eastern & Central, Ranjeet- North Eastern, Salivahana-Western, Pushyami – Southern--ZC			
4042	29919	Pusa 5159-1-2-1-1-1-4	White ponni / P-44	LS
4043	29920	CR 4334-2-1-1-1	CR 3856-44-22-2-1-7*3 / Swarna MAS	LS
4044	29921	CRHR 160 (Hybrid)	PMS17A / MP351	LS
4045	29922	SYE 35-4-37-9	PKV HMT /Kundalika	MS
4046	29923	CR 4350-234-1-1-1	CRL 22R / MTU1071	MB
4047	29924	WGL 1573	BPT 5204 / JGL 3844 /// TNAUCO 50	MS
4048	29925	CR 4354-3-1-1-2-1	CR 3549-11-2-1-1-1 / CR 3511-3-4-1-1-1-1	MB
4049	29926	RP 6167-SR-R 232	Swarna / O. rufipogon	LS
4050	29927	AD 18092	CR 1009 / BPT 2270	MS
4051	29928	CRHR 151 (Hybrid)	CRMS 32A / CRL 352	LS
4052	PA 6444 (HC)			
4053	29929	CR 2851-S-1-S-B-B-3-2-1	Gayatri / SR 26B	MS
4054	29930	RP 6527-RMS-1422-28-19-1	Swarna / Habataki / ST6 // ST12 / Swarna	MB
4055	29931	AD 18147	CR 1009 / MTU 1075	SB
4056	29932	RP 6112-MS-M-99-55-25-6-9-3-9-6	BPT 5204 Mutant	MS
4057	28273	CR 3939-2-1-1-2-1-2-1	IR 73907-753-2-3 / Pratiksyia	LS
4058	29933	RP 5976-5-4-6-15	Improved Samba Mahsuri / Wazuhophek	SB
4059	29934	CR 3984-1-5-4-2-1	CR 3624-2 / CRMAS 2232-85	MS
4060	29935	MTU 1377	MTU 1075 / MTU 1001	MS
4061	29908	CR 4148-8	N 22 Mutant	SB
4062	29936	RP 6112-SP-M-KS-61-8-4-7-2-1-5	BPT 5204 Mutant	MS
4063	29937	CR 3938-11-1-8-1-1-1-2	IR 73907-753-2-3 / Pratiksyia	LS
4064	Local Check			

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Table No. 1.41: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - LATE, Kharif 2021

Entry No	IET No	ZONE III-EASTERN														
		ODISHA						BIHAR								
		ICAR-NRRI (Cuttack)			JEYPORE			BIKRAMGANJ (Dhangain)			SABOUR			Patna-ICAR		
GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP		
4001	29880	8450	1	116	4542		114	3759		116	6394	7	104	4160	116	
4002	29881	4750		105	2672		118	3907		117	5790		107	2930	106	
4003	29882	4800		116	4064		122	3836		120	4367		104	3851	119	
4004	29883	3350		94	3526		120	5570	10	95	5338		105	4430	103	
4005	29884	4150		94	2715		109	6873	1	93	5198		120	4690	101	
4006	29885	5400		106	4361		120	4225		118	7304	1	105	2370	111	
4007	29886	6150		105	5403	4	112	5041		112	4594		115	2940	115	
4008	29887	6500		121	4593		112	3247		122	1309		120	2947	126	
4009	29888	5450		107	3107		109	5335		112	5095		105	5340	107	
4010	29889	6000		107	4875		113	4904		100	5276		103	3640	106	
4011	29890	3550		89	2026		117	3694		93	4708		102	3940	97	
4012	29891	6250		116	5076	9	122	3954		119	5898		106	3170	116	
4013	29892	4850		98	4322		109	5120		101	5573		100	5310	103	
4014	29893	1900		91	2840		117	4130		98	4187		100	5140	98	
4015	29894	6250		117	5806	3	125	3639		119	2045		120	2890	128	
4016	29895	2100		87	3965		101	4461		112	2825		95	3490	93	
4017	29896	6750	8	109	2847		118	6038	4	102	5224		106	5130	112	
4018	29897	7300	6	106	3244		115	5037		120	5994		109	4540	110	
4019	Swarna (NC)	6700	9	106	3933		110	5135		116	6607	4	102	5860	4	
4020	29898	5850		102	4069		102	5157		95	5696		97	5460	9	
4021	29899	6150		102	3418		117	5049		116	6418	6	103	3500	92	
4022	29900	3950		95	3694		101	4508		100	6495	5	104	4230	107	
4023	29901	4700		97	4151		100	5640	9	97	5271		100	3050	94	
4024	29902	5250		104	4318		111	5649	8	100	5869		102	3830	106	
4025	29903	5000		99	2828		115	4611		98	4230		107	3830	105	
4026	29904	5500		102	3917		119	4675		98	4919		106	3640	109	
4027	29905	7450	5	105	4769		107	5681	6	116	4620		97	5620	7	
4028	29906	4000		103	4154		109	4534		111	6387	8	106	3050	117	
4029	29907	3450		104	4394		111	4383		98	3907		102	2480	109	
4030	27152	3450		93	4532		124	4198		100	4969		96	4770	99	
4031	29909	4700		105	5085	8	125	4231		116	6131		106	5220	113	
4032	29910	3650		101	4222		111	3827		97	4198		102	2430	112	
4033	29911	3850		90	4840		103	4716		95	5037		103	4700	89	
4034	29912	5600		115	2483		124	3546		121	6052		104	3720	110	
4035	29913	5500		104	4628		110	4717		114	5493		99	4180	108	
4036	29914	3950		93	2646		111	3593		91	2874		93	3660	94	
4037	29915	5100		102	3903		104	4479		111	4973		90	3500	110	
4038	29916	7800	2	127	5196	7	127	3049		101				6110	3	
4039	29917	6250		99	4144		107	6189	3	116	6002		105	2923	135	
4040	29918	5700		100	5207	6	103	5112		101	6089		99	4520	105	
4041	Zonal Check (ZC)	4800		106	4742		104	4676		114	6151		107	4030	114	
4042	29919	4550		104	3206		121	3235		114	4781		106	2620	116	
4043	29920	7550	4	106	4472		114	5106		102	4864		106	3260	115	
4044	29921	4350		102	3546		110	4564		101	5582		106	2800	115	
4045	29922	3850		100	4229		107	3747		101	5048		103	5660	6	
4046	29923	5700		108	4901		110	3562		120	5521		106	3220	114	
4047	29924	5350		102	4943	10	105	4438		116	5449		103	5160	103	
4048	29925	6700	9	103	4833		111	5380		114	6811	2	102	4600	106	
4049	29926	2350		56	2313		111	3809		100						
4050	29927	6550		122	4328		120	3698		128	617		121	2918	132	
4051	29928	4600		99	2611		114	4624		108	6335	9	96	5160	95	
4052	PA 6444 (HC)	2650		94	3861		108	5163		100	4896		94	6480	1	
4053	29929	5400		104	3615		107	5012		114	5095		105	2350	112	
4054	29930	2200		90	2169		108	4883		97	4140		89	6330	2	
4055	29931	6300		111	5257	5	120	3596		119	6290	10	105	2390	115	
4056	29932	3450		112	4015		112	3910		118	3592		128	2250	110	
4057	28273	5200		103	3725		106	3800		108	5315		101	5790	5	
4058	29933	7800	2	103	2950		111	3775		100	5035		103	4200	114	
4059	29934	5500		116	5872	2	122	3611		121	4658		90	3180	128	
4060	29935	6150		112	3928		113	6873	1	120	5865		128	2130	116	
4061	29908	4550		94	1993		108	5000		92						
4062	29936	3450		103	4778		109	5050		101	5073		101	2710	115	
4063	29937	5350		98	4550		104	5929	5	101	5510		97	5600	8	
4064	Local Check	7000	7	115	6033	1	113	5662	7	110	6619	3	111	4160	116	
Mean		5138		103	4022		112	4602		107	5125		104	4003	108	
F Value		40.71(p<0.0001)S			8.12(p<0.0001)S			14.27(p<0.0001)S			15.03(p<0.0001)S			23.03(p<0.0001)S		
CD		653			958			643			908			682		
SEm				1			1			1			1		2	
CV%		6.36			11.92			6.99			8.86			8.52		
D/S		16-07-2021			26-07-2021			17-07-2021			17-07-2021			16-07-2021		
D/P		13-08-2021			26-08-2021			17-08-2021			07-08-2021			13-08-2021		
Local Check Name		Sumit (CR Dhan 404)			Hasanta			R. Mahsuri 1			Rajendra Mahsuri 1			Sambha Mahsuri		

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No.1.41 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT-LATE, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									ZONE-V – CENTRAL		
		JHARKHAND (1)			UTTAR PRADESH (1)			Z3 (7)			CHHATTISGARH		
		RANCHI			MASODHA			Mean			RAIPUR		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4001	29880	3157		109	3657	#	113	4874	#	112	5432		111
4002	29881	2336		88	3989	#	115	3768		108	3460		112
4003	29882	2525		97	4322	#	120	3966		114	3841		120
4004	29883	3851		100	4455	#	114	4360		104	4762		110
4005	29884	3977		98	4787	#	118	4627		104	3084		110
4006	29885	3977		108	5319	9 #	121	4708		113	5166		112
4007	29886	3535		99	5386	7 #	115	4721		110	6105	3	112
4008	29887				3723	#	110	3720		118	3061		123
4009	29888	4293		92	4920	#	121	4791		107	4313		112
4010	29889	4104		99	5053	10 #	113	4836		106	4857		109
4011	29890	4482		96	3391		115	3684		101	3788		112
4012	29891	4735		111	3989	#	113	4725		115	4433		112
4013	29892	5871	4 *	96	4787	#	108	5119	9 #	102	4916		111
4014	29893	2273		93	4388	#	104	3551		100	4310		112
4015	29894	3598		93	4122	#	116	4050		117	3143		122
4016	29895	5177	8	88	3856	#	117	3696		99	4139		106
4017	29896	5682	6 *	92	4854	#	112	5218	5 #	107	4624		111
4018	29897	4545		108	5585	5 * #	106	5178	5 #	110	5244		113
4019	Swarna (NC)	4419		101	4920		118	5368		108	5982	5	111
4020	29898	3977		93				5035	10 #	99	3398		109
4021	29899	2336		93				4479		104	5909	6	113
4022	29900	5114	9	99	3657	#	120	4521		103	5892	7	112
4023	29901	4609		92	4721	#	117	4592		99	5679	8	111
4024	29902	3851		97	3989	#	113	4679		104	5536	9	113
4025	29903	2715		100	4920	#	108	4019		104	3819		112
4026	29904	3725		99	5452	6 #	114	4547		106	4739		113
4027	29905	4482		96	4721	#	113	5335	#	105	3763		111
4028	29906	4798		101	5718	4 * #	116	4663		109	6136	2	112
4029	29907	3472		100	5851	2 * #	118	3991		106	4141		110
4030	27152	3598		93	5386	7 #	114	4415		103	4683		112
4031	29909	3598		95	4787	#	117	4822		111	4787		113
4032	29910	4672		100	5918	1 * #	112	4131		105	4040		113
4033	29911	3662		90	5785	3 * #	124	4656		99	4610		109
4034	29912	4104		109	3258		113	4109		114	6235	1	111
4035	29913	4040		100	3723	#	118	4612		107	5143		113
4036	29914	3472		91	3856	#	108	3436		97	3732		110
4037	29915	4482		98	3258		113	4242		104	5289		110
4038	29916				3723	#	116	5176	7 #	115			
4039	29917	4545		99	3723	#	117	4825		111	5455	10	112
4040	29918	6124	2 *	93	3391		123	5163	8 #	103	4806		112
4041	Zonal Check (ZC)	4735		96	3324		113	4637		107	5331		112
4042	29919				3856		118	3708		113	4444		113
4043	29920	4293		100	3790	#	121	4762		109	4781		111
4044	29921	3662		98	3524		120	4004		107	5168		113
4045	29922	2715		113	3790	#	114	4148		106	4891		112
4046	29923				3457		115	4394		112	4994		118
4047	29924	4987	10	100	3723	#	112	4864	#	106	4155		112
4048	29925	6566	1 *	100	3989	#	116	5554	1 #	107	5393		111
4049	29926	2778		75	3391		111	2928		90	2382		86
4050	29927				3457		117	3595		123	3782		124
4051	29928	2715		93	3989	#	120	4291		103	4652		113
4052	PA 6444 (HC)	5682	6	90	3059		121	4542		100	5087		111
4053	29929	4230		106	4455		117	4308		109	3889		111
4054	29930	5997	3 *	91	3457		115	4168		98	3246		111
4055	29931	4987	10	104	3657	#	118	4640		113	6030	4	114
4056	29932							3443		116	3423		115
4057	28273	3346		99				4529		103	3923		113
4058	29933	4735		99	3258		120	4536		107	4315		113
4059	29934				3524		118	4391		116	3855		117
4060	29935	3851		112	3989	#	120	4684		117	4893		112
4061	29908	5808	5 *	88	3457		117	4162		100	4018		113
4062	29936	3346		111	3657	#	116	4009		108	4080		112
4063	29937	4798		100	3324		113	5009	#	102	4784		113
4064	Local Check	4735		99	4189		115	5485	2 #	111	4492		111
Mean		4173		98	4194		115	4456		107	4579		112
F Value		10.00 (p<0.0001)S			13.9 (p<0.0001)S			23.04 (p<0.0001)S			7.99 (p<0.0001)S		
CD		896			591			322			864		
SEm				1			1			0			1
CV%		10.72			7.04			3.61			9.44		
D/S		22-07-2021			10-07-2021						16-07-2021		
D/P		10-08-2021			10-08-2021						07-08-2021		
Local Check Name		SWARNA			NDR 8002						Jakubi		

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Table No.1.41 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT-LATE, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL			ZONE-VI – WESTERN						ZONE VII – SOUTHERN		
		Z5 (1)			GUJARAT (1)			Z6 (1)			ANDHRA PRADESH		
		Mean			NAVASARI			Mean			MARUTERU		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4001	29880	5432		111	5873		101	5873		101	8010		103
4002	29881	3460		112	4528		98	4528		98	4455		97
4003	29882	3841		120	3544		97	3544		97	4740		115
4004	29883	4762		110	4440		90	4440		90	3025		92
4005	29884	3084		110	4486		92	4486		92	7285		92
4006	29885	5166		112	6448	5	100	6448	5	100	3165		100
4007	29886	6105	3 #	112	5778		103	5778		103	8310		100
4008	29887	3061		123	3061		108	3061		108	7325		115
4009	29888	4313		112	6016		97	6016		97	8955	5	98
4010	29889	4857		109	4953		102	4953		102	3325		100
4011	29890	3788		112	4240		94	4240		94	6960		89
4012	29891	4433		112	6060		97	6060		97	8620	9	112
4013	29892	4916		111	4837		95	4837		95	8965	4	93
4014	29893	4310		112	6231	9	86	6231	9	86	6190		87
4015	29894	3143		122	3182		106	3182		106	5780		115
4016	29895	4139		106	5061		83	5061		83	4885		82
4017	29896	4624		111	6525	3	97	6525	3	97	9295	1	99
4018	29897	5244		113	5895		103	5895		103	4720		102
4019	Swarna (NC)	5982	5	111	5746		102	5746		102	9185	2	98
4020	29898	3398		109	6084		98	6084		98	8870	8	89
4021	29899	5909	6	113	5009		94	5009		94	3190		92
4022	29900	5892	7	112	5102		92	5102		92	5910		87
4023	29901	5679	8	111	5077		92	5077		92	8915	6	93
4024	29902	5536	9	113	6256	8	95	6256	8	95	7660		98
4025	29903	3819		112	4116		86	4116		86	8245		88
4026	29904	4739		113	3821		98	3821		98	7860		94
4027	29905	3763		111	5329		96	5329		96			
4028	29906	6136	2 #	112	4773		95	4773		95	6015		92
4029	29907	4141		110	3603		95	3603		95	7840		98
4030	27152	4683		112	4232		85	4232		85	9010	3	87
4031	29909	4787		113	4105		94	4105		94	6115		100
4032	29910	4040		113	3964		101	3964		101	4360		96
4033	29911	4610		109	3118		91	3118		91	6155		98
4034	29912	6235	1 #	111	6530	2	102	6530	2	102	7185		113
4035	29913	5143		113	6504	4	91	6504	4	91	4885		100
4036	29914	3732		110	3762		84	3762		84	6585		86
4037	29915	5289		110	5621		101	5621		101	5510		100
4038	29916				2844		108	2844		108	3335		125
4039	29917	5455	10	112	4695		96	4695		96	3510		97
4040	29918	4806		112	6227	10	96	6227	10	96	5420		96
4041	Zonal Check (ZC)	5331		112	5012		102	5012		102	7400		100
4042	29919	4444		113	5918		100	5918		100	4735		96
4043	29920	4781		111	5739		100	5739		100	5150		97
4044	29921	5168		113	4951		91	4951		91	3330		90
4045	29922	4891		112	4025		95	4025		95	4225		91
4046	29923	4994		118	5481		108	5481		108	8380	10	115
4047	29924	4155		112	3920		93	3920		93	5580		94
4048	29925	5393		111	5341		93	5341		93	8880	7	95
4049	29926	2382		86	4698		92	4698		92			
4050	29927	3782		124	2994		109	2994		109	6100		118
4051	29928	4652		113	5012		87	5012		87	4405		87
4052	PA 6444 (HC)	5087		111	5577		80	5577		80	5510		90
4053	29929	3889		111	6190		100	6190		100	6905		102
4054	29930	3246		111	5612		89	5612		89	2970		89
4055	29931	6030	4 #	114	4112		98	4112		98	7650		104
4056	29932	3423		115	3635		103	3635		103	5850		105
4057	28273	3923		113	6412	6	95	6412	6	95	7980		95
4058	29933	4315		113	6590	1	95	6590	1	95	5960		95
4059	29934	3855		117	6286	7	108	6286	7	108	6390		119
4060	29935	4893		112	4036		109	4036		109	7565		106
4061	29908	4018		113	3947		101	3947		101			
4062	29936	4080		112	3929		101	3929		101	4115		99
4063	29937	4784		113	5110		96	5110		96	3000		95
4064	Local Check	4492		111	5484		101	5484		101	5490		111
Mean		4579		112	4964		96	4964		96	6186		98
F Value		7.99(p<0.0001)S			7.25(p<0.0001)S			7.25(p<0.0001)S			11.21(p<0.0001)S		
CD		864			1095			1095			1604		
SEm				1			0			0			1
CV%		9.44			11.04			11.04			12.96		
D/S					17-07-2021						16-07-2021		
D/P					07-08-2021						11-08-2021		
Local Check Name					Masuri						MTU 1061		

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Table No.1.41 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT-LATE, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN											
		ANDHRA PRADESH						TELANGANA (1)			TAMIL NADU (1)		
		RAGOLU			BAPATLA			WARANGAL			ADUTHURAI		
		GY	R	DDF	GY	R	DDF	GY	R	DDF	GY	R	DDF
4001	29880	6320	1	101	3831		103	9197	2 #	110	5655		118
4002	29881	3810		98	4780		101	5553		111	5387		116
4003	29882	5249		115	4771		106	7862	#	107	6994	6 #	115
4004	29883	3701		93	3521		98	7111		98	6071		111
4005	29884	3810		92	3907		100	6786		97	5000		112
4006	29885	5541	7	102	2845		99	7534		115	5595		111
4007	29886	6158	2	101	5558	3	106	7990	10 #	110	5506		111
4008	29887	4297		108	4644		109	6094		117	7024	5 #	109
4009	29888	3323		94	3002		97	8197	8 #	104	3958		116
4010	29889	4729		97	4981	6	98	8430	6 #	108	5536		115
4011	29890	2262		87	2927		95	4413		95	5268		114
4012	29891	5617	6	110	4914	7	107	9710	1 #	113	6399	#	116
4013	29892	5227		97	3918		95	8615	5 #	102	4613		106
4014	29893	3528		93	4855	10	98	4331		96	5274		113
4015	29894	4643		114	3946		105	8986	3 #	116	5208		109
4016	29895	2879		80	4234		98	5087		93	3869		109
4017	29896	3777		95	3306		97	8920	4 #	104	5179		114
4018	29897	5639	5	98	5280	4	101	5947		112	6488	10 #	115
4019	Swarna (NC)	3247		99	4907	8	101	8422	7	108	6964	8	108
4020	29898	3236		92	4212		96	6496		98	5060		106
4021	29899	3496		94	4021		98	5973		106	5357		109
4022	29900	3994		94	4208		94	4816		96	5446		110
4023	29901	4275		95	4407		96	7691		96	3720		107
4024	29902	5162		96	4708		98				4494		108
4025	29903	4307		86	2880		98	7096		97	4970		109
4026	29904	3907		95	3475		98	4721		98	5060		111
4027	29905	4708		96	2956		96	5327		104	4524		109
4028	29906	5812	4	93	4692		97	6161		103	5327		106
4029	29907	3680		92	3889		98	3967		100	5089		112
4030	27152	2792		81	3181		95	5880		93	4167		113
4031	29909	3561		97	3972		100	4993		107	5631		112
4032	29910	3052		97	2808		98	4754		104	4881		112
4033	29911	3095		86	3556		97	5239		94	4048		109
4034	29912	4275		102	3720		104	5624		115	5506		116
4035	29913	4805		94	3066		104	4288		105	4524		109
4036	29914	3041		85	3825		96	3561		104	5268		109
4037	29915	5487	8	101	3750		99	7139		111	4583		112
4038	29916	3236		137	2525		106	6394		116	4643		120
4039	29917	3604		94	2980		97	5872		103	4792		111
4040	29918	3853		93	3560		95	4186		105	3899		111
4041	Zonal Check (ZC)	5184		98	4672		100	6266		104	3571		111
4042	29919	3831		99	3463		101	6504		108	5952		112
4043	29920	5963	3	98	4674		99	6550		106	3571		109
4044	29921	3636		98	3778		99	7124		102	5327		116
4045	29922	3117		93	3769		99	6673		101	5655		111
4046	29923	4848		109	4488		106	5182		111	8125	1 #	119
4047	29924	3442		94	2931		98	6821		102	4940		111
4048	29925	4058		93	3806		97	6653		103	5060		109
4049	29926	1537		62							2560		70
4050	29927	4383		114	5120	5	108	6659		120	4077		114
4051	29928	3864		98	4662		99	4766		97	5357		115
4052	PA 6444 (HC)	5195		88	4625		103	6298		95	4315		111
4053	29929	4156		97	3981		95	7052		101	8095	2	112
4054	29930	2857		86	3481		95	5093		95	3690		108
4055	29931	5281	10	99	5660	1	102	6359		111	4851		112
4056	29932	5065		102	3905		100	4037		103	3869		114
4057	28273	3149		95	3704		97	6124		104	4435		112
4058	29933	4675		94	4667		97	7648		103	5357		109
4059	29934	3961		106	5609	2	107	8135	9 #	112	6994		118
4060	29935	5422	9	109	4706		107	7866	#	110	7321	4 #	116
4061	29908	3799		94							5357		112
4062	29936	4232		98	3801		99	6127		106	6786	9 #	109
4063	29937	4058		93	4309		96	3919		105	7738	3 #	107
4064	Local Check	5271		112	4897	9	105	7083		113	6250		122
Mean		4189		97	4052		100	6366		104	5254		111
F Value		17.02(p<0.0001)S			2.77(p<0.0001)S			7.13(p<0.0001)S			3.25(p<0.0001)S		
CD		685			1308			1559			1769		
SEm				0			1			1			1
CV%		8.18			16.15			12.24			16.85		
D/S		16-07-2021			29-07-2021			16-07-2021			20-08-2021		
D/P		10-08-2021						12-08-2021			21-09-2021		
Local Check Name		MTU 1061			BPT 2782			Siddhi (WGL 44)			ADT 51		

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Table No.1.41 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT-LATE, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									Overall Mean (16)		
		KARNATAKA (1)			PUDUCHERRY (1)			Z7 (7)					
		GANGAVATHI			KARAIKAL			Mean					
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4001	29880	5035		114	6958		117	6429	5 #	109	5652	4 #	110
4002	29881	4641		114	5625		112	4893		107	4288		107
4003	29882	4554		118	6611		114	5826	#	113	4746		113
4004	29883	3894		110	4208		103	4504		100	4453		102
4005	29884	3317		116	5244		105	5050		102	4707		103
4006	29885	6192	3	102	4964		107	5119		105	5025		108
4007	29886	5404	6	113	6439		105	6481	4 #	107	5644	5 #	108
4008	29887	3692		118	5104		117	5454		113	4441		115
4009	29888	3321		116	6306		103	5295		104	5058		105
4010	29889	5712	5	111	5744		107	5494		105	5132		105
4011	29890	3590		102	3917		87	4191		95	3947		99
4012	29891	6090	4	110	8696	8 #	109	7149	1 * #	111	5851	1 #	112
4013	29892	4295		110	4893		106	5789	#	101	5382	#	102
4014	29893	4199		100	4758		100	4734		98	4283		99
4015	29894	3856		115	7376		114	5685		112	4654		114
4016	29895	3593		97	4793		91	4191		93	4026		96
4017	29896	5131		114	5626		108	5891	9 #	104	5557	6 #	105
4018	29897	4080		115	8317	10 #	105	5782	#	107	5491	10 #	108
4019	Swarna (NC)	3519		116	5803		106	6007	7	105	5709	2	106
4020	29898	4321		102	5000		106	5314		98	5126		99
4021	29899	3417		114	8708	7 #	108	4880		103	4797		103
4022	29900	3436		106	11153	1 * #	103	5566		98	5100		101
4023	29901	4240		102	5486		103	5533		99	5102		99
4024	29902	3308		106	3963		108	4883		102	4923		103
4025	29903	3952		112	3489		103	4991		99	4438		101
4026	29904	3349		114	4046		103	4631		102	4550		104
4027	29905	4763		107	5868		105	4691		103	4972		104
4028	29906	6202	2	99	6092		102	5757	#	99	5241	#	104
4029	29907	4061		114	4807		102	4762		102	4313		104
4030	27152	3715		106	5554		100	4900		96	4632		99
4031	29909	4247		116	3358		104	4554		105	4658		107
4032	29910	4183		116	4297		102	4048		103	4079		104
4033	29911	4006		106	5597		91	4528		97	4501		98
4034	29912	4080		115	7082		109	5353		110	4938		111
4035	29913	3590		118	6365		104	4503		105	4716		105
4036	29914	3974		101	4936		90	4456		96	3921		96
4037	29915	3990		107	6500		103	5280		104	4848		104
4038	29916	2981		120	8903	6 #	115	4574		120	4672		117
4039	29917	4837		110	3913		104	4215		102	4590		106
4040	29918	5208	9	107	6783		102	4701		101	5005		102
4041	Zonal Check (ZC)	3782		114	8315	#	105	5599		104	5124		106
4042	29919	3526		120	8974	4	109	5284		106	4640		109
4043	29920	3599		107	4463		104	4853		103	4864		106
4044	29921	3942		114	4058		103	4456		103	4334		105
4045	29922	5231	8	116	4110		104	4683		102	4421		104
4046	29923	5042		115	5739		115	5972	8 #	113	5243	#	112
4047	29924	4936		113	4989		133	4806		106	4735		105
4048	29925	4378		112	5692		102	5504		101	5509	9 #	104
4049	29926	4167		96	6958		116	3806		86	3358		88
4050	29927	4744		113	7736	#	118	5546		115	4478		118
4051	29928	4910		104	7269		103	5033		100	4683		101
4052	PA 6444 (HC)	4551		107	5233		128	5104		103	4886		101
4053	29929	4808		112	5669		95	5809		102	5056		105
4054	29930	4878		109	7738	#	90	4387		96	4296		97
4055	29931	3907		118	7325		103	5862	#	107	5228	#	109
4056	29932	3654		114	5439		102	4546		106	4007		110
4057	28273	3494		110	6290		131	5025		106	4846		105
4058	29933	3417		113	6297		125	5432		105	5042		106
4059	29934	6686	1 *	118	8944	5 #	117	6674	3 #	114	5547	8 #	114
4060	29935	4558		118	9747	2 #	109	6741	2 * #	111	5556	7 #	113
4061	29908	5356	7	109	8990	3 #	114	5876	10 #	107	4752		103
4062	29936	3673		119	6611		101	5049		104	4464		106
4063	29937	3436		106	7094		99	4793		100	4907		102
4064	Local Check	5192	10	114	8500	9	114	6098	6	113	5691	3	111
Mean		4310		111	6179		106	5203		104	4826		105
F Value		5.63(p<0.0001)S			4.01(p<0.0001)S			11.40(p<0.0001)S			20.56(p<0.0001)S		
CD		977			2382			583			314		
SEm				1			2			0			0
CV%		11.34			19.29			5.6			3.26		
D/S		24-07-2021			18-08-2021								
D/P		29-08-2021			29-07-2021								
Local Check Name		BPT 5204			CR 1009								

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Table No. 1.41 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT –LATE (State Means), Kharif 2021

Entry No	IET No	ODISHA (2)			BIHAR (3)			CHHATTISGARH (1)			ANDHRA PRADESH (3)			KARNATAKA (1)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4001	29880	6496	3 #	115	4771		112	5432		111	6054	4 #	102	5035		114
4002	29881	3711		111	4209		110	3460		112	4348		99	4641		114
4003	29882	4432	#	119	4018		114	3841		120	4920		112	4554		118
4004	29883	3438		107	5113		101	4762		110	3416		94	3894		110
4005	29884	3433		101	5587	4	104	3084		110	5001		94	3317		116
4006	29885	4881	#	113	4633		111	5166		112	3850		100	6192	3 * #	102
4007	29886	5777	8 #	109	4192		114	6105	3 #	112	6675	1 * #	102	5404	6	113
4008	29887	5547	#	117	2501		123	3061		123	5422		111	3692		118
4009	29888	4279	#	108	5257		108	4313		112	5093		96	3321		116
4010	29889	5438	#	110	4607		103	4857		109	4345		98	5712	5 #	111
4011	29890	2788		103	4114		97	3788		112	4050		90	3590		102
4012	29891	5663	#	119	4341		114	4433		112	6384	2 #	109	6090	4 #	110
4013	29892	4586	#	104	5334	10	101	4916		111	6037	5 #	95	4295		110
4014	29893	2370		104	4486		98	4310		112	4858		92	4199		100
4015	29894	6028	5 #	121	2858		122	3143		122	4790		111	3856		115
4016	29895	3033		94	3592		100	4139		106	3999		87	3593		97
4017	29896	4799	#	113	5464	7	106	4624		111	5459		97	5131		114
4018	29897	5272	#	110	5190		113	5244		113	5213		100	4080		115
4019	Swarna (NC)	5317		108	5867	1	108	5982	5	111	5780	10	99	3519		116
4020	29898	4960	#	102	5438	8	99	3398		109	5439		92	4321		102
4021	29899	4784	#	109	4989		103	5909	6	113	3569		95	3417		114
4022	29900	3822		98	5078		103	5892	7	112	4704		92	3436		106
4023	29901	4426	#	99	4654		97	5679	8	111	5866	8 #	94	4240		102
4024	29902	4784	#	107	5116		103	5536	9	113	5843	9 #	97	3308		106
4025	29903	3914	#	107	4224		103	3819		112	5144		90	3952		112
4026	29904	4709	#	110	4411		104	4739		113	5081		96	3349		114
4027	29905	6110	4 #	106	5307		105	3763		111	3832		96	4763		107
4028	29906	4077	#	106	4657		111	6136	2 #	112	5506		94	6202	2 * #	99
4029	29907	3922	#	107	3590		103	4141		110	5136		96	4061		114
4030	27152	3991	#	109	4646		98	4683		112	4994		88	3715		106
4031	29909	4893	#	115	5194		112	4787		113	4549		99	4247		116
4032	29910	3936	#	106	3485		104	4040		113	3407		97	4183		116
4033	29911	4345	#	97	4818		95	4610		109	4269		94	4006		106
4034	29912	4042	#	119	4439		112	6235	1 #	111	5060		106	4080		115
4035	29913	5064	#	107	4797		107	5143		113	4252		99	3590		118
4036	29914	3298		102	3376		93	3732		110	4484		89	3974		101
4037	29915	4502	#	103	4317		104	5289		110	4916		100	3990		107
4038	29916	6498	2 #	127	4580		102				3032		123	2981		120
4039	29917	5197	#	103	5038		118	5455	10	112	3365		96	4837		110
4040	29918	5454	#	101	5240		101	4806		112	4278		95	5208	9	107
4041	Zonal Check (ZC)	4771		105	4952		111	5331		112	5752		99	3782		114
4042	29919	3878		112	3545		112	4444		113	4010		99	3526		120
4043	29920	6011	6 #	110	4410		107	4781		111	5262		98	3599		107
4044	29921	3948	#	106	4315		107	5168		113	3581		95	3942		114
4045	29922	4040	#	103	4818		102	4891		112	3704		94	5231	8	116
4046	29923	5301	#	109	4101		113	4994		118	5905	6 #	110	5042		115
4047	29924	5147	#	103	5016		107	4155		112	3984		95	4936		113
4048	29925	5767	9 #	107	5597	3	107	5393		111	5581		95	4378		112
4049	29926	2332		83	3809		100	2382		86	1537		62	4167		96
4050	29927	5439	#	121	2411		127	3782		124	5201		113	4744		113
4051	29928	3606		106	5373	9	99	4652		113	4310		94	4910		104
4052	PA 6444 (HC)	3256		101	5513	5	97	5087		111	5110		94	4551		107
4053	29929	4508	#	105	4152		110	3889		111	5014		98	4808		112
4054	29930	2185		99	5118		93	3246		111	3103		90	4878		109
4055	29931	5779	7 #	115	4092		113	6030	4 #	114	6197	3 #	102	3907		118
4056	29932	3733		112	3251		119	3423		115	4940		102	3654		114
4057	28273	4463	#	104	4968		104	3923		113	4944		95	3494		110
4058	29933	5375	#	107	4337		106	4315		113	5101		95	3417		113
4059	29934	5686	10 #	119	3816		113	3855		117	5320		111	6686	1 * #	118
4060	29935	5039	#	112	4956		121	4893		112	5898	7 #	107	4558		118
4061	29908	3272		101	5000		92	4018		113	3799		94	5356	7	109
4062	29936	4114	#	106	4278		105	4080		112	4049		98	3673		119
4063	29937	4950	#	101	5680	2	101	4784		113	3789		95	3436		106
4064	Local Check	6517	1	114	5480	6	112	4492		111	5219		109	5192	10	114
Mean		4580		108	4571		106	4579		112	4746		98	4310		111
F Value		25.95(p<0.0001)S			25.21(p<0.0001)S			7.99(p<0.0001)S			13.79(p<0.0001)S			5.63(p<0.0001)S		
CD		569			427			864			718			977		
SEm		1			1			1			1			1		
CV%		6.21			4.67			9.44			7.57			11.34		

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Table No. 1.41 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - LATE (Data Not Considered), Kharif 2021

Entry No	IET No	Odisha			West Bengal						TRIPURA		
		@RANITAL			@CHINSURAH			@MALDA			@LEMBUCHERRA		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4001	29880	3800		113	4722		128	5775		108	6339	5	97
4002	29881	3278		118	4167		127	7417	5	113	4944		95
4003	29882	3333		121	5056	9	126	4208		129	6250	6	106
4004	29883	3067		108	4722		104	4642		99	2902		91
4005	29884	2978		112	4278		105	6267		108	2310		86
4006	29885	4089		121	4500		105	6775		113	5491		97
4007	29886	4700	3	112	4722		124	5983		115	5134		98
4008	29887	3889		119				5050		129	2902		113
4009	29888	2889		111	4611		119	6492		113	3963		94
4010	29889	3887		117	4611		110	6050		105	5290		95
4011	29890	2822		109				7600	4	100	3527		89
4012	29891	4456	8	121	4722		124	6767		125	6790	1	101
4013	29892	3444		111	4722		111	4417		106	5290		97
4014	29893	2889		110	4167		105	5958		104	2500		86
4015	29894	4678	4	125	4389		124	5592		116	4799		104
4016	29895	3311		100	4389		126	4233		92	4431		86
4017	29896	2811		117	4944		124	6750		112	4933		97
4018	29897	3189		114	4389		126	7192	6	110	5569	10	97
4019	Swarna (NC)	3300		110	5278	4	125	5450		113	5145		93
4020	29898	3222		106				6221		110	4732		94
4021	29899	2867		118	4722		116	6350		109	4285		95
4022	29900	3256		109				6875	10	104	4006		86
4023	29901	3478		107	4611		115	7925	1	99	3231		88
4024	29902	3511		112	4500		121	7058	7	107	5669	9	92
4025	29903	2922		115	4389		124	6300		110	4308		94
4026	29904	3333		118	4578		115	4367		110	3393		90
4027	29905	3767		109	5278	4	116	4775		118	5569	10	93
4028	29906	3989		111	5389	2	117	5433		120	4431		94
4029	29907	3800		112	4511		106	5425		108	4776		96
4030	27152	3622		114	4000		99	5058		107	4073		90
4031	29909	4622	7	123	4556		112	7792	2	115	3995		87
4032	29910	3589		113	4111		115	5133		114	4908		93
4033	29911	4011		105	4567		99	5742		92	3817		90
4034	29912	3011		122	4278		124	5942		116	2589		104
4035	29913	3569		111				7650	3	106	3694		92
4036	29914	2944		112	4111		100				4073		89
4037	29915	3378		109	5278	4	120	6350		109	6674	2	96
4038	29916	4356	9	125	4478		127	6142		128	4598		121
4039	29917	3500		108	5500	1	122	4808		107	5212		96
4040	29918	3922		107	5167	6	120	4708		105	3527		95
4041	Zonal Check (ZC)	3878		107	5056	9	120	5383		108	4520		98
4042	29919	3067		121	4544		126	6075		127	3080		106
4043	29920	3489		115	4111		116	6483		105	5759	8	87
4044	29921	3089		111	4667		116	4775		106	5156		94
4045	29922	3556		109	4700		117	3683		117	3415		93
4046	29923	4033		111	4889		124	5425		113	5446		97
4047	29924	4678	4	108	5167	6	122	6217		118	5446		98
4048	29925	3922		112	5122	8	106	5942		112	5063		96
4049	29926	3011		114				4925		97	6361	4	87
4050	29927	3678		120	4233		126	5958		106	3091		117
4051	29928	2989		114	4478		102	5958		120	3705		96
4052	PA 6444 (HC)	3544		111	4367		105	4442		106	4754		87
4053	29929	3356		110	4444		106	6192		97	4587		122
4054	29930	2922		106	4044		104	4700		115	2957		79
4055	29931	4667	6	119	4378		123	6417		99	6618	3	104
4056	29932	3278		115	4367		117	7042	8	113	3973		89
4057	28273	3189		110				4775		107	3839		89
4058	29933	2967		112	4311		116	3683		107	5089		90
4059	29934	4856	2	124	4111		121	6233		126	4587		105
4060	29935	3422		113	4356		125	5975		111	5167		97
4061	29908	3011		110				4692		110	5535		91
4062	29936	4200	10	110	4667		126	6842		113	636		94
4063	29937	3978		110				6942	9	110	4419		89
4064	Local Check	5311	1	114	4500		110	5442		107	5765	7	87
Mean		3587		113	4599		116	5823		110	4516		95
F Value		8.10(p<0.0001)S			2435298(p<0.0001)S			48.10(p<0.0001)S			2.14(p<0.0001)S		
CD		581			1			413			2290		
SEm				1			1			2			1
CV%		8.11			0.007			3.55			25.38		
D/S		16-07-2021			20-07-2021			26-07-2021			03-08-2021		
D/P		14-08-2021			24-08-2021			09-08-2021			02-08-2021		
Local Check Name		Swarna			Kaushalya			Rajdeep			Khowai		

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Table No. 1.41 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - LATE (Data Not Considered), Kharif 2021

Entry No	IET No	Chattisgarh			MAHARSHTRA 1			MAHARSHTRA 2			KARNATAKA					
		@JAGADALPUR			@SAKOLI			@KARJAT			@PONNAMPET			@SIRSI		
		GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD
4001	29880	5254		115	3153		103	5288	3	111	3219		111	2067		134
4002	29881	6191	3	111	3254	10	101	4904	7	100	2393		110	1900		147
4003	29882	3809		113	2971		99	3365		104	1948		121	1333		136
4004	29883	5566	7	111	3048		97	2788		95	2200		105	1450		131
4005	29884	3633		109	2271		96	5096	5	96	1026		104	1133		134
4006	29885	4303		110	3553	6	95	3846		112	3889	5	105	2867		131
4007	29886	4375		112	2341		104	6154	1	112	3770	8	112	2400		138
4008	29887	3503		111	2059		106	5096	5	111	915		126	1700		147
4009	29888	3730		113	2321		94	3750		97	3259		104	1683		131
4010	29889	3626		120	3996	2	97	2788		112	3007		103	2033		131
4011	29890	4805		109	2124		93	3077		91	3274		108	1867		131
4012	29891	3548		111	2928		105	4423		108	3270		111	2600		134
4013	29892	6576	2	116	2793		90	4423		97	3937	4	103	2133		127
4014	29893	4069		109	2883		96	4615		95	2433		102	1417		127
4015	29894	3678		113	2027		105	3654		111	2207		123	2000		153
4016	29895	5033		105	2281		76	3154		93	3122		93	1767		120
4017	29896	4141		111	2221		96	2962		97	3470		104	1667		131
4018	29897	5007		120	2546		101	4038		113	2867		107	2883		131
4019	Swarna (NC)	5371	9	114	2995		98	3846		111	3407		112	1633		136
4020	29898	3789		108	3185		87	2596		91	2396		97	1867		120
4021	29899	3646		116	2681		98	4135		110	1148		82	2400		125
4022	29900	6107	4	110	2411		96	3077		95	3967	3	104	1533		127
4023	29901	5449	8	111	2596		90	2019		93	3148		97	1833		120
4024	29902	5898	6	105	3553	6	92	4615		96	3652	9	104	3233	9	125
4025	29903	3555		110	4568	1	88	2596		93	2163		104	2467		127
4026	29904	3743		111	2075		98	3750		97	1404		111	2600		134
4027	29905	6003	5	111	2406		95	4904	7	100	3033		104	3100		124
4028	29906	3848		111	2488		98	3558		97	2922		105	3783	2	127
4029	29907	3600		112	2531		94	3750		98	2893		109	2383		131
4030	27152	3698		105	2291		88	3846		95	2437		102	3067		127
4031	29909	3633		114	2406		100	2462		108	1293		112	2850		134
4032	29910	3711		113	2108		98	4231		96	2315		115	2867		134
4033	29911	4727		105	2446		80	2885		91	3889	5	98	4350	1	89
4034	29912	3581		114	2570		100	4712	10	108	2059		110	2100		98
4035	29913	4948		120	2767		97	4231		97	2033		115	1467		95
4036	29914	3587		109	2137		85	4615		89	3130		97	2033		84
4037	29915	4967		114	2384		95	3173		108	3396		103	3417	7	98
4038	29916	3555		111	2031		107	3923		116	615		133	1667		117
4039	29917	3509		112	2484		96	3846		108	3200		109	2667		95
4040	29918	3581		108	2334		95	4375		95	3637	10	101	2500		91
4041	Zonal Check (ZC)	3418		113	2679		94	3846		111	3096		106	2267		95
4042	29919	3678		111	2219		106	5365	2	100	3000		115	2133		110
4043	29920	3698		102	2085		99	3846		106	4304	1	102	3633	4	95
4044	29921	3822		114	2151		100	4327		96	2311		106	3200	10	95
4045	29922	6966	1	117	3918	3	99	3173		112	3285		120	2967		109
4046	29923	3711		110	2667		106	4423		111	2704		112	3400	8	100
4047	29924	4635		118	2577		97	4519		100	3263		104	3633	4	95
4048	29925	4577		113	2488		96	4423		99	2770		106	1167		95
4049	29926	3607		99	2491		66	2962		83	2700		91	1400		81
4050	29927	3555		112	2478		108	3000		111	2170		129	2000		117
4051	29928	3678		110	2364		90	3846		95	1578		98	2383		88
4052	PA 6444 (HC)	3633		100	1991		95	4769	9	94	4233	2	92	3533	6	95
4053	29929	4512		111	2209		93	4231		112	3370		92	1467		95
4054	29930	3789		102	2574		90	3365		95	1663		97	2267		89
4055	29931	3783		120	2909		100	4327		111	2648		110	2367		98
4056	29932	3711		120	2098		105	3750		96	2030		107	1917		100
4057	28273	4440		111	3546	8	96	3558		96	2493		102	2433		95
4058	29933	4173		113	2442		98	3558		99	3111		108	2683		98
4059	29934	3672		122	2477		107	2790		113	1611		126	2600		117
4060	29935	3594		124	3151		104	4327		101	3819	7	111	2700		102
4061	29908	3704		99				2712		96	3207		103	1967		98
4062	29936	4355		121	3656	5	103	3269		110	2978		112	2900		98
4063	29937	5280	10	99	3723	4	96	4231		97	2415		103	3067		95
4064	Local Check	3717		105	3346	9	98	5096	5	113	3248		117	3767	3	95
Mean		4267		111	2674		96	3879		101	2756		107	2384		114
F Value		1.20(p<0.2358)NS			6.81(p<0.0001)S			8.9(p<0.0001)S			13.25(p<0.0001)S			54.38(p<0.0001)S		
CD		2356			602			777			655			310		
SEm		0			0			1			1			0		
CV%		27.64			11.27			10.03			11.9			6.51		
D/S		06-07-2021			16-07-2021			27-07-2021			16-07-2021			29-07-2021		
D/P		28-07-2021			02-08-2021			19-08-2021			14-08-2021			10-08-2021		
Local Check Name		Jakubi			SKL-8			Karjat-2			Tunga			ASHA		

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Table No. 1.42: Plant Height (cm) & Panicles/m² of entries in IVT - LATE, Kharif 2021

Entry No	IET No	ZONE III-EASTERN													
		ODISHA				BIHAR								JHARKHAND	
		ICAR-NRRI (Cuttack)		JEYPORE		BIKRAMGANJ (Dhangain)		SABOUR		Patna-ICAR		RANCHI			
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP		
4001	29880	127	464	92	327	92	261	105	275	88	332	92	136		
4002	29881	115	313	77	372	92	327	108	278	95	267	88	78		
4003	29882	109	283	78	244	90	302	97	255	74	258	92	95		
4004	29883	106	250	81	227	98	281	104	200	85	275	76	110		
4005	29884	101	309	71	437	109	328	97	319	88	349	72	128		
4006	29885	117	307	90	417	118	316	124	280	94	286	81	160		
4007	29886	119	256	92	283	90	302	96	258	90	232	98	114		
4008	29887	118	273	75	304	72	308	90	286	83	316				
4009	29888	110	318	81	233	95	322	103	208	78	276	82	157		
4010	29889	129	317	102	266	122	323	121	223	104	285	92	150		
4011	29890	98	415	85	280	101	311	98	321	94	253	78	195		
4012	29891	122	308	85	340	92	348	112	300	86	357	83	160		
4013	29892	132	289	96	338	111	300	128	220	115	256	101	171		
4014	29893	115	173	88	344	104	292	119	168	98	291	75	108		
4015	29894	126	384	98	360	111	359	108	198	87	259	62	105		
4016	29895	105	307	86	398	103	303	111	215	89	290	83	152		
4017	29896	118	383	77	255	102	317	98	214	75	357	79	178		
4018	29897	110	264	82	261	94	302	101	219	87	286	83	150		
4019	Swarna (NC)	102	383	77	281	82	327	97	244	75	312	67	161		
4020	29898	134	252	88	306	121	323	119	215	114	277	82	147		
4021	29899	123	418	84	282	96	339	124	233	88	358	100	73		
4022	29900	108	269	87	203	96	291	110	199	79	254	79	161		
4023	29901	117	263	79	284	135	300	115	201	107	239	92	150		
4024	29902	131	178	96	250	109	361	121	203	87	284	93	136		
4025	29903	91	364	82	283	82	317	81	310	83	307	54	99		
4026	29904	106	289	78	394	102	333	112	283	84	282	83	151		
4027	29905	112	300	88	330	110	345	112	208	95	381	79	133		
4028	29906	118	317	74	466	121	283	102	248	79	269	76	138		
4029	29907	128	338	101	283	123	357	113	187	87	218	91	116		
4030	27152	102	218	85	394	110	270	101	194	82	277	85	130		
4031	29909	120	257	87	318	112	331	116	210	89	269	73	176		
4032	29910	132	210	101	266	109	363	128	194	84	309	95	148		
4033	29911	95	288	85	306	93	297	108	296	85	315	82	189		
4034	29912	108	255	81	305	84	368	95	238	90	275	89	136		
4035	29913	135	277	98	234	121	324	124	194	92	254	84	121		
4036	29914	133	254	80	289	126	298	108	170	98	294	83	136		
4037	29915	113	328	87	300	92	328	100	248	93	217	81	141		
4038	29916	130	276	98	330	84	362			87	293				
4039	29917	119	255	85	315	124	313	116	286	91	278	80	111		
4040	29918	110	365	73	347	103	316	111	287	93	309	79	177		
4041	Zonal Check (ZC)	111	286	72	315	82	317	92	274	81	353	78	170		
4042	29919	102	364	70	244	82	301	81	206	70	373				
4043	29920	112	373	83	261	92	327	116	207	89	231	76	110		
4044	29921	118	320	92	266	103	314	109	220	78	341	86	108		
4045	29922	107	250	74	462	109	312	100	217	85	304	72	143		
4046	29923	111	254	90	412	99	358	103	255	83	222				
4047	29924	120	339	92	326	81	301	117	267	95	320	84	154		
4048	29925	121	398	88	320	110	317	119	207	102	235	83	173		
4049	29926	92	287	83	250	81	301					93	80		
4050	29927	90	305	75	418	68	340	77	214	71	381				
4051	29928	115	340	82	301	119	339	113	250	102	265	81	168		
4052	PA 6444 (HC)	112	287	77	305	120	265	107	202	101	372	86	169		
4053	29929	123	247	74	255	111	359	116	217	92	260	81	128		
4054	29930	101	240	79	205	103	270	96	156	89	301	70	150		
4055	29931	101	208	77	250	71	362	87	229	72	362	74	171		
4056	29932	124	276	84	293	111	324	124	265	93	297				
4057	28273	117	277	85	283	93	304	115	279	95	295	84	179		
4058	29933	125	362	87	449	86	258	107	184	84	329	87	122		
4059	29934	106	273	84	278	121	317	93	291	73	298				
4060	29935	116	229	85	283	85	344	111	358	84	316	81	133		
4061	29908	117	307	82	285	83	317					89	120		
4062	29936	120	166	96	335	92	291	115	203	87	236	96	153		
4063	29937	121	332	83	255	110	342	109	268	97	312	82	138		
4064	Local Check	126	157	83	270	104	315	119	220	86	318	71	115		
Mean		115	294	84	309	101		107	237	88	294	82	139		
		PH: Plant Height		NP: No. of Panicles/sqm											

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Table No. 1.42 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - LATE, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE-V – CENTRAL				ZONE-VI – WESTERN	
		UTTAR PRADESH		Z3 (7)		CHHATTISGARH		Z5 (1)		GUJARAT (1)	
		MASODHA		Mean		RAIPUR		Mean		NAVASARI	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4001	29880	120	205	102	285	96	185	96	185	102	205
4002	29881	121	215	99	264	107	155	107	155	104	204
4003	29882	109	229	93	238	94	163	94	163	95	212
4004	29883	132	239	97	226	100	170	100	170	92	185
4005	29884	121	260	94	304	96	157	96	157	92	197
4006	29885	139	275	109	291	108	210	108	210	117	229
4007	29886	121	250	101	242	106	175	106	175	114	227
4008	29887	123	236	93	287	96	164	96	164	102	200
4009	29888	136	271	98	255	90	152	90	152	119	203
4010	29889	141	259	116	260	109	179	109	179	117	193
4011	29890	137	211	99	283	86	156	86	156	91	263
4012	29891	141	220	103	290	115	213	115	213	113	248
4013	29892	141	241	118	259	125	144	125	144	124	173
4014	29893	126	239	103	230	97	146	97	146	114	193
4015	29894	136	237	104	271	117	175	117	175	106	199
4016	29895	141	218	103	269	115	161	115	161	108	176
4017	29896	136	258	98	280	88	172	88	172	105	200
4018	29897	132	224	99	243	95	185	95	185	108	196
4019	Swarna (NC)	126	239	89	278	93	238	93	238	95	202
4020	29898			110	253	119	169	119	169	131	231
4021	29899			102	284	115	204	115	204	113	227
4022	29900	123	205	97	226	97	178	97	178	106	196
4023	29901	126	210	110	235	112	162	112	162	111	209
4024	29902	137	210	110	231	121	143	121	143	137	168
4025	29903	141	246	88	275	74	204	74	204	72	240
4026	29904	132	249	100	283	223	174	223	174	106	230
4027	29905	123	239	103	276	108	165	108	165	112	240
4028	29906	136	256	101	282	99	178	99	178	112	212
4029	29907	141	245	112	249	116	143	116	143	128	171
4030	27152	156	271	103	250	92	164	92	164	100	231
4031	29909	145	264	106	261	108	169	108	169	117	210
4032	29910	126	270	111	251	110	138	110	138	116	210
4033	29911	137	264	98	279	85	178	85	178	81	225
4034	29912	141	229	98	258	108	169	108	169	115	226
4035	29913	132	249	112	236	116	136	116	136	123	188
4036	29914	141	218	110	237	99	123	99	123	125	184
4037	29915	151	217	102	254	102	204	102	204	112	200
4038	29916	136	239	107	300					118	218
4039	29917	120	239	105	257	99	228	99	228	105	245
4040	29918	119	216	98	288	110	224	110	224	119	215
4041	Zonal Check (ZC)	120	210	91	275	112	210	112	210	116	245
4042	29919	132	216	89	284	78	191	78	191	95	245
4043	29920	122	220	98	247	98	168	98	168	117	279
4044	29921	123	228	101	257	110	204	110	204	130	278
4045	29922	125	218	96	272	93	186	93	186	113	229
4046	29923	132	229	103	288	109	163	109	163	117	214
4047	29924	123	210	102	274	106	223	106	223	106	216
4048	29925	124	246	107	271	120	199	120	199	126	214
4049	29926	141	226	98	229	129	152	129	152	105	200
4050	29927	136	227	86	314	81	169	81	169	81	188
4051	29928	141	227	108	270	101	150	101	150	129	209
4052	PA 6444 (HC)	111	210	102	258	96	151	96	151	125	218
4053	29929	120	221	102	241	117	235	117	235	122	177
4054	29930	119	210	94	219	92	146	92	146	112	201
4055	29931	126	221	87	257	91	174	91	174	108	217
4056	29932			107	291	112	177	112	177	129	230
4057	28273			98	269	104	186	104	186	114	226
4058	29933	123	227	100	276	103	164	103	164	129	252
4059	29934	130	249	101	284	113	157	113	157	116	212
4060	29935	141	258	100	274	98	179	98	179	131	235
4061	29908	103	240	95	254	107	130	107	130	110	224
4062	29936	120	227	104	230	109	158	109	158	120	190
4063	29937	129	231	104	268	97	184	97	184	105	227
4064	Local Check	136	246	103	234	163	175	163	175	136	204
Mean		130	234	101	263	106	174	106	174	112	214

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Table No. 1.42 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - LATE, Kharif 2021

Entry No	IET No	ZONE-VI – WESTERN		ZONE VII – SOUTHERN							
		Z6 (1)		ANDHRA PRADESH						TELANGANA (1)	
		Mean		MARUTERU		RAGOLU		BAPATLA		WARANGAL	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4001	29880	102	205	139	317	124	386	141	243	122	394
4002	29881	104	204	130	304	110	301	124	213	111	408
4003	29882	95	212	120	317	108	353	132	237	118	424
4004	29883	92	185	112	330	108	364	130	231	106	398
4005	29884	92	197	120	314	101	350	109	226	105	411
4006	29885	117	229	139	337	128	338	122	192	135	426
4007	29886	114	227	153	317	128	327	122	221	122	393
4008	29887	102	200	129	327	123	354	109	249	121	408
4009	29888	119	203	137	314	104	373	118	246	124	393
4010	29889	117	193	161	323	137	370	145	168	135	401
4011	29890	91	263	118	307	90	268	109	198	103	411
4012	29891	113	248	138	323	126	366	137	214	125	388
4013	29892	124	173	159	327	136	343	139	187	135	408
4014	29893	114	193	126	320	109	324	129	166	112	378
4015	29894	106	199	130	323	139	357	128	211	136	386
4016	29895	108	176	121	340	106	360	84	200	116	389
4017	29896	105	200	129	340	106	317	118	151	118	386
4018	29897	108	196	135	317	125	360	126	207	119	401
4019	Swarna (NC)	95	202	118	297	99	353	115	155	98	393
4020	29898	131	231	153	317	135	347	141	207	133	378
4021	29899	113	227	140	317	124	334	115	202	130	396
4022	29900	106	196	127	327	107	357	112	156	109	375
4023	29901	111	209	141	317	121	367	129	215	121	419
4024	29902	137	168	156	307	137	334	149	148		
4025	29903	72	240	108	294	88	356	100	218	86	389
4026	29904	106	230	150	327	111	337	122	243	124	391
4027	29905	112	240			124	340	130	140	122	416
4028	29906	112	212	135	330	116	383	134	209	126	391
4029	29907	128	171	142	327	132	299	147	173	130	394
4030	27152	100	231	126	314	93	261	115	172	106	396
4031	29909	117	210	147	323	132	320	140	201	128	406
4032	29910	116	210	153	330	121	320	138	158	131	394
4033	29911	81	225	129	327	99	386	79	127	98	366
4034	29912	115	226	144	327	115	357	119	220	115	396
4035	29913	123	188	154	337	131	307	132	189	123	396
4036	29914	125	184	135	317	76	353	83	105	119	403
4037	29915	112	200	138	314	122	344	127	162	113	389
4038	29916	118	218	167	333	142	256	152	239	152	431
4039	29917	105	245	128	310	115	350	126	190	120	343
4040	29918	119	215	139	310	119	344	124	227	109	460
4041	Zonal Check (ZC)	116	245	137	333	121	369	139	208	119	375
4042	29919	95	245	118	327	98	281	113	246	97	384
4043	29920	117	279	134	337	110	358	126	180	111	389
4044	29921	130	278	123	304	132	360	140	250	125	419
4045	29922	113	229	138	307	110	324	122	200	115	414
4046	29923	117	214	149	327	127	340	128	248	126	469
4047	29924	106	216	156	317	120	373	132	190	117	391
4048	29925	126	214	140	323	143	357	134	229	117	358
4049	29926	105	200			127	327				
4050	29927	81	188	118	314	101	360	103	188	102	383
4051	29928	129	209	125	330	108	271	129	235	120	409
4052	PA 6444 (HC)	125	218	142	304	111	370	109	180	119	401
4053	29929	122	177	129	310	135	343	138	248	125	421
4054	29930	112	201	113	307	93	314	119	184	107	409
4055	29931	108	217	127	307	105	344	108	242	107	406
4056	29932	129	230	147	327	124	307	116	200	116	376
4057	28273	114	226	148	307	109	304	129	179	117	373
4058	29933	129	252	140	323	125	360	128	252	108	416
4059	29934	116	212	128	310	112	373	113	244	105	388
4060	29935	131	235	145	340	130	300	122	181	124	399
4061	29908	110	224			98	347				
4062	29936	120	190	147	310	127	297	129	215	124	381
4063	29937	105	227	133	314	112	360	120	212	116	398
4064	Local Check	136	204	138	327	104	350	103	260	116	403
Mean		112	214	136	320	116	339	123	203	118	398

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Table No.1.42 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - LATE, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN								Overall Mean (16)	
		TAMIL NADU (1)		KARNATAKA (1)		PUDUCHERRY (1)		Z7 (7)			
		ADUTHURAI		GANGAVATHI		KARAIKAL		Mean		PH	NP
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4001	29880	95	275	104	366	110	190	119	310	109	285
4002	29881	85	170	101	351	115	132	111	268	105	255
4003	29882	93	340	95	381	97	166	109	317	100	266
4004	29883	75	205	87	325	107	188	104	291	100	248
4005	29884	66	250	79	375	104	180	98	301	96	287
4006	29885	97	210	106	353	119	208	121	295	115	284
4007	29886	103	240	95	308	119	225	120	290	111	258
4008	29887	63	260	94	330	113	169	107	299	101	279
4009	29888	128	140	96	375	122	183	118	289	108	260
4010	29889	98	203	120	366	144	175	134	286	124	262
4011	29890	63	220	80	312	90	159	93	268	95	267
4012	29891	105	250	107	373	123	257	123	310	113	291
4013	29892	98	255	107	334	115	137	127	284	123	257
4014	29893	62	212	105	366	113	175	108	277	106	243
4015	29894	120	228	102	290	148	229	129	289	116	269
4016	29895	75	159	100	336	113	146	102	276	103	259
4017	29896	112	250	88	371	136	172	115	284	105	270
4018	29897	95	240	100	357	127	224	118	301	107	262
4019	Swarna (NC)	94	277	78	366	118	207	103	292	96	277
4020	29898	97	244	99	339	142	114	128	278	120	258
4021	29899	85	208	101	357	121	208	117	289	111	277
4022	29900	110	237	90	347	100	290	108	298	103	253
4023	29901	73	223	87	320	137	157	116	288	113	252
4024	29902	63	259	113	335	134	117	125	250	119	229
4025	29903	84	195	68	348	88	107	89	272	86	267
4026	29904	86	183	91	300	108	121	113	271	114	268
4027	29905	82	255	89	371	122	156	111	279	107	268
4028	29906	110	199	86	405	113	182	117	300	109	279
4029	29907	106	205	111	360	121	169	127	275	120	249
4030	27152	74	218	79	354	114	146	101	266	101	250
4031	29909	85	153	104	368	133	106	124	268	115	255
4032	29910	140	250	117	272	143	122	135	264	121	247
4033	29911	63	293	80	351	109	177	94	289	94	274
4034	29912	94	271	92	308	108	162	112	291	106	265
4035	29913	103	239	89	302	127	139	123	273	118	243
4036	29914	68	251	57	262	132	121	96	259	104	236
4037	29915	83	280	93	321	107	202	112	287	107	262
4038	29916	83	223	124	319	149	217	138	288	125	287
4039	29917	95	205	94	321	125	92	115	259	109	255
4040	29918	85	123	93	361	113	227	112	293	106	281
4041	Zonal Check (ZC)	75	210	100	272	115	217	115	283	104	273
4042	29919	73	225	87	299	105	230	99	284	93	275
4043	29920	80	190	76	287	123	115	108	265	104	252
4044	29921	94	248	97	330	131	98	120	287	112	268
4045	29922	83	245	95	349	121	126	112	280	104	268
4046	29923	115	264	102	322	133	126	126	299	115	280
4047	29924	102	220	103	325	120	121	121	276	111	268
4048	29925	86	272	104	351	129	148	122	291	115	271
4049	29926	83	136	94	341	124	162	107	241	105	224
4050	29927	92	248	74	342	120	142	101	282	93	281
4051	29928	76	240	84	369	133	234	111	298	110	271
4052	PA 6444 (HC)	83	193	83	330	128	113	111	270	107	254
4053	29929	65	258	85	310	129	132	115	289	110	257
4054	29930	105	208	91	328	107	222	105	281	100	241
4055	29931	110	250	93	284	111	168	109	286	98	262
4056	29932	95	248	92	345	128	138	117	277	114	271
4057	28273	75	220	93	368	124	105	114	265	107	259
4058	29933	72	230	95	345	137	102	115	290	108	273
4059	29934	100	340	74	334	137	230	110	317	107	286
4060	29935	111	289	110	340	129	207	124	294	113	274
4061	29908	111	230	83	334	131	148	106	265	101	244
4062	29936	111	338	115	319	135	160	127	289	115	249
4063	29937	106	338	86	375	109	131	112	304	107	276
4064	Local Check	112	275	87	315	124	176	112	301	113	258
Mean		91	234	94	337	121	165	114	284	108	264

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Table No. 1.42 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – LATE (State Means), Kharif 2021

Entry No	IET No	ODISHA		BIHAR		CHHATTISGARH		ANDHRA PRADESH		KARNATAKA		
		Mean		Mean		Mean		Mean		Mean		
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	
4001	29880	109	395	95	289	96	185	135	315	104	366	
4002	29881	96	343	98	290	107	155	121	272	101	351	
4003	29882	94	264	87	272	94	163	120	302	95	381	
4004	29883	93	238	95	252	100	170	117	308	87	325	
4005	29884	86	373	98	332	96	157	110	297	79	375	
4006	29885	103	362	112	294	108	210	130	289	106	353	
4007	29886	105	269	92	264	106	175	134	288	95	308	
4008	29887	96	289	82	303	96	164	120	310	94	330	
4009	29888	96	276	92	268	90	152	120	311	96	375	
4010	29889	116	292	115	277	109	179	148	287	120	366	
4011	29890	91	347	97	295	86	156	91	257	80	312	
4012	29891	103	324	96	335	115	213	134	301	107	373	
4013	29892	114	313	118	258	125	144	145	286	107	334	
4014	29893	102	258	107	250	97	146	121	270	105	366	
4015	29894	112	372	102	272	117	175	132	297	102	290	
4016	29895	95	352	101	269	115	161	104	300	100	336	
4017	29896	98	319	91	296	88	172	118	269	88	371	
4018	29897	96	262	94	269	95	185	129	294	100	357	
4019	Swarna (NC)	89	332	85	294	93	238	111	268	78	366	
4020	29898	111	279	118	272	119	169	143	290	99	339	
4021	29899	104	350	103	310	115	204	126	284	101	357	
4022	29900	98	236	95	248	97	178	116	280	90	347	
4023	29901	98	273	119	247	112	162	130	299	87	320	
4024	29902	114	214	105	282	121	143	147	263	113	335	
4025	29903	87	324	82	311	74	204	99	289	68	348	
4026	29904	92	342	99	299	223	174	92	128	302	91	300
4027	29905	100	315	105	311	108	165	127	240	89	371	
4028	29906	96	391	101	266	99	178	128	307	86	405	
4029	29907	114	311	107	254	116	143	140	266	111	360	
4030	27152	93	306	97	247	92	164	111	249	79	354	
4031	29909	103	288	105	270	108	169	140	281	104	368	
4032	29910	116	238	107	288	110	138	137	269	117	272	
4033	29911	90	297	95	302	85	178	102	280	80	351	
4034	29912	94	280	90	293	108	169	126	301	92	308	
4035	29913	116	255	112	257	116	136	139	277	89	302	
4036	29914	106	271	110	254	99	123	98	258	57	262	
4037	29915	100	314	95	264	102	204	129	273	93	321	
4038	29916	114	303	85	327			154	276	124	319	
4039	29917	102	285	110	292	99	228	123	283	94	321	
4040	29918	92	356	102	304	110	224	127	293	93	361	
4041	Zonal Check (ZC)	91	301	85	314	112	210	132	303	100	272	
4042	29919	86	304	77	293	78	191	110	284	87	299	
4043	29920	97	317	99	255	98	168	123	291	76	287	
4044	29921	105	293	97	292	110	204	132	304	97	330	
4045	29922	90	356	98	277	93	186	123	277	95	349	
4046	29923	101	333	95	278	109	163	135	305	102	322	
4047	29924	106	333	98	296	106	223	136	293	103	325	
4048	29925	104	359	110	253	120	199	139	303	104	351	
4049	29926	88	268	81	301	129	152	127	327	94	341	
4050	29927	83	361	72	311	81	169	107	287	74	342	
4051	29928	99	320	111	285	101	150	121	279	84	369	
4052	PA 6444 (HC)	95	296	109	279	96	151	121	284	83	330	
4053	29929	98	251	106	278	117	235	134	300	85	310	
4054	29930	90	223	96	242	92	146	108	268	91	328	
4055	29931	89	229	77	318	91	174	113	297	93	284	
4056	29932	104	285	109	295	112	177	129	278	92	345	
4057	28273	101	280	101	292	104	186	129	263	93	368	
4058	29933	106	405	92	257	103	164	131	312	95	345	
4059	29934	95	275	96	302	113	157	117	309	74	334	
4060	29935	101	256	93	339	98	179	132	273	110	340	
4061	29908	100	296	83	317	107	130	98	347	83	334	
4062	29936	108	250	98	243	109	158	134	274	115	319	
4063	29937	102	293	105	307	97	184	121	295	86	375	
4064	Local Check	104	213	103	284	163	175	115	312	87	315	
Mean		100	302	98	284	106	174	125	288	94	337	

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Table No. 1.42 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-LATE (Data Not Considered), Kharif 2021

Entry No	IET No	Odisha		West Bengal				TRIPURA		Chattisgarh	
		@RANITAL		@CHINSURAH		@MALDA		@LEMBUCHERRA		@JAGADALPUR	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4001	29880	97	320	95	264	117	329	101	363	80	195
4002	29881	84	352	105	281	97	391	110	388	80	100
4003	29882	82	249	100	281	103	309	90	413	88	152
4004	29883	88	232	90	231	108	325	94	388	86	172
4005	29884	84	376	90	248	105	335	93	263	87	213
4006	29885	93	366	100	297	98	408	90	325	69	249
4007	29886	91	296	103	264	118	308	95	438	96	179
4008	29887	83	300			104	366	108	325	85	192
4009	29888	87	236	98	231	95	342	92	413	84	174
4010	29889	107	261	115	264	119	415	98	338	93	160
4011	29890	89	278			103	368	111	313	81	171
4012	29891	95	315	103	264	110	294	93	388	89	162
4013	29892	94	324	104	215	138	331	100	275	82	191
4014	29893	90	343	108	231	98	403	122	338	86	184
4015	29894	103	372	104	248	108	338	102	325	80	153
4016	29895	85	370	89	264	92	327	111	263	83	156
4017	29896	81	245	97	248	94	419	100	363	79	186
4018	29897	87	253	99	264	109	307	96	463	70	178
4019	Swarna (NC)	84	271	81	281	104	332	102	375	78	163
4020	29898	90	309			95	400	87	438	80	187
4021	29899	91	278	108	248	102	299	150	238	87	231
4022	29900	96	250			101	370	112	413	79	178
4023	29901	87	275	110	264	105	394	109	250	77	181
4024	29902	100	256	113	248	96	313	112	363	66	231
4025	29903	91	293	70	248	89	329	117	238	86	165
4026	29904	84	380	96	264	103	363	95	513	76	155
4027	29905	90	322	105	281	105	393	100	438	83	191
4028	29906	85	405	105	264	97	307	107	338	95	180
4029	29907	105	265	115	248	107	341	97	313	80	182
4030	27152	88	371	102	264	106	371	120	238	103	187
4031	29909	89	320	100	215	97	396	112	263	80	161
4032	29910	101	271	111	215	104	335	114	263	79	130
4033	29911	83	304	94	264	83	310	122	250	83	230
4034	29912	89	301	92	281	107	394	100	363	113	170
4035	29913	100	226			121	368	104	263	71	143
4036	29914	88	287	113	297			112	225	81	166
4037	29915	90	302	101	297	109	300	101	363	93	209
4038	29916	98	296	96	264	97	395	119	363	87	166
4039	29917	87	311	90	264	115	396	114	313	86	208
4040	29918	87	345	97	281	106	333	94	313	95	122
4041	Zonal Check (ZC)	83	305	100	281	96	399	95	338	70	168
4042	29919	80	271	75	314	98	1779	104	350	69	189
4043	29920	84	268	101	248	108	359	89	400	83	156
4044	29921	96	279	104	215	103	401	104	363	80	191
4045	29922	83	403	96	264	111	365	119	363	82	200
4046	29923	90	384	99	281	89	299	98	313	87	168
4047	29924	97	297	102	248	105	340	107	338	83	181
4048	29925	86	334	102	281	119	391	96	338	70	169
4049	29926	92	254			95	342	100	313	73	229
4050	29927	88	399	83	314	95	305	120	350	75	213
4051	29928	82	284	95	231	132	398	91	388	90	174
4052	PA 6444 (HC)	87	294	95	248	106	372	94	338	87	124
4053	29929	82	260	106	215	102	310	123	363	93	165
4054	29930	79	238	88	264	104	393	109	438	112	155
4055	29931	86	253	84	281	87	309	85	350	116	238
4056	29932	90	283	102	314	116	328	101	325	104	198
4057	28273	85	274			102	410	104	338	102	181
4058	29933	93	364	103	281	108	300	100	338	114	251
4059	29934	88	275	98	281	97	326	115	238	124	187
4060	29935	86	276	99	264	102	363	91	263	93	236
4061	29908	87	276			104	394	96	188	114	186
4062	29936	97	332	106	264	97	311	114	363	118	165
4063	29937	92	269			115	409	101	288	120	168
4064	Local Check	98	289	110	281	99	305	118	413	93	150
Mean		90	301	99	263	104	375	104	337	88	180

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Table No. 1.42 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-LATE (Data Not Considered), Kharif 2021

Entry No	IET No	MAHARSHTRA 1		MAHARSHTRA 2		KARNATAKA			
		@SAKOLI		@KARJAT		@PONNAMPET		@SIRSI	
		PH	NP	PH	NP	PH	NP	PH	NP
4001	29880	105	208	108	216	85	319	94	345
4002	29881	93	101	108	210	76	275	95	320
4003	29882	94	131	103	207	72	341	74	334
4004	29883	103	173	101	201	76	336	83	312
4005	29884	83	135	97	219	59	429	78	372
4006	29885	116	163	120	210	81	336	94	385
4007	29886	92	101	106	210	80	292	91	304
4008	29887	85	81	112	215	68	396	89	339
4009	29888	75	132	115	213	80	325	89	378
4010	29889	92	126	134	213	93	314	100	282
4011	29890	75	87	93	207	66	385	70	302
4012	29891	84	151	111	229	80	341	95	307
4013	29892	93	91	131	210	92	259	99	320
4014	29893	74	96	123	200	75	325	86	273
4015	29894	63	88	129	217	80	358	96	297
4016	29895	75	94	119	214	77	314	86	343
4017	29896	93	125	106	220	77	369	91	378
4018	29897	84	99	115	192	77	270	87	274
4019	Swarna (NC)	73	131	95	211	69	363	75	489
4020	29898	106	134	127	212	81	308	90	325
4021	29899	75	94	117	221	79	413	96	388
4022	29900	95	121	102	211	70	369	69	350
4023	29901	91	130	111	205	79	374	94	322
4024	29902	125	137	133	210	100	264	111	291
4025	29903	82	311	92	209	53	600	65	405
4026	29904	96	101	114	209	77	347	94	358
4027	29905	93	123	103	213	81	319	95	365
4028	29906	84	135	122	205	75	358	94	419
4029	29907	100	124	128	211	97	292	109	301
4030	27152	84	118	104	200	77	292	84	312
4031	29909	94	101	119	205	75	281	89	381
4032	29910	95	92	119	200	93	352	110	258
4033	29911	75	129	104	205	76	314	88	391
4034	29912	85	100	105	206	82	292	89	452
4035	29913	84	105	119	189	95	275	104	375
4036	29914	96	72	118	222	78	281	97	302
4037	29915	94	114	118	200	80	319	91	391
4038	29916	66	68	143	193	97	314	112	301
4039	29917	95	118	114	222	83	286	93	408
4040	29918	85	114	112	197	78	330	87	416
4041	Zonal Check (ZC)	83	122	120	215	83	297	91	396
4042	29919	58	99	105	200	71	374	85	436
4043	29920	74	86	114	230	82	264	96	411
4044	29921	75	114	122	209	85	352	100	398
4045	29922	87	202	103	200	76	347	92	350
4046	29923	82	87	120	210	81	319	101	414
4047	29924	94	149	110	203	74	325	90	409
4048	29925	84	93	127	213	87	314	101	431
4049	29926	109	106	115	189	99	226	107	329
4050	29927	60	120	102	211	60	391	75	457
4051	29928	97	112	113	213	73	330	95	334
4052	PA 6444 (HC)	73	74	118	210	79	303	87	395
4053	29929	84	78	113	208	76	319	85	348
4054	29930	84	120	106	208	71	297	83	393
4055	29931	85	160	102	198	72	292	85	340
4056	29932	85	104	119	220	84	297	98	312
4057	28273	113	217	106	214	76	347	92	342
4058	29933	94	144	111	208	88	314	102	312
4059	29934	105	103	105	216	67	413	87	439
4060	29935	74	195	118	218	89	286	101	367
4061	29908			105	225	80	402	89	299
4062	29936	85	187	118	201	93	358	104	429
4063	29937	98	168	105	198	71	347	88	355
4064	Local Check	96	137	96	210	91	308	107	408
Mean		88	124	113	209	79	330	92	359

ADVANCED VARIETY TRIAL 1– BORO (AVT 1 – BORO) 2020-2021

Locations: 08 **Test Entries: 09**
Checks: Gautam (National), IR 64 (Zonal), Rajalaxmi & NPH 8899 (Hybrid) and Local check **Table: 1.43**

The AVT-1 Boro trial was constituted with 9 test entries (5 inbreds plus 4 hybrids) in the second year of testing and five checks *viz.*, Gautam (National), IR 64 (Zonal), Rajalaxmi and NPH 8899 (Hybrid) and Local check. The trial was sent to 12 locations but eight centres sent the data *viz.*, (Cuttack, Chinsurah, Pundibari, Varanasi, Arundhutinagar, Lembucherra, Titabar and Gerua). Four centres namely Pusa, Mohanpur, Shillongani and Karimganj did not send the data. The centre-wise data on yield, days to 50% flowering, plant height, panicles/m² and quality are presented in the tables 1.44, 1.45, 1.46, 1.47 and 1.48 respectively.

Overall performance

Overall mean grain yield was ranged from 4240 kg/ha (IET 28876) to 6960 kg/ha (IET 28840) and days to 50% flowering ranged from 107 days (Gautam) to 121 days (IET 28858). Among checks, Rajalaxmi (Hybrid check) recorded highest grain yield (6319 kg/ha) whereas, IR 64 recorded the lowest yield (5094 kg/ha).

Among test entries, IET 28840 (6960 Kg/ha) recorded 16% over local check, the best varietal check (BVC) and among hybrids IET 28848 (Hybrid, 6658 Kg/ha) recorded yield gain of 5.3% over best hybrid check (Rajalaxmi) and 10.8% over BVC (LC).

Quality-wise IET 28840 recorded 58.2% HRR, moderate AC (25.8%), 22 mm GC and 4 ASV. Similarly, IET 28848 recorded 53 % HRR, moderate AC (22%), 22 mm GC and 4 ASV.

Hence, IET 28840 and IET 28848 (Hybrid) were promoted to third year of testing in AVT-2- Boro.

Zone III

The trial was sent to 6 locations (Pusa, Chinsura, Pundibari, Mohanpur, Cuttack and Varanasi). However, Pusa and Mohanpur centres did not send the data. Therefore, data from four locations (Cuttack, Chinsurah, Pundibari and Varanasi) was considered for assessing the performance of test entries in Zone III.

The grain yield ranged from 4866 Kg/ha (IR 64) to 7703 kg/ha (IET 28840) and days to 50% flowering ranged from 114 days (Gautam) to 133 days (IET 28842). Among the checks, Rajalaxmi (HC) recorded highest grain yield of 6339 kg/ha, whereas, IR64 recorded the lowest grain yield (4866 kg/ha).

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Among test entries IET 28840 (7703 Kg/ha) recorded 22.6% yield superiority over Local check (BVC) and two hybrid entries are IET 28850 (13.4%, 12.4%), IET 28849 (11%, 10%) recorded yield gain over LC (BVC) and Rajalaxmi (BHC) respectively.

Quality-wise IET 28840 recorded 58.2% HRR, moderate AC (25.8%), 22 mm GC and 4 ASV while IET 28849 displayed 57.4 % HRR, moderate AC (24.5 %), 33 mm GC and 4 ASV.

Therefore, IET 28840 and IET 28849 (Hybrid) were promoted to third year of testing in AVT-2- Boro in Zone III.

Zone IV

The trial was sent to 6 locations (Gerua, Shillongani, Karimganj, Titabar, Arundhutinagar and Lembucherra). But data was received from only 4 locations (Gerua, Titabar, Arundhutinagar and Lembucherra). The mean grain yield ranged from 3472 Kg/ha (IET 28876) to 6620 kg/ha (IET 28848) and days to 50% flowering ranged from 94 days (Rajalaxmi) to 124 days (IET 28858). Among checks, Rajalaxmi (HC) recorded highest grain yield (6298 kg/ha) whereas, Gautam recorded lowest grain yield (4990 kg/ha).

Among test entries IET 28840 (6217 Kg/ha) indicated 8.4% yield advantage over BVC (Local check) and one hybrid test entry IET 28848 recorded yield gain of 15.4% and 5.1% over BVC (LC) and BHC (Rajalaxmi) respectively.

Quality-wise IET 28840 recorded 58.2% HRR, moderate AC (25.8%), 22 mm GC and 4 ASV. Similarly, IET 28848 recorded 52.4 % HRR (55%), moderate AC (22%), 22 mm GC and 4 ASV.

Hence, IET 28840 and IET 28848 (Hybrid) were promoted to third year of testing in AVT-2- Boro in Zone IV.

Performance of superior entries in AVT1 – Boro during 2020-2021

Sl. No.	IET No/ Designation/ Cross combination	Zone III		Zone IV		Overall	
		Kg/ha	%BVC/ HC (LC/ Rajalaxmi)	Kg/ha	%BVC/ HC (LC/ Rajalaxmi)	Kg/ha	%BVC/ HC (LC/ Rajalaxmi)
1	28840 PUR- B-190 Nilachal / MTU 7029	7703	22.6	6217	8.4	6960	16
2	28850(H) HRM-424 (Mali-424)	7131	13.4 12.4	-	-	-	-
3	28849 (H) NK 5231	7001	11 10	-	-	-	-
4	28848 (H) JKRH 2728	-	-	6620	15. 5.1	6658	10.8 5.3
	Gautam – Check	6100		4990		5545	
	IR64 –Check	4866		5321		5094	
	Rajalaxmi- (HC)	6339		6298		6319	
	Local Check	6283		5735		6009	

INITIAL VARIETY TRIAL – BORO (IVT – BORO) 2020-21

Locations:	12	Test Entries:	47
Checks:	Gautam (National), IR 64 (Zonal), Rajalaxmi (Hybrid) and Local check	Table:	1.49

IVT – Boro Trial was constituted with 47 test entries and four checks. The 47 test entries include 40 varietal and seven hybrid test entries in the first year of testing. The four checks include IR 64 (National), Gautam (Zonal), Rajalakshmi (Hybrid) and Local Check. The trial was sent to 12 locations in Zone III and Zone IV. However, four locations namely Shillongani (Assam), Karimganj (Assam), Pusa (Bihar) and Mohanpur (West Bengal) did not conduct the trial. At Arundhutinagar (Tripura), 18 entries did not germinate, two entries including local check not flowered due to photosensitivity and one entry was bird damaged. The mean yield data of Arundhutinagar was 2950 kg/ha hence, the location was not considered for analysis. The data from remaining seven locations was considered for assessing the performance of test entries. The data pertaining to yield, days to 50% flowering, plant height and panicles/m² are presented in the tables 1.50, 1.51, 1.52 and 1.53 respectively. The findings are discussed in the following paragraphs.

Overall

Overall mean grain yield was ranged from 2603 (IET 29592) to 8448 kg/ha (IET 29624) and days to 50% flowering from 99 (Gautam) to 124 days (IET 29592, 29588 and 29622). Among checks, local check recorded highest grain yield of 6127 kg/ha, whereas, hybrid check recorded 6151 kg/ha. Among test entries, **IET 29624 and IET 29630** recorded required yield advantage over the best entries, hence promoted to second year of testing.

Zone III

Data from four locations (NRRI Cuttack, Chinsurah, Pundibhari and Varanasi) was considered for assessing the performance of test entries in Zone III. The grain yield was ranged from 4493 (IET 29602) to 8448 kg/ha (IET 29624) and days to 50% flowering ranged from 105 (IET 29610) to 130 days (IET 29599 and 29622). Among checks, local check recorded highest grain yield of 6508 kg/ha, whereas, hybrid check recorded 6945 kg/ha.

Among the test entries, seven varietal entries (**IETs 29599, 29601, 29605, 29621, 29624, 29630 and 29632**) and two hybrid entries (**IET 29611 and IET 29615**) recorded required yield advantage over the best. Hence, these nine test entries were promoted to second year of testing.

Zone IV

Data from three locations (Lembucherra, Titabar and Gerua) was considered for assessing the performance of test entries in Zone IV. The grain yield was ranged from 1281 (IET 29629) to 6319 kg/ha (IET 29630) and days to 50% flowering 78 (IET 29631) to 124 days (IET 29592).

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Among checks, local check recorded highest grain yield of 5619 kg/ha, whereas, hybrid check recorded 4961 kg/ha. Among the test entries, **IET 29630** recorded required yield advantage over the best check, hence promoted to second year of testing.

Performance of superior entries in IVT – Boro during 2020-2021

IET No.	GT	Zone III (4)		Zone IV (3)		Overall (7)	
		Kg/ha DFP	%VC /HC	Kg/ha DFP	%VC /HC	Kg/ha DFP	%VC /HC
IET 29599 KAUM 238-1-1-1-1-1 Uma/Jyothi	MB	7096 130	9.03	-	-	-	-
IET 29601 CR 3856-44-22-2-1-11-4-1-1 IR 73963-86-1-5-2-2 / CR2324-1	SB	7430 126	14.16	-	-	-	-
IET 29605 CR 4121-37-6-1 CR 3856-44-22-2-1-11*3/ IRBB 60/Swarna Sub 1	LS	7040 120	8.17	-	-	-	-
IET 29611 <i>S 9001 (Hybrid)</i>	LB	7311 118	12.33 5.2	-	-	-	-
IET 29615 <i>S 4003 (Hybrid)</i>	MS	7723 119	18.66 11.20	-	-	-	-
IET 29621 CR 3856-44-22-7-1-2-1-1 IR 73963-86-1-5-2-2/CR 2324-1	LS	7099 126	9.08	-	-	-	-
IET 29624 CR 4334-2-1-1 CR 3856-44-22-2-1-7*3/ Swarna MAS	LS	8448 125	29.8	-	-	8448 122	37.88
IET 29630 Gontra Bidhan 7 IET 4786/Jaya	MS	6939 120	6.62	6319 105	12.45	6733 115	9.89
IET 29632 CR 4340-2-4-GSR-IR2-1-R6-N5- N3-N53-N80 WTR/Haoannong	SB	7395 123	13.62	-	-	-	-
IR 64 (NC)		6407 114		5159 97		5872 107	
Gautam (ZC)		4833 107		3813 88		4396 99	
Local Check (LC)		6508 116		5619 102		6127 111	
Rajalakshmi (HC)		6945 114		4961 96		6151 109	

In IVT – Boro trial, out of 47 test entries evaluated, seven varietal entries (IETs 29599, 29601, 29605, 29621, 29624, 29630 and 29632) and two hybrid entries (IET 29611 and IET 29615) recorded required yield advantage over the best check, Hence, these nine test entries were promoted to second year of testing.

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Table No.1.43: Composition of entries in Advance Variety Trial 1-Boro (AVT1- BORO) 2020-21

Entry No.	IET No.	Designation	Cross Combination	GT
2nd year of testing:				
2101	28867	HTW 65-IR16F 1070	IR 09F436 / IRION 237	LS
2102	28842	CR 3783-2-1-1-1-7-1	Surendra / Abhaya	MS
2103	Gautam (Check)			
2104	28876	CR 4312-5-1-1-3	CR 3856-44-22-2-1 / IR 64 MAS	SB
2105	28840	PUR- B-190	Nilachal / MTU 7029	SB
2106	28851	<i>HIRO-2 (Hybrid)</i>	-	SB
2107	28849	<i>NK 5231 (Hybrid)</i>	-	SB
2108	28848	<i>JKRH 2728 (Hybrid)</i>	-	SB
2109	28850	<i>HRM-424 (Mali-424) (Hybrid)</i>	-	LS
2110	28858	CR 4212-12-17-1-1-2-1-1	Sahabhagi Dhan / IR 20	SB
2111	Rajalaxmi (Check)			
2112	IR 64 (Check)			
2113	NPH 8899 (Check)			
2114	Local Check			

Table No. 1.44: Grain Yield (kg/ha) of entries in AVT 1 – BORO 2020-21

Entry No	IET No	ZONE-III							
		WB				WB(2)		UP(1)	
		CHN	PNB	Mean		VRN			
2101	28867	4926	10	5200	9	5063		8407	7
2102	28842	5556	7			5556	8	5252	
2103	Gautam (Check)	4667		6700	5	5684	6	8222	8
2104	28876	6481	3	3800		5141	10	4741	
2105	28840	6963	1	7367	2	7165	1 * 17.67% # 35%	10719	2 17.84% 21%
2106	28851	4333		7500	1	5917	5, 11.72%	8200	9
2107	28849	5370	8	7000	3	6185	3, 16.78%	10496	4 15.39 % 18.47%
2108	28848	5815	5	4333		5074		10756	1 18.24 % # 21.41%
2109	28850	5889	4	6967	4	6428	2 5.56% # 21%	10600	3 16.53 % 19.65%
2110	28858	4815		5333	8	5074		8022	10
2111	Rajalaxmi (Hybrid Check)	5296	9			5296	9	8859	6
2112	IR 64 (Check)	4519		5100	10	4810		6289	
2113	NPH 8899 (Hybrid Check)	6778	2	5400	7	6089	4	7030	
2114	Local Check	5667	6	5600	6	5634	7	9096	5
Exp. Mean		5505		5858		5638		8335	
CD		879.36		955.17		1043.41		1877.8	
CV%		9.52		7.4		11.03		10.43	
D/S		26-12-2020		12-01-2021				02-12-2020	
D/P		10-02-2021		20-02-2021				02-02-2021	
Local Check Name		Satabdi (IET 4786)		MTU 1153				HUR-105	

*Superior to best check #Superior over hybrid check %superior over best check

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Table No. 1.44 Contd.: Grain Yield (kg/ha) of entries in AVT 1 – BORO 2020-21

Entry No	IET No	ZONE-III						ZONE-IV				
		OD(1)			Zone 3 (4)			TR				
		CTK			Mean			ARD		LMC		
2101	28867	5384	4	11.93%	10.73%	5979	9		5735		7271	3
2102	28842	5777	2	20.10%	18.81%	5528			5800		3000	
2103	Gautam (Check)	4810	9			6100	8		6981	4	2948	
2104	28876					5007			6702	6	1198	
2105	28840	5763	3	19.81%	18.53%	7703	1 *	22.60% # 22%	7308	3	4615	7
2106	28851					6678	5	6.28%	6573	8	4604	8
2107	28849	5139	6	6.83%		7001	3	11.42% 10%	6700	7	5344	6
2108	28848	5879	1	22.22%	20.91%	6696	4	6.57%	6970	5	8063	1
2109	28850	5069	7	5.38%		7131	2	13.49% 12%	9338	1 *	3448	
2110	28858	5321	5	10.62%	9.44%	5873	10		6217	9	5740	5
2111	Rajalaxmi (Hybrid Check)	4862	8			6339	6		7608	2	4594	9
2112	IR 64 (Check)	3556				4866			5570		5938	4
2113	NPH 8899 (Hybrid Check)	4165				5843			6168	10	4448	10
2114	Local Check	4767	10			6283	7		5426		7281	2
Exp. Mean		5041				6045			6650		4892	
CD		1261.2				1043.43			1475.46		1835	
CV%		11.36				10.28			13.22		17.36	
D/S				29-12-2020							15-12-2020	
D/P				10-02-2021							04-01-2021	
Local Check Name				Tapaswini							Naveen	

*Superior to best check #Superior over hybrid check %superior over best check

Table No. 1.44 Contd.: Grain Yield (kg/ha) of entries in AVT 1 – BORO 2020-21

Entry No	IET No	ZONE-IV										Overall (8) Mean							
		TR(2)		AS		AS(2)		Zone 4 (4)											
		Mean		TTB	GER	Mean		Mean											
2101	28867	6503	2	5329	1	5683	9	5506	5	6005	9	4.69%	5992	8					
2102	28842	4400				2317		2317		3706			4617						
2103	Gautam (Check)	4964.5		4222	8	5808	8	5015	9	4990	7		5545						
2104	28876	3950				2517		2517		3472			4240						
2105	28840	5961.5	8	4458	6	8488	1	6473	2	19.69%	6217	2	8.40%	6960	1 *	15.83%	10.14%		
2106	28851	5588.5	10	4131	10	6813	4	5472	6		5530	6		6022	6				
2107	28849	6022	6	4629	2	7267	2	5948	3	9.98%	5985	3		6493	3	8.05%			
2108	28848	7516.5	1 *	18.30%	23%	4606	3	6842	3	5.84%	5724	4	5.84%	6620	5	15.43%	6658	2	10.80%
2109	28850	6393	3	3700		5500	10	4600			5497	4		6314	5	5.07%			
2110	28858	5978.5	7	4538	5			4538			5498	10		5712	9				
2111	Rajalaxmi (Hybrid Check)	6101	5			6692	5	6692	1		6298	1		6319	4				
2112	IR 64 (Check)	5754	9	4606	3	5171		4889	10		5321			5094					
2113	NPH 8899 (Hybrid Check)	5308		4144	9	6671	6	5408	7		5358	8		5601	10				
2114	Local Check	6353.5	4	4351	7	5883	7	5117	8		5735			6009	7				
Exp. Mean		5771		4429		5819		5015			5445			5827					
CD		1449.3		355.68		1774.5		1049.2			1254.5			849.74					
CV%		14.2		3.6		13.99		9.7			12.73			8.5					
D/S				08-02-2021		29-12-2020													
D/P				11-03-2021		15-02-2021													
Local Check Name				Kanaklata		Chandrama													

*Superior to best check #Superior over hybrid check %superior over best check

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Table No. 1.45: Days to 50% flowering of entries in AVT 1 - BORO 2020-21

Entry No	IET No	ZONE - III					
		WB		WB(2)	UP(1)	OD(1)	Zone 3 (4)
		CHN	PNB	Mean	VRN	CTK	Mean
2101	28867	121	126	123	152	107	126
2102	28842	130		130	158	112	133
2103	Gautam (Check)	115	114	114	133	95	114
2104	28876	123	126	124	151		133
2105	28840	119	125	122	147	110	125
2106	28851	110	122	116	138		123
2107	28849	112	122	117	149	109	123
2108	28848	116	124	120	152	113	126
2109	28850	118	123	121	150	108	125
2110	28858	116	131	123	137	93	119
2111	Rajalaxmi (Hybrid Check)	112		112	141	112	122
2112	IR 64 (Check)	110	117	113	141	106	118
2113	NPH 8899 (Hybrid Check)	122	133	127	147	121	130
2114	Local Check	115	115	115	152	109	123
Exp. Mean		117	123	120	146	108	124

Table No. 1.45 Contd.: Days to 50% flowering of entries in AVT 1 - BORO 2020-21

Entry No	IET No	ZONE-IV							Overall (8) Mean
		TR		TR(2)	AS		AS(2)	Zone 4 (4)	
		ARD	LMC	Mean	TTB	GER	Mean	Mean	
2101	28867	122	103	113	118	81	100	106	116
2102	28842	124	99	112		92	92	105	119
2103	Gautam (Check)	112	111	112	106	72	89	100	107
2104	28876	121	106	113		78	78	102	117
2105	28840	121	101	111	110	74	92	102	113
2106	28851	113	109	111	113	72	93	102	111
2107	28849	116	99	107	116	74	95	101	112
2108	28848	114	103	109	119	80	99	104	115
2109	28850	112	98	105	122	76	99	102	113
2110	28858	115	128	121	129		129	124	121
2111	Rajalaxmi (Hybrid Check)	115	97	106		72	72	94	108
2112	IR 64 (Check)	113	98	105	119	74	96	101	110
2113	NPH 8899 (Hybrid Check)	113	108	111	129	78	104	107	119
2114	Local Check	115	96	105	129	81	105	105	114
Exp. Mean		116	104	110	119	77	96	104	114

Table No. 1.46: Plant Height (cm) of entries in AVT 1 - BORO 2020-21

Entry No	IET No	ZONE III					
		WB		WB(2)	UP(1)	OD(1)	Zone 3 (4)
		CHN	PNB	Mean	VRN	CTK	Mean
2101	28867	116.00	101.00	108.50	89.70	106.25	97.98
2102	28842	111.00		111.00	91.10	111.50	101.30
2103	Gautam (Check)	100.00	93.00	96.50	80.50	95.50	88.00
2104	28876	108.00	96.80	102.40	95.30		95.30
2105	28840	110.00	114.40	112.20	103.70	109.75	106.73
2106	28851	105.00	106.60	105.80	79.40		79.40
2107	28849	112.00	106.60	109.30	86.80	108.25	97.53
2108	28848	114.00	103.00	108.50	86.20	112.25	99.23
2109	28850	99.00	99.20	99.10	83.90	107.50	95.70
2110	28858	98.00	104.70	101.35	70.80	92.50	81.65
2111	Rajalaxmi (Hybrid Check)	119.00		119.00	98.70	111.50	105.10
2112	IR 64 (Check)	91.00	91.20	91.10	72.60	105.75	89.18
2113	NPH 8899 (Hybrid Check)	115.00	106.80	110.90	87.90	120.25	104.08
2114	Local Check	108.00	106.20	107.10	87.00	108.25	97.63
Exp. Mean		107.57	102.46	105.91	86.69	107.44	95.63

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Table No. 1.46 Contd.: Plant Height (cm) of entries in AVT 1 - BORO 2020-21

Entry No	IET No	ZONE IV							Overall (8) Mean
		TR		TR(2)	AS		AS(2)	Zone 4 (4)	
		ARD	LMC	Mean	TTB	GER	Mean	Mean	
2101	28867	119.73	88.00	103.87	96.80	102.20	99.50	101.68	91.08
2102	28842	108.67	90.50	99.58		97.40	97.40	98.86	87.17
2103	Gautam (Check)	104.90	107.00	105.95	79.45	89.20	84.33	95.14	83.28
2104	28876	104.40	93.00	98.70		95.20	95.20	97.53	84.67
2105	28840	121.33	104.00	112.67	87.10	101.20	94.15	103.41	94.61
2106	28851	106.00	115.00	110.50	92.90	97.80	95.35	102.93	87.84
2107	28849	98.87	86.00	92.43	87.10	97.40	92.25	92.34	87.00
2108	28848	110.80	121.00	115.90	94.30	100.80	97.55	106.73	93.59
2109	28850	107.67	99.00	103.33	77.60	95.40	86.50	94.92	85.47
2110	28858	99.22	111.00	105.11	95.18		95.18	101.80	83.92
2111	Rajalaxmi (Hybrid Check)	123.20	95.50	109.35		100.20	100.20	106.30	92.59
2112	IR 64 (Check)	99.00	110.00	104.50	88.80	89.10	88.95	96.73	83.05
2113	NPH 8899 (Hybrid Check)	105.47	113.50	109.48	96.30	99.20	97.75	103.62	93.82
2114	Local Check	105.33	95.00	100.17	101.30	99.80	100.55	100.36	90.10
Exp. Mean		108.19	102.04	105.11	90.62	97.30	94.63	100.17	88.44

Table No. 1.47: Panicles/m2 of entries in AVT 1 - BORO 2020-21

Entry No	IET No	ZONE III					
		WB		WB(2)	UP(1)	OD(1)	Zone 3 (4)
		CHN	PNB	Mean	VRN	CTK	Mean
2101	28867	341	379	360	261	378	319
2102	28842	330		330	248	366	307
2103	Gautam (Check)	407	508	458	313	555	434
2104	28876	407	318	362	253		253
2105	28840	308	390	349	220	300	260
2106	28851	286	374	330	319		319
2107	28849	330	368	349	302	279	290
2108	28848	275	382	329	254	378	316
2109	28850	286	357	321	341	366	353
2110	28858	418	297	358	343	480	412
2111	Rajalaxmi (Hybrid Check)	352		352	314	460	387
2112	IR 64 (Check)	385	340	363	284	480	382
2113	NPH 8899 (Hybrid Check)	330	340	335	253	354	303
2114	Local Check	341	351	346	368	342	355
Exp. Mean		343	367	353	291	395	335

Table No. 1.47 Contd.: Panicles/m2 of entries in AVT 1 - BORO 2020-21

Entry No	IET No	ZONE IV					Overall (7) Mean
		TR(1)	AS		AS(2)	Zone 4 (3)	
		ARD	TTB	GER	Mean	Mean	
2101	28867	339	186	323	255	283	315
2102	28842	348		249	249	298	308
2103	Gautam (Check)	315	197	289	243	267	369
2104	28876	313		202	202	258	299
2105	28840	358	211	224	217	264	287
2106	28851	341	179	236	207	252	289
2107	28849	346	217	216	216	259	294
2108	28848	377	222	220	221	273	301
2109	28850	297	173	275	224	248	299
2110	28858	350	205		205	277	349
2111	Rajalaxmi (Hybrid Check)	335		255	255	295	343
2112	IR 64 (Check)	374	220	392	306	329	354
2113	NPH 8899 (Hybrid Check)	342	179	238	208	253	291
2114	Local Check	320	216	255	236	264	313
Exp. Mean		340	200	259	232	273	315

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Table No. 1.48: Grain quality characteristics of the entries in AVT 1-Boro 2020-21

Entry No.	IET No.	HULL (%)	MILL (%)	HRR (%)	KL (mm)	KB (mm)	L/B	GT	Grain Chalk	ASV	AC (%)	GC
2101	28867	80.0	64.5	29.8	6.40	2.05	3.12	LS	VOC	3.0	19.44	78
2102	28842	79.5	72.3	64.3	5.08	2.02	2.51	MS	VOC	4.0	21.67	22
2103	Gautam	76.4	66.8	57.0	5.03	1.98	2.54	MS	VOC	7.0	24.25	31
2104	28876	79.9	70.5	54.5	5.02	2.46	2.04	SB	OC	4.0	21.88	22
2105	28840	79.6	70.6	58.2	5.28	2.24	2.35	SB	VOC	4.0	25.81	22
2106	28851	79.4	67.8	41.3	5.49	2.57	2.13	SB	VOC	4.0	25.54	22
2107	28849	80.0	72.0	57.4	5.43	2.48	2.18	SB	VOC	4.0	24.52	33
2108	28848	76.0	66.4	52.4	5.56	2.26	2.46	SB	OC	4.0	22.02	22
2109	28850	79.4	57.3	20.6	6.27	1.83	3.42	LS	VOC	3.0	14.05	59
2110	28858	77.6	67.9	59.9	5.24	2.10	2.49	SB	OC	5.0	23.64	53
2111	Rajalaxmi	79.8	71.8	66.7	5.34	1.9	2.81	MS	OC	7.0	25.60	23
2112	IR 64	80.4	74.5	73.2	6.34	1.96	3.23	LS	VOC	4.0	23.34	44
2113	NPH 8899	81.1	73.7	72.5	5.49	2.05	2.67	MS	VOC	4.0	26.75	22
2114	LC											

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery; KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and Breadth (mm); Grain chalk: Grain Chalkiness; VOC: Very Occasionally Chalkiness; OC: Occasionally Chalkiness; ASV: Alkali Spreading Value; AC: Amylose Content (%); GC: Gel Consistency; LS: Long Slender; MS: Medium Slender; SB: Short Bold.

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Table No.1.49: Composition of entries in Initial Variety Trial -Boro (IVT- BORO) 2020-21

Entry No.	IET No.	Designation	Cross Combination	GT
2201	29586	TRC 2020-18	Gomati / Tripura Nirog	LB
2202	29587	CR 4061-1325-1-1-2-5	Pyari / IET 22704	MS
2203	29588	KAUM 240-1-3-2-2-1	MO 9 / IET 20034	SB
2204	29589	CR 3856-44-22-2-1-7-1-4-2	IR 73963-86-1-5-2-2 / CR 2324-1-1	LS
2205	29590	Gontra Bidhan -9	GB-1 / IR 64	LS
2206	29591	CR 3881-4-1-3-7-2-3	Naveen / FL496 / Naveen	LB
2207	29592	TRC 2020-16	Tripura Nirog / Hakuchuk 2	LS
2208	29593	CR 4113-3-2-1	CR 3724-1 / TJ 171-1	LS
2209	29594	CRAC 3998-153-1	Doubled haploid of 27 P63	MS
2210	Gautam Check			
2211	29595	RAU 1416-4-2-5-2-2	Saket-4 / Rakshree	LS
2212	29596	CR 3516-11-2-4-1-1-2	Birupa / Pusa 44	MS
2213	29597	TRC 2020-20	Tripura Nirog / Tripura Chikan	MS
2214	29598	CR 3582-5-2-1-3-1-1	Lalat / Supriya	SB
2215	29599	KAUM 238-1-1-1-1-1	Uma / Jyothi	MB
2216	29600	CRAC 3998-104-6	Doubled haploid of 27 P 63	SB
2217	29601	CR 3856-44-22-2-1-11-4-1-1	IR 73963-86-1-5-2-2 / CR 2324-1	SB
2218	29602	RAU 1401-18-1-1	Rajshree / Gautam	MS
2219	29603	CR 3506-1-2-3-2-1-1	IR 36 / Tapaswini	MS
2220	29604	PUR-B-156	Nilachal / MTU 7029	SB
2221	29605	CR 4121-37-6-1	CR 3856-44-22-2-1-11*3 / IRBB 60 / Swarna Sub1	LS
2222	29606	CRAC 3995-48-3	Doubled haploid of BS 6444G	LS
2223	29607	TSPM 3-1	Mutant of Tulaipanji	SB
2224	29608	CRAC 3995-80-4	Doubled haploid of BS 6444G	LS
2225	IR 64 Check			
2226	29609	CR 4060-1318-1-1-1-1-1-1-4	IET 22729 / Brown gora	MS
2227	29610	TRC 2020-17	Gomati / Tripura Nirog	LB
2228	29611	<i>S 9001 (Hybrid)</i>	-	LB
2229	29612	<i>Mali-601 (Hybrid)</i>	-	LB
2230	29613	<i>SVH 1836509 (Hybrid)</i>	-	SB
2231	29614	<i>NK 5251 (Hybrid)</i>	-	LS
2232	Rajalaxmi Check			
2233	29615	<i>S 4003 (Hybrid)</i>	-	MS
2234	29616	<i>Mali-484 (Hybrid)</i>	-	SB
2235	29617	<i>S 4001 (Hybrid)</i>	-	SB
2236	29618	RP 5401-JBB 624-7-3-1-1-1	Swarna / IRGC 63248 // DSB 3	LS
2237	29619	CR 3562-7-2-1-2-1-1	Surendra / N 22	SB
2238	29620	TRC 2020-19	Tripura Nirog / Tripura Chikan	LB
2239	29621	CR 3856-44-22-7-1-2 -1-1	IR 73963-86-1-5-2-2 / CR 2324-1	LS
2240	29622	RP 5401-JBB 624-7-3-2-1-1	Swarna / IRGC 63248 // DSB 3	LB
2241	29623	Gontra Bidhan-8	GB-1 / MTU 7029	MS
2242	29624	CR 4334-2-1-1	CR 3856-44-22-2-1-7*3 / Swarna MAS	LS
2243	29625	CR 3879-3-1-6-1-3-1	Naveen / FL 378	SB
2244	29626	RAU 1421-15-3-2-5-7-3	Sujata / C ₁ 14	LS
2245	29627	CR 3783-3-2-1-1-1-1	Surendra / Abhaya	MS
2246	29628	RP 5387-JBB 703-10-3-1-1-1	Swarna / IRGC 27502 // MTU 1081	LS
2247	29629	CR 3504-19-1-1-2-1-1	IR 36 / Birupa	LS
2248	29630	Gontra Bidhan-7	IET 4786 / Jaya	MS
2249	29631	RP 5480-JBB 654-18-3-1-1-1	Swarna / IRGC 48960 // RP Bio 226	LS
2250	29632	CR 4340-2-4-GSR IR2-1-R6-N5-N3-N53-N80	WTR / Haoannong	SB
2251	Local Check			

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Table No. 1.50: Grain Yield (kg/ha) of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE III							
		WB		WB(2)			UP(1)		
		CHN	PNB	Mean		VRN			
2201	29586			5200		5200			
2202	29587	5678	10	5167		5423		10756	10 12.82% # 24%
2203	29588	5879	4	5300		5590		5278	
2204	29589			4700		4700			
2205	29590	4768		5600		5184		9348	
2206	29591	4560		6133	8	5347			
2207	29592			4700		4700			
2208	29593	4457		5767		5112		8333	
2209	29594			5333		5333			
2210	Gautam Check	4023		7100	3	5562		4022	
2211	29595	4640		5700		5170		5356	
2212	29596	4683		5233		4958			
2213	29597	3919		4533		4226		9844	13.43%
2214	29598	4371				4371		8944	
2215	29599	6581	1 *	5967	10	6274	2 6.80% 10.86%	10685	12.08% # 23.12%
2216	29600	4164		5633		4899		8578	
2217	29601	6374	2 *	4833		5604		13141	2 * 37.84% # 51.42%
2218	29602	4994		4733		4864		5089	
2219	29603			5000		5000			
2220	29604	5195		7033	4	6114	4	5196	
2221	29605	5354		5467		5411		10300	8% # 18.69%
2222	29606	5635		5267		5451		8926	
2223	29607	5287		5800		5544		8800	
2224	29608	5678	10	5600		5639			
2225	IR 64 Check	5147		6600	5	5874	6	8711	
2226	29609	5037		4733		4885		9522	
2227	29610	5232		6300	7	5766	8		
2228	29611	5000		5700		5350		13256	1 * 39.05% # 52.75%
2229	29612	4133		4733		4433		10500	10% # 20.99%
2230	29613	5806	6	5500		5653		10100	5.94% 16.38%
2231	29614	5513		5367		5440		11522	7 * 20.86% # 32.77%
2232	Rajalaxmi (HybridCheck)	5659				5659	10	8678	
2233	29615	6044	3	7367	2	6706	1 * 14.16% # 18.50%	11511	8 * 20.74% # 32.64%
2234	29616	5366		4033		4700		11633	6 * 22.02% # 34.05%
2235	29617	5629		4567		5098		7822	
2236	29618	5592				5592			
2237	29619			5300		5300			
2238	29620	5806	6	5600		5703	9	5970	
2239	29621	4805		5667		5236		11748	5 * 23.23% # 35.37%
2240	29622	5739	9	6533	6	6136	3 4.46%	3978	
2241	29623			4933		4933			
2242	29624	5849	5			5849	7	12304	3 * 29.06% # 41.78%
2243	29625	5788	8	4567		5178			
2244	29626	5024		5667		5346			
2245	29627			4900		4900			
2246	29628	5391				5391		3633	
2247	29629	5623		4167		4895			
2248	29630	4139		7700	1	5920	5	10915	9 14.49% # 25.77%
2249	29631	5372		4800		5086		9915	14.25%
2250	29632	4951		5167		5059		12067	4 * 26.58% # 39.05%
2251	Local Check	5140		6033	9	5587		9533	
Exp. Mean		5210		5472		5320		9026	
CD		1137.66		751.08		814.77		1513.52	
CV%		10.82		6.81		7.62		8.25	
D/S		31-12-2020		12-01-2021				08-12-2020	
D/P		03-02-2021		20-02-2021				27-01-2021	
Local Check Name		Ajit		MTU 1153				HUR 105	

*Superior to best check #Superior over hybrid check % superior over best check

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Table No. 1.50 Contd.: Grain Yield (kg/ha) of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE III				ZONE IV			
		OD (1)		Zone 3 (4)		TR		TR (1)	
		CTK		Mean		@ARD	LMC	Mean	
2201	29586			5200					
2202	29587	5104		6676			2266		2266
2203	29588	6859	4 * 28.83%	5829			6859	4	6859 4 # 56.77%
2204	29589			4700					
2205	29590	6455	8 21.24%	6543			2828		2828
2206	29591			5347					
2207	29592			4700			453		453
2208	29593	5853	9.93%	6103			3266		3266
2209	29594			5333					
2210	Gautam Check	4187		4833		3520 7	2297		2297
2211	29595	3533		4807		2672	4203		4203
2212	29596			4958			484		484
2213	29597	6859	4 * 28.83%	6289			2734		2734
2214	29598	6997	2 * 31.42%	6771		2959	2938		2938
2215	29599	5151		7096	8 9.03%	2899	6234	8	6234 8 # 42.49%
2216	29600	5680	6.68%	6014		2882	6516	7	6516 7 # 48.93%
2217	29601	5371		7430	3 * 14.16%	4280 5	2688		2688
2218	29602	3155		4493		1402	1828		1828
2219	29603			5000					
2220	29604			5808		2041	3297		3297
2221	29605			7040	10 8.17%	2936	3719		3719
2222	29606			6609		2777	1656		1656
2223	29607			6629		1885	891		891
2224	29608			5639					
2225	IR 64 Check	5169		6407		4909 1	5906	10	5906 10
2226	29609	3963		5814		4838 3	7031	2	7031 2 # 60.70%
2227	29610	4144		5225			1000		1000
2228	29611	5289		7311	5 * 12.33%	4856 2	6156	9	6156 9 40.70%
2229	29612	5252		6155		2601	4109		4109
2230	29613	6868	3 * 29%	7069	9 8.62%	4536 4	6734	5	6734 5 # 53.92%
2231	29614	6678	6 25.43%	7270	6 * 11.70%	4200 6	3141		3141
2232	Rajalaxmi (HybridCheck)	6498	7	6945		3456 9	4375		4375
2233	29615	5969	12.11%	7723	2 * 18.66% # 11.20%	2899	5328		5328 21.78%
2234	29616	5654	6.19%	6672		2539			
2235	29617	6374	9 19.72%	6098		3307	3047		3047
2236	29618	5541		5567			1266		1266
2237	29619			5300					
2238	29620	3856		5308		3377 10	6625	6	6625 6 # 51.42%
2239	29621	6177	16.02%	7099	7 9.08%	1243	3531		3531
2240	29622	5247		5374		997	3203		3203
2241	29623			4933			1047		1047
2242	29624	7190	1 * 35.04% 10.64%	8448	1 * 29.80% # 21.64%	2807			
2243	29625			5178			3641		3641
2244	29626	4720		5137		1102	953		953
2245	29627			4900			766		766
2246	29628	6221	10 16.84%	5082		2765			
2247	29629			4895		2368	1281		1281
2248	29630	5003		6939	6.62%	3490 8	6875	3	6875 3 #57.14%
2249	29631	5416		6376		1975	4234		4234
2250	29632			7395	4 * 13.62% 6%		3297		3297
2251	Local Check	5324		6508			8266	1	8266 1
Exp. Mean		5508		6019		2951	3585		3585
CD		1477.2		685.32		227.74	1801.1		1801.1
CV%		13.17		5.67		3.77	24.86		24.86
D/S			29-12-2020				24-12-2020		
D/P			10-02-2021				04-01-2021		
Local Check Name			Tapaswini			Naveen	Hakuchuk 2		

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Table No. 1.50 Contd.: Grain Yield (kg/ha) of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE IV							Overall (7) Mean					
		AS		AS(2)		Zone 4 (3)								
		TTB	GER	Mean		Mean								
2201	29586	2430			2430		2430		3815					
2202	29587	3245			3245		2756		5369					
2203	29588	4265		3900	4083		5008		5477					
2204	29589	1795			1795		1795		3248					
2205	29590	1745		5404	10	3575		3326		5164				
2206	29591	5445	3 *		5445	6	13.76%	5445	7	5379				
2207	29592	2655			2655			1554		2603				
2208	29593	4825	7		4825			4046		5417				
2209	29594									5333				
2210	Gautam Check	3460		5683	7	4572		3813		4396				
2211	29595	2665		3617		3141		3495		4245				
2212	29596	2580			2580			1532		3245				
2213	29597	5030	5 *		5030	8		3882		5487				
2214	29598			6217	3	6217	2 * 29.89%	12.09%	4578		5893			
2215	29599			1896		1896		4065		6086	10			
2216	29600	5045	4 *		5045	7	5.41%	5781	3	5936				
2217	29601			2942		2942		2815		5892				
2218	29602	2325			2325			2077		3687				
2219	29603	2335			2335			2335		3668				
2220	29604	2795		1642		2219		2578		4193				
2221	29605	5450	2 *		5450	5	13.87%	4585		6058				
2222	29606	3450			3450			2553		4987				
2223	29607	2655			2655			1773		4687				
2224	29608	3710			3710			3710		4996				
2225	IR 64 Check	4630	8	4942		4786		5159	10	5872				
2226	29609	4150			4150			5591	5	5739				
2227	29610	2665			2665			1833		3868				
2228	29611	3655		5904	5	4780		5238	9	6423	5			
2229	29612	3380		5963	4	4672		4484		5439				
2230	29613	3650		6388	2	5019	9	5591	5	12.69%	6435	4	5.02%	
2231	29614	6080	1 *	6575	1	6328	1 * 32.21%	14.10%	5265	8	6411	6	4.63%	
2232	Rajalaxmi (HybridCheck)			5546	8	5546	4	4961		6151	8			
2233	29615	4450	9	5546	8	4998	10	4.42%	5108		6602	3	7.75%	
2234	29616			2975		2975		2975		5932				
2235	29617			3833		3833		3440		5212				
2236	29618			2783		2783		2025		3796				
2237	29619	3090			3090			3090		4195				
2238	29620	4945	6		4945			5785	2	5467				
2239	29621							3531		6386	7			
2240	29622			2483		2483		2843		4531				
2241	29623	4195			4195			2621		3392				
2242	29624									8448	1 *	37.88%	# 37.34%	
2243	29625	4445			4445			4043		4610				
2244	29626	3420			3420			2187		3957				
2245	29627	2165			2165			1466		2610				
2246	29628			1475		1475		1475		4180				
2247	29629							1281		3690				
2248	29630			5763	6	5763	3 * 20.41%	6319	1	12.45%	# 27.37%	6733	2 * 9.89%	# 9.46%
2249	29631			3638		3638		3936		5563				
2250	29632	3655			3655			3476		5827				
2251	Local Check	4450	9	4142		4296		5619	4	6127	9			
Exp. Mean		3637		4315		3781		3577		5076				
CD		318.43		1989.67		946.08		937.66		559.43				
CV%		4.31		22.23		12.43		13.04		5.49				
D/S		08-02-2021		29-12-2020										
D/P		11-03-2021		15-02-2021										
Local Check Name		Kanaklata		Chandrama										

*Superior to best check #Superior over hybrid check %superior over best check

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Table No. 1.51: Days to 50% flowering of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE III					
		WB		WB(2)	UP(1)	OD (1)	Zone 3 (4)
		CHN	PNB	Mean	VRN	CTK	Mean
2201	29586		125	125			125
2202	29587	119	121	120	157	123	128
2203	29588	120	127	124	153	123	129
2204	29589		118	118			118
2205	29590	110	120	115	147	103	119
2206	29591	107	122	115			115
2207	29592		126	126			126
2208	29593	113	114	114	159	88	118
2209	29594		123	123			123
2210	Gautam Check	94	121	108	126	87	107
2211	29595	101	111	106	127	89	107
2212	29596	107	122	115			115
2213	29597	110	126	118	141	105	120
2214	29598	112		112	145	113	121
2215	29599	129	129	129	149	113	130
2216	29600	109	124	117	136	98	117
2217	29601	113	134	124	143	115	126
2218	29602	93	125	109	125	87	108
2219	29603		117	117			117
2220	29604	106	116	111	127		115
2221	29605	107	119	113	139		120
2222	29606	113	118	116	157		126
2223	29607	98	122	110	131		115
2224	29608	110	126	118			118
2225	IR 64 Check	99	116	108	141	105	114
2226	29609	101	118	110	137	94	112
2227	29610	106	115	111		89	105
2228	29611	105	122	114	137	113	118
2229	29612	104	127	116	134	94	115
2230	29613	103	111	107	134	74	106
2231	29614	107	125	116	139	113	120
2232	Rajalaxmi (Hybrid check)	105		105	142	105	114
2233	29615	110	115	113	143	113	119
2234	29616	103	127	115	138	94	115
2235	29617	104	113	109	129	109	113
2236	29618	118		118		124	120
2237	29619		114	114			114
2238	29620	101	114	108	126	98	109
2239	29621	113	130	122	144	120	126
2240	29622	118	128	123	157	124	130
2241	29623		122	122			122
2242	29624	117		117	144	120	125
2243	29625	105	128	117			117
2244	29626	105	127	116		98	112
2245	29627		123	123			123
2246	29628	118		118	151	113	125
2247	29629	111	122	117			117
2248	29630	107	126	117	141	109	120
2249	29631	132	123	128	156	103	128
2250	29632	107	124	116	145		123
2251	Local Check	101	113	107	146	113	116
Exp. Mean		109	121	115	141	105	118

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Table No. 1.51 Contd.: Days to 50% flowering of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE IV							Overall (7) Mean
		TR		TR (1)	AS		AS(2)	Zone 4 (3)	
		@ARD	LMC	Mean	TTB	GER	Mean	Mean	
2201	29586		113	113	115		115	114	118
2202	29587		112	112	108		108	110	123
2203	29588		117	117	132	97	115	115	124
2204	29589		82	82	107		107	95	102
2205	29590		95	95	112	78	95	95	109
2206	29591		117	117	105		105	111	113
2207	29592		115	115	132		132	124	124
2208	29593		100	100	141		141	121	119
2209	29594		106	106				106	115
2210	Gautam Check	99	109	109	84	72	78	88	99
2211	29595	101	103	103	108	65	87	92	101
2212	29596		103	103	111		111	107	111
2213	29597		95	95	110		110	103	115
2214	29598	116	102	102		78	78	90	110
2215	29599	122				93	93	93	123
2216	29600	110			112		112	112	116
2217	29601	120	92	92		93	93	93	115
2218	29602	95	134	134	92		92	113	109
2219	29603		124	124	109		109	117	117
2220	29604	102	102	102	103	65	84	90	103
2221	29605	109	107	107	107		107	107	116
2222	29606	116	89	89	112		112	101	118
2223	29607	103	97	97	112		112	105	112
2224	29608		125	125	113		113	119	119
2225	IR 64 Check	112	104	104	112	74	93	97	107
2226	29609	111	113	113	108		108	111	112
2227	29610		134	134	108		108	121	110
2228	29611	116	126	126	107	74	91	102	112
2229	29612	111	125	125	112	74	93	104	110
2230	29613	109	96	96	117	72	95	95	101
2231	29614	117	82	82	114	78	96	91	108
2232	Rajalaxmi (Hybrid check)	114	117	117		74	74	96	109
2233	29615	116	107	107	110	78	94	98	111
2234	29616	113	92	92		74	74	83	105
2235	29617	119	115	115		78	78	97	108
2236	29618		82	82		105	105	94	107
2237	29619		124	124	99		99	112	112
2238	29620	104	117	117	110		110	114	111
2239	29621	122	91	91				91	120
2240	29622	124	124	124		93	93	109	124
2241	29623		126	126	112		112	119	120
2242	29624	121	107	107				107	122
2243	29625		133	133	112		112	123	120
2244	29626	106	115	115	103		103	109	110
2245	29627		82	82	107		107	95	104
2246	29628	115	134	134		93	93	114	122
2247	29629	113	114	114				114	116
2248	29630	120	131	131		78	78	105	115
2249	29631	125				78	78	78	118
2250	29632	115	106	106	105		105	106	117
2251	Local Check		100	100	126	81	104	102	111
Exp. Mean		113	109	109	111	80	100	104	113

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Table No. 1.52: Plant Height (cm) of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE III					
		WB		WB(2)	UP(1)	OD (1)	Zone 3 (4)
		CHN	PNB	Mean	VRN	CTK	Mean
2201	29586		112.50	112.50			112.50
2202	29587	118.00	107.40	112.70	89.10	89.40	100.98
2203	29588	119.11	102.30	110.71	95.50	96.70	103.40
2204	29589		104.70	104.70			104.70
2205	29590	110.44	104.00	107.22	96.90	93.80	101.29
2206	29591	107.00	110.50	108.75			108.75
2207	29592		113.30	113.30			113.30
2208	29593	112.56	93.90	103.23	118.20	111.70	109.09
2209	29594		101.55	101.55			101.55
2210	Gautam Check	93.56	102.15	97.85	68.60	73.70	84.50
2211	29595	100.56	122.85	111.70	81.80	98.50	100.93
2212	29596	107.89	111.15	109.52			109.52
2213	29597	110.89	112.45	111.67	86.30	86.70	99.08
2214	29598	110.00		110.00	112.30	108.10	110.13
2215	29599	116.00	113.20	114.60	89.60	97.70	104.13
2216	29600	120.00	104.45	112.23	97.50	100.80	105.69
2217	29601	118.33	110.70	114.52	109.50	118.20	114.18
2218	29602	86.00	108.95	97.48	74.40	76.80	86.54
2219	29603		110.65	110.65			110.65
2220	29604	107.00	97.60	102.30	92.20		98.93
2221	29605	112.33	106.95	109.64	108.20		109.16
2222	29606	115.33	109.85	112.59	94.60		106.59
2223	29607	103.67	105.65	104.66	97.70		102.34
2224	29608	112.33	107.15	109.74			109.74
2225	IR 64 Check	127.67	104.75	116.21	73.90	82.30	97.15
2226	29609	99.33	108.85	104.09	93.10	103.80	101.27
2227	29610	110.33	102.90	106.62		91.80	101.68
2228	29611	112.00	114.95	113.48	91.30	98.30	104.14
2229	29612	111.33	109.60	110.47	85.90	92.50	99.83
2230	29613	121.00	105.00	113.00	84.10	99.00	102.28
2231	29614	123.33	108.05	115.69	92.40	105.10	107.22
2232	Rajalaxmi (Hybrid Check)	114.00		114.00	100.80	107.60	107.47
2233	29615	110.67	121.35	116.01	94.30	108.50	108.70
2234	29616	93.33	109.80	101.57	86.50	89.90	94.88
2235	29617	98.00	125.55	111.78	155.10	100.60	119.81
2236	29618	138.00		138.00		117.20	127.60
2237	29619		101.60	101.60			101.60
2238	29620	100.67	101.80	101.23	78.90	91.60	93.24
2239	29621	119.00	113.85	116.43	98.70	106.00	109.39
2240	29622	135.00	103.20	119.10	141.10	109.80	122.28
2241	29623		112.55	112.55			112.55
2242	29624	114.33		114.33	85.00	98.70	99.34
2243	29625	107.00	100.75	103.88			103.88
2244	29626	102.33	95.00	98.67		77.00	91.44
2245	29627		105.65	105.65			105.65
2246	29628	104.33		104.33	95.50	103.70	101.18
2247	29629	133.33	100.90	117.12			117.12
2248	29630	100.67	97.10	98.88	86.70	90.50	93.74
2249	29631	107.00	102.40	104.70	101.90	94.30	101.40
2250	29632	87.00	122.70	104.85	95.60		101.77
2251	Local Check	93.00	101.05	97.03	92.70	94.70	95.36
Exp. Mean		110.32	107.46	109.12	95.60	97.42	104.50

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Table No. 1.52 Contd.: Plant Height (cm) of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE IV							Overall (7) Mean
		TR		TR (1)	AS		AS(2)	Zone 4 (3)	
		@ARD	LMC	Mean	TTB	GER	Mean	Mean	
2201	29586		106.50	106.50	80.90		80.90	93.70	99.97
2202	29587		96.00	96.00	84.05		84.05	90.03	97.33
2203	29588		111.50	111.50	77.55	88.00	82.78	92.35	98.67
2204	29589		62.00	62.00	77.10		77.10	69.55	81.27
2205	29590		102.00	102.00	83.65	92.40	88.03	92.68	97.60
2206	29591		135.00	135.00	86.70		86.70	110.85	109.80
2207	29592		111.00	111.00	79.80		79.80	95.40	101.37
2208	29593		106.50	106.50	104.75		104.75	105.63	107.93
2209	29594		117.00	117.00				117.00	109.28
2210	Gautam Check	86.20	118.50	118.50	63.10	90.80	76.95	90.80	87.20
2211	29595	104.00	103.50	103.50	76.70	94.60	85.65	91.60	96.93
2212	29596		93.50	93.50	79.60		79.60	86.55	98.03
2213	29597		97.00	97.00	82.90		82.90	89.95	96.04
2214	29598	113.00	103.50	103.50		106.60	106.60	105.05	108.10
2215	29599	107.80				103.60	103.60	103.60	104.02
2216	29600	108.40			96.65		96.65	96.65	103.88
2217	29601	117.80	111.00	111.00		116.20	116.20	113.60	113.99
2218	29602	82.20	112.50	112.50	71.50		71.50	92.00	88.36
2219	29603		113.50	113.50	80.00		80.00	96.75	101.38
2220	29604	135.20	95.50	95.50	80.00	100.40	90.20	91.97	95.45
2221	29605	123.20	116.00	116.00	89.60		89.60	102.80	106.62
2222	29606	123.20	105.50	105.50	92.70		92.70	99.10	103.60
2223	29607	121.60	97.50	97.50	86.50		86.50	92.00	98.20
2224	29608		93.00	93.00	78.20		78.20	85.60	97.67
2225	IR 64 Check	102.00	89.50	89.50	74.30	89.80	82.05	84.53	91.75
2226	29609	121.20	102.50	102.50	92.10		92.10	97.30	99.95
2227	29610		96.00	96.00	79.50		79.50	87.75	96.11
2228	29611	115.00	103.00	103.00	86.45	103.60	95.03	97.68	101.37
2229	29612	104.60	130.00	130.00	84.00	99.00	91.50	104.33	101.76
2230	29613	116.20	93.50	93.50	96.50	100.80	98.65	96.93	99.99
2231	29614	121.20	77.50	77.50	98.50	105.40	101.95	93.80	101.47
2232	Rajalaxmi (Hybrid Check)	106.60	109.50	109.50		109.80	109.80	109.65	108.34
2233	29615	113.60	95.50	95.50	90.00	106.60	98.30	97.37	103.85
2234	29616	109.20	68.50	68.50		94.40	94.40	81.45	90.41
2235	29617	106.80	113.00	113.00		100.10	100.10	106.55	115.39
2236	29618		107.50	107.50		129.80	129.80	118.65	123.13
2237	29619		96.50	96.50	80.15		80.15	88.33	92.75
2238	29620	108.20	117.50	117.50	84.50		84.50	101.00	95.83
2239	29621	108.20	110.50	110.50				110.50	109.61
2240	29622	158.60	103.00	103.00		140.60	140.60	121.80	122.12
2241	29623		113.00	113.00	94.00		94.00	103.50	106.52
2242	29624	114.80	92.50	92.50				92.50	97.63
2243	29625		107.50	107.50	90.00		90.00	98.75	101.31
2244	29626	77.20	102.50	102.50	75.50		75.50	89.00	90.47
2245	29627		97.00	97.00	79.00		79.00	88.00	93.88
2246	29628	109.00	95.50	95.50		103.00	103.00	99.25	100.41
2247	29629	127.20	101.50	101.50				101.50	111.91
2248	29630	100.20	116.00	116.00		88.00	88.00	102.00	96.49
2249	29631	106.20				90.40	90.40	90.40	99.20
2250	29632		115.50	115.50	87.00		87.00	101.25	101.56
2251	Local Check		87.00	87.00	100.00	106.40	103.20	97.80	96.41
Exp. Mean		111.62	103.11	103.11	84.54	102.62	91.69	97.39	101.02

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Table No. 1.53: Panicles/m² of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE III					
		WB		WB(2)	UP(1)	OD (1)	Zone 3 (4)
		CHN	PNB	Mean	VRN	CTK	Mean
2201	29586		398	398			398
2202	29587	363	512	438	481	450	452
2203	29588	396	370	383	496	426	422
2204	29589		448	448			448
2205	29590	297	325	311	471	390	371
2206	29591	297	501	399			399
2207	29592		328	328			328
2208	29593	264	515	390	591	198	392
2209	29594		358	358			358
2210	Gautam Check	231	347	289	533	414	381
2211	29595	297	535	416	451	456	435
2212	29596	330	336	333			333
2213	29597	198	370	284	541	456	391
2214	29598	264		264	591	510	455
2215	29599	429	510	469	462	426	457
2216	29600	231	356	293	585	570	435
2217	29601	429	392	411	426	342	397
2218	29602	231	381	306	467	504	396
2219	29603		428	428			428
2220	29604	297	431	364	564		431
2221	29605	330	392	361	461		394
2222	29606	330	356	343	570		419
2223	29607	297	384	340	563		415
2224	29608	330	333	332			332
2225	IR 64 Check	297	308	303	593	606	451
2226	29609	231	683	457	611	396	480
2227	29610	264	437	350		588	430
2228	29611	297	395	346	526	468	421
2229	29612	264	358	311	466	306	349
2230	29613	297	493	395	490	432	428
2231	29614	363	325	344	436	444	392
2232	Rajalaxmi (Hybrid Check)	330		330	586	417	444
2233	29615	330	521	425	369	426	411
2234	29616	297	476	387	507	450	433
2235	29617	330	504	417	412	513	440
2236	29618	330		330		288	309
2237	29619		398	398			398
2238	29620	363	398	380	589	384	433
2239	29621	231	319	275	352	300	301
2240	29622	330	420	375	396	468	404
2241	29623		333	333			333
2242	29624	297		297	386	414	366
2243	29625	264	358	311			311
2244	29626	264	414	339		416	365
2245	29627		392	392			392
2246	29628	297		297	469	288	351
2247	29629	297	356	326			326
2248	29630	231	465	348	522	366	396
2249	29631	264	431	348	570	360	406
2250	29632	231	633	432	566		477
2251	Local Check	264	409	336	471	468	403
Exp. Mean		298	416	358	502	422	398

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Table No. 1.53 Contd.: Panicles/m² of entries in IVT - BORO 2020-21

Entry No	IET No	ZONE IV					Overall (6) Mean
		TR(1)	AS		AS(2)	Zone 4 (2)	
		@ARD	TTB	GER	Mean	Mean	
2201	29586		165		165	165	281
2202	29587		171		171	171	395
2203	29588		182	369	276	276	373
2204	29589		155		155	155	302
2205	29590		118	310	214	214	318
2206	29591		202		202	202	333
2207	29592		170		170	170	249
2208	29593		181		181	181	350
2209	29594						358
2210	Gautam Check	348	185	376	281	281	348
2211	29595	385	170	270	220	220	363
2212	29596		160		160	160	275
2213	29597		210		210	210	355
2214	29598	449		349	349	349	429
2215	29599	308		250	250	250	415
2216	29600	329	195		195	195	387
2217	29601	270		211	211	211	360
2218	29602		155		155	155	348
2219	29603		161		161	161	295
2220	29604	312	169	213	191	191	335
2221	29605	367	190		190	190	343
2222	29606	295	184		184	184	360
2223	29607	323	162		162	162	351
2224	29608		175		175	175	279
2225	IR 64 Check	320	191	376	284	284	395
2226	29609	397	185		185	185	421
2227	29610		160		160	160	362
2228	29611	280	172	217	195	195	346
2229	29612	380	174	264	219	219	305
2230	29613	312	190	283	237	237	364
2231	29614	340	205	288	247	247	343
2232	Rajalaxmi (Hybrid Check)	270		276	276	276	402
2233	29615	338	195	191	193	193	339
2234	29616	320		224	224	224	391
2235	29617	430		184	184	184	389
2236	29618			244	244	244	287
2237	29619		157		157	157	277
2238	29620	262	200		200	200	387
2239	29621	262					301
2240	29622	351		249	249	249	373
2241	29623		165		165	165	249
2242	29624	370					366
2243	29625		180		180	180	267
2244	29626	397	175		175	175	317
2245	29627		147		147	147	270
2246	29628	398		204	204	204	315
2247	29629	430					326
2248	29630	380		217	217	217	360
2249	29631	408		244	244	244	374
2250	29632		185		185	185	404
2251	Local Check		179	297	238	238	348
	Exp. Mean	346	176	265	205	205	343

Hybrid Rice

In our country, an excellent progress has been made in hybrid rice research and development. As a result of concerted efforts over the last three decades, 133 hybrids have been released for commercial cultivation in different rice growing states across the country. Among these, 40 hybrids have been developed by the public sector, while the remaining 93 are developed by the private sector. The private sector is playing a very important role in hybrid rice research and development in the country. During the year 2021, hybrid rice was planted in an area of 3.5 m.ha. and more than 80% of the total hybrid rice area is in the states of Uttar Pradesh, Jharkhand, Chhattisgarh, Madhya Pradesh, Odisha and Haryana. During this year (2021-22), six rice hybrids viz., NPH-X1, MR-8666, SAVA-200, SAVA-300, CR Dhan 702 and CR Dhan 703 were released and notified by the CSCCSN&RV for commercial cultivation in different parts of the country. Among these NPH-X1, MR 8666 are central releases; SAVA-200, SAVA-300, CR Dhan 702 and CR Dhan 703 are state releases.

For identification of high yielding and widely adapted hybrids, a national level three tier system of evaluation is being adapted and in this, the hybrids developed by research network centres, including some of the voluntary centres and those developed by private sector seed companies having their own R&D are pooled together based on maturity groups in early (<120 days), mid early (121-130 days) and medium (131-140 days) trials. In addition, one more trial is also constituted aiming to develop medium slender grain type hybrids. IHRTs are conducted at 30-35 locations and these trials consist of test hybrids, national varietal / hybrid checks, zonal and local varietal checks in the respective maturity and grain type groups.

The location data is considered for analysis and the hybrids are promoted to the next stage of testing i.e., Advance Varietal Trial-1 (AVT-1) based on criterion mentioned in the proceeding of 56th ARGM (p14-15).

1. The significance of the trial is determined based on F-value. If the F value at individual location is not significant, data from such locations are not considered for assessment of entries.
2. 'Minimum experimental mean yield of 4 t/ha, for inbreds and 5 t/ha for hybrid trial is a requirement for inclusion of location data for assessment of entries'. However, it has been slightly modified this year to include the yield data up to 4 t/ha for IHRTs as many locations were getting dropped, if 5 t/ha limit is applied.
3. CV for trial acceptance is in the range of 5-20%.
4. CD @ 5% is considered as a criteria for promotion of entries.

During Kharif 2021, four hybrid trials were conducted and evaluated and test locations are given in Table 1.54 and Table 1.55 respectively.

Table 1.54: Details of Initial Hybrid Rice Trials conducted during Kharif 2021

S. No	Name of the trial	No. of hybrids evaluated		No. of test locations
		Public	Private	
1.	Initial Hybrid Rice Trial - Early	6	17	33
2.	Initial Hybrid Rice Trial - Mid Early	7	26	34
3.	Initial Hybrid Rice Trial - Medium	2	13	35
4.	Initial Hybrid Rice Trial - Medium Slender	5	5	32

Table 1.55: Zone wise test centres for Initial Hybrid Rice Trials, Kharif 2021

Zone	No. of Locations	Name of Locations
Zone II (Northern)	5	Public Sector: Malan (MLN), Kaul (KUL), Ludhiana (LDN), New Delhi (IAR), Pantnagar (PNT)
Zone III (Eastern)	13	Public Sector: Chinsurah (CHN), Chiplima (CHP), Cuttack (NRRRI), Dhangain (DNG), Hazaribagh (HZB), Masodha (MSD), Nagina (NGN), Ranchi (RCI), Varanasi (VRN) Private Sector: Rasi Seeds (RSI), JK Agri Genetics (JKA), Syngenta (SYN), Trimurthi Seeds (TMT)
Zone IV (North Eastern)	2	Public Sector: Arundhatinagar (ARD), Titabar (TTB)
Zone V (Central)	9	Public Sector: Jabalpur (JBP), Raipur (RPR), Sakoli (SKL), Sindewahi (SND), Waraseoni (WRS) Private Sector: Ankur Seeds (ANK), Nuziveedu Seeds (NUZ), Rasi Seeds (RSI), VNR Seeds (VNR)
Zone VI (Western)	7	Public Sector: Karjat (KJT), Navsari (NVS), Nawagam (NWG), Pondaghat (PDG), Radhanagari (RDN), Shirgaon (SHG), Vadgaon Maval (VDG)
Zone VII (Southern)	12	Public Sector: Aduthurai (ADT), Bapatla (BPT), Coimbatore (CBT), Hyderabad (IIRR), Karaikal (KRK), Malagi (MLG), Mandya (MND), Maruteru (MTU), Ragolu (RGL), Sirsi (SRS), Warangal (WGL) Private Sector: Bayer Bio Sciences (BAY)

1. Initial Hybrid Rice Trial - Early (IHRT-E)

Twenty three test hybrids (17 and 6 from private and public sector respectively) were evaluated in 33 locations comprising Zone II, III, IV, V, VI and VII along with national hybrid check (US 314), national varietal check (CO-51), zonal varietal checks (PR-124 - Zone II; NDR-97 - Zone III; Luit - Zone IV; Shabhagidhan - Zone V & VI; MTU-1153 - Zone VII) and local varietal checks of their respective locations. The details of the composition of the trial are given in Table 1.56.

Table 1.56: Composition of Initial Hybrid Rice Trial - Early (IHRT-E), Kharif 2021

S.No.	IET No.	Name	Nominating Agency
1	29685	JRH-133	JNKVV, Jabalpur
2	29686	CP R414	CP Seeds, Bangalore
3	29687	RALLIS-20101	Rallis (I) Ltd., Hyderabad
4	29688	RALLIS-20102	Rallis (I) Ltd., Hyderabad
5	29689	HRI-214	Bayer Bioscience, Hyderabad
6	29690	UPLRH-180842	UPL, Hyderabad
7	29691	VNR-228	VNR Seeds, Raipur
8	29692	UPLRH-162087	UPL, Hyderabad
9	29693	US-321	Seed Works, Hyderabad
10	29694	UPLRH-181325	UPL, Hyderabad
11	29695	KAVERI-7227	Kaveri Seeds, Hyderabad
12	29696	PAN-2150	PAN Seeds, Hyderabad
13	29697	TNRH-297	TNAU, Coimbatore
14	29698	NPH-X60	Nuziveedu Seeds, Hyderabad
15	29699	IIRRH-152	ICAR-IIRR, Hyderabad
16	29700	JKRH-1004	JK Seeds, Hyderabad
17	29701	PHI-21101	Pioneer, Hyderabad
18	29702	MEPH-162	MAHYCO, Hyderabad
19	29703	PHI-21102	Pioneer, Hyderabad
20	29704	IIRRH-150	ICAR-IIRR, Hyderabad
21	29705	MEPH-163	MAHYCO, Hyderabad
22	29706	IIRRH-151	ICAR-IIRR, Hyderabad
23	29707	IIRRH-153	ICAR-IIRR, Hyderabad
24	-	US-314 (NCH)	National Check Hybrid
25	-	CO-51 (NCV)	National Check Variety
26	-	PR-124/Luit/NDR-97/ Sahbhagidhan/MTU-1153 (ZCV)	Zonal Check Variety
27	-	Local Check Variety (LCV)	Local Check Variety

The detailed location wise and zone wise performance for grain yield and days to 50% flowering (DFF) is given in Appendix-1&2 respectively. The overall DFF ranged from 79 to 92 days. The national varietal check (CO-51) had overall mean of 83 days, zonal check of 85 days, local check of 86 days and national hybrid check (US 314) of 87 days. The grain quality characteristics of test entries are given in Appendix-3.

Based on overall mean, nine hybrids viz., PHI 21102, UPLRH-180842, UPLRH-181325, HRI-214, KAVERI-7227, PAN-2150, PHI-21101, VNR-228 and UPLRH 162087 significantly out yielded the best varietal and hybrid check (Table 1.57). Besides these, based on zonal means, two hybrids viz., US-321, JKRH-1004 (Zone II) were found promising. Of these 11 hybrids viz., eight hybrids viz., UPLRH-180842, UPLRH-181325, HRI-214, PAN 2150, PHI 21101, VNR-228, UPLRH-162087, JKRH-1004 are promoted to AVT-1-E-TP. The remaining three hybrids viz., PHI-21102, KAVERI-7227 and US 321 (as they are falling short of quality requirements) were dropped from further evaluation.

Table 1.57: Promising hybrids identified in IHRT-E, Kharif 2021

S. No	Hybrid	IET No	DFF	Grain Type	Mean Yield (kg/ha)							Remarks
					Over all	Zone II	Zone III	Zone IV	Zone V	Zone VI	Zone VII	
1	PHI-21102	29703	91	LS	6743 ^{*#}	8434 ^{*#}	6698 ^{*#}	5118	6608 ^{*#}	5582 [*]	8211 ^{*#}	Dropped: Low AC: 17.64
2	UPLRH-180842	29690	91	LB	6687 ^{*#}	8033 ^{*#}	6556 ^{*#}	5323	6584 ^{*#}	6412 [*]	7757 ^{*#}	Promoted to AVT-1-E-TP
3	UPLRH-181325	29694	90	LS	6673 ^{*#}	8584 ^{*#}	6378 [*]	4895	6794 ^{*#}	6362 [*]	7508 ^{*#}	Promoted to AVT-1-E-TP
4	HRI-214	29689	88	LB	6553 ^{*#}	7526 [*]	6421 [*]	4090	6486 [*]	6054 [*]	5477	Promoted to AVT-1-E-TP
5	KAVERI 7227	29695	87	LB	6521 ^{*#}	8162 ^{*#}	6976 ^{*#}	5145	5982 [*]	5207	7616 ^{*#}	Dropped: Low AC: 16.64
6	PAN 2150	29696	91	LS	6447 ^{*#}	7523 ^{*#}	6459 [*]	4846	6019 [*]	6071 [*]	7862 ^{*#}	Promoted to AVT-1-E-TP
7	PHI-21101	29701	88	LB	6444 ^{*#}	8198 ^{*#}	6785 ^{*#}	4677	4583	5372	7040 [#]	Promoted to AVT-1-E-TP
8	VNR 228	29691	86	SB	6419 ^{*#}	7635 ^{*#}	6330 [*]	4758	6522 ^{*#}	5962 [*]	7194 [#]	Promoted to AVT-1-E-TP
9	UPLRH 162087	29692	87	LS	6395 ^{*#}	7394 [*]	6431 [*]	5187	6361 [*]	5816 [*]	7388 ^{*#}	Promoted to AVT-1-E-TP
10	US 321	29693	81	LS	6092 [*]	7439 ^{*#}	6154	5940	5920 [*]	5148	7066 [#]	Dropped: high AC: 28.11 Low GC: 25
11	JKRH 1004	29700	83	LS	5604 [*]	7639 ^{*#}	5722	4711	5311	5236	5527	Promoted to AVT-1-E-TP
	US 314	NCH	87	MS	6101	6983	6195	6008	6007	6111	6380	
	Co 51	NCV	83	MS	5142	5594	5572	4724	4991	4008	5950	
		ZCV	85	LB	4964	4351	4888	5462	4972	3876	6870	
		LCV	86	SB	5359	6372	5888	3404	5081	5048	5670	
	CD (0.05)				170.86	413.94	316.43	499.21	499.35	439.04	388.26	
	HC + CD (0.05)				6272	7397	6511	6507	6506	6550	6768	
	BVC+ CD (0.05)				5530	6786	6204	5961	5580	5487	7258	

#: Denotes superior to Hybrid Check; *: Denotes superior to Best Varietal Check.

2. Initial Hybrid Rice Trial - Mid Early (IHRT-ME)

Mid Early trial comprising of 33 hybrids and four checks viz., Gontra Bidhan-3 (national varietal check); US 312 (national hybrid check); zonal checks - PR 113 (Zone II); Lalat (Zone III); Karjat-7 (Zone V&VI); MTU 1010 (Zone VII) and respective local checks were conducted at 34 locations. Among the 33 hybrids evaluated, 26 were from private sector and seven from public sector. The composition of the trial is given in Table 1.58.

Table 1.58: Composition of Initial Hybrid Rice Trial - Mid Early (IHRT-ME), Kharif 2021

S.No.	IET No.	Name	Nominating Agency
1	29708	MALI-348	Mali Agri tech., Ranaghat
2	29709	JRH-134	JNKVV, Jabalpur
3	29710	CP R444	CP Seeds, Bangalore
4	29711	IRH-128	IGKV, Raipur
5	29712	Indam 300-021	Indo-American Seeds, Hyderabad
6	29713	IRH-129	IGKV, Raipur
7	29714	Indam 200-053	Indo-American Seeds, Hyderabad
8	29715	IRH-130	IGKV, Raipur
9	29716	RALLIS-20308	Rallis (I), Ltd., Hyderabad
10	29717	RRX-271	Rasi Seeds, Hyderabad
11	29718	UPLRH-180839	UPL, Hyderabad
12	29719	NPH-X5+	Nuziveedu Seeds, Hyderabad
13	29720	UPLRH-169054	UPL, Hyderabad
14	29721	UPLRH-189001	UPL, Hyderabad
15	29722	RNRH-15	RRC, PJTSAU, Hyderabad
16	29723	SPH-43	Super Seeds, Hyderabad
17	29724	PAN-2140	PAN Seeds, Hyderabad
18	29725	NPH-X49	Nuziveedu Seeds, Hyderabad
19	29726	PHI-21103	Pioneer, Hyderabad
20	29727	PRSH-2009	Prabhat Agri Biotech, Hyderabad
21	29728	US-346	Seed Works, Hyderabad
22	29729	ARRH-23316	Ankur Seeds, Nagpur
23	29730	US-355	Seed Works, Hyderabad
24	29731	RNC-0334	Syngenta, Hyderabad
25	29732	KPHDF8PX	Kaveri Seeds, Hyderabad
26	29733	JKRH-1038	JK Seeds, Hyderabad
27	29734	PHI-21104	Pioneer, Hyderabad
28	29735	MEPH-164	MAHYCO, Hyderabad
29	29736	PHI-21105	Pioneer, Hyderabad
30	29737	IIRRH-148	ICAR-IIRR, Hyderabad
31	29738	RNC-0457	Syngenta, Hyderabad
32	29739	MEPH-165	MAHYCO, Hyderabad
33	29740	IIRRH-149	ICAR-IIRR, Hyderabad
34	-	US-312 (NCH)	National Check Hybrid
35	-	Gontra Bidhan-3 (NCV)	National Check Variety
36	-	PR-113/Lalat/ Karjat-7/MTU-1010 (ZCV)	Zonal Check Variety
37	-	Local Check Variety (LCV)	Local Check Variety

Performance of the hybrids with respect to grain yield and days to 50% flowering (DFF) are given in Appendix-4&5 respectively. The grain quality characteristics of test entries are given in Appendix-6.

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Performance of promising hybrids identified in different zones is given in Table 1.59. In the trial, mean DFF of checks ranged from 87 to 100 days, the hybrid check US 312 had mean DFF of 95 days. The varietal checks viz., national, zonal and local checks had mean DFF of 93, 94 and 95 days respectively.

Table 1.59: Promising hybrids identified in IHRT-ME, Kharif 2021

S. No	Hybrid	IET No	DFF	Grain Type	Mean Yield (kg/ha)							Remarks
					Over All	Zone II	Zone III	Zone IV	Zone V	Zone VI	Zone VII	
1	PHI- 21103	29726	94	LS	7054 ^{*#}	6808 [*]	6976 ^{*#}	7125 [*]	6262	5993	8399 ^{*#}	Promoted to AVT-1-ME-TP
2	PHI-21105	29736	92	LS	7042 ^{*#}	7651 ^{*#}	6699 ^{*#}	6875 [*]	6625 [#]	5211	8460 ^{*#}	Promoted to AVT-1-ME-TP
3	PHI-21104	29734	97	LB	6912 ^{*#}	6796 [#]	6847 ^{*#}	6900 [*]	6925 [#]	5698	7660 [*]	Promoted to AVT-1-ME-TP
4	RNC-0457	29738	96	LS	6803 ^{*#}	7464 ^{*#}	6478 [#]	7156 [*]	6638 [#]	5929	7435 [*]	Promoted to AVT-1-ME-TP
5	RNC-0334	29731	96	LB	6743 ^{*#}	7039 [*]	6590 ^{*#}	6112	6647 [#]	5783	7434 [*]	Promoted to AVT-1-ME-TP
6	KPHDF8PX	29732	93	LS	6706 ^{*#}	7362 ^{*#}	6635 ^{*#}	7251	6668 [#]	5653	6964	Dropped: High AC: 27.01 Low GC: 22
7	MALI-348	29708	94	LS	6647 [*]	7868 ^{*#}	6401	6004	6484	5182	7311	Promoted to AVT-1-ME-TP
8	IRH-130	29715	93		5203	7707 ^{*#}	5093	6491	5274	3962	5077	Promoted to AVT-1-ME-TP
9	UPLRH-180839	29718	93	LB	6522	7576 ^{*#}	6260	6944	6592	5464	6778	Promoted to AVT-1-ME-TP
10	Indam 200-053	29714	98	LS	6463	7429 ^{*#}	6331	5570	6470	5415	6792	Promoted to AVT-1-ME-TP
11	NPH-X5+	29719	91	SB	6432	7414 ^{*#}	5925	7033 [*]	6231	6577 [*]	6641	Dropped: Low AC: 16.65
12	MEPH 164	29735	93	LB	6517	7258 ^{*#}	6172	5858	6055	5781	7511 [*]	Promoted to AVT-1-ME-TP
13	ARRH-23316	29729	97	LB	6536	5874	6907 ^{*#}	7346 ^{*#}	6745 ^{*#}	5022	6856	Promoted to AVT-1-ME-TP
14	RRX-271	29717	95	LS	6659 [*]	6702 [*]	6876 ^{*#}	6181	6719 [#]	5428	6969	Promoted to AVT-1-ME-TP
15	MEPH 165	29739	94	LB	6693 [*]	5975	6543 ^{*#}	6273	6576	6201	7645 [*]	Dropped: High AC: 26.53 Low GC: 22
16	US-312	NCH	95	MS	6509	6171	6172	6818	6160	6267	7485	
17	Gontra Bidhan-3	NCV	93	SB	6439	6422	6297	6295	6662	5753	6837	
18		ZCV	94	LS	5263	5880	5302	5225	5501	4273	5221	
19		LCV	95	SB	5890	6769	5825	4408	5362	4647	6743	
	CD(0.05)				195.41	456.98	243.47	501.65	454.69	565.36	529.08	
	HC + CD (0.05)				6704	6628	6415	7320	6615	6832	8014	
	BVC + CD (0.05)				6634	7226	6540	6797	7117	6318	7366	

#: Denotes superior to Hybrid Check; *: Denotes superior to Best Varietal Check.

Based on the overall mean, six hybrids viz., PHI-21103, PHI-21105, PHI-21104, RNC-0457, RNC-0334 and KPHDF8PX were found promising and based on zonal means, nine hybrids viz., MALI-348, IRH-130, UPLRH-180839, Indam 200-053, NPH-X5+, MEPH-164 (Zone II); ARRH-23316 (Zone-III, IV & V), RRX-271, MEPH-165 (Zone III). Of these 15 hybrids, 12 hybrids viz., PHI-21103, PHI-21105, PHI-21104, RNC-0457, RNC-0334, MALI-348, IRH-130, UPLRH-180839, Indam 200-053, MEPH-164, ARRH-23316 and RRX-271 are promoted to AVT-1-ME-TP. The remaining three hybrids viz., KPHDF8PX, NPH-X5+, and

MEPH-165 (as they falling short of quality requirements), were dropped from further evaluation.

3. Initial Hybrid Rice Trial-Medium (IHRT-M)

The IHRT-M, conducted at 35 locations with 15 hybrids along with four checks viz., HRI-174 (national hybrid check); NDR-359 (national varietal check); zonal varietal checks (PR-121-Zone-II; CR Dhan 300-Zone-III and IV; IR-64-Zone-V; Akshayadhan-Zone-VI; Jaya-Zone-VII) and local checks of their respective locations. Besides these, two observational hybrid checks viz., 28P67 and Bio-799 were included in the trial to evaluate their performance vis-à-vis the existing hybrid check HRI-174 and if found promising to replace the HRI-174 as national hybrid check. Among the 15 test hybrids evaluated, 13 are from private sector and two from public sector. The details of about the composition of the trial are given in Table 1.60.

Table 1.60: Composition of Initial Hybrid Rice Trials - Medium (IHRT-M), Kharif 2021

S.No.	IET No.	Name	Nominating Agency
1	29741	HRI-209	Bayer Bioscience, Hyderabad
2	29742	RRX-338	Rasi Seeds, Hyderabad
3	29743	HRI-211	Bayer Bioscience, Hyderabad
4	29744	RRX-438	Rasi Seeds, Hyderabad
5	29745	PAN-2435	PAN Seeds, Hyderabad
6	29746	RNE-0219	Syngenta, Hyderabad
7	28999	Marshal-135 Pro (Repeat)	Savannah Seeds, Hyderabad
8	29747	RNE-0337	Syngenta, Hyderabad
9	29748	US-384	Seed Works, Hyderabad
10	29749	VNR-230	VNR Seeds, Raipur
11	29750	PHI-21106	Pioneer, Hyderabad
12	29751	PHI-21107	Pioneer, Hyderabad
13	29752	CRHR-156	ICAR-NRRI, Cuttack
14	29753	PHI-20108	Pioneer, Hyderabad
15	29754	IIRRH-154	ICAR-IIRR, Hyderabad
16	-	28P67 (OBCH-1)	Observational Check Hybrid-1
17	-	Bio-799 (OBCH-2)	Observational Check Hybrid-2
18	-	HRI-174 (NCH)	National Check Hybrid
19	-	NDR-359 (NCV)	National Check Variety
20	-	PR-121/CR Dhan-300/ IR-64 Akshayadhan/Jaya (ZCV)	Zonal Check Variety
21	-	Local Check Variety (LCV)	Local Check Variety

The location wise mean data of grain yield and DFF are given in Appendix-7&8 respectively. The grain quality characteristics of test entries are given in Appendix-9

The list of promising hybrids with yield advantages over the best checks in their respective zones in given in Table-1.61.

Table 1.61: Promising hybrids identified in IHRT-M Kharif 2021

S. No	Hybrid	IET No	DFP	Grain Type	Mean Yield (kg/ha)							Remarks
					Over all	Zone II	Zone III	Zone IV	Zone V	Zone VI	Zone VII	
1	PHI-21106	29750	97	LB	7079 [#]	8142 [#]	6670 [#]	7005 [#]	6680 [#]	6575 [#]	7825 [*]	Dropped: High AC: 26.34 Low GC: 22
2	HRI-211	29743	100	LB	6987 [#]	8143 [#]	6681 [#]	6241 [#]	6771 [#]	6681 [#]	7467 [*]	Promoted to AVT-1-M-TP
3	RNE-0337	29747	99	SB	6818 [#]	7427 [#]	6667 [#]	6174 [#]	6310 [*]	6566 [#]	7522 ^{#D}	Dropped: AC: 28.73 Low GC: 22
4	HRI-209	29741	97	MS	6712 [#]	7190 [#]	6775 [#]	7016 [#]	6764 [#]	5748	6943	Promoted to AVT-1-M-TP
5	PHI-20108	29753	97	LB	6695 [#]	6369	6541 [*]	6638 [#]	6233 [*]	6182 [*]	7731 [*]	Promoted to AVT-1-M-TP
6	VNR-230	29749	100	LB	6680 [#]	7744 [#]	6178 [*]	6183 [#]	6143 [*]	6108 [*]	7800 [*]	Promoted to AVT-1-M-TP
7	RRX-338	29742	98	LB	6572 [*]	6817 [#]	7242 [#]	5699 [*]	6646 [#]	5375	6627	Promoted to AVT-1-M-TP
8	RRX-438	29744	99	LS	6551 [*]	5980	7165 [#]	4898	6332 [*]	6179 [*]	6920	Promoted to AVT-1-M-TP
9	RNE-0219	29746	100	SB	6599 [*]	6447	6687 [#]	5936 [*]	6007 [*]	5886	7685 [*]	Dropped: High AC: 26.51 Low GC: 22
10	US-384	29748	98	LB	6318 [*]	6676 [*]	6558 [#]	5048	5909 [*]	5761	6940	Promoted to AVT-1-M-TP
11	PHI-21107	29751	100	LB	6472 [*]	6303	6368 [*]	6437 [#]	6212 [*]	4889	7877	Promoted to AVT-1-M-TP
12	CRHR-156	29752	107	LS	5734	3700	6173 [*]	6225 [#]	5500	4495	6729	Promoted to AVT-1-M-TP
13	HRI-174	NCH	99	LB	6444	6051	6260	5755	6203	5931	7500	
14	NDR-359	NCV	98	LB	5548	5216	5591	4962	4791	4886	6848	
		ZCV	100	SB	5298	4899	5309	4492	4287	5518	6384	
		LCV	99	SB	5748	6226	5591	4774	5446	4816	6798	
	CD (0.05)				159.28	481.89	297.89	317.92	307.85	467.22	446.2	
	NCH + CD(0.05)				6603	6533	6558	6073	6511	6398	7946	
	BVC+ CD(0.05)				5907	6708	5889	5280	5754	5985	7294	

#: Denotes superior to Hybrid Check; *: Denotes superior to Best Varietal Check.

Based on the overall mean, six hybrids viz., PHI-21106, HR-211, RNE-0337, HRI-209, PHI-20108 and VNR-230 based on zonal means six hybrids viz., RRX-338 (Zone-II, III, V); RRX-438, RNE-0219, US-384 (Zone-III); PHI-21107, CRHR-156 (Zone-IV) were found to be promising with required yield advantage over the varietal and hybrid checks. Of these 12 hybrids, nine hybrids viz., HRI-211, HRI-209, PHI-20108, VNR-230, RRX-338, RRX-438, US-384, PHI-21107 and CRHR-156 are promoted to AVT-1-M-TP trial. The remaining three hybrids viz., PHI-21106, RNE-0337 and RNE-0219 (as they are falling short of quality requirements) were dropped from further evaluation.

The observational hybrid check 28P67 and Bio-799 have shown 'NO' significant yield superiority over the national hybrid check (HRI-174) (Table 1.62). They are inferior to HRI-174 in Zone-II, Zone-IV, Zone-V, Zone-VI, Zone-VII and overall mean basis (only in Zone-III, 28P67 has shown its yield superiority over HRI-174). Because of their inferior and inconsistent yield performance across the zones, they are 'NOT' considered to replace HRI-174 as nation yield check.

Table 1.62: Performance of Observational Hybrid Checks viz., 28P67 & Bio-799 over the existing national Hybrid check HRI-174 in IHRT-M, Kharif 2021

S. No	Hybrid	DFP	Grain Type	Mean Yield (kg/ha)						
				Overall	Zone II	Zone III	Zone IV	Zone V	Zone VI	Zone VII
1	28P67	96	LB	6397	6071	6669 [*]	6050	5920	5702	7153
2	Bio-799	97	LS	6076	6245	5782	5765	5973	5292	6999
3	HRI-174	99	LB	6444	6051	6260	5755	6203	5931	7500
	CD (0.05)			159.28	481.89	297.89	317.92	307.85	467.22	446.2
	HCV+ CD (0.05)			6603	6533	6558	6073	6511	6398	7946

4. Initial Hybrid Rice Trial - Medium Slender (IHRT-MS) Kharif 2021

The trial consisting of 10 hybrids, five each from public as well as private sector, was conducted at 32 locations. It has five checks viz., national hybrid check (27P63 and JKRH-3333); national varietal checks (BPT-5204 and WGL-14); zonal checks (Improved Samba Mahsuri-Zone-III and V); Karjat-6-Zone-VI; Ketekejoha-Zone-IV; ADT-49-Zone-VII). The details about the composition of the trial are given in Table 1.63.

Table 1.63: Composition of Initial Hybrid Rice Trial - Medium slender (IHRT-MS), Kharif 2021

S.No.	IET No.	Name	Nominating Agency
1	29755	KRH-8	ZARS, Mandya
2	29756	US-301	Seed Works, Hyderabad
3	29757	VNR-229	VNR Seeds, Raipur
4	29758	KRH-11	ZARS, Mandya
5	29759	MEPH-166	MAHYCO, Hyderabad
6	29760	TMRH-5766	Trimurthi Seeds, Hyderabad
7	29761	CRHR-153	ICAR-NRRI, Cuttack
8	29762	SRH-5402	Shakthi Seeds, Hyderabad
9	29763	CRHR-154	ICAR-NRRI, Cuttack
10	29764	CRHR-155	ICAR-NRRI, Cuttack
11	-	JKRH-3333 (NCH-1)	National Check Hybrid-1
12	-	27P63 (NCH-2)	National Check Hybrid-2
13	-	WGL-14 (NCV-1)	National Check Variety-1
14	-	BPT-5204 (NCV-2)	National Check Variety-2
15	-	Improved Samba Mahsuri/Ketekejoha/Karjat-6/ADT-49 (ZCV)	Zonal Check Variety

The location wise mean data of grain yield and DFF are given in Appendix-10 and 11 respectively. The grain quality characteristics of test entries are given in Appendix-12.

Based on overall mean two hybrids viz., TMRH-5766 and VNR-229 and on zonal mean basis, one hybrid CRHR-154 (Zone-III) were found promising with required yield advantage over the varietal and hybrid checks (Table 1.64). Of these three hybrids, one hybrid CRHR-154 is promoted to AVT-1 MS trial. Remaining two hybrids viz., TMRH-5766 and VNR-229 are dropped from further evaluation, as they were found to have non-MS grain type.

Table 1.64: Promising hybrids identified in IHRT-MS, Kharif 2021

S. No	Hybrid	IET No	DFF	Grain Type	Mean Yield (kg/ha)					Remarks
					Over all	Zone III	Zone V	Zone VI	Zone VII	
1	TMRH 5766	29760	93	LS	6379 [#]	6442	5798 [*]	6326	6588 [#]	Dropped: Non-MS grain type
2	VNR-229	29757	94	LB	6253 [#]	6733 [#]	5785 [*]	6424 [*]	5986 [#]	Dropped: Non-MS grain type
3	CRHR-154	29763	103	SS	6145 [*]	7235 [#]	5400 [*]	5948	6063 [#]	Promoted to AVT-1-MS
4	JKRH-3333	NCH-1	94	MS	6022	6355	6030	5921	5551	
5	27P63	NCH-2	100	MS	5990	5836	6093	6627	5558	
6	WGL-14	NCV-1	102	MS	5826	6401	4961	5822	6059	
7	BPT 5204	NCV-2	104	MS	5840	6657	5137	5498	6174	
8		ZCV	102	MS	5424	6223	4516	4167	6136	
	CD (0.05)				179.4	303.87	262.85	552.9	340.75	
	Best NCH + CD (0.05)				6201	6659	6356	7180	5899	
	BVC+ CD (0.05)				6019	6961	5400	6375	6515	

#: Denotes superior to Hybrid Check; *: Denotes superior to Best Varietal Check.

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Appendix-1: Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	Zone II						Zone III (contd.)					
			MLN	LDN	KUL	PNT	IAR	Zone II Mean (5)	MSD	NGN	JKA	UP Mean (3)	SYN	CHN
1	29685	JRH-133	5325	6890	6767(10)	5181	8505	6534	6209	6404(9)	6870(7)	6494(7)	5249	5295
2	29686	CP R414	6190	8155	5333	4856	9054(11)	6718	6005	8352(1)	6208	6855(1)	6428	5093
3	29687	RALLIS-20101	6061	7592	4800	4315	8710	6296	5748	4251	6194	5397	8562(1)	6051
4	29688	RALLIS-20102	7922(6)	7514	5167	4871	8726	6840	5882	7347(2)	5690	6306	6522	5799
5	29689	HRI-214	6580	7943	6800 (9)	6119(6)	8839	7256	6168	6358(10)	6622(11)	6383(9)	7190	6657(9)
6	29690	UPLRH-180842	7489(8)	9783(5)	7700(1)	5645	9548(4)	8033(5)	6495(1)	6713(6)	6982(4)	6730(2)	7625(7)	6858(8)
7	29691	VNR-228	7662(7)	8484(10)	7167 (5)	5774(10)	9086(10)	7635(7)	6495 (3)	6437(8)	7053(2)	6662(4)	7244(11)	6354
8	29692	UPLRH-162087	7316(10)	8484(9)	7167(5)	4595	9409(7)	7394(10)	5882	6888(4)	6797(8)	6523(6)	7080	7766(2)
9	29693	US-321	7143	8919(7)	5567	5909(7)	9656(3)	7439(9)	6250(9)	5161	6317	5909	6499	7262(6)
10	29694	UPLRH-181325	8139(4)	10524(1)	7367(3)	7157(1)	9737(2)	8584(1)	6087	3972	6125	5395	8166(3)	7312(5)
11	29695	KAVERI-7227	8009(5)	9872(3)	7233 (4)	5886(9)	9812(1)	8162(4)	5351	6116	6994(3)	6154	7217	7110(7)
12	29696	PAN-2150	6147	9342(6)	6833(8)	6133(5)	9161(9)	7523(8)	6454(4)	6675(7)	6198	6442(8)	7182	5345
13	29697	TNRH-297	4892	7324	3800	5093	7075	5637	6258(8)	4259	5739	5419	6051	6051
14	29698	NPH-X60	6797	7821	4667	5537	8645	6693	6168	4009	5660	5279	7465(8)	6304
15	29699	IIRRH-152	2165	4169	2533	3534	4183	3317	5617	5378	6212	5736	8290(2)	5295
16	29700	JKRH-1004	7403(9)	8200(11)	7033 (7)	6133(4)	9425(6)	7639(6)	6168	4318	6752(9)	5746	8083(4)	5900
17	29701	PHI-21101	9913(1)	9849(4)	5467	6400(3)	9360(8)	8198(3)	6209(11)	6128	7232(1)	6523(5)	7075	6556(11)
18	29702	MEPH-162	8615(3)	5741	4200	3577	8699	6166	6495(1)	6254(11)	6279	6343(10)	6587	5497
19	29703	PHI-21102	8788(2)	9883(2)	7467(2)	6497(2)	9538(5)	8434(2)	6417(5)	7017(3)	6673(10)	6702(3)	6192	7917(1)
20	29704	IIRRH-150	6234	6756	4167	5753(11)	8414	6265	6291(7)	4159	6402	5618	7003	6051
21	29705	MEPH-163	5671	5524	4000	4892	8419	5701	5576	4898	6239	5571	7683(6)	5850
22	29706	IIRRH-151	4892	6081	4933	4958	8419	5857	5494	3579	5972	5015	6050	6455
23	29707	IIRRH-153	5281	7191	5033	5125	8790	6284	6238(10)	5423	6188	5950	6952	7463(4)
24	US-314 (NCH)		6623	7731	6733(11)	5894(8)	7935	6983	6332(6)	4118	6924(6)	5791	7341(10)	7615(3)
25	CO-51 (NCV)		5931	5334	4667	4323	7715	5594	5502	3988	6144	5211	7800(5)	6606(10)
26	Zonal Check Variety (ZCV)		3636	4454	2700	4198	6769	4351	4551	6750(5)	6157	5819	7417(9)	5446
27	Local Check Variety (LCV)		7229	8818(8)	5733	2938	7140	6372	4003	5970	6939(5)	5637	6833	5345
Exp. Mean			6595	7718	5594	5233	8547	6737	5939	5590	6428	5986	7144	6343
CD (0.05)			960.67	910.96	557.05	877.62	942.35	413.94	485.35	513.31	561.98	309.1	674.88	956.82
CV			8.92	7.23	6.10	10.27	6.75	3.76	5.00	5.62	5.35	3.16	5.79	9.24
F Value			**	**	**	**	**	**	**	**	**	**	**	**
NHC+CD (0.05)								7397						
BVC+CD (0.05)								6786						
D/S			15.6.21	9.6.21	8.6.21	11.6.21	9.6.21		15.6.21	28.6.21	16.6.21		2.7.21	25.6.21
D/P			9.7.21	10.7.21	10.7.21	6.7.21	5.7.21		15.7.21	22.7.21	10.7.21		27.7.21	22.7.21
Gross Plot Size (Sq.m)			3.85	7.56	10.00	10.13	10.00		10.00	10.00	10.00		10.00	8.28
Net Plot Size (Sq.m)			3.85	5.98	10.00	10.13	10.00		8.16	7.99	10.00		10.00	6.61
Local Check Variety				PR 126	HKR-48	Govind	IR 64		NDR 97		NDR 97		Jarasandh	Ajit

**-Highly Significant; *-significant; ns-not significant

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Appendix-1 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	(contd.)/Zone III					Zone IV			Zone V(contd.)			
			HZB	RCI	JH Mean (2)	CTK	Zone III Mean (8)	ARD	TTB	Zone IV Mean (2)	JBP	RPR	VNR	CG Mean (2)
1	29685	JRH-133	5861(8)	5541	5701	5957	5923	5035(7)		5035	5993(6)	4930(10)	7265	6098
2	29686	CP R414	6028(7)	6516(9)	6272(8)	7035(6)	6458(6)	4514		4514	5320	5634(6)	7352	6493
3	29687	RALLIS-20101	2250	3280	2765	5879	5277	5001(8)	5472(10)	5237(7)	3690	3759	7424	5592
4	29688	RALLIS-20102	1528	3324	2426	4602	5087	3712	6042(6)	4877	3973	4256	4800	4528
5	29689	HRI-214	6111(5)	5186	5649	7079(5)	6421(8)	4090		4090	5733(9)	4845	9337(1)	7091(7)
6	29690	UPLRH-180842	5056	5452	5254	7268(3)	6556(4)	4936(11)	5709(8)	5323(6)	6687(2)	4940(9)	8796(7)	6868(8)
7	29691	VNR-228	5417	5940	5678	5702	6330	4758		4758	5787(7)	5583(7)	9259(2)	7421(2)
8	29692	UPLRH-162087	5233	5807	5520	5991(11)	6431(7)	5187(3)		5187(8)	6293(4)	5681(5)	9097(3)	7389(4)
9	29693	US-321	5694(10)	6028	5862	6024(10)	6154	5659(2)	6222(4)	5940(2)	5357	4583	8530(11)	6557
10	29694	UPLRH-181325	6667(1)	6383(10)	6525(5)	6313(8)	6378(9)	4953(10)	4836	4895	5427	5894(2)	8438	7166(6)
11	29695	KAVERI-7227	6506(2)	9264(1)	7885(1)	7246(4)	6976(1)	5145(6)		5145(9)	4970	5933(1)	8852(6)	7393(3)
12	29696	PAN-2150	6333(3)	6826(6)	6580(4)	6657(7)	6459(5)	5183(4)	4509	4846	6063(5)	5894(2)	8775(8)	7334(5)
13	29697	TNRH-297	5694(11)	6206(11)	5950(10)	5591	5686	4673	6426(3)	5549(4)	4137	3831	5947	4889
14	29698	NPH-X60	5778(9)	6693(9)	6236(9)	6057(9)	6017	4396		4396	5147	4694	8337	6516
15	29699	IIRRH-152	1694	2305	2000	3968	4845	4503	3972	4237	2347	2046	2638	2342
16	29700	JKRH-1004	4389	4211	4300	5957	5722	3206	6216(5)	4711	4753	3220	8889(5)	6054
17	29701	PHI-21101	6083(6)	7491(4)	6787(2)	7501(2)	6785(2)	4677		4677	6863(1)	4847	8578(10)	6713(9)
18	29702	MEPH-162	4889	5452	5171	5935	5923	4639	6861(1)	5750(3)	4500	4023	6579	5301
19	29703	PHI-21102	4689	7092(5)	5891	7588(1)	6698(3)	5157(5)	5079	5118(10)	6600(3)	5808(4)	9052(4)	7430(1)
20	29704	IIRRH-150	6194(4)	6649(8)	6422(7)	5879	6079	4979(9)	4077	4528	5113	3940	7886	5913
21	29705	MEPH-163	5072	6206	5639	5913	5930	4286	5916(7)	5101	5610(10)	4183	8200	6191
22	29706	IIRRH-151	5028	5895	5462	5564	5505	4804	5103(11)	4954	5497(11)	4878(11)	8236	6557(10)
23	29707	IIRRH-153	5167	8112(2)	6639(3)	5137	6335(10)	3631	3939	3785	5093	4009	6994	5502
24	US-314 (NCH)		5572	5718	5645	5939	6195	6008(1)		6008(1)	5747(8)	4972(8)	7939	6456
25	CO-51 (NCV)		4250	5408	4829	4880	5572	3954	5493(9)	4724	4963	4387	6882	5634
26	Zonal Check Variety (ZCV)		2417	1817	2117	4546	4888	4369	6555 (2)	5462(5)	2430	3931	7572	5751
27	Local Check Variety (LCV)		5194	7668(3)	6432(6)	5146	5888	2793	4015	3404	5047	2433	8689(9)	5561
Exp.Mean			4992	5795	5394	5976	6019	4602	5359	4898	5153	4560	7790	6176
CD (0.05)			637.48	1113.36	555.61	1263.5	316.43	600.53	477.63	499.21	840.27	1372.71	1050.99	860.04
CV			7.82	11.76	6.31	12.95	3.22	7.99	5.40	6.24	9.98	18.43	8.26	8.53
F Value			**	**	**	**	**	**	**	**	**	**	**	**
NHC+CD (0.05)							6511			6507				
BVC+CD (0.05)							6204			5961				
D/S			7.7.21	26.6.21		29.6.21		7.6.21	20.7.21		19.6.21	21.6.21	25.6.21	
D/P			4.8.21	23.7.21		24.7.21		7.7.21	7.8.21		11.7.21	20.7.21	14.7.21	
Gross Plot Size (Sq.m)			8.00	10.00		9.00		9.00	10.00		10.00	10.70	625.00	
Net Plot Size (Sq.m)			6.00	7.52		6.72		7.84	10.00		7.99	7.20	6.44	
Local Check Variety			Sahbhagidhan	Sahbhagidhan		Ananda			Lachi		MTU 1010	Indira Barani	MTU 1010	

**-Highly Significant; *-significant; ns-not significant

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Appendix-1 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	(contd.)Zone V					Zone VI (contd.)						
			SKL	SND	@ ANK	MH Mean (2)	Zone V Mean (5)	KJT	RDN	VDG	MH Mean (3)	NWG	NVS	GJ Mean (2)
1	29685	JRH-133	5778(9)	4813	5206	5295	5756	6548(8)	6899(3)	6236(5)	6561(4)	5556(2)	5571	4638(8)
2	29686	CP R414	4272	5250(11)	5430	4761	5566	8249(3)	6969(2)	6510(1)	7242(1)	3449	6290(10)	4295
3	29687	RALLIS-20101	3221	4822	5535(9)	4022	4583	5962	5031	4758	5251	3277	4608	3397
4	29688	RALLIS-20102	4844	5102	5592(6)	4973	4595	4431	4488	4899	4606	3874	5566	4075
5	29689	HRI-214	7088(3)	5428(7)	5522(11)	6258(2)	6486(5)	8960(1)	5018	6250(3)	6743(2)	3617	6424(8)	4418
6	29690	UPLRH-180842	7080(4)	5419(8)	5421	6249(3)	6584(3)	7025(6)	7447(1)	5739(10)	6737(3)	5307(5)	6542(6)	5040(2)
7	29691	VNR-228	7635(2)	4345	5689(1)	5990(4)	6522(4)	5819	6187(6)	6148(6)	6051(9)	5423(4)	6233(11)	4925(5)
8	29692	UPLRH-162087	6103(7)	4630	5364	5367	6361(6)	6785(7)	5309(11)	6306(2)	6133(8)	5130(7)	5552	4486
9	29693	US-321	6675(5)	4456	5636(2)	5566(8)	5920	4008	4927	5920(7)	4952	5547(3)	5339	4519(10)
10	29694	UPLRH-181325	8135(1)	6078(1)	5632(3)	7107(1)	6794(1)	8349(2)	5135	5552	6345(5)	5901(1)	6872(2)	5403(1)
11	29695	KAVERI-7227	4839	5316(10)	5425	5078	5982(10)	5762	4484	5607(11)	5284	3883	6300(9)	4444
12	29696	PAN-2150	3734	5628(5)	4987	4681	6019(8)	6446(9)	6786(4)	5790(9)	6341(6)	4731(9)	6599(5)	4877(6)
13	29697	TNRH-297	4476	4532	5596(5)	4504	4585	5667	3993	3848	4503	3123	4391	3237
14	29698	NPH-X60	4481	5744(4)	5535(9)	5112	5680	5683	5405(10)	4833	5307	4320	6737(4)	4808(7)
15	29699	IIRRH-152	3696	3552	4904	3624	2856	2207	3206	3648	3020	1989	3840	2583
16	29700	JKRH-1004	5131	4563	5272	4847	5311	5497	5448(9)	4644	5197	5019(8)	5572	4459
17	29701	PHI-21101	5332	5771(3)	5320	5551(9)	6278(7)	5920	5978(7)	4508	5469	3627	6826(3)	4622(9)
18	29702	MEPH-162	4526	4782	5439	4654	4882	6295(10)	4814	4917	5342	3930	5069	3844
19	29703	PHI-21102	5615(11)	5963(2)	5588(7)	5789(5)	6608(2)	7840(4)	3050	5917(8)	5602(10)	3633	7470(1)	4946(4)
20	29704	IIRRH-150	5048	5205	5136	5126	5438	5784	4484	6244(4)	5504	3750	4928	3714
21	29705	MEPH-163	5290	4461	4855	4875	5549	5913	5539(8)	5182	5544	4065	4987	3849
22	29706	IIRRH-151	3200	5223	5092	4211	5407	5734	4922	4657	5105	4422(11)	5723	4335
23	29707	IIRRH-153	6429(6)	4920	4789	5674(7)	5489	5683	3376	4164	4407	3950	5015	3824
24	US-314 (NCH)		5982(8)	5397(9)	5539(8)	5690(6)	6007(9)	7108(5)	6525(5)	5265	6299(7)	5213(6)	6445(7)	4960(3)
25	CO-51 (NCV)		4556	4167	5618(4)	4361	4991	5812	3345	4361	4506	2750	3773	2803
26	Zonal Check Variety (ZCV)		5695(10)	5232	5430	5463(10)	4972	6004	3741	4797	4847	947	3892	2262
27	Local Check Variety (LCV)		3776	5463(6)	5211	4620	5081	6011(11)	4988	4412	5137	4699(10)	5130	4131
Exp. Mean			5283	5047	5361	5165	5567	6130	5092	5226	5483	4116	5618	4181
CD (0.05)			796.20	1060.88	617.59	771.45	499.35	1156.89	1002.2	674.26	563.06	954.18	1345.26	915.1
CV			9.23	12.87	7.05	9.15	5.49	11.56	12.05	7.90	6.29	11.28	14.66	13.4
F Value			**	**	ns	**	**	**	**	**	**	**	**	**
NHC+CD (0.05)							6506							
BVC+CD (0.05)							5580							
D/S			22.6.21	8.6.21	1.7.21			12.6.21	18.6.21	23.6.21		17.6.21	16.6.21	
D/P			15.7.21	19.7.21	2.8.21			4.7.21	5.8.21	22.7.21		26.7.21	3.7.21	
Gross Plot Size (Sq.m)			10.00	10.00	9.45			6.50	10.24	12.60		7.20	8.78	
Net Plot Size (Sq.m)			7.99	7.48	7.60			4.39	7.67	10.14		5.28	6.93	
Local Check Variety			Sakoli-6	Sindewahi-1	Sakoli-6			Karjat 7	Phule Radha	Phule Radha		Mahisagar	GR-7	

Note: @ Data of Ankur Seeds (ANK) not included in the analysis due to Non-Significant F Value. **-Highly Significant; *-significant; ns-not significant

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Appendix-1 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	(contd.)	Zone VII											Overall Mean (31)
			Zone VI	MTU	BAY	AP Mean (2)	IIRR	WGL	TS Mean (2)	MND	@ CBT	ADT	TN Mean (1)	Zone VII Mean (6)	
			Zone VI Mean (5)												
1	29685	JRH-133	6162(4)		7561(3)	7561(1)	5984	5438	5711	9439	5859	7599(6)	7599(6)	7204(8)	6001
2	29686	CP R414	6293(3)		5173	5173	5731	4474	5102	12002(7)	6882(3)	5179	5179	6512	6065
3	29687	RALLIS-20101	4727	4003		4003	5493	4821	5157	5035	5849	6036	6036	5078	5082
4	29688	RALLIS-20102	4652	2560	7552(4)	5056	5385	3972	4679	5315	5981	8075(4)	8075(4)	5477	5158
5	29689	HRI-214	6054(7)	6963(4)	7103(9)	7033(4)	7508(1)	7790(2)	7649(1)	12863(3)	6762(5)	7063(11)	7063(11)	8215(1)	6553(4)
6	29690	UPLRH-180842	6412(1)	6467(7)	7088(10)	6777(6)	6815(5)	7868(1)	7342(2)	12422(4)	6829(4)	5881	5881	7757(4)	6687(2)
7	29691	VNR-228	5962(8)	6847(5)	5527	6187	7108(3)	6402(6)	6755(3)	11411(9)	6685(6)	5869	5869	7194(9)	6419(8)
8	29692	UPLRH-162087	5816	6650(6)	7653(2)	7152(3)	6159	6595(5)	6377(8)	11952(8)	6579(8)	5317	5317	7388(7)	6395(9)
9	29693	US-321	5148	7073(3)	6736	6905(5)	6653(8)	5284	5968	10120	5275	6528	6528	7066(10)	6092
10	29694	UPLRH-181325	6362(2)	5517(10)	7162(7)	6340(10)	6182	6209(7)	6196(10)	10731	6545(10)	9248(1)	9248(1)	7508(6)	6673(3)
11	29695	KAVERI-7227	5207	7330(1)	5931	6631(7)	7287(2)	5939(10)	6613(4)	12162(6)	6329	7044	7044	7616(5)	6521(5)
12	29696	PAN-2150	6071(6)	4673	8253(1)	6463(9)	6854(4)	6020(8)	6437(7)	12402(5)	7403(1)	8968(3)	8968(3)	7862(3)	6447(6)
13	29697	TNRH-297	4205	3037	6834	4935	4535	3864	4200	8739	6327	5437	5437	5407	5075
14	29698	NPH-X60	5395	6007(9)	6945(11)	6476(8)	5543	4011	4777	11101(10)	6628(7)	7036	7036	6774	5888
15	29699	IIRRH-152	2978	1597	4939	3268	2238	4474	3356	3243	5969	5397	5397	3648	3706
16	29700	JKRH-1004	5236	4140	5436	4788	4690	4512	4601	8909	5832	5476	5476	5527	5604
17	29701	PHI-21101	5372	3257	6856	5056	6539(9)	5025	5782	13323(2)	6571(9)	7242(9)	7242(9)	7040	6444(7)
18	29702	MEPH-162	5005	3020	5773	4397	4370	4474	4422	9830	6188	7758(5)	7758(5)	5871	5472
19	29703	PHI-21102	5582(10)	7313(2)	7306(5)	7310(2)	5869	5939(9)	5904	13654(1)	7163(2)	9187(2)	9187(2)	8211(2)	6743(1)
20	29704	IIRRH-150	5038	5147	7163(6)	6155	5413	5245	5329	11051(11)	6500(11)	7500(7)	7500(7)	6920	5723
21	29705	MEPH-163	5137	3407	5959	4683	6363(10)	5399	5881	9870	6003	7123(10)	7123(10)	6354	5546
22	29706	IIRRH-151	5092	3350	6109	4729	6682(7)	5824	6253(9)	10400	5897	5290	5290	6276	5427
23	29707	IIRRH-153	4437	4893	6571	5732	6300(11)	6684(4)	6491(6)	9369	6396	6706	6706	6754	5619
24	US-314 (NCH)		6111(5)	5147(11)	6736	5941	6726(6)	5284	6005	8539	6223	5851	5851	6380	6101(10)
25	CO-51 (NCV)		4008	3903	5063	4483	4819	5854(11)	5337	8659	6465	7401(8)	7401(8)	5950	5142
26	Zonal Check Variety (ZCV)		3876	5040	7104(8)	6072	5541	7598(3)	6569(5)	10240	5940	5694	5694	6870	4964
27	Local Check Variety (LCV)		5048	6300(8)	5147	5724	4480	5650	5065	6627	6292	5813	5813	5670	5359
Exp.Mean			5237	4946	6526	5741	5824	5580	5702	9978	6347	6730	6730	6612	5811
CD (0.05)			439.04	804.55	1124.93	795.62	939.09	720.60	508.4	1591.92	1110.25	741.28	741.28	388.26	170.86
CV			5.13	9.96	10.56	8.49	9.87	7.91	5.46	9.77	10.71	6.74	6.74	3.6	1.8
F Value			**	**	**	**	**	**	**	**	ns	**	**	**	**
NHC+CD (0.05)			6550											6768	6272
BVC+CD (0.05)			5487											7258	5530
D/S				13.7.21	22.6.21		22.6.21	1.7.21		17.7.21	20.7.21	4.9.21			
D/P				6.8.21	17.7.21		23.7.21	25.7.21		6.8.21	13.8.21	4.10.21			
Gross Plot Size (Sq.m)				12.60	10.00		6.73	9.69		3.33	10.13	10.80			
Net Plot Size (Sq.m)				9.90	10.00		5.20	8.64			8.19	8.40			
Local Check Variety				MTU 1156	RNR 15048		Rasi	KNM 118		Raksha		ADT 53			

Note: @ Data of Coimbatore (CBT) not included in the analysis due to Non-Significant F Value. **-Highly Significant; *-significant; ns-not significant

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Appendix-2: Days to 50% Flowering (DFF)of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	Zone II						Zone III (contd.)					
			MLN	LDN	KUL	PNT	IAR	Zone II Mean (5)	MSD	NGN	JKA	UP Mean (3)	SYN	CHN
1	29685	JRH-133	94	87	90	96	95	93	95	105	91	97	72	93
2	29686	CP R414	100	92	92	91	90	93	95	104	92	97	79	93
3	29687	RALLIS-20101	88	78	78	79	84	81	85	89	80	85	67	79
4	29688	RALLIS-20102	90	78	80	80	79	81	84	92	81	86	79	80
5	29689	HRI-214	95	89	87	88	85	89	93	102	89	95	83	89
6	29690	UPLRH-180842	102	93	90	91	90	93	94	109	94	99	86	93
7	29691	VNR-228	95	84	86	87	84	87	89	98	88	92	84	87
8	29692	UPLRH-162087	99	85	87	88	87	89	93	100	89	94	79	89
9	29693	US-321	92	78	81	81	83	83	81	92	82	85	81	75
10	29694	UPLRH-181325	96	89	94	91	97	94	94	103	93	96	87	95
11	29695	KAVERI-7227	98	91	88	88	87	91	87	98	90	92	83	89
12	29696	PAN-2150	103	94	93	90	92	94	92	103	95	97	83	92
13	29697	TNRH-297	102	103	105	98	99	102	92	104	97	98		96
14	29698	NPH-X60	99	94	92	87	91	93	98	102	95	98	83	93
15	29699	IIRRH-152	94	87	93	89	92	91	97	102	92	97	85	90
16	29700	JKRH-1004	95	85	86	87	86	88	86	94	85	89	92	83
17	29701	PHI-21101	98	93	89	92	89	92	91	99	80	90	79	89
18	29702	MEPH-162	85	76	82	78	85	81	93	92	78	88	83	85
19	29703	PHI-21102	99	96	91	93	90	94	94	104	95	98	76	90
20	29704	IIRRH-150	95	88	93	92	95	93	99	105	92	99	86	90
21	29705	MEPH-163	92	79	83	82	87	85	83	95	82	87	80	81
22	29706	IIRRH-151	93	79	88	83	88	86	94	98	88	93	74	86
23	29707	IIRRH-153	95	83	89	86	92	89	93	101	89	94	79	87
24	US-314 (NCH)		90	88	87	87	87	88	99	103	89	97	86	89
25	CO-51 (NCV)		85	77	84	82	86	83	82	94	80	85	81	90
26	Zonal Check Variety (ZCV)		89	82	82	81	89	85	82	89	76	82	70	76
27	Local Check Variety (LCV)		98	85	89	77	91	88	81	109	92	94	84	88
Exp. Mean			96	87	89	88	89	90	92	100	89	93	81	88

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Appendix-2 contd.: Days to 50% Flowering (DFF)of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone III					Zone IV			Zone V (contd.)			
			HZB	RCI	JH Mean (2)	CTK	Zone III Mean (8)	ARD	TTB	Zone IV Mean (2)	JBP	RPR	VNR	CG Mean (2)
1	29685	JRH-133	96	91	94	85	91	68		68	90	89	78	84
2	29686	CP R414	96	93	94	87	92	67		67	96	93	82	88
3	29687	RALLIS-20101	83	80	82	75	80	64	64	64	79	84	68	76
4	29688	RALLIS-20102	81	81	81	75	82	62	71	66	79	83	68	76
5	29689	HRI-214	97	92	94	87	92	69		69	95	94	78	86
6	29690	UPLRH-180842	95	95	95	87	94	66	84	75	97	92	83	88
7	29691	VNR-228	90	89	90	83	89	66		66	91	92	74	83
8	29692	UPLRH-162087	92	91	92	83	90	66		66	92	89	76	83
9	29693	US-321	86	84	85	81	83	65	71	68	89	86	70	78
10	29694	UPLRH-181325	97	93	95	91	94	69	74	71	93	93	79	86
11	29695	KAVERI-7227	89	91	90	85	89	67		67	95	91	77	84
12	29696	PAN-2150	96	98	97	87	93	65	81	73	98	98	82	90
13	29697	TNRH-297	96	96	96	91	96	64	76	70	92	90	81	86
14	29698	NPH-X60	95	95	95	91	94	67		67	96	95	80	87
15	29699	IIRRH-152	91	91	91	87	92	71	74	73	91	88	75	82
16	29700	JKRH-1004	86	87	86	83	87	62	67	64	86	86	73	80
17	29701	PHI-21101	90	92	91	87	88	65		65	95	92	78	85
18	29702	MEPH-162	84	87	86	79	85	64	65	64	86	84	68	76
19	29703	PHI-21102	101	100	100	91	94	64	79	72	97	93	81	87
20	29704	IIRRH-150	93	92	93	85	93	66	77	72	91	90	77	84
21	29705	MEPH-163	91	86	89	79	85	64	67	66	88	87	74	81
22	29706	IIRRH-151	96	91	94	83	89	71	67	69	91	84	74	79
23	29707	IIRRH-153	92	86	89	85	89	68	72	70	92	85	75	80
24	US-314 (NCH)		91	88	90	83	91	67		67	86	88	76	82
25	CO-51 (NCV)		88	90	89	83	86	65	76	71	88	89	73	81
26	Zonal Check Variety (ZCV)		82	81	81	75	79	70	71	70	102	114	74	94
27	Local Check Variety (LCV)		87	91	89	83	89	67	71	69	88	83	75	79
Exp.Mean			92	90	91	85	90	66	73	68	91	89	76	83

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Appendix-2 contd.: Days to 50% Flowering (DFF)of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone V					Zone VI (contd.)						
			SKL	SND	@ ANK	MH Mean (2)	Zone V Mean (5)	KJT	RDN	VDG	MH Mean (3)	NWG	NVS	GJ Mean (2)
1	29685	JRH-133	86	102	96	94	89	77	103	90	90	92	82	87
2	29686	CP R414	84	102	96	93	91	78	104	93	91	95	87	91
3	29687	RALLIS-20101	76	90	80	83	79	73	97	77	82	97	76	86
4	29688	RALLIS-20102	75	110	82	93	83	74	97	75	82	76	71	74
5	29689	HRI-214	78	99	95	88	89	75	98	93	89	92	86	89
6	29690	UPLRH-180842	85	101	97	93	92	79	100	98	92	96	84	90
7	29691	VNR-228	82	99	88	90	88	75	99	91	89	82	81	82
8	29692	UPLRH-162087	78	98	89	88	87	79	104	93	92	85	79	82
9	29693	US-321	78	90	85	84	83	73	98	86	86	84	76	80
10	29694	UPLRH-181325	82	101	95	92	90	79	102	89	90	101	84	92
11	29695	KAVERI-7227	82	99	90	90	89	77	101	93	90	86	81	84
12	29696	PAN-2150	87	90	96	89	91	83	103	97	95	92	86	89
13	29697	TNRH-297	86	101	96	94	90	78	100	89	89	102	85	93
14	29698	NPH-X60	84	101	95	92	91	81	101	97	93	103	83	93
15	29699	IIRRH-152	79	95	90	87	85	79	103	87	90	98	81	89
16	29700	JKRH-1004	77	92	84	85	83	74	103	83	87	87	80	84
17	29701	PHI-21101	82	102	97	92	90	77	99	94	90	90	83	87
18	29702	MEPH-162	72	89	84	80	80	75	97	81	84	85	70	78
19	29703	PHI-21102	88	102	96	95	93	80	102	97	93	94	87	91
20	29704	IIRRH-150	83	97	95	90	88	77	102	89	89	95	82	89
21	29705	MEPH-163	76	94	86	85	84	74	102	87	88	90	74	82
22	29706	IIRRH-151	78	98	92	88	85	77	102	88	89	96	80	88
23	29707	IIRRH-153	78	99	89	88	86	76	98	87	87	101	77	89
24	US-314 (NCH)		80	98	88	89	86	73	100	86	86	95	80	87
25	CO-51 (NCV)		75	94	88	85	84	73	102	86	87	84	76	80
26	Zonal Check Variety (ZCV)		79	99	88	89	94	81	108	89	93	75	98	86
27	Local Check Variety (LCV)		75	102	87	89	85	80	104	93	92	95	81	88
Exp. Mean			81	98	91	89	87	77	101	89	89	92	81	86

Note: @ Data of Ankur Seeds (ANK) not included in the analysis.

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Appendix-2 contd.: Days to 50% Flowering (DFF)of hybrids in IHRT-Early, Kharif 2021

S. No.	IET No.	Name	(contd.)	Zone VII											Overall Mean (31)
			Zone VI	MTU	BAY	AP Mean (2)	IIRR	WGL	TS Mean (2)	MND	@ CBT	ADT	TN Mean (1)	Zone VII Mean (6)	
			Zone VI Mean (5)												
1	29685	JRH-133	89		90	90	97	89	93	81	83	76	76	86	89
2	29686	CP R414	91		86	86	100	86	93	93	95	79	79	89	91
3	29687	RALLIS-20101	84	67	76	72	81	74	78	74	75	75	75	75	79
4	29688	RALLIS-20102	79	68	79	74	81	71	76	75	77	75	75	75	79
5	29689	HRI-214	89	77	85	81	96	85	90	92	94	74	74	85	88
6	29690	UPLRH-180842	91	82	85	84	100	87	94	98	96	80	80	89	91
7	29691	VNR-228	86	76	83	79	93	83	88	91	89	79	79	84	86
8	29692	UPLRH-162087	88	73	84	78	93	82	88	92	92	81	81	84	87
9	29693	US-321	83	72	79	76	84	77	81	84	89	80	80	79	81
10	29694	UPLRH-181325	91	80	90	85	96	92	94	84	87	75	75	86	90
11	29695	KAVERI-7227	88	76	84	80	95	83	89	91	95	78	78	85	87
12	29696	PAN-2150	92	82	85	84	99	89	94	95	96	83	83	89	91
13	29697	TNRH-297	91	82	90	86	98	91	95	84	87	81	81	88	92
14	29698	NPH-X60	93	77	87	82	101	86	94	93	91	73	73	86	91
15	29699	IIRRH-152	90	76	84	80	94	87	91	79	81	82	82	84	88
16	29700	JKRH-1004	85	72	76	74	85	78	82	79	79	78	78	78	83
17	29701	PHI-21101	89	76	86	81	98	85	91	93	92	85	85	87	88
18	29702	MEPH-162	82	68	80	74	85	78	82	79	76	80	80	78	80
19	29703	PHI-21102	92	78	88	83	100	87	94	95	96	83	83	89	91
20	29704	IIRRH-150	89	76	85	80	95	89	92	83	83	81	81	85	88
21	29705	MEPH-163	85	72	81	76	82	78	80	82	81	85	85	80	83
22	29706	IIRRH-151	89	72	82	77	91	85	88	86	84	82	82	83	85
23	29707	IIRRH-153	88	73	82	78	90	87	89	81	83	75	75	81	86
24	US-314 (NCH)		87	76	83	80	93	85	89	83	82	77	77	83	87
25	CO-51 (NCV)		84	72	81	77	83	83	83	80	84	81	81	80	83
26	Zonal Check Variety (ZCV)		90	77	89	83	100	89	95	83	84	80	80	86	85
27	Local Check Variety (LCV)		90	87	80	83	82	90	86	77	78	85	85	84	86
Exp. Mean			88	75	84	80	93	84	88	86	87	79	79	83	86

Note: @ Data of Coimbatore (CBT) not included in the analysis.

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Appendix-3: Quality characteristics of IHRT-Early Kharif 2021

S. No.	IET No.	Name	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
1	29685	JRH-133	82.1	74.8	68.5	6.65	2.07	3.21	LS	VOC	5.5	19.27	56
2	29686	CP R414	81.9	73.1	68.3	6.70	1.98	3.38	LS	A	5.8	14.34	94
3	29687	RALLIS-20101	82.4	71.4	62.1	6.63	2.20	3.01	LS	OC	4.0	22.36	56
4	29688	RALLIS-20102	80.3	72.5	71.4	6.00	2.24	2.67	LB	VOC	4.0	22.58	51
5	29689	HRI-214	83.7	72.4	66.7	6.37	2.18	2.92	LB	VOC	4.5	23.58	61
6	29690	UPLRH-180842	80.6	72.4	69.3	6.37	2.39	2.66	LB	VOC	4.0	22.20	65
7	29691	VNR-228	79.8	73.6	71.0	5.95	2.48	2.39	SB	VOC	7.0	20.82	22
8	29692	UPLRH-162087	80.5	72.2	67.1	7.44	2.37	3.13	LS	VOC	6.1	23.08	38
9	29693	US-321	80.5	70.6	66.4	6.63	2.16	3.06	LS	VOC	4.0	28.11	25
10	29694	UPLRH-181325	80.9	72.8	72.1	6.69	2.12	3.15	LS	A	4.7	22.17	66
11	29695	KAVERI-7227	81.3	70.5	65.3	6.56	2.41	2.72	LB	VOC	5.0	16.64	97
12	29696	PAN-2150	80.2	72.2	68.6	6.90	2.29	3.01	LS	VOC	7.0	25.40	22
13	29697	TNRH-297	82.7	72.6	68.5	6.22	1.91	3.25	LS	VOC	4.8	23.52	53
14	29698	NPH-X60	81.3	73.7	71.8	5.84	2.32	2.51	MS	VOC	7.0	23.87	22
15	29699	IIRRH-152	79.4	70.5	62.7	5.75	2.20	2.61	MS	VOC	4.5	23.96	22
16	29700	JKRH-1004	81.5	71.5	65.2	6.56	2.14	3.06	LS	VOC	4.0	22.70	54
17	29701	PHI-21101	81.5	72.8	67.8	6.54	2.38	2.74	LB	VOC	4.0	22.32	46
18	29702	MEPH-162	80.2	71.1	67.5	6.34	2.10	3.01	LS	VOC	5.5	23.43	22
19	29703	PHI-21102	82.0	69.3	58.2	6.75	2.09	3.22	LS	A	3.0	17.64	100
20	29704	IIRRH-150	82.5	74.1	72.3	6.34	2.08	3.04	LS	VOC	5.0	21.94	36
21	29705	MEPH-163	79.4	71.0	65.3	6.46	2.14	3.01	LS	VOC	7.0	25.10	37
22	29706	IIRRH-151	80.9	70.6	67.1	6.78	2.04	3.32	LS	A	5.8	24.93	42
23	29707	IIRRH-153	79.2	69.8	64.5	5.99	2.20	2.72	MS	A	5.6	25.72	40
24	US-314 (NCH)		81.1	73.0	69.7	5.74	2.08	2.75	MS	VOC	5.6	23.76	60
25	CO-51 (NCV)		78.9	69.6	68.1	5.85	2.08	2.81	MS	A	4.0	25.40	66
26	MTU-1153 (ZCV)		81.7	72.8	71.5	6.46	2.25	2.87	LB	VOC	3.0	22.76	60
27	Rasi (LCV)		78.7	69.9	67.8	5.49	2.34	2.34	SB	VOC	7.0	25.63	24

Hull: Hulling %; Mill: Milling %; HRR: Head rice recovery; KL: Kernel length; KB: Kernel breadth; L/B: L/B ratio; ASV: Alkali spreading value; AC: Amylose content; GC: Gel consistency

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Appendix-4: Grain Yield (kg/ha) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	Zone II					Zone III (contd.)							
			PNT	LDN	KUL	IAR	Zone II Mean(4)	MSD	NGN	Rasi	JKA	UP Mean (4)	DNG	SYN	
1	29708	MALI-348	5663	7418(6)	9033(1)	9361(3)	7868(1)	5621	5056	7920	7238(9)	6595	6391(6)	6780	
2	29709	JRH-134	6301	4506	6867	8520	6549	6413	4047	6499	5917	6123	4882	7379(10)	
3	29710	CP R444	4833	4974	7367	7830	6251	5903	5503(8)	7683	6236	6609	5091	7136	
4	29711	IRH-128		5540		6810	5540	4698	4585	6518		5596	5141	6558	
5	29712	Indam 300-021	6811 (5)	4918	7400	7494	6656	6475	3162	7496	6822	6237	4697	8313(1)	
6	29713	IRH-129		5540		8872(8)	7206(10)	3848	5219(9)	6658		5656	4141	7193	
7	29714	Indam 200-053	6649 (9)	5170	8867(2)	9030(7)	7429(6)	6699(9)	4264	8289(9)	5899	6436	5939	7988(2)	
8	29715	IRH-130		7707(4)		7392	7707(2)	5580	3104	6695		5590	3754	6317	
9	29716	RALLIS-20308	5957	6883(8)	6633	9095(6)	7142	4657	4251	6555	5750	5732	6121(9)	7186	
10	29717	RRX-271	5760	5262	7233	8553	6702	7108(4)	4439	10206(1)	6973	7316(1)	5923	7197	
11	29718	UPLRH-180839	5647	8061(2)	7967(6)	8628(10)	7576(4)	6413	4860	7335	5949	6191	5983	7283	
12	29719	NPH-X5+	6860 (4)	5694	7167	9935(2)	7414(7)	5658	4005	6891	6667	6498	6485(3)	6137	
13	29720	UPLRH-169054	6315	5015	8233(5)	6329	6473	6062	4314	6664	6629	6388	6401(5)	7638(6)	
14	29721	UPLRH-189001	5813	5715	6967	5519	6003	6740(8)	3617	7372	6999	6464	5811	6924	
15	29722	RNRH-15	5217	4115	6967	7795	6023	5184	3488	5790	6598	5590	5003	6991	
16	29723	SPH-43	5491	3652	7267	7608	6005	6495	7117(1)	6486	6012	6852(8)	4751	7885(4)	
17	29724	PAN-2140	5820	6908(7)	8300(4)	7795	7206	6209	3997	9491(2)	6621	6908(6)	3481	7256	
18	29725	NPH-X49	5732	7850(3)	6967	6841	6847	6577	5874(5)	8137(9)	6184	7074(2)	3525	7002	
19	29726	PHI-21103	7004 (3)	5391	6133	8703(9)	6808	6438	4368	8359(6)	7707(5)	7060(3)	6205(7)	7366	
20	29727	PRSH-2009	5608	5741	6800	6191	6085	6025	5177(10)	7897	5817	6653	5195	7515(7)	
21	29728	US-346	6328	5828	5500	8211	6467	6985(5)	4084	4115	7143(10)	6018	5657	6957	
22	29729	ARRH-23316	5815	4352	7467(9)	5862	5874	7271(2)	4155	7859	7890(4)	6863(7)	6539(1)	7791(5)	
23	29730	US-355	5580	3812	4533	8549	5619	6863(2)	3413	6563	7631(6)	6572	5478	7943(3)	
24	29731	RNC-0334	6799 (7)	6466(10)	8433(3)	6458	7039	4514	4589	8415(5)	7936(2)	6745	6138(8)	7066	
25	29732	KPHDF8PX	6803 (6)	5499	7833(7)	9313(4)	7362(8)	6377	4856	5599	7085	6435	6458(4)	7320	
26	29733	JKRH-1038	5367	4491	6233	7737	5957	6904(6)	4151	8872(3)	8200(1)	7003(4)	5808	6795	
27	29734	PHI-21104	7015 (2)	5303	6733	8132	6796	5359	6675(2)	8171	7374(8)	6970(5)	5781	7229	
28	29735	MEPH-164	6796 (8)		6567	8412	7258(9)	6307	3963	8539(4)	6190	6556	4684	6754	
29	29736	PHI-21105	7371 (1)	5782	7200	10251(1)	7651(3)	6642(10)	5657(6)	7314	5612	6711	6508(2)	6953	
30	29737	IIRRH-148	5559	3529	5733	7037	5465	6250	5119	6816	5405	6332	5323	6784	
31	29738	RNC-0457	6208	6852(9)	7600(8)	9195(5)	7464(5)	6536	5607(7)	7248	6439	6768(10)	6013(10)	6619	
32	29739	MEPH-165	5868	4362	5933	7737	5975	6046	6462(4)	8089(10)	6441	6826(9)	5606	6610	
33	29740	IIRRH-149	5128	2778	5900	7579	5346	7802(1)	4743	6781	6121	6606	5397	7475(9)	
34	US-312 (NCH)		6258	4815	6867	6746	6171	7149(3)	4447	6350	7623(7)	6373	4869	7488(8)	
35	Gontra Bidhan-3 (NCV)		6343 (10)	4563	6700	8083	6422	5004	6546(3)	7074	6394	6585	4906	6362	
36	Zonal Check Variety (ZCV)		4282	7665(5)	5100	6473	5880	4841	3020	4583	5712	4889	5024	7708	
37	Local Check Variety (LCV)		4829	9316(1)	7400(10)	5532	6769	6025	4322	6409	7927(3)	6305	4431	6434	
Exp. Mean			5995	5597	6997	7571	6622	6099	4656	7058	6681	6436	5393	6815	
CD (0.05)			1090	1001	834	1856	456.98	495	489	2304	685	263.96	584	1992	
CV			11.25	11.06	7.37	15.16	4.27	5.02	6.5	16.15	6.34	2.54	6.69	18.08	
F Value			**	**	**	**	**	**	**	**	**	**	**	**	
NHC+CD (0.05)							6628								
BVC+CD (0.05)							7226								
D/S			11.6.21	8.6.21	9.6.21	9.6.21		15.6.21	28.6.21	22.6.21	16.6.21		21.6.21	2.7.21	
D/P			8.7.21	8.7.21	12.7.21	5.7.21		15.7.21	23.7.21	13.7.21	10.7.21		18.7.21	27.7.21	
Gross Plot Size (Sq.m)			10.13	8.1	10	10		10	10	10.1	10		10	10	
Net Plot Size (Sq.m)			10.13	6.48	10	10		8.16	7.99		10		9.9	10	
Local Check Variety			Pant Dhan 12	PR 124	HKR-47	Pusa 44		NDR 2065	NDR 359	Surju 52	MTU 1010		R Bhagwathi	Gangotri	

**-Highly Significant; *-significant; ns-not significant

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Appendix-4 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone III							Zone IV	Zone V (contd.)					
			BR Mean (2)	CHN	CTK	CHP	OD Mean (2)	RCI	Zone III Mean (10)	TTB	JBP	RPR	Rasi	NZV	VNR	CG Mean (4)
1	29708	MALI-348	6586	5679	5477	5513	5495	7598(9)	6401	6004	6466	7516(6)	4607	7140	8996	7040
2	29709	JRH-134	6130	5902	4073	3683	3878	5246	5616	5703	6028	6287	3755	7740	8577	6206
3	29710	CP R444	6113	5754	4460	5489	4975	7372	6213	5279	6854(5)	6989	4751	7720	8856	6865
4	29711	IRH-128	5850	5568	4266	4385	4326	1673	4998	6593	882891)	6781	4288	6585	5266	5445
5	29712	Indam 300-021	6505	6682(10)	5099	4640	4870	7146	6160	7156(6)	5841	6540	4936	7230	10353(1)	7276(9)
6	29713	IRH-129	5668	6050	4973	6328(3)	5650	2081	5339	7176(5)	6688(8)	6720	5833(3)	6900	8338	6963
7	29714	Indam 200-053	6964(3)	6199	5544	5318	5431	6468	6331	5570	6208	7030(10)	5378(10)	7030	8831	7080
8	29715	IRH-130	5036	7164(3)	5035	5034	5034	1266	5093	6491	5248	5502	4085	6980	6059	5216
9	29716	RALLIS-20308	6654(8)	7053(4)	6206(9)	6010(6)	6108(3)	6061	6118	7093(9)	6496(10)	6405	3665	7445	8042	6037
10	29717	RRX-271	6560	6570	5211	6873(1)	6042(7)	7282	6876(3)	6181	6792(7)	6119	8628(1)	7855	8142	7630(1)
11	29718	UPLRH-180839	6633(9)	6050	7088(4)	4626	5857(9)	6875	6260	6944	6003	6932	5077	6400	9572(5)	7194(10)
12	29719	NPH-X5+	6311	5605	4677	3726	4202	6061	5925	7033(10)	5607	6736	5006	9270(1)	9202	6982
13	29720	UPLRH-169054	7019(2)	6496	6455(6)	4844	5650	6920	6427(10)	7404(1)	5924	6793	5392(8)	8270(7)	8384	6856
14	29721	UPLRH-189001	6368	6459	5779	5849(10)	5814	7327	6406	6656	5474	7676(3)	5015	7590	8863	7184
15	29722	RNRH-15	5997	6347	5066	3560	4313	5608	5502	4075	5261	6609	5041	6890	8978	6876
16	29723	SPH-43	6318	7350(1)	4566	3768	4167	7689(7)	6388	5887	6195	6536	5444(7)	8150	6850	6277
17	29724	PAN-2140	5369	5754	4988	5958(8)	5473	7191	6288	5583	6220	6736	5978(2)	8220(10)	9211(10)	7309(8)
18	29725	NPH-X49	5264	5865	3704	4996	4350	5473	5994	4484	5770	5192	3609	8600(2)	7919	5573
19	29726	PHI-21103	6786(5)	7201(2)	6477(5)	5641	6059(4)	8548(2)	6976(1)	7125(8)	5749	6483	4187	8430(3)	9712(3)	6794
20	29727	PRSH-2009	6355	5791	4320	4754	4537	4342	5926	7296(3)	4539	6601	4881	8350(5)	8813	6765
21	29728	US-346	6307	5939	4511	6513(2)	5512	8141(4)	6164	6552	5732	6328	4608	7760	7972	6303
22	29729	ARRH-23316	7165(1)	6644	8168(1)	6096(4)	7132(1)	6422	6907(2)	7346(2)	5302	8346(1)	4528	7140	9129	7334(6)
23	29730	US-355	6711(7)	7016(5)	5088	5067	5078	6739	6381	6181	4785	6511	5641(6)	8390(4)	9408(8)	7187
24	29731	RNC-0334	6602(10)	5828	6455(6)	5641	6048(6)	7644(8)	6590(7)	6112	5136	7569(5)	5722(5)	8270(7)	9439(6)	7577(3)
25	29732	KPHDF8PX	6889(4)	6756(8)	5999	5906(9)	5953(8)	8367(3)	6635(6)	7251(4)	5503	7443(7)	5386(9)	8260(9)	9418(7)	7416(4)
26	29733	JKRH-1038	6302	5568	4522	4171	4347	7825(6)	6337	4493	5628	5494	4355	6890	7903	5917
27	29734	PHI-21104	6505	6422	5611	6020(5)	5815(10)	9408(1)	6847(4)	6900	7050(3)	7418(8)	5737(4)	7270	9719(2)	7625(2)
28	29735	MEPH-164	5719	6978(6)	5055	4228	4642	7417	6172	5858	4718	6389	4816	7780	9174	6793
29	29736	PHI-21105	6731(6)	6756(9)	8077(2)	4285	6181(2)	7553(10)	6699(5)	6875	5453	7684(2)	4850	8330(6)	9635(4)	7389(5)
30	29737	IIRRH-148	6054	6533	6210(8)	5370	5790	7237	6283	4458	6191	6585	4933	8070	8902	6807
31	29738	RNC-0457	6316	5754	5755	5726	5740	7553	6478(9)	7156(6)	6329	7647(4)	5233	8010	9065	7315(7)
32	29739	MEPH-165	6108	6013	6115(10)	5987(7)	6051(5)	7508	6543(8)	6273	6550	6593	5339	7090	9190	7041
33	29740	IIRRH-149	6436	6830(7)	6073	4062	5067	6829	6336	6057	6863	6830	4417	7580	8749	6665
34	US-312 (NCH)		6178	6459	5044	5299	5172	6875	6172	6818	6366	6548	5088	6295	7559	6398
35	Gontra Bidhan-3 (NCV)		5634	6533	7244(3)	3427	5335	7870(5)	6297	6295	7276(2)	7190(9)	4998	7905	9316(9)	7168
36	Zonal Check Variety (ZCV)		6366	5642	4657	4825	4742	6015	5302	5225	5741	5666	4196	6290	5607	5156
37	Local Check Variety (LCV)		5433	5531	5384	4626	5005	6151	5825	4408	6842(6)	5057	3808	6840	6155	5007
Exp. Mean			6269	6320	5498	5088	5293	6589	6195	6280	6045	6689	4952	7593	8522	6721
CD (0.05)			427.04	676	1266	758	765.3	1297	243.47	502	683	13666	1221	1148	925	645.96
CV			4.21	6.65	14.24	9.22	8.94	12.18	2.43	4.99	6.99	12.63	12.21	7.48	6.72	5.95
F Value			**	**	**	**	**	**	**	**	**	**	**	**	**	**
NHC+CD (0.05)									6415							
BVC+CD (0.05)									6540							
D/S				25.6.21			16.7.21		26.6.21		16.7.21	19.6.21	21.6.21	16.6.21	17.6.21	25.6.21
D/P				26.7.21			19.8.21		3.8.21		10.8.21	11.7.21	20.7.21	11.7.21	15.7.21	14.7.21
Gross Plot Size (Sq.m)				10.86			9.45		10.6		10	10	11.2		12.48	625
Net Plot Size (Sq.m)				8.98			7.03		7.4		10	7.99	8.16	10.3	10	5.47
Local Check Variety				Khitish			MTU 1156		IR 64 drt-1		Chilarai	JR 206	Chandrasahini	MTU 1010		MTU 1010

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Appendix-4 contd. : Grain Yield (kg/ha) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone V				Zone VI						
			SND	ANK	MH Mean (2)	Zone V Mean (7)	KJT	RDN	MH Mean (2)	NWG	NVS	GJ Mean (2)	Zone VI Mean (4)
1	29708	MALI-348	5446(10)	5874	5660	6484	5395	4389	4892	4272	6670(7)	5471(10)	5182
2	29709	JRH-134	5455(9)	6147	5801	6041	6763(10)	5622(10)	6193(8)	4134	5210	4672	5433
3	29710	CP R444	4862	6428	5645	6457	5590	5498	5544	3412	6451(10)	4932	5238
4	29711	IRH-128	4545	6518(9)	5531	6038				3693		3693	3693
5	29712	Indam 300-021	5954(4)	6435	6195(3)	6676(4)	6928	5570	6249(6)	4320	7126(2)	5723(8)	5986(5)
6	29713	IRH-129	4430	6444	5437	6408		3425	3425	4601	4470	4535	4165
7	29714	Indam 200-053	5107	6265	5686	6470	6634	4265	5450	5805(5)	4956	5380	5415
8	29715	IRH-130	4171	6577(6)	5374	5274		4534	4534		3390	3390	3962
9	29716	RALLIS-20308	5187	6554(8)	5871	6058	5570	6394(2)	5982	3335	7273(1)	5304	5643
10	29717	RRX-271	4376	6255	5316	6719(3)	5844	6088(5)	5966	4451	5328	4889	5428
11	29718	UPLRH-180839	6056(2)	5914	5985(7)	6592(10)	7269(7)	4379	5824	3755	6454(9)	5104	5464
12	29719	NPH-X5+	4439	6396	5418	6231	7921(2)	5565	6744(3)	5996(4)	6824(6)	6410(2)	6577(1)
13	29720	UPLRH-169054	6127(1)	6678(2)	6403(2)	6550	4255	5292	4773(4)	4988(10)	5330	5159	4966
14	29721	UPLRH-189001	5196	6566(7)	5881(10)	6465	7303(5)	5776(8)	6539	3982	5282	4632	5586
15	29722	RNRH-15	5472(8)	5962	5717	6221	4697	6341(3)	5519	2634	4608	3621	4570
16	29723	SPH-43	5009	6340	5675	6062	5904	3506	4705	3305	4913	4109	4407
17	29724	PAN-2140	4857	6436	5647	6573	5901	4119	5010	5303(7)	5597	5450	5230
18	29725	NPH-X49	5241	6250	5745	5663	5915	6188(4)	6052(10)	1847	4907	3377	4714
19	29726	PHI-21103	5526(7)	5912	5719	6262	6618	5667(9)	6143(9)	5327(6)	6361	5844(7)	5993(4)
20	29727	PRSH-2009	4898	6061	5479	5966	6654	5445	6050	2356	6436	4396	5223
21	29728	US-346	4207	6434	5321	5880	6058	5938(6)	5998	3355	5630	4493	5246
22	29729	ARRH-23316	5873(6)	7294(1)	6584(1)	6745(2)	5920	4234	5077	4092	5844	4968	5022
23	29730	US-355	5045	6577(5)	5811	6328	5380	4819	5100	2517	5737	4127	4614
24	29731	RNC-0334	5406	6610(3)	6008(6)	6647(7)	7307(4)	4060	5683	6259(3)	5506	5883(6)	5783(7)
25	29732	KPHDF8PX	5922(5)	6338	6131(4)	6668(5)	5622	5102	5362	4830	7056(4)	5943(5)	5653
26	29733	JKRH-1038	4528	6509(10)	5518	5736	7272(6)	3726	5499	2279	3926	3103	4301
27	29734	PHI-21104	5018	6607(4)	5813	6925(1)	7116(8)	5563	6339(5)	4110	6003	5057	5698(10)
28	29735	MEPH-164	4853	6382	5617	6055	6476	4533	5505	5028(9)	7085(3)	6057(4)	5781(8)
29	29736	PHI-21105	5976(3)	6150	6063(5)	6625(9)	6007	4123	5065	3693	7022(5)	5358	5211
30	29737	IIRRH-148	4639	6210	5425	6243	5588	6866(1)	6227(7)	3993	4666	4330	5278
31	29738	RNC-0457	5334	6217	5776	6638(8)	4863	5391	5127	6819(1)	6643(8)	6731(1)	5929(6)
32	29739	MEPH-165	5330	6454	5892(9)	6576	7871(3)	5854(7)	6863(2)	4830	6249	5539(9)	6201(3)
33	29740	IIRRH-149	5053	6463	5758	6396	4719	5094	4907	2796	5027	3912	4409
34	US-312 (NCH)		5076	6325	5701	6160	9153(1)	5613	7383(1)	4081	6221	5151	6267(2)
35	Gontra Bidhan-3 (NCV)		5120	6075	5597	6662(6)	6265	4319	5292	6586(2)	5842	6214(3)	5753(9)
36	Zonal Check Variety (ZCV)		5408	6392	5900(8)	5501	5730	5013	5372	1714	4635	3175	4273
37	Local Check Variety (LCV)		5423	4886	5155	5362	6091	3361	4726	5133(8)	4005	4569	4647
Exp. Mean			5150	6323	5737	6280	6253	5046	5436	4156	5686	4884	5215
CD (0.05)			850	767	582.52	454.69	1279	917	818.48	1180	1302	688.26	565.36
CV			10.21	7.5	6.28	4.48	12.65	11.25	9.31	14.05	14.16	8.72	6.71
F Value			**	**	**	**	**	**	**	**	**	**	**
NHC+CD (0.05)						6615							6832
BVC+CD (0.05)						7117							6318
D/S			8.6.21	1.7.21			12.6.21	18.6.21		17.6.21	16.6.21		
D/P			20.7.21	3.8.21			3.7.21	4.8.21		26.7.21	3.7.21		
Gross Plot Size (Sq.m)			10	9.45			6.48	9.45		7.2	8.55		
Net Plot Size (Sq.m)			7.48	7.6			4.41	7.07		5.28	6.89		
Local Check Variety			SYE-1	MTU 1010			Karjat-5	Phule Samrudhi		Mahi Sagar	NAUR-1		

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Appendix-4 contd. : Grain Yield (kg/ha) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	Zone VII												Over all Mean (34)
			MTU	RGL	BAY	AP Mean (3)	IIRR	WGL	TS Mean (2)	MND	CBT	ADT	TN Mean (2)	Zone VII Mean (8)	
1	29708	MALI-348	5579	7283(1)	7499(3)	6787	7465	5010	6238	10689	7897(9)	7063(7)	7480(5)	7311	6647(9)
2	29709	JRH-134	7449	4581	5595	5875	6464	4916	5690	9535	6209	5198	5704	6243	5930
3	29710	CP R444	8452	5738	6698	6963	7176	4443	5810	11426(9)	7680	4821	6251	7054	6316
4	29711	IRH-128		4523	6630	5577		4774	4774	7147		7067(6)	7068(9)	6028	5507
5	29712	Indam 300-021	5893	5890	5508	5763	7306	5010	6158	7700	4603	4444	4524	5794	6232
6	29713	IRH-129		5457	5141	5299		4254	4254	7556	5011	6230	6230	5728	5725
7	29714	Indam 200-053	7579	5447	6624	6550	6506	4821	5664	10064	6067	7226(5)	6646	6792	6463
8	29715	IRH-130		5333	4006	4670		3923	3923	7476		4647	4647	5077	5203
9	29716	RALLIS-20308	4866	6748(6)	6780	6132	7072	7043(4)	7058(6)	10833	8175(4)	7381(3)	7778(3)	7362	6493
10	29717	RRX-271	4563	5103	6570	5412	6056	6050	6053	10978	8769(1)	7659(2)	8214(2)	6969	6659(8)
11	29718	UPLRH-180839	6189	6416(10)	6420	6342	7891(5)	4396	6143	10913	7513	4484	5999	6778	6522
12	29719	NPH-X5+	8559	5352	5233	6381	7568	5105	6336	10296	6728	4286	5507	6641	6432
13	29720	UPLRH-169054	8726(9)	4678	6803	6735	7925(4)	7657(1)	7791(3)	9784	6347	6905	6626	7353	6529
14	29721	UPLRH-189001	9679(3)	5939	7032(6)	7550(5)	6977	4916	5946	11538(8)	6812	6587	6700	7435(9)	6522
15	29722	RNRH-15	4443	4483	5139	4689	6794	4632	5713	10144	6987	7024(10)	7006	6206	5704
16	29723	SPH-43	5773	4033	6654	5487	6189	3687	4938	9615	6549	5357	5953	5982	5942
17	29724	PAN-2140	9726(2)	5057	5859	6880	7591(10)	6239(10)	6915(7)	9671	7778	5119	6449	7130	6499
18	29725	NPH-X49	7676	6652(8)	4079	6136	6956	6665(7)	6811(8)	9896	7121	4246	5684	6661	5998
19	29726	PHI-21103	9616(4)	6169	7025(8)	7603(4)	9619(1)	7090(3)	8354(1)	14030(1)	7969(8)	5675	6822	8399(2)	7054(1)
20	29727	PRSH-2009	6366	5603	5259	5743	5453	6806(5)	6130	10409	6820	5516	6168	6529	6051
21	29728	US-346	7689	5900	7329(5)	6973(10)	5567	4868	5218	11210	8171(5)	8968(1)	8570(1)	7463(7)	6359
22	29729	ARRH-23316	6053	5356	6960(9)	6123	7635(7)	6617(8)	7126(5)	11675(7)	5234	5317	5276	6856	6536(10)
23	29730	US-355	5299	5307	6316	5641	7061	4727	5894	12620(5)	8513(2)	5794	7153(7)	6955	6203
24	29731	RNC-0334	9306(6)	6907(4)	7334(4)	7849(1)	6882	5956	6419	11362(10)	8236(3)	3492	5864	7434(10)	6743(5)
25	29732	KPHDF8PX	6443	6808(5)	6368	6539	7842(6)	4821	6331	11314	7272	4841	6057	6964	6706(6)
26	29733	JKRH-1038	7249	5499	6586	6445	6689	5199	5944	10689	8061(6)	5952	7007(10)	6991	6046
27	29734	PHI-21104	7999	6746(7)	7583(2)	7443(7)	7453	5152	6303	13301(4)	7846	5198	6522	7660(3)	6912(3)
28	29735	MEPH-164	7513	7008(3)	6812(10)	7111(8)	7630(8)	4821	6226	13782(2)	7522	5000	6261(6)	7511(5)	6517
29	29736	PHI-21105	9799(1)	5623	7029(7)	7484(6)	9236(2)	7326(2)	8281(2)	13742(3)	7859(10)	7063(7)	7461	8460(1)	7042(2)
30	29737	IIRRH-148	5319	5110	6285	5571	6382	5861	6122	8830	6891	5238	6064	6240	5998
31	29738	RNC-0457	9299(7)	7063(2)	6785	7716(3)	7599(9)	5577	6588(10)	11250	7859	4048	5954	7435(8)	6803(4)
32	29739	MEPH-165	8722(10)	6467	5816	7002(9)	8724(3)	6806(5)	7765(4)	10345	7013	7262(4)	7138(8)	7645	6693(7)
33	29740	IIRRH-149	9292(8)	4407	5832	6510	6342	6192	6267	9671	6864	5238	6051	6730	6088
34	US-312 (NCH)		9452(5)	6251	7643(1)	7782(2)	7276	4490	5883	9663	8043(7)	7063(7)	7554(4)	7485(4)	6509
35	Gontra Bidhan-3 (NCV)		4806	5997	6459	5754	6911	6476(9)	6693(9)	12091(6)	6880	5079	5979	6837	6439
36	Zonal Check Variety (ZCV)		4386	4533	4604	4508	5679	4774	5226	7179	5576	5040	5308	5221	5263
37	Local Check Variety (LCV)		7533	6208	6506	6749	5103	6145	5624	10465	6308	5675	5991	6743	5890
Exp. Mean			7273	5721	6007	6372	7089	5493	6179	10511	7072	5768	6423	6868	6302
CD (0.05)			1273	491	1700	611.53	1498	1060	837.64	2113	1507	787	778.16	529.08	195.41
CV			10.83	5.31	17.5	5.94	13.07	11.93	8.39	12.43	13.18	8.45	7.49	4.77	1.92
F Value			**	**	**	**	**	**	**	**	**	**	**	**	**
NHC+CD (0.05)														8014	6704
BVC+CD (0.05)														7366	6634
D/S			13.7.21	9.7.31	22.6.21		20.6.21	27.6.21		17.7.21	28.6.21	8.9.21			
D/P			6.8.21	8.8.21	19.7.21		23.7.21	31.7.21		6.8.21	26.7.21	10.10.21			
Gross Plot Size (Sq.m)			12.6	11.34	10		6.73	8.64		4.16	9.45	10.8			
Net Plot Size (Sq.m)			9.9	8.4	10		5.2	7.05			7.61	8.4			
Local Check Variety			MTU 1121	MTU 1121			Varadhan	RNR 15048		IR 64	ADT 39	ADT 39			

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Appendix-5: Days to 50% Flowering (DFF) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	Zone II					Zone III (contd.)								
			PNT	LDN	KUL	IAR	Zone II Mean (4)	MSD	NGN	Rasi	JKA	UP Mean (4)	DNG	SYN	BR Mean (2)	
1	29708	MALI-348	93	88	96	89	92	97	107	85	93	95	91	88	89	
2	29709	JRH-134	88	85	92	87	88	87	98	81	89	89	83	87	85	
3	29710	CP R444	101	104	100	104	102	101	113	88	97	100	89	89	89	
4	29711	IRH-128		102		88	95	119	103	81		101	91	88	90	
5	29712	Indam 300-021	94	97	96	101	97	94	105	84	91	93	83	81	82	
6	29713	IRH-129		96		89	92	111	104	82		99	83	89	86	
7	29714	Indam 200-053	100	108	100	105	103	105	113	92	95	101	91	91	91	
8	29715	IRH-130		94		87	91	118	106	82		102	84	86	85	
9	29716	RALLIS-20308	99	101	96	102	99	98	107	87	93	96	88	90	89	
10	29717	RRX-271	95	99	96	104	98	99	109	86	91	96	87	89	88	
11	29718	UPLRH-180839	93	87	94	90	91	93	108	84	94	95	91	90	90	
12	29719	NPH-X5+	95	86	93	99	93	86	118	86	93	96	86	88	87	
13	29720	UPLRH-169054	102	103	101	106	103	102	112	88	97	100	91	89	90	
14	29721	UPLRH-189001	106	106	101	107	105	103	114	93	98	102	94	92	93	
15	29722	RNRH-15	88	83	90	84	86	87	104	81	90	91	83	86	85	
16	29723	SPH-43	91	87	93	93	91	86	105	83	91	91	83	89	86	
17	29724	PAN-2140	102	105	102	105	104	104	114	94	95	102	91	93	92	
18	29725	NPH-X49	85	77	86	84	83	86	97	80	88	88	84	86	85	
19	29726	PHI-21103	92	88	93	96	92	98	105	88	95	96	92	90	91	
20	29727	PRSH-2009	86	80	86	79	83	87	120	82	89	94	85	86	85	
21	29728	US-346	96	98	99	102	99	100	110	85	94	97	90	87	88	
22	29729	ARRH-23316	101	103	101	107	103	98	113	92	97	100	88	90	89	
23	29730	US-355	101	102	102	103	102	101	114	89	96	100	92	92	92	
24	29731	RNC-0334	99	103	98	105	101	89	107	88	95	95	90	90	90	
25	29732	KPHDF8PX	92	88	93	89	91	96	119	85	91	98	91	90	90	
26	29733	JKRH-1038	101	112	103	107	106	104	115	86	97	100	94	91	93	
27	29734	PHI-21104	100	106	101	105	103	102	108	88	96	98	89	89	89	
28	29735	MEPH-164	92		94	89	92	91	106	85	94	94	91	92	91	
29	29736	PHI-21105	92	85	91	86	89	90	105	86	94	94	91	90	91	
30	29737	IIRRH-148	96	98	96	105	99	99	111	84	97	98	91	90	91	
31	29738	RNC-0457	94	91	96	100	95	94	106	87	96	96	89	92	91	
32	29739	MEPH-165	98	103	99	105	101	100	104	85	95	96	89	95	92	
33	29740	IIRRH-149	94	102	94	100	98	93	107	86	92	94	85	88	87	
34	US-312 (NCH)		95	101	97	101	99	95	107	87	96	96	91	89	90	
35	Gontra Bidhan-3 (NCV)		94	84	93	99	92	94	103	83	94	93	89	87	88	
36	Zonal Check Variety (ZCV)		102	102	105	103	103	109	120	96	107	108	96	95	96	
37	Local Check Variety (LCV)		92	105	99	110	101	105	109	83	96	98	91	86	89	
Exp. Mean			96	96	96	97	96	97	109	86	94	97	88	89	89	

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Appendix-5 contd. : Days to 50% Flowering (DFF) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone III						Zone IV	Zone V (contd.)					
			CHN	CTK	CHP	OD Mean (2)	RCI	Zone III Mean (10)	TTB (1)	JBP	RPR	Rasi	NZV	VNR	CG Mean (4)
1	29708	MALI-348	92	93	106	99	104	96	89	96	94	91	96	85	91
2	29709	JRH-134	91	83	105	94	101	91	79	91	87	86	100	78	88
3	29710	CP R444	96	93	105	99	107	98	91	97	96	95	100	86	94
4	29711	IRH-128	92	93	106	99	105	98	80	89	87	86	100	79	88
5	29712	Indam 300-021	94	85	106	96	101	92	82	90	91	92	100	79	90
6	29713	IRH-129	87	87	106	97	104	95	79	91	87	86	98	78	87
7	29714	Indam 200-053	85	97	112	105	104	99	92	97	97	98	100	86	95
8	29715	IRH-130	95	95	134	114	105	100	83	91	87	90	95	78	88
9	29716	RALLIS-20308	93	88	105	97	105	95	91	98	94	95	97	85	93
10	29717	RRX-271	92	90	106	98	105	95	91	95	92	94	101	84	93
11	29718	UPLRH-180839	96	90	107	99	103	96	88	92	94	88	99	81	91
12	29719	NPH-X5+	92	97	107	102	100	95	79	102	90	87	93	81	88
13	29720	UPLRH-169054	94	95	105	100	108	98	91	99	96	96	97	84	93
14	29721	UPLRH-189001	96	89	107	98	109	100	90	99	99	98	99	90	96
15	29722	RNRH-15	91	73	106	90	99	90	79	93	89	87	96	75	87
16	29723	SPH-43	92	79	105	92	100	91	85	93	93	91	97	78	90
17	29724	PAN-2140	101	91	107	99	109	100	91	98	97	97	98	89	95
18	29725	NPH-X49	88	83	107	95	98	90	77	93	89	85	99	74	87
19	29726	PHI-21103	95	93	106	100	102	96	88	97	95	94	99	85	93
20	29727	PRSH-2009	92	91	106	99	97	93	80	96	90	84	98	78	88
21	29728	US-346	95	97	106	102	105	97	89	101	97	95	97	85	93
22	29729	ARRH-23316	95	93	106	100	108	98	91	100	95	95	98	85	93
23	29730	US-355	97	87	107	97	106	98	88	101	98	97	99	87	95
24	29731	RNC-0334	96	97	110	103	106	97	88	101	94	96	100	84	93
25	29732	KPHDF8PX	93	91	108	100	101	96	86	96	92	89	97	80	90
26	29733	JKRH-1038	104	91	118	105	108	101	96	100	98	100	98	90	96
27	29734	PHI-21104	95	91	112	102	105	97	91	97	96	96	98	86	94
28	29735	MEPH-164	95	97	106	102	99	96	85	97	96	90	99	83	92
29	29736	PHI-21105	93	93	106	100	100	95	85	96	91	88	99	82	90
30	29737	IIRRH-148	96	87	107	97	105	97	90	100	93	96	98	87	93
31	29738	RNC-0457	97	93	106	100	106	97	91	103	96	93	97	87	93
32	29739	MEPH-165	95	87	106	97	103	96	86	93	91	94	99	81	91
33	29740	IIRRH-149	93	93	112	103	104	95	91	97	92	96	97	81	91
34	US-312 (NCH)		97	97	106	102	109	97	89	97	94	96	97	84	93
35	Gontra Bidhan-3 (NCV)		95	92	118	105	101	95	84	96	94	90	97	83	91
36	Zonal Check Variety (ZCV)		96	85	107	96	107	102	100	93	90	84	98	81	88
37	Local Check Variety (LCV)		93	93	107	100	103	97	90	93	94	84	98	78	88
Exp. Mean			94	90	108	99	104	96	87	96	93	92	98	83	91

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Appendix-5 contd.: Days to 50% Flowering (DFF) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone V				Zone VI						
			SND	ANK	MH Mean (2)	Zone V Mean (7)	KJT	RDN	MH Mean (2)	NWG	NVS	GJ Mean (2)	Zone VI Mean (4)
1	29708	MALI-348	106	95	101	95	82	101	92	95	85	90	91
2	29709	JRH-134	99	89	94	90	78	98	88	85	75	80	84
3	29710	CP R444	104	96	100	96	85	106	96	101	90	95	96
4	29711	IRH-128	94	86	90	89				103		103	103
5	29712	Indam 300-021	102	93	97	92	82	100	91	98	84	91	91
6	29713	IRH-129	94	85	90	88		96	96	96	84	90	92
7	29714	Indam 200-053	111	96	104	98	93	105	99	110	89	100	99
8	29715	IRH-130	94	87	90	89		100	100		84	84	92
9	29716	RALLIS-20308	104	96	100	96	89	104	97	107	82	95	96
10	29717	RRX-271	104	93	99	95	85	102	94	98	88	93	93
11	29718	UPLRH-180839	104	94	99	93	78	104	91	92	84	88	89
12	29719	NPH-X5+	101	89	95	92	85	99	92	91	85	88	90
13	29720	UPLRH-169054	106	95	101	96	83	106	95	103	92	97	96
14	29721	UPLRH-189001	106	97	102	98	85	102	94	107	92	99	96
15	29722	RNRH-15	98	88	93	89	76	105	91	90	83	86	88
16	29723	SPH-43	99	92	96	92	79	99	89	96	83	89	89
17	29724	PAN-2140	109	98	103	98	90	106	98	116	91	103	101
18	29725	NPH-X49	95	86	91	89	76	102	89	87	82	85	87
19	29726	PHI-21103	103	94	98	95	89	102	95	93	88	90	93
20	29727	PRSH-2009	99	88	93	90	79	100	89	84	80	82	86
21	29728	US-346	111	93	102	97	76	103	90	104	87	95	93
22	29729	ARRH-23316	104	92	98	96	93	105	99	109	90	99	99
23	29730	US-355	107	94	101	97	85	105	95	107	92	100	97
24	29731	RNC-0334	105	94	99	96	91	105	98	102	89	96	97
25	29732	KPHDF8PX	91	95	93	91	82	99	91	93	86	90	90
26	29733	JKRH-1038	110	99	105	99	92	108	100	113	89	101	100
27	29734	PHI-21104	106	96	101	96	89	102	96	107	87	97	96
28	29735	MEPH-164	101	95	98	94	84	105	95	97	86	92	93
29	29736	PHI-21105	102	92	97	93	81	102	92	91	88	90	91
30	29737	IIRRH-148	105	97	101	97	78	99	89	105	87	96	92
31	29738	RNC-0457	106	98	102	97	81	109	95	98	85	91	93
32	29739	MEPH-165	104	94	99	94	93	94	94	101	84	92	93
33	29740	IIRRH-149	103	95	99	94	89	100	95	103	91	97	96
34	US-312 (NCH)		102	94	98	95	78	108	93	102	87	94	93
35	Gontra Bidhan-3 (NCV)		101	91	96	93	82	100	91	90	83	87	89
36	Zonal Check Variety (ZCV)		97	85	91	90	77	97	87	86	88	87	87
37	Local Check Variety (LCV)		99	89	94	91	91	96	94	95	82	89	91
Exp. Mean			103	93	98	94	84	102	94	99	86	93	93

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Appendix-5 contd. : Days to 50% Flowering (DFF) of hybrids in IHRT-Mid Early, Kharif 2021

S. No.	IET No.	Name	Zone VII												Over all Mean (34)
			MTU	RGL	BAY	AP Mean (3)	IIRR	WGL	TS Mean (2)	MND	CBT	ADT	TN Mean (2)	Zone VII Mean (8)	
1	29708	MALI-348	85	85	89	86	104	95	99	97	95	95	95	93	94
2	29709	JRH-134	73	81	83	79	90	90	90	84	86	95	90	85	88
3	29710	CP R444	85	90	91	89	104	98	101	95	98	98	98	95	97
4	29711	IRH-128		88	84	86		97	97	89	91	97	94	91	93
5	29712	Indam 300-021	77	85	86	82	98	96	97	92	86	92	89	89	92
6	29713	IRH-129		85	85	85		91	91	90	88	96	92	89	91
7	29714	Indam 200-053	83	90	92	88	105	103	104	85	94	97	95	94	98
8	29715	IRH-130		88	86	87		91	91	89	86	98	92	90	93
9	29716	RALLIS-20308	82	87	90	87	103	100	102	89	95	92	94	92	95
10	29717	RRX-271	85	87	91	88	104	99	101	92	95	95	95	93	95
11	29718	UPLRH-180839	81	87	89	86	103	96	99	98	98	92	95	93	93
12	29719	NPH-X5+	77	83	82	80	96	91	94	89	88	98	93	88	91
13	29720	UPLRH-169054	84	88	91	88	103	102	102	87	92	98	95	93	97
14	29721	UPLRH-189001	86	91	92	90	106	102	104	94	99	97	98	96	98
15	29722	RNRH-15	74	84	82	80	97	94	95	89	90	99	95	88	89
16	29723	SPH-43	77	87	85	83	98	97	98	89	90	98	94	90	91
17	29724	PAN-2140	86	90	95	90	107	105	106	94	98	100	99	97	99
18	29725	NPH-X49	73	80	79	77	94	89	92	85	87	93	90	85	87
19	29726	PHI-21103	84	87	88	86	102	95	99	97	96	96	96	93	94
20	29727	PRSH-2009	74	81	81	79	93	86	89	92	92	98	95	87	89
21	29728	US-346	84	87	88	87	102	98	100	92	98	99	99	94	96
22	29729	ARRH-23316	86	91	91	89	102	98	100	93	96	95	95	94	97
23	29730	US-355	86	87	91	88	104	98	101	95	98	96	97	94	97
24	29731	RNC-0334	85	87	90	87	103	101	102	95	99	96	98	95	96
25	29732	KPHDF8PX	79	87	86	84	101	97	99	92	96	94	95	91	93
26	29733	JKRH-1038	86	93	93	91	109	99	104	97	99	94	97	96	100
27	29734	PHI-21104	81	90	91	87	105	100	103	91	95	98	97	94	97
28	29735	MEPH-164	80	87	88	85	98	93	96	93	94	99	96	92	93
29	29736	PHI-21105	84	87	88	86	101	93	97	94	95	93	94	92	92
30	29737	IIRRH-148	85	90	89	88	103	101	102	94	95	94	94	94	95
31	29738	RNC-0457	83	91	90	88	104	99	102	98	98	94	96	95	96
32	29739	MEPH-165	79	85	89	84	100	97	98	82	88	91	89	89	94
33	29740	IIRRH-149	79	86	90	85	104	99	102	90	92	95	94	92	95
34	US-312 (NCH)		79	87	90	85	102	99	100	91	94	98	96	93	95
35	Gontra Bidhan-3 (NCV)		81	85	85	84	103	97	100	93	95	94	95	92	93
36	Zonal Check Variety (ZCV)		75	81	84	80	96	97	96	83	86	95	91	87	94
37	Local Check Variety (LCV)		101	100	91	98	102	103	103	85	103	96	100	98	95
Exp. Mean			81	87	88	86	101	97	99	92	94	96	95	92	94

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Appendix-6: Quality characteristics of IHRT-Mid-Early Kharif 2021

S. No.	IET No.	Name	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
1	29708	MALI-348	81.5	72.4	69.0	6.49	2.14	3.03	LS	VOC	4.9	22.99	52
2	29709	JRH-134	81.2	73.4	69.1	6.71	2.22	3.02	LS	OC	5.2	21.38	22
3	29710	CP R444	82.3	71.8	68.0	6.76	2.06	3.28	LS	A	6.5	17.92	95
4	29711	IRH-128											
5	29712	Indam 300-021	80.4	72.3	71.6	6.21	2.31	2.68	LB	VOC	5.5	24.25	22
6	29713	IRH-129											
7	29714	Indam 200-053	82.0	72.6	69.7	6.90	2.02	3.41	LS	VOC	6.5	23.93	22
8	29715	IRH-130											
9	29716	RALLIS-20308	83.0	74.1	68.6	6.88	2.02	3.40	LS	VOC	3.4	22.00	53
10	29717	RRX-271	81.5	73.0	68.1	6.66	2.04	3.26	LS	VOC	3.5	21.88	46
11	29718	UPLRH-180839	81.5	71.9	68.0	6.14	2.32	2.64	LB	VOC	5.1	23.29	40
12	29719	NPH-X5+	79.3	68.8	63.8	5.52	2.35	2.34	SB	VOC	5.1	16.65	67
13	29720	UPLRH-169054	80.7	72.8	71.3	6.53	2.20	2.96	LB	VOC	7.0	24.66	22
14	29721	UPLRH-189001	83.1	72.2	64.7	6.81	2.26	3.01	LS	VOC	7.0	24.49	50
15	29722	RNRH-15	81.0	73.0	71.4	6.86	2.01	3.41	LS	VOC	4.0	26.04	22
16	29723	SPH-43	81.2	73.9	71.9	7.56	2.00	3.78	LS	VOC	4.3	23.26	24
17	29724	PAN-2140	81.9	73.3	70.0	6.69	2.15	3.11	LS	VOC	4.0	26.54	58
18	29725	NPH-X49	80.9	71.5	69.2	6.05	2.41	2.51	LB	VOC	4.6	26.63	22
19	29726	PHI-21103	82.0	74.2	69.5	7.34	2.22	3.30	LS	VOC	4.3	24.58	22
20	29727	PRSH-2009	81.1	72.8	67.0	6.35	2.61	2.50	LB	VOC	4.4	21.17	22
21	29728	US-346	80.4	70.8	67.3	5.80	2.27	2.55	MS	VOC	5.5	20.38	60
22	29729	ARRH-23316	81.5	72.3	65.4	6.85	2.38	2.87	LB	A	4.3	23.81	44
23	29730	US-355	81.8	73.6	70.5	5.89	2.34	2.51	MS	VOC	4.4	17.39	74
24	29731	RNC-0334	80.6	72.5	68.6	6.50	2.27	2.86	LB	VOC	5.5	25.02	22
25	29732	KPHDF8PX	80.9	70.8	65.9	7.11	2.26	3.14	LS	OC	7.0	27.01	22
26	29733	JKRH-1038	81.6	70.8	66.4	7.04	2.08	3.38	LS	A	4.3	18.97	83
27	29734	PHI-21104	81.5	74.5	70.5	6.53	2.21	2.70	LB	VOC	4.0	24.46	22
28	29735	MEPH-164	79.7	71.4	67.7	6.50	2.22	2.92	LB	VOC	5.5	25.28	22
29	29736	PHI-21105	81.9	72.8	66.7	7.14	2.12	3.34	LS	VOC	3.5	23.94	50
30	29737	IIRRH-148	77.2	68.2	66.6	6.65	1.99	3.34	LS	VOC	7.0	24.52	22
31	29738	RNC-0457	79.4	72.4	69.6	6.83	2.22	3.07	LS	VOC	6.2	22.73	44
32	29739	MEPH-165	82.0	73.0	70.5	6.16	2.41	2.55	LB	OC	5.0	26.53	22
33	29740	IIRRH-149	81.3	73.5	71.5	6.25	2.20	2.84	LB	VOC	5.6	23.61	22
34	US-312 (NCH)		80.2	70.8	68.9	5.71	2.06	2.77	MS	VOC	4.8	23.58	41
35	Gontra Bidhan-3 (NCV)		80.7	70.6	69.0	5.51	2.33	2.36	SB	VOC	4.4	25.87	40
36	MTU-1010 (ZCV)		79.5	72.5	70.0	6.76	2.05	3.29	LS	A	7.0	24.05	62
37	Varadhan (LCV)		80.1	72.0	69.2	5.52	2.31	2.38	SB	VOC	4.5	25.22	66

Hull: Hulling %; Mill: Milling %; HRR: Head rice recovery; KL: Kernel length; KB: Kernel breadth; L/B: L/B ratio; ASV: Alkali spreading value; AC: Amylose content; GC: Gel consistency

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Appendix-7: Grain Yield (kg/ha) of hybrids in IHRT-Medium, Kharif 2021

S. No.	IET No.	Name	Zone II				Zone III (contd.)								
			PNT	LDN	KUL	Zone II (3)	MSD	VRN	NGN	Rasi	UP Mean (4)	DNG	SYN	BR Mean (2)	CHN
1	29741	HRI-209	5759(6)	7744(6)	8067(5)	7190(5)	5964	7276	5845(5)	4822(6)	5977(9)	7162(1)	7193(10)	7177(4)	6657
2	29742	RRX-338	5772(5)	7778(5)	6900(8)	6817(6)	7190(6)	8643(3)	4672	9593(1)	7525(2)	6724(6)	7819(4)	7271(3)	6909(7)
3	29743	HRI-211	6050(4)	8748(1)	9633(1)	8143(1)	7557(4)	8241(7)	5323(10)	4793(7)	6479(5)	6559(9)	6740	6649(10)	6203
4	29744	RRX-438	5466(10)	6209	6267	5980	7026(7)	7854	6963(1)	8473(2)	7579(1)	6764(5)	6543	6654(9)	6909(6)
5	29745	PAN-2435	4979			4979	5474	7088	4456	5601(4)	5655	6966(2)	8651(1)	7809(1)	67579(10)
6	29746	RNE-0219	5608(7)	6701	7033(7)	6447(8)	7618(3)	8367(5)	5486(8)	7048(3)	7130(3)	6209	6143	6176	5900
7	28999	Marshal-135 Pro (Repeat)	5487(9)	6979	6467	6311	6185	7871(10)	4802	3878	5684	6441(10)	6696	6568	6404
8	29747	RNE-0337	6216(2)	7700(7)	8367(4)	7427(4)	7292(5)	8823(2)	5690(6)	4422	6557(4)	6882(3)	6788	6835(8)	5900
9	29748	US-384	5445	6915	7667(6)	6676(7)	6495(10)	7755	5327(9)	3545	5781	6559(8)	7345(9)	6952(7)	7716(2)
10	29749	VNR-230	6087(3)	8577(2)	8567(3)	7744(3)	6393	7857	4180	3769	5550	6128	6733	6430	6253
11	29750	PHI-21106	6738(1)	8421(3)	9267(2)	8142(2)	5596	8286(6)	4368	5270(5)	5880	6879(4)	6404	6641	7615(3)
12	29751	PHI-21107	5375	7300(10)	6233	6303	6675(9)	9262(1)	3037	3783	5689	6401	7830(3)	7115(5)	6556
13	29752	CRHR-156	5032		2367	3700	3431	8037(9)	6633(2)	2804	5226	6104	6512	6308	7968(1)
14	29753	PHI-20108	5445	7563(8)	6100	6369(9)	6373	8044(8)	6229(4)	3727	6093(7)	6253	7779(6)	7016(6)	6959(5)
15	29754	IIRRH-154	5351	6296	6267	5971	5637	7327	6375(3)	3352	5673	4832	7752(7)	6292	6808(8)
16	28P67 (OBCH-1)		5533(8)	6545	6133	6071	7761(1)	7374	5544(7)	3855	6134(6)	6246	8376(2)	7311(2)	6606
17	Bio-799 (OBCH-2)		4492	7510(9)	6733(10)	6245	6005	7184	3738	4628	5389	5805	7354(8)	6579	6253
18	HRI-174 (NCH)		5339	6847	5967	6051	6740(8)	8466(4)	5131	3725	6015(8)	5384	5898	5641	6808(8)
19	NDR-359 (NCV)		4210	6038	5400	5216	5658	7054	4243	3685	5160	5215	5751	5483	6354
20	Zonal Check Variety (ZCV)		4375	5989	4333	4899	7639(2)	3248	4568	2772	4557	4259	7814(5)	6037	7161(4)
21	Local Check Variety (LCV)		3645	8134(4)	6900(8)	6226	5678	6670	4656	4141	5286	6586(7)	6082	6334	6152
Exp.Mean			5353	7263	6733	6329	6399	7654	5108	4652	5953	6207	7057	6632	6707
CD (0.05)			852.95	816.23	744.27	481.89	459.91	965.79	400.57	781.88	289.48	594.63	769.59	497.8	1058.73
CV			9.7	6.8	6.7	4.61	4.4	7.7	4.8	8.1	2.95	5.8	6.6	4.55	9.6
F Value			**	**	**	**	**	**	**	**	**	**	**	**	*
NHC + CD (0.05)						6533									
BVC + CD (0.05)						6708									
D/S			12.6.21	8.6.21	8.6.21		15.6.21	15.6.21	26.6.21	21.6.21		21.6.21	2.7.21		25.6.21
D/P			9.7.21	4.7.21	9.7.21		15.7.21	5.7.21	21.7.21	11.7.21		20.7.21	28.7.21		22.7.21
Gross Plot Size (Sq.m)			10.13	8.50	10.00		10.00	10.00	10.00			10.00	10.00		8.28
Net Plot Size (Sq.m)			10.13	6.84	10.00		8.16	9.80	7.99	10.10		9.90	10.00		6.61
Zonal Check Variety			PR 121	PR 121	PR 121		CR Dhan 300	CR Dhan 300	CR Dhan 300	CR Dhan 300		CR Dhan 300	CR Dhan 300		Pratikshya
Local Check Variety			Pant Dhan 4	PR 121	HKR-128		NDR 2064	HUR-105		Surju 52		Sabour Shree	Magdha		

**-Highly Significant; *-significant; ns-not significant

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Appendix-7 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Medium, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone III			Zone IV			Zone V (contd.)						
			RCI	CTK	Zone III Mean (9)	ARD	TTB	Zone IV Mean (2)	JBP	WRS	MP Mean (2)	RPR	Rasi	VNR	CG Mean (3)
1	29741	HRI-209	6911(5)	9148(1)	6775(3)	7190(1)	6841(9)	7016(1)	6903(3)	6197(1)	6550(1)	6663(3)	6415(4)	9432(4)	7503(3)
2	29742	RRX-338	7227(3)	6404	7242(1)	4819	6580	5699	6443(4)	4710	5576(7)	6325(6)	8485(1)	8605	7805(1)
3	29743	HRI-211	7272(2)	7437(10)	6681(5)	5554	6929(5)	6241(5)	5853	5905(2)	5879(3)	7214(1)	6574(3)	9516(2)	7768(2)
4	29744	RRX-438	6414(9)	7537(8)	7165(2)	5814(6)	3981	4898	5580	5409(4)	5495(10)	4743	8183(2)	8815(9)	7247(6)
5	29745	PAN-2435	6188	7448(9)	6515	5635(9)	6237	5936	5857	4340	5098	6183(8)	5552	7074	6270
6	29746	RNE-0219	6098	7315	6687(4)	4951	6922(7)	5936(10)	5097	3478	4287	6259(7)	6310(5)	9457(3)	7342(5)
7	28999	Marshal-135 Pro (Repeat)	6865(6)	5526	6074	4152	7226(3)	5689	5940(10)	5024(9)	5482	6013	5612	7778	6468
8	29747	RNE-0337	6775(7)	7426	6667(8)	5561(10)	6786(10)	6174(8)	5960(8)	5416(3)	5688(5)	5892	6039(9)	9285(5)	7072(8)
9	29748	US-384	6640(8)	7637(7)	6558(9)	5724(7)	4371	5048	5957(9)	4369	5163	5630	5514	8729(10)	6624
10	29749	VNR-230	7091(4)	7193	6178	5446	6919(8)	6183(7)	6214(7)	5183(7)	5699(4)	5767	5499	8837(8)	6701
11	29750	PHI-21106	6459(10)	9148(1)	6670(6)	6980(2)	7029(4)	7005(2)	7523(1)	5309(6)	6416(2)	6700(2)	5704(10)	9879(1)	7428(4)
12	29751	PHI-21107	5917	7848(5)	6368	6476(3)	6398	6437(4)	5047	5409(4)	5228	6426(4)	6210(6)	8091	6909(9)
13	29752	CRHR-156	6233	7837(6)	6173	4786	7663(1)	6225(6)	3047	4957(10)	4002	5849	6083(8)	7107	6346
14	29753	PHI-20108	4743	8759(3)	6541(10)	6351(4)	6925(6)	6638(3)	6317(5)	4824	5570(8)	5723	5639	9216(6)	6860(10)
15	29754	IIRRH-154	4336	6715	5904	4031	5655	4843	6940(2)	4314	5627(6)	6010	5664	6615	6096
16	28P67 (OBCH-1)		5691	8570(4)	6669(7)	5656(8)	6443	6050(9)	5397	5109(8)	5253	6180(9)	5413	7498	6364
17	Bio-799 (OBCH-2)		4336	6737	5782	4174	7355(2)	5765	5413	4684	5049	5929	5486	8497	6638
18	HRI-174 (NCH)		7453(1)	6737	6260	5847(5)	5664	5755	6293(6)	4706	5500(9)	6362(5)	6086(7)	8940(7)	7129(7)
19	NDR-359 (NCV)		6278	6082	5591	3806	6117	4962	4363	4232	4298	5454	3597	5212	4754
20	Zonal Check Variety (ZCV)		5149	5171	5309	4291	4693	4492	4457	3063	3760	3238	3843	5414	4165
21	Local Check Variety (LCV)		3613	6744	5591	4834	4714	4774	4683	4362	4523	6081(10)	5615	6669	6375
Exp. Mean			6081	7306	6352	5337	6260	5798	5680	4809	5245	5935	5895	8127	6660
CD (0.05)			1179.02	1786.33	297.89	453.28	451.27	317.92	747.79	934.36	544.06	1017.04	988.15	868.43	455.23
CV			11.8	14.8	2.84	5.2	4.4	3.32	8.0	11.8	6.29	10.4	8.0	6.5	4.14
F Value			**	**	**	**	**	**	**	**	**	**	**	**	**
NHC + CD (0.05)					6558			6073							
BVC + CD (0.05)					5889			5280							
D/S			26.6.21	29.6.21		19.7.21	14.7.21		19.6.21	19.6.21		23.6.21	16.6.21	25.6.21	
D/P			24.7.21	27.7.21		19.8.21	6.8.21		11.7.21	10.7.21		10.7.21	11.7.21	15.7.21	
Gross Plot Size (Sq.m)			10.32	9.00		19.50	10.00		10.00	10.00		15.36		8.19	
Net Plot Size (Sq.m)			7.38	6.72		17.64	10.00		7.99	9.01		12.48	10.30	6.25	
Local Check Variety			IR 64 drt-1	Tapaswini				Shraboni	IR 64	JR 206		Rajeshwari		Mahamaya	

**-Highly Significant;*-significant;ns-not significant

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Appendix-7 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Medium, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone V				Zone VI							
			SND	@ ANK	MH Mean (1)	Zone V Mean (6)	KJT	SHR	PDG	MH Mean (3)	NWG	NVS	GJ Mean (2)	Zone VI Mean (5)
1	29741	HRI-209	5151(8)	6588(7)	5151(8)	6764(2)	7098	3239	5723(7)	5353	7491(2)	5186	6339(4)	5748
2	29742	RRX-338	5414(4)	6539	5414(4)	6646(4)	6698	5333(10)	5866(6)	5966(8)	3870	5109	4490	5375
3	29743	HRI-211	6038(1)	6298	6038(1)	6771(1)	8165(2)	6828(3)	7085(1)	7359(1)	5830(8)	5495(7)	5662(9)	6681(1)
4	29744	RRX-438	4978	6618(4)	4978	6332(5)	7265	7212(2)	6325(5)	6934(3)	5114	4928	5021	6169(5)
5	29745	PAN-2435	5232(6)	6259	5232(6)	5785	6364	5778(8)	5613(9)	5918	4844	4676	4760	5455
6	29746	RNE-0219	4929	6522	4929	6007	8036(3)	3219	5431	5562	5966(7)	6779(1)	6373(3)	5886(9)
7	28999	Marshal-135 Pro (Repeat)	5094	6544	5094	6001	8492(1)	4505	4782	5926	6223(5)	5757(6)	5990(6)	5952(7)
8	29747	RNE-0337	5013	6561(8)	5013	6310(6)	7552	6310(5)	5191	6351(6)	7576(1)	6199(2)	6887(1)	6566(3)
9	29748	US-384	5036	6127	5036	5909	6279	4485	6692(3)	5818	5534(9)	5814(4)	5674(8)	5761(10)
10	29749	VNR-230	4964	6535	4964	6143(10)	7777(4)	6707(4)	6760(2)	7081(2)	4965	4330	4648	6108(6)
11	29750	PHI-21106	5187(7)	6461	5187(7)	6680(3)	6539	7764(1)	5441	6581(4)	7346(3)	5784(5)	6565(2)	6575(2)
12	29751	PHI-21107	5655(2)	6645(3)	5655(2)	6212(8)	6990	4747	5094	5611	3021	4594	3808	4889
13	29752	CRHR-156	4853	6605(5)	4853	5500	7637(5)	3596	3914	5049	2964	4366	3665	4495
14	29753	PHI-20108	5321(5)	6592(6)	5321(5)	6233(7)	7192(10)	6141(6)	5646(8)	6327(7)	7045(4)	4885	5965(7)	6182(4)
15	29754	IIRRH-154	5031	6544(10)	5031	5874	5962	4047	5211	5073	4282	5230(9)	4756	4947
16	28P67 (OBCH-1)		5143(10)	6697(1)	5143(10)	5920	6532	5428(9)	4447	5469	6042(6)	6062(3)	6052(5)	5702
17	Bio-799 (OBCH-2)		5147(9)	6654(2)	5147(9)	5973	6577	3933	5316	5275	5404(10)	5230(10)	5317(10)	5292
18	HRI-174 (NCH)		4764	6272	4764	6203(9)	7402(7)	5838(7)	6340(4)	6527(5)	4716	5356(8)	5036	5931(8)
19	NDR-359 (NCV)		4283	6399	4283	4791	6538	5212	4653	5467	3778	4249	4014	4886
20	Zonal Check Variety (ZCV)		3440	6553(9)	3440	4287	7265(8)	4976	4822	5688	5389	5135	5262	5518
21	Local Check Variety (LCV)		5521(3)	5360	5521(3)	5446	6667	4451	4299	5139	4485	4178	4332	4816
Exp. Mean			5057	6446	5057	5990	7097	5226	5460	5928	5328	5207	5267	5663
CD (0.05)			992.19	879.27	992.19	307.85	1202.35	853.68	853.15	589.35	1609.86	1045.09	633.39	467.22
CV			11.9	8.3	11.9	3.11	10.3	9.9	9.5	6.03	14.5	12.2	7.29	5
F Value			*	ns	*	**	**	**	**	**	**	**	**	**
NHC + CD (0.05)						6511								6398
BVC + CD (0.05)						5754								5985
D/S			8.6.21	1.7.21			12.6.21	17.6.21	21.6.21		17.6.21	14.6.21		
D/P			20.7.21	2.8.21			3.7.21	23.7.21	15.7.21		26.7.21	8.7.21		
Gross Plot Size (Sq.m)			10.00	9.45			5.27	7.02	10.20		7.20	12.15		
Net Plot Size (Sq.m)			7.48	7.60			3.47	4.95	7.70		5.28	9.95		
Local Check Variety			SYE-2001	IR 64			Karjat 9	Ratnagiri 4	Karjat 9		Mahisagar	GNR-3		

Note: @Data of ANK(Ankur Seeds) not included in the analysis due to Non-Significant F Value. **-Highly Significant;*-significant;ns-not significant

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Appendix-7 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Medium, Kharif 2021

S. No.	IET No.	Name	Zone VII													Over all Mean (32)
			MTU	RGL	BAY	AP Mean(3)	IIRR	WGL	TS Mean (2)	MND	@ SRS	KA Mean (1)	CBT	@ KRK	Zone VII Mean (7)	
1	29741	HRI-209	7106	6216(10)	6094	6472	6305(5)	9101(3)	7703(2)	8236	2893	8236	7384	5106	6943	6712(4)
2	29742	RRX-338	6999	5177	6351(7)	6176	6604(3)	6462	6533	10036(8)	2886	10036(8)	6479	4911	6627	6572(8)
3	29743	HRI-211	9932(1)	5305	6190	7143(6)	6705(2)	7210	6957(7)	10164(7)	3172(7)	10164(7)	8119(7)	6108	7467(8)	6987(2)
4	29744	RRX-438	8742(8)	4561	5671	6325	5720	5201	5461	11120(3)	2743	11120(3)	9096(3)	5247	6920	6551(9)
5	29745	PAN-2435	7486	5543	5656	6228	5780	7250	6515	5538	1800	5538	5262	5768	6035	5985
6	29746	RNE-0219	9412(5)	6362(8)	5774	7183(5)	5818(9)	7998(8)	6908(8)	11222(1)	3579(2)	11222(1)	8488(5)	6408	7685(5)	6599(7)
7	28999	Marshal-135 Pro (Repeat)	6839	6650(2)		6744	6117(6)	8550(6)	7333(5)	10009(10)	3372(5)	10009(10)	7295	5928	7341(9)	6307
8	29747	RNE-0337	7129	6621(3)	5548	6433	6113(7)	7486	6799(9)	10916(4)	2936	10916(4)	9164(2)	7197(6)	7522(6)	6818(3)
9	29748	US-384	6189	6548(4)	6200	6313	5813(10)	6383	6098	9933	3264(6)	9933	8237(6)	6216	6940	6318
10	29749	VNR-230	9292(7)	5774	6882(1)	7316(3)	6007(8)	7210	6609	10893(5)	2772	10893(5)	8842(4)	7498(2)	7800(3)	6680(6)
11	29750	PHI-21106	9656(3)	6864(1)	6230(10)	7583(1)	6928(1)	10008(1)	8468(1)	9493	2729	9493	6860	6558	7825(2)	7079(1)
12	29751	PHI-21107	9376(6)	6375(7)	6688(2)	7479(2)	5460	8116(7)	6788(10)	10422(6)	3486(3)	10422(6)	9410(1)	7167(7)	7877	6472(10)
13	29752	CRHR-156		5206	6443(4)	5825	5728	6462	6095	7684	3450(4)	7684	8051(8)	7526(1)	6729	5734
14	29753	PHI-20108	7473	6453(6)	6427(5)	6784(9)	6315(4)	8826(4)	7570(3)	11151(2)	3075(8)	11151(2)	7810(10)	7394(3)	7731(4)	6695(5)
15	29754	IIRRH-154	7569	6479(5)	6249(9)	6766(10)	4910	6816	5863	7751	3036(9)	7751	5588	6450	6477	5835
16	28P67 (OBCH-1)		9439(4)	6273(9)	6115	7276(4)	5811	6462	6137	8400	2514	8400	7423	7299(5)	7153(10)	6397
17	Bio-799 (OBCH-2)		7293	5528	6378(6)	6400	5259	9574(2)	7417(4)	8969	2625	8969	6236	6757(9)	6999	6076
18	HRI-174 (NCH)		8179(9)	5867	6316(8)	6787(8)	5670	8707(5)	7189(6)	10009(9)	4300(1)	10009(9)	7949(9)	7303(4)	7500(7)	6444
19	NDR-359 (NCV)		9922(2)	5962	5368	7084(7)	4536	5910	5223	8916	2568	8916	7494	6676(10)	6848	5548
20	Zonal Check Variety (ZCV)		7326	5053	4128	5502	5548	7919(9)	6733	8236	2600	8236	6667	6200	6384	5298
21	Local Check Variety (LCV)		6773	5835	6614(3)	6407	4061	7447	5754	9356	3000(10)	9356	7502	6800(8)	6798	5748
Exp.Mean			8106	5936	6066	6677	5772	7576	6674	9450	2990	9450	7588	6501	7124	6327
CD (0.05)			1328.46	586.08	1071.42	613.41	1128.37	989.73	760.7	1599.64	458.49	1599.64	1238.60	2102.88	446.2	159.28
CV			9.9	6.0	10.7	5.57	11.9	7.9	6.91	10.3	7.4	10.3	9.9	19.6	3.8	1.53
F Value			**	**	**	**	**	**	**	**	**	**	**	ns	**	**
NHC + CD (0.05)															7946	6603
BVC + CD (0.05)															7294	5907
D/S			13.7.21	9.7.21	22.6.21		28.6.21	22.6.21		13.7.21	17.6.21		6.8.21	24.8.21		
D/P			6.8.21	8.8.21	18.7.21		31.7.21	20.7.21		4.8.21	7.7.21		4.9.21	27.9.21		
Gross Plot Size (Sq.m)			12.60	10.92	10.00		6.43	10.08		7.50	7.00		10.33	4.80		
Net Plot Size (Sq.m)			9.90	8.58	10.00		4.95	8.46			4.65		8.44	4.80		
Local Check Variety			MTU 1239	MTU 1210	MTU 1121		DRR Dhan 38	WGL 347		Thanu				TKM 11		

Note: @Data of SRS (Sirsi) not included in the analysis due to low experimental Grain Yield (Kg/ha), @Data of KRK (Karaikal) not included in the analysis due to Non-Significant F Value.

**-Highly Significant,*-significant,ns-not significant

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Appendix-8: Days to 50% Flowering (DFF) of hybrids in IHRT- Medium, Kharif 2021

S. No.	IET No.	Name	Zone II				Zone III (contd.)									
			PNT	LDN	KUL	Zone II Mean (3)	MSD	VRN	NGN	Rasi	UP Mean (4)	DNG	SYN	BR Mean (2)	CHN	RCI
1	29741	HRI-209	99	105	102	102	100	88	110	95	98	90	88	89	102	101
2	29742	RRX-338	99	102	106	102	108	98	109	100	104	100	91	96	104	102
3	29743	HRI-211	102	110	103	105	105	97	113	98	103	95	92	94	102	103
4	29744	RRX-438	104	108	103	105	107	93	110	97	102	95	90	92	102	103
5	29745	PAN-2435	120			120	113	103	119	109	111	103	93	98	103	106
6	29746	RNE-0219	101	110	104	105	101	101	113	99	104	95	90	93	101	106
7	28999	Marshal-135 Pro (Repeat)	105	108	103	106	104	94	109	100	102	93	91	92	103	104
8	29747	RNE-0337	103	111	103	106	104	91	116	100	103	95	93	94	102	106
9	29748	US-384	101	107	102	103	105	94	107	96	101	93	89	91	99	101
10	29749	VNR-230	104	107	102	104	107	93	114	99	103	102	89	96	102	103
11	29750	PHI-21106	100	109	100	103	102	90	107	96	99	95	90	93	98	101
12	29751	PHI-21107	103	107	109	106	107	100	106	100	103	95	96	95	102	106
13	29752	CRHR-156	120		114	117	102	105	121	111	110	107	92	100	109	112
14	29753	PHI-20108	103	100	103	102	104	92	108	97	100	94	90	92	101	102
15	29754	IIRRH-154	106	113	107	109	100	98	118	100	104	98	88	93	103	100
16	28P67 (OBCH-1)		98	105	106	103	98	87	109	102	99	97	90	94	96	105
17	Bio-799 (OBCH-2)		106	101	107	105	103	95	117	99	103	94	90	92	105	101
18	HRI-174 (NCH)		102	107	106	105	108	93	112	100	103	95	89	92	102	103
19	NDR-359 (NCV)		101	106	103	103	106	99	107	97	102	95	88	91	96	97
20	Zonal Check Variety (ZCV)		102	111	110	108	107	104	125	116	113	86	101	94	108	113
21	Local Check Variety (LCV)		96	110	100	102	107	101	115	84	102	104	89	97	109	96
Exp. Mean			104	107	105	106	104	95	112	100	103	97	91	94	102	104

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Appendix-8 contd. : Days to 50% Flowering (DFF) of hybrids in IHRT- Medium, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone III		Zone IV			Zone V (contd.)							
			CTK	Zone III Mean (9)	ARD	TTB	Zone IV Mean (2)	JBP	WRS	MP Mean (2)	RPR	Rasi	VNR	CG Mean (3)	SND
1	29741	HRI-209	95	97	93	92	93	97	93	95	99	95	84	93	109
2	29742	RRX-338	91	100	95	98	96	98	96	97	101	99	90	97	115
3	29743	HRI-211	99	101	93	97	95	105	95	100	102	100	90	97	115
4	29744	RRX-438	97	99	90	95	92	102	93	98	102	98	88	96	111
5	29745	PAN-2435	97	105	90	91	90	96	107	102	104	96	99	100	118
6	29746	RNE-0219	97	100	90	93	92	101	94	98	102	97	88	96	113
7	28999	Marshal-135 Pro (Repeat)	101	100	90	96	93	102	98	100	103	97	90	97	113
8	29747	RNE-0337	93	100	92	94	93	99	97	98	108	97	86	97	102
9	29748	US-384	99	98	88	93	90	100	96	98	100	94	84	93	110
10	29749	VNR-230	102	101	92	95	94	102	94	98	102	98	89	96	111
11	29750	PHI-21106	101	98	93	93	93	97	90	94	101	97	85	94	108
12	29751	PHI-21107	97	101	93	98	96	103	95	99	102	99	88	96	111
13	29752	CRHR-156	104	107	93	104	98	105	108	107	109	97	102	103	131
14	29753	PHI-20108	103	99	92	94	93	101	94	97	100	96	87	94	110
15	29754	IIRRH-154	105	101	91	96	94	97	88	93	102	101	87	96	108
16	28P67 (OBCH-1)		91	97	93	89	91	98	90	94	96	97	81	91	104
17	Bio-799 (OBCH-2)		93	100	92	95	94	101	95	98	100	98	90	96	109
18	HRI-174 (NCH)		97	100	94	97	96	102	94	98	101	99	90	97	100
19	NDR-359 (NCV)		103	99	87	93	90	102	96	99	103	94	88	95	111
20	Zonal Check Variety (ZCV)		115	109	115	104	110	90	96	93	96	85	73	84	100
21	Local Check Variety (LCV)		101	101	89	103	96	92	83	87	95		84	89	110
Exp. Mean			98	100	92	95	93	100	95	98	102	97	89	96	112

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Appendix-8 contd.: Days to 50% Flowering (DFF) of hybrids in IHRT- Medium, Kharif 2021

S. No.	IET No.	Name	(contd.) Zone V			Zone VI							
			@ ANK	MH Mean (1)	Zone V Mean (6)	KJT	SHR	PDG	MH Mean (3)	NWG	NVS	GJ Mean (2)	Zone VI Mean (5)
1	29741	HRI-209	101	109	96	100	99	106	102	106	89	98	100
2	29742	RRX-338	103	115	100	82	105	102	96	105	88	96	96
3	29743	HRI-211	103	115	101	99	101	106	102	107	94	100	101
4	29744	RRX-438	100	111	99	100	101	102	101	105	86	96	99
5	29745	PAN-2435	94	118	104	102	104	102	102	115	108	111	106
6	29746	RNE-0219	102	113	99	100	106	106	104	108	95	102	103
7	28999	Marshal-135 Pro (Repeat)	104	113	100	97	103	106	102	105	89	97	100
8	29747	RNE-0337	101	102	98	99	107	108	105	110	91	101	103
9	29748	US-384	99	110	97	107	100	102	103	105	90	98	101
10	29749	VNR-230	104	111	99	100	101	107	103	106	89	98	101
11	29750	PHI-21106	98	108	96	101	99	106	102	110	88	99	101
12	29751	PHI-21107	101	111	100	92	105	108	102	107	91	99	101
13	29752	CRHR-156	106	131	109	102	113	110	108	115	94	105	107
14	29753	PHI-20108	99	110	98	92	97	106	98	107	88	98	98
15	29754	IIRRH-154	98	108	97	91	99	102	97	107	92	100	98
16	28P67 (OBCH-1)		98	104	94	81	96	102	93	113	85	99	96
17	Bio-799 (OBCH-2)		98	109	99	95	98	106	100	108	86	97	99
18	HRI-174 (NCH)		101	100	98	99	101	106	102	110	90	100	101
19	NDR-359 (NCV)		99	111	99	97	99	106	101	112	91	102	101
20	Zonal Check Variety (ZCV)		91	100	90	100	100	107	102	110	96	103	103
21	Local Check Variety (LCV)		98	110	93	99	100	109	103	104	82	93	99
Exp. Mean			100	112	99	96	102	105	101	108	91	100	101

Note: @ Data of ANKUR Seeds (ANK) not included in the analysis

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Appendix-8 contd. : Days to 50% Flowering (DFF) of hybrids in IHRT- Medium, Kharif 2021

S. No.	IET No.	Name	Zone VII													Over All Mean (32)
			MTU	RGL	BAY	AP Mean (3)	IIRR	WGL	TS Mean (2)	MND	@ SRS	KA Mean (1)	CBT	@ KRK	Zone VII Mean (7)	
1	29741	HRI-209	85	88	93	89	103	101	102	95	109	95	94	102	94	97
2	29742	RRX-338	78	92	94	88	103	100	102	97	106	97	95	102	94	98
3	29743	HRI-211	87	91	94	91	106	105	105	98	115	98	96	104	97	100
4	29744	RRX-438	86	92	95	91	104	100	102	98	112	98	96	102	96	98
5	29745	PAN-2435	82	86	95	88	96	102	99	86	106	86	82	102	90	101
6	29746	RNE-0219	88	92	96	92	107	104	106	99	113	99	99	103	98	100
7	28999	Marshal-135 Pro (Repeat)	88	94	95	92	104	104	104	98	113	98	95	103	97	99
8	29747	RNE-0337	87	90	95	91	105	103	104	98	112	98	97	101	96	99
9	29748	US-384	87	90	92	90	102	100	101	97	112	97	97	100	95	98
10	29749	VNR-230	87	93	94	91	104	104	104	96	110	96	92	101	96	99
11	29750	PHI-21106	85	88	92	88	100	98	99	92	106	92	94	94	93	97
12	29751	PHI-21107	89	96	94	93	106	103	104	97	113	97	100	101	98	100
13	29752	CRHR-156		96	105	101	112	110	111	103	117	103	97	101	104	107
14	29753	PHI-20108	83	88	91	88	101	99	100	96	112	96	94	96	93	97
15	29754	IIRRH-154	81	90	94	88	98	99	99	89	108	89	87	90	91	98
16	28P67 (OBCH-1)		78	92	89	86	100	98	99	92	102	92	103	96	93	96
17	Bio-799 (OBCH-2)		81	91	89	87	99	102	101	90	108	90	87	93	91	98
18	HRI-174 (NCH)		87	93	94	91	104	100	102	99	112	99	93	102	96	99
19	NDR-359 (NCV)		86	90	91	89	104	100	102	99	113	99	93	94	95	98
20	Zonal Check Variety (ZCV)		85	88	89	88	102	95	99	101	113	101	100	94	94	101
21	Local Check Variety (LCV)		98	100	102	100	102	107	105	96	122	96	99	100	101	99
Exp. Mean			84	91	94	90	103	102	102	95	110	95	94	100	95	99

Note: @Data of SRS (Sirsi) not included in the analysis. Note: @Data of KRK (Karaikal) not included in the analysis.

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Appendix-9: Quality characteristics of IHRT-Medium Kharif 2021

S. No.	IET No.	Name	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
1	29741	HRI-209	81.9	73.1	71.8	5.74	2.20	2.60	MS	VOC	4.8	23.17	41
2	29742	RRX-338	81.6	72.8	67.6	6.25	2.30	2.71	LB	VOC	4.0	23.90	39
3	29743	HRI-211	80.0	71.5	69.7	6.65	2.28	2.47	LB	VOC	6.1	24.69	36
4	29744	RRX-438	80.6	72.1	66.2	6.66	2.18	3.05	LS	VOC	4.5	23.08	72
5	29745	PAN-2435	79.6	73.0	69.8	6.17	2.45	2.51	LB	OC	4.0	22.55	22
6	29746	RNE-0219	81.3	73.4	71.9	5.83	2.39	2.43	SB	VOC	7.0	26.51	22
7	28999	Marshal-135 Pro (Repeat)	82.1	73.8	71.3	6.10	2.28	2.67	LB	VOC	5.0	23.64	47
8	29747	RNE-0337	81.2	74.6	72.8	5.65	2.39	2.36	SB	VOC	7.0	28.03	22
9	29748	US-384	80.4	72.2	69.6	6.23	2.18	2.85	LB	VOC	5.6	25.10	25
10	29749	VNR-230	80.4	72.0	69.4	6.24	2.16	2.88	LB	VOC	4.8	23.61	46
11	29750	PHI-21106	81.8	71.1	62.6	6.15	2.28	2.69	LB	VOC	4.0	26.34	22
12	29751	PHI-21107	81.5	71.7	65.7	6.29	2.21	2.84	LB	VOC	4.0	26.66	47
13	29752	CRHR-156	81.6	71.3	67.7	6.75	2.16	3.12	LS	VOC	4.7	27.25	48
14	29753	PHI-20108	79.7	69.7	65.3	6.30	2.29	2.75	LB	VOC	4.0	24.55	58
15	29754	IIRRH-154	79.4	70.4	68.1	6.16	2.12	2.90	LB	A	4.0	24.20	25
16	HRI-174 (NCH)		81.1	72.9	69.9	6.11	2.21	2.76	LB	VOC	4.0	25.66	50
17	28P67 (OBCH-1)		79.9	72.4	69.7	6.44	2.21	2.91	LB	VOC	3.0	20.26	68
18	Bio-799 (OBCH-2)		81.0	72.9	69.9	6.64	2.18	3.04	LS	VOC	5.0	25.43	48
19	NDR-359 (NCV)		78.5	71.1	67.8	6.47	2.46	2.63	LB	VOC	4.0	24.49	22
20	Jaya (ZCV)		79.5	71.8	70.3	5.57	2.48	2.24	SB	OC	7.0	24.55	22
21	DRR Dhan-38 (LCV)		80.9	72.9	71.1	5.47	2.34	2.33	SB	VOC	4.7	26.89	47

Hull: Hulling %; Mill: Milling %; HRR: Head rice recovery; KL: Kernel length; KB: Kernel breadth; L/B: L/B ratio; ASV: Alkali spreading value; AC: Amylose content; GC: Gel consistency

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Appendix-10: Grain Yield (kg/ha) of hybrids in IHRT-Medium Slender, Kharif 2021

S. No	IET No.	Name	Zone III										Zone IV	Zone V (contd.)
			MSD	DNG	SYN	BR Mean (2)	CHN	RCI	TMT	JH Mean (2)	CTK	Zone III Mean (7)	TTB	JBP
1	29755	KRH-8	6618	5259	6175	5717	5605	6698(5)	6951	6698(6)	6288(4)	6107	5623(10)	5860(4)
2	29756	US-301	6475	4663	6385	5524	5828	5457	6403	5457	5035	5640	5905(7)	5673(6)
3	29757	VNR-229	6904(3)	5822	7724(3)	6773(7)	7424(1)	6408	7182	6408	6115(6)	6733(3)	7520(1)	5190(7)
4	29758	KRH-11	6663(8)	6165(7)	6070	6118	5865	6160	7600(4)	6160	6222(5)	6191(10)	4532	5927(3)
5	29759	MEPH-166	6842(5)	5024	6221	5623	6644(8)	6615(8)	7009	6615(8)	5231	6096	5818(9)	6033(2)
6	29760	TMRH-5766	6740(6)	5842	8968(1)	7405(1)	5976	6822(4)	8431(1)	6822(4)	4304	6442(5)	6431(3)	5713(5)
7	29761	CRHR-153	6658(9)	6256(5)	5094	5675	6756(7)	6698(5)	6687	6698(5)	5351(10)	6135	6085(5)	3577
8	29762	SRH-5402	6658(10)	6135(8)	7800(2)	6967(5)	6830(6)	5209	7288(6)	5209	5455(8)	6348(8)	6479(2)	6743(1)
9	29763	CRHR-154	7312(1)	6963(3)	7365(6)	7164(3)	7238(2)	7979(2)	7636(3)	7979(2)	6550(2)	7235(1)	5902(8)	4447
10	29764	CRHR-155	4943	7034(2)	7507(4)	7270(2)	6867(5)	8021(1)	8076(2)	8021(1)	6559(1)	6822(2)	5390	4027
11	JKRH-3333 (NCH-1)		6904(3)	5589	6932(7)	6261		5995	7394(5)	5995		6355(7)		4397
12	27P63 (NCH-2)		4208	5926	4711	5319	6570(9)	7814(3)	7237(7)	7814(3)	5788(8)	5836	6407(4)	3337
13	WGL-14 (NCV-1)		6475	6414(4)	7492(5)	6953(6)	5271	6656(7)	6867	6657(7)	6099(7)	6401(6)		2983
14	BPT-5204 (NCV-2)		6699(7)	7444(1)	6862(9)	7153(4)	7016(3)	5540	6876	5540	6377(3)	6657(4)	4885	4127
15	Zonal Check Variety (ZCV)		7149(2)	6202(6)	6866(8)	6534(8)	6978(4)	4755	6578	4754	5388(9)	6223(9)	5921(6)	2610
Exp. Mean			6483	6049	6811	6430	6491	6455	7214	6455	5769	6348	5915	4710
CD (0.05)			535.07	517.88	580.90	382.13	1112.34	1014.90	854.84	1014.91	1095.96	303.87	457.21	843.98
CV			4.94	5.12	5.10	3.55	10.21	9.40	7.09	9.4	11.32	2.86	4.59	10.72
F Value			**	**	**	**	**	**	**	**	**	**	**	**
NHC + CD (0.05)												6659		
BVC + CD (0.05)												6961		
D/S			15.6.21	21.6.21	2.7.21		25.6.21	26.6.21			29.6.21		12.7.21	19.6.21
D/P			15.7.21	18.7.21	28.7.21		26.7.21	24.7.21			27.7.21		6.8.21	11.7.21
Gross Plot Size (Sq.m)			10	10	10		10.86	10.3			8.4		10	10
Net Plot Size (Sq.m)			8.16	9.9	10		8.98	8.1			6.9		10	7.99

**-Highly Significant;*-significant;ns-not significant

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Appendix-10 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Medium Slender, Kharif 2021

S. No	IET No.	Name	(contd.) Zone V										Zone VI (contd.)		
			WRS	MP Mean(2)	RPR	@ VNR	CG Mean (1)	SKL	SND	@ ANK	MH Mean (2)	Zone V Mean (5)	KJT	SHR	PDG
1	29755	KRH-8	5486(4)	5673(3)	5511	7756(4)	5511	5799(6)	5276(7)	6149(1)	5742(5)	5977(5)	6408	6952(2)	5821(7)
2	29756	US-301	4765	5219(6)	5612(7)	6744	5612(7)	7885(1)	5517(5)	5830	6411(2)	6004(4)	6667(8)	4658	5512(8)
3	29757	VNR-229	4739	4965(8)	5916(6)	7805(2)	5916(6)	5298(8)	5740(2)	5809	5616(7)	5785(9)	8198(1)	4545	6774(1)
4	29758	KRH-11	6371(1)	6149(1)	6677(2)	7206	6677(2)	5799(6)	5682(3)	6035(5)	5839(4)	6242(1)	8164(2)	4970	4299
5	29759	MEPH-166	5120(7)	5577(4)	5440	7573(6)	5440	6341(4)	4541	5895	5592(8)	5849(6)	7492(3)	4909	6156(4)
6	29760	TMRH-5766	5427(5)	5570(5)	5546(10)	7840(1)	5546(10)	4735	5254(8)	6069(4)	5353	5798(8)	6618(9)	6597(4)	6455(3)
7	29761	CRHR-153	4654	4115	5926(5)	7096	5926(5)	6258(5)	4969	5920	5716(6)	5486	5644	4459	4212
8	29762	SRH-5402	4761	5752(2)	6369(3)	7423(7)	6369(3)	4088	5561(4)	5850	5167	5828(7)	6801(7)	7749(1)	4537
9	29763	CRHR-154	5572(2)	5009(7)	5086	7653(5)	5086	4151	4920	5972(7)	5014	5400	7466(4)	4165	5987(6)
10	29764	CRHR-155	5398(6)	4712	5599(8)	7406(8)	5599(8)	3421	4924	6135(2)	4827	5273	6093	5403	5382(9)
11	JKRH-3333 (NCH-1)			4397	6362(4)	7034	6362(4)	7217(3)	5147	6020(6)	6128(3)	6030(3)	6517(10)	5550(6)	6007(5)
12	27P63 (NCH-2)		4954(8)	4145	6772(1)	7783(3)	6772(1)	7593(2)	6083(1)	6128(3)	6601(1)	6093(2)	7293(5)	6442(5)	6500(2)
13	WGL-14 (NCV-1)		4684	3834	5582(9)	7193	5582(9)	2879	5472(6)	5935	4762	4961	7155(6)	6762(3)	4536
14	BPT-5204 (NCV-2)		5527(3)	4827	4449	7345	4449	4255	4394	5859	4836	5137	6157	5290	4529
15	Zonal Check Variety (ZCV)		4876(9)	3743	4458	6733	4458	2190	4871	5873	4311	4516	4205	4026	3999
Exp. Mean			5167	4912.47	5687	7373	5687	5194	5223	5965	5461	5625	6725	5498	5380
CD (0.05)			748.49	553.06	892.03	1129.13	892.03	804.49	906.27	834.34	440.12	262.85	1337.72	1402.78	689.30
CV			8.63	6.73	9.38	9.16	9.38	9.26	10.38	8.36	4.82	2.79	11.90	15.26	7.66
F Value			**	**	**	ns	**	**	*	ns	**	**	**	**	**
NHC + CD (0.05)												6356			
BVC + CD (0.05)												5400			
D/S			19.6.21		21.6.21	25.6.21		22.6.21	8.6.21				14.6.21	17.6.21	
D/P			10.7.21		19.7.21	15.7.21		15.7.21	19.7.21				4.7.21	13.7.21	
Gross Plot Size (Sq.m)			10		14.6	11.25		10	10				5.74	5.69	
Net Plot Size (Sq.m)			9.01		10.08	6.25		7.99	7.48				3.8	3.85	

Note: @ Data of VNR Seeds (VNR) and Ankur Seeds (ANK) not included in the analysis due to Non-Significant F Values.

**-Highly Significant;*-significant;ns-not significant

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Appendix-10 contd.: Grain Yield (kg/ha) of hybrids in IHRT-Medium Slender, Kharif 2021

S. No	IET No.	Name	(contd.) Zone VI				Zone VII (contd.)							
			MH Mean (3)	@ NWG	NVS	Zone VI Mean (4)	MTU	BPT	RGL	BAY	AP Mean (4)	IIRR	WGL	TS Mean (2)
1	29755	KRH-8	6394(4)	3222(6)	5482	6166(5)	5759(7)	4201(8)	5508	6667(3)	5534(6)	5190(10)	4976	4977
2	29756	US-301	5612	2377	5681(9)	5629	3373	3722	6589(1)	6402(6)	5021	5746(5)	6045(5)	6045(5)
3	29757	VNR-229	6506(3)	4384(1)	6178(3)	6424(2)	6623(4)	4748(3)	6144(3)	5516	5758(5)	6182(3)	5779	5779
4	29758	KRH-11	5811	3377(5)	4864	5574	5953(6)	3912	5445	6403(5)	5428	5428(7)	4466	4466
5	29759	MEPH-166	6186(6)	4184(3)	6044(5)	6151(6)	4536	3760	5789(7)	7314(1)	5350	6641(1)	5891(6)	5891(6)
6	29760	TMRH-5766	6557(2)	3068(9)	5635(10)	6326(3)	9502(1)	3648	6466(2)	6357(7)	6494(1)	6294(2)	6933(3)	6933(3)
7	29761	CRHR-153	4771	939	6853(1)	5292	6536(5)	5355(1)	5567	6212(8)	5917(2)	4818	5471	5471
8	29762	SRH-5402	6362(5)	4199(2)	6011(7)	6275(4)	3350	4478(5)	6028(5)	6154(9)	5003	5379(8)	7135(1)	7135(1)
9	29763	CRHR-154	5872(9)	2688(10)	6175(4)	5948	5206(9)	5169(2)	5411	5868	5414	5108	5008	5008
10	29764	CRHR-155	5626	2652	5804(8)	5670	3370	4333(6)	5489	5770	4741	5503(6)	5870(7)	5870(7)
11	JKRH-3333 (NCH-1)		6024(8)	2653	5612	5921(8)			5278	5082	5278		5290	5290
12	27P63 (NCH-2)		6745(1)	3763(4)	6275(2)	6627(1)	3030	3534	5644	7096(2)	4826	5860(4)	5333	5333
13	WGL-14 (NCV-1)		6151(7)	3115(7)	4835	5822	7879(2)	3834	5840(6)	6068(10)	5905(3)	5324(9)	6960(2)	6959(2)
14	BPT-5204 (NCV-2)		5325	1763	6017(6)	5498	5256(8)	4730(4)	5259	6599(4)	5461	4146	6795(4)	6795(4)
15	Zonal Check Variety (ZCV)		4077	966	4440	4167	7496(3)	4203(7)	6111(4)	5505	5829(4)	3963	5232	5232
Exp. Mean			5868	3109	5727	5833	5421	4259	5771	5975	5464	5399	5812	5812
CD (0.05)			749.11	640.42	1053.01	552.9	1115.16	739.99	716.87	1342.74	474.11	1155.49	1099.23	1099.23
CV			7.63	10.33	11.00	5.67	11.94	10.35	7.43	13.43	5.19	12.75	11.31	11.31
F Value			**	**	**	**	**	**	**	**	**	**	**	**
NHC + CD (0.05)						7180								
BVC + CD (0.05)						6375								
D/S				17.6.21	14.6.21		13.7.21	30.7.21	9.7.21	22.6.21		9.7.21	24.6.21	
D/P				26.7.21	8.7.21		6.8.21		8.8.21	17.7.21		8.8.21	21.7.21	
Gross Plot Size (Sq.m)				7.2	12.15		12.6	7.8	12.87	10.00		12.87	7.2	
Net Plot Size (Sq.m)				5.28	9.95		9.9	9.95	9.99	10.00		9.99	6.27	

Note: @ Data of Nawagam (NWG) not included in the analysis due to Low Grain Yield (Kg/Ha).

**-Highly Significant;*-significant;ns-not significant

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Appendix-10 contd. : Grain Yield (kg/ha) of hybrids in IHRT-Medium Slender, Kharif 2021

S. No	IET No.	Name	(contd.) Zone VII									Overall Mean (27)
			@ MND	MLG	@ SRS	KA Mean (1)	CBT	ADT	TN Mean (2)	KRK	Zone VII Mean (10)	
1	29755	KRH-8	8849(5)	5300(3)	2660(3)	5300(3)	4857	5853	5355	4439	5558	5894
2	29756	US-301	6244	4970(4)	2040	4970(4)	6704(1)	5694	6199(9)	4725	5555	5739
3	29757	VNR-229	10173(1)	5400(2)	3100(2)	5400(2)	5930(7)	6667(6)	6299(8)	4663	5986(8)	6253(2)
4	29758	KRH-11	9520(3)	4120(7)	2485(5)	4120(7)	4768	5357	5063	5098(8)	5401	5838
5	29759	MEPH-166	9182(4)	4140(6)	2330(8)	4140(6)	4822	9425(1)	7123(1)	5789(5)	6100(5)	6086(4)
6	29760	TMRH-5766	7169	4500(6)	2430(6)	4500(6)	6489(3)	6131	6310(6)	5922(3)	6588(1)	6379(1)
7	29761	CRHR-153	5929	2700	1760	2700	5784(8)	8016(2)	6900(3)	5216(6)	6139(3)	5835
8	29762	SRH-5402	8218(7)	3580	1610	3580	4672	4742	4707	5125(7)	5456	5939(7)
9	29763	CRHR-154	8129(8)	3690	2560(4)	3690	5689	7063(5)	6376(5)	7498(1)	6063(6)	6145(3)
10	29764	CRHR-155	8480(6)	3700	2040	3700	6289(5)	6329	6309(7)	4282	5460	5815
11	JKRH-3333 (NCH-1)		7924(9)	3040	1390	3040	5748	4405	5077		5551	6022(5)
12	27P63 (NCH-2)		9556(2)	5420(1)	3560(1)	5420(1)	5493	7480(3)	6487(4)	4631	5558	5990(6)
13	WGL-14 (NCV-1)		7329(10)	3360	1980	3360	6124(6)	5556	5840	5076(9)	6059(7)	5826
14	BPT-5204 (NCV-2)		7160	3750	1620	3750	6388(4)	5972	6180(10)	7221(2)	6174(2)	5840
15	Zonal Check Variety (ZCV)		5640	2620	2420(7)	2620	6604(2)	7460(4)	7032(2)	5881(4)	6136(4)	5424
Exp. Mean			8189	4019	2266	4019	5757	6410	6084	5397	5852	5935
CD (0.05)			1129.13		748.79		1066.47	592.21	605.1	1416.14	340.75	179.04
CV			9.16		15.41		11.08	5.52	5.95	15.63	3.48	1.8
F Value			ns	**	**	**	**	**	**	**	**	**
NHC + CD (0.05)											5899	6201
BVC + CD (0.05)											6515	6019
D/S			13.7.21		17.6.21		6.8.21	4.9.21		24.8.21		
D/P			4.8.21		8.7.21		3.9.21	4.10.21		28.9.21		
Gross Plot Size (Sq.m)			7.5		5		10.3	10.8		6		
Net Plot Size (Sq.m)					2.79		8.4	10.4		6		

Note: @ Data of Sirsi (SRS) not included in the analysis due to Low Grain Yield (Kg/Ha) and Data of Mandya (MND) not included in the analysis due to Non-Significant F value.

**-Highly Significant;*-significant;ns-not significant

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Appendix-11: Days to 50% Flowering (DFF) of hybrids in IHRT- Medium Slender, Kharif 2021

S. No	IET No.	Name	Zone III										Zone IV	Zone V (contd.)
			MSD	DNG	SYN	BR Mean (2)	CHN	RCI	TMT	JH Mean (2)	CTK	Zone III Mean (7)	TTB	JBP
1	29755	KRH-8	108	93	89	91	103	100	94	97	97	98	94	103
2	29756	US-301	106	93	89	91	105	99	91	95	85	96	98	100
3	29757	VNR-229	92	95	87	91	97	100	89	95	97	94	89	96
4	29758	KRH-11	103	93	87	90	101	100	92	96	102	97	94	98
5	29759	MEPH-166	103	93	85	89	100	100	93	96	95	96	95	96
6	29760	TMRH-5766	108	94	90	92	94	99	101	100	92	97	90	90
7	29761	CRHR-153	110	104	97	100	109	107	96	102	107	104	102	108
8	29762	SRH-5402	102	90	89	90	98	100	93	96	99	96	93	97
9	29763	CRHR-154	103	106	95	100	109	106	99	102	107	103	102	109
10	29764	CRHR-155	102	104	102	103	107	107	98	102	107	104	95	109
11	JKRH-3333 (NCH-1)		88	93	88	91		100	90	95		92		102
12	27P63 (NCH-2)		118	95	91	93	106	103	95	99	99	101	99	102
13	WGL-14 (NCV-1)		108	104	99	102	109	104	96	100	97	103		106
14	BPT-5204 (NCV-2)		110	105	109	107	111	103	102	103	111	107	88	109
15	Zonal Check Variety (ZCV)		86	103	113	108	113	104	95	100	111	104	99	108
Exp. Mean			104	96	91	94	102	102	95	98	99	98	95	101

Appendix-11 contd.: Days to 50% Flowering (DFF) of hybrids in IHRT- Medium Slender, Kharif 2021

S. No	IET No.	Name	(contd.) Zone V										Zone VI (contd.)	
			WRS	MP Mean (2)	RPR	@ VNR	CG Mean (1)	SKL	SND	@ ANK	MH Mean (2)	Zone V Mean (5)	KJT	SHR
1	29755	KRH-8	96	99	105	92	105	93	113	98	103	102	90	94
2	29756	US-301	90	95	107	90	107	90	114	100	102	100	90	93
3	29757	VNR-229	90	93	99	86	99	90	103	95	96	96	87	92
4	29758	KRH-11	95	96	105	89	105	91	107	97	99	99	90	93
5	29759	MEPH-166	95	96	103	87	103	90	103	97	96	98	80	94
6	29760	TMRH-5766	81	86	94	91	94	77	100	95	89	88	80	85
7	29761	CRHR-153	102	105	112	101	112	104	124	105	114	110	91	102
8	29762	SRH-5402	89	93	104	88	104	88	106	95	97	97	86	91
9	29763	CRHR-154	101	105	111	99	111	101	109	106	105	106	96	100
10	29764	CRHR-155	99	104	112	98	112	101	122	104	112	109	93	100
11	JKRH-3333 (NCH-1)			102	105	90	105	92	106	93	99	101	80	89
12	27P63 (NCH-2)		96	99	106	94	106	97	118	104	108	104	88	98
13	WGL-14 (NCV-1)		101	104	111	98	111	97	121	102	109	107	80	100
14	BPT-5204 (NCV-2)		98	103	107	96	107	96	118	97	107	105	94	99
15	Zonal Check Variety (ZCV)		100	104	114	101	114	103	118	105	110	109	86	91
Exp. Mean			94	97	105	92	105	92	110	99	101	100	88	94

Note: @ Data of VNR Seeds (VNR) and Ankur Seeds (ANK) not included in the analysis

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Appendix-11contd. : Days to 50% Flowering (DFF) of hybrids in IHRT- Medium Slender, Kharif 2021

S. No	IET No.	Name	(contd.) Zone VI					Zone VII (contd.)						
			PDG	MH Mean (3)	@ NWG	NVS	Zone VI Mean (4)	MTU	BPT	RGL	BAY	AP Mean (4)	IIRR	WGL
1	29755	KRH-8	106	97	111	99	97	88	92	90	98	92	103	101
2	29756	US-301	102	95	108	98	96	85	104	92	96	94	104	98
3	29757	VNR-229	99	93	94	85	91	82	95	87	88	88	103	96
4	29758	KRH-11	102	95	114	95	95	87	95	90	95	92	102	101
5	29759	MEPH-166	101	92	111	92	92	84	96	90	93	91	96	99
6	29760	TMRH-5766	95	87	117	82	86	105	95	87	91	94	95	92
7	29761	CRHR-153	108	100	115	94	99	96	102	98	90	96	108	104
8	29762	SRH-5402	99	92	114	89	91	81	95	90	92	90	93	96
9	29763	CRHR-154	108	101	107	101	101	98	99	98	101	99	107	105
10	29764	CRHR-155	108	100	120	98	100	96	99	98	102	99		113
11		JKRH-3333 (NCH-1)	102	90	104	85	89			86	87	87		100
12		27P63 (NCH-2)	106	97	110	97	97	89	92	92	97	93	106	100
13		WGL-14 (NCV-1)	108	96	115	97	96	94	101	94	99	97	107	102
14		BPT-5204 (NCV-2)	110	101	120	96	100	96	104	100	105	101	105	104
15		Zonal Check Variety (ZCV)	110	96	105	90	94	95	99	94	99	97	107	92
Exp. Mean			103	95	111	94	95	90	97	92	95	93	101	101

Note: @ Data of Nawagam (NWG) not included in the analysis

Appendix-11 contd.: Days to 50% Flowering (DFF) of hybrids in IHRT- Medium Slender, Kharif 2021

S. No	IET No.	Name	(contd.) Zone VII										Overall Mean (27)
			TS Mean (2)	@ MND	MLG	@ SRS	KA Mean (1)	CBT	ADT	TN Mean (2)	KRK	Zone VII Mean (10)	
1	29755	KRH-8	102	97	102	113	102	94	101	97	95	96	98
2	29756	US-301	101	94	96	109	96	94	101	97	100	97	97
3	29757	VNR-229	100	95	101	108	101	95	103	99	93	94	94
4	29758	KRH-11	102	104	101	109	101	95	105	100	96	97	97
5	29759	MEPH-166	98	96	100	108	100	95	104	100	110	97	96
6	29760	TMRH-5766	94	89	89	97	89	87	105	96	109	96	93
7	29761	CRHR-153	106	102	109	111	109	98	110	104	103	102	103
8	29762	SRH-5402	95	89	100	109	100	87	100	94	87	92	94
9	29763	CRHR-154	106	102	110	115	110	102	106	104	100	103	103
10	29764	CRHR-155	113	98	112	115	112	102	104	103	101	103	103
11		JKRH-3333 (NCH-1)	100	96	102	112	102	87	109	98		95	94
12		27P63 (NCH-2)	103	98	103	111	103	98	102	100	101	98	100
13		WGL-14 (NCV-1)	105	102	105	115	105	98	109	103	101	101	102
14		BPT-5204 (NCV-2)	104	103	110	106	110	98	110	104	99	103	104
15		Zonal Check Variety (ZCV)	100	100	108	114	108	95	109	102	101	100	102
Exp. Mean			102	96	102	109	102	95	104	99	99	98	98

Note: @ Data of Mandya (MND) and Sirsi (SRS) not included in the analysis

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Appendix-12: Quality characteristics of IHRT-Medium Slender Kharif 2021

S. No.	IET No.	Name	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
1	29755	KRH-8	79.4	69.2	66.1	5.25	2.07	2.53	MS	A	5.2	23.23	22
2	29756	US-301	80.3	72.0	70.5	5.41	2.01	2.61	MS	VOC	4.0	21.70	22
3	29757	VNR-229	79.5	70.4	66.9	6.33	2.18	2.90	LB	VOC	4.0	22.88	43
4	29758	KRH-11	81.2	72.1	70.9	5.27	2.00	2.63	MS	VOC	4.0	23.96	22
5	29759	MEPH-166	80.1	71.5	69.4	5.39	1.95	2.76	MS	VOC	5.0	24.90	22
6	29760	TMRH-5766	80.7	71.5	68.7	6.40	2.08	3.07	LS	VOC	5.0	22.85	25
7	29761	CRHR-153	79.4	70.1	68.1	5.44	1.93	2.81	MS	A	5.8	26.10	40
8	29762	SRH-5402	79.9	71.5	68.0	5.29	2.00	2.54	MS	VOC	4.0	22.67	35
9	29763	CRHR-154	81.3	73.2	71.3	5.65	1.85	3.05	SS	VOC	5.7	24.90	22
10	29764	CRHR-155	79.4	71.6	69.3	5.46	1.85	2.95	MS	A	5.7	25.13	22
11	JKRH-3333 (NCH-1)												
12	27P63 (NCH-2)		82.0	70.6	68.6	5.23	1.93	2.70	MS	A	4.0	24.72	22
13	WGL-14 (NCV-1)		79.9	70.8	68.2	5.22	1.89	2.76	MS	A	4.0	23.26	22
14	BPT-5204 (NCV-2)		80.2	70.8	69.4	5.20	1.91	2.72	MS	A	4.0	24.28	32
15	ADT-49 (ZCV)		77.1	70.3	67.4	5.01	1.82	2.75	MS	A	7.0	23.34	30

Hull: Hulling %; Mill: Milling %; HRR: Head rice recovery; KL: Kernel length; KB: Kernel breadth; L/B: L/B ratio; ASV: Alkali spreading value; AC: Amylose content; GC: Gel consistency

ADVANCE VARIETY TRIAL 2 &1 – AEROBIC (AVT 2 &AVT 1 – AEROB)

Locations: 27

Test Entries: 29

Checks: National (NC): CR Dhan 201; Zonal (ZC): CR Dhan 202 (Northern, Eastern and Central), AAUDR-1 (Western), MAS 946-1 (Southern); Hybrid (HC): PA 6129; Local (LC). Table: 2.1

The ‘Advanced Variety Trial 1 – Aerobic (AVT 1 – Aerob)’ was constituted with 29 test entries (4 in 3rd year of testing; 25 in 2nd year of testing) along with four checks (NC, ZC, HC and LC). AVT 1 – Aerob was sent to 27 locations and data was received from 22 centres. The data was not received from Bhubaneswar, Arundhutinagar, Jabalpur, Rudrur and Jagtial. Among the 22 centres from where the data was received, the data was not considered due to low experimental mean (i.e., <3000 kg/ha) from Ludhiana, Pusa, Ranchi, Hazaribag, Masodha, Gorakhpur, Rewa, and Derol. The experimental mean grain yield varied from 6388 kg/ha at Kaul to 619.89 kg/ha at Derol. The CV ranged from 5.28% (Bikramganj) to 27.53% (Lembucherra). The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 2.2, 2.3, 2.4, 2.5 and 2.6 respectively.

AVT-2 (Entries which are in 3rd Year of Testing):

Three-year performance of test entries

Four entries (IET 28645 – Hybrid; IET 27951; IET 27937 - Hybrid and IET 28631) were evaluated in 3rd year. But, IET 27951 and IET 27937 were tested during 2018, 2019, 2020 and 2021 i.e., four years.

IET 28645 (YRH – 2027), a hybrid did not show yield advantage over the BVC and the HC in any Zone during AVT 2 testing during 2021. Also, the performance of IET 28645 was inconsistent during IVT (2019) and AVT 1 (2020), **hence it is discontinued**.

IET 27951 (HURS 18-2-1R-98976-20-1-2-2) has been tested for four years (2018, 2019, 2020, and 2021). It exhibited yield advantage of 16.0% over the BVC in Zone II i.e., in Haryana during 2021. Similarly, it had shown yield advantage over the BVC of 9.0% and 30.0% over the BVC in Haryana in 2018 and 2019. The grain quality traits are: HRR – 71.7%, AC – 24.14 and GC - 54. Since it has shown yield superiority only in one state, **it is not found promising and hence discontinued**.

IET 27937 (IIRRH – 124) is a hybrid entry that was tested for during 2018, 2019, 2020 and 2021. This hybrid exhibited a yield advantage of 42.7% and 8.9% over the BVC and HC respectively during 2021 (i.e., AVT 2) in Zone VI i.e., in Gujarat. Similarly, it had shown a yield superiority of 38.0% and 36.0% over the BVC and HC respectively in 2020 also in Gujarat. While in 2018 it had exhibited yield superiority in Tripura (43.4% / 36.0%) and did not show any advantage during 2019 in any zone. The grain quality traits are: HRR – 70.2%, AC – 24.43 and GC - 22. **Overall, IET 27937 performed only Gujarat in 2020 and 2021, hence not found promising, discontinued**.

IET 28631 (RCPR63-1R 97034-21-2-1-3) exhibited a yield advantage of 14.1% over the BVC in Zone VI and 10.0% advantage over the BVC in Gujarat during 2021 (in AVT 2). IET 28631 also showed a yield superiority of 40.0% over the BVC in Gujarat during 2020

(i.e., AVT 1). The grain quality traits are: HRR – 73.2%, AC – 24.17 and GC - 52. Since *IET 28631 performed only in Gujarat it is not found promising, and discontinued.*

Year-wise performance of test entries in IVT, AVT 1 and AVT 2

IET No.	Year	Zone	Yield (kg/ha)	Yield adv. over BVC/HC (%)	States	Yield (Kg/ha)	Yield adv. over BVC/HC (%)	Remarks	
28645 (H)	2019	ZVII	5626	5.6/31.9	-	-	-	Discontinued due to inconsistent performance.	
	2020	ZVI	4052	13.0/16.0	GU	4678	21.0/19.0		
	2021	-	-	-	-	-	-		
27951	2018	ZII	4890	9.0	HA	6000	9.0	Discontinued as performed better over BVC only in Haryana in 2018, 2020 & 2021.	
		ZIV	6857	16.0	TR	6857	16.0		
	2019	ZII	4839	11.0	PU	4495	-		
		HA	5183	30.0					
	2020	ZVI	3838	7.0	GU	4143	7.0		
TN		5464	7.0						
2021	ZII	5278	16.0	HA	5278	16.0			
27937 (H)	2018	ZII	5522	23.4/5.6	-	-	-	Discontinued as performed better over BVC / HC only in Gujarat in 2020 & 2021	
		ZIV	8500	43.4/36.0	TR	8500	43.4/36.0		
	2019	-	-	-	-	-	-		
		2020 (R)	ZII	5366	32/125	PU	5366		32/125
			ZV	5719	25/40	CH	5719		25/40
		2021	ZVI	4561	27/31	GU	5352		38/36
ZVI	5748		42.7/8.9	GU	5748	42.7/8.9			
28631	2019	ZIII	5042	7.0	BI	5042	7.0	Discontinued as performed over BVC only in Gujarat during 2020 & 2021	
		ZV	6049	8.0	CH	6049	8.0		
		ZVII	5918	11.0	TE	7853	7.0		
	2020	ZII	4597	13.0	PU	4597	13.0		
		ZVI	4539	26.0	GU	5409	40.0		
2021	ZVI	4599	14.1	GU	5450	10.0			

AVT-1 (Entries which are in 2nd Year of Testing):

25 entries are in second year of testing, their performance is discussed below.

Overall

On overall basis, the mean experimental yield was 4261kg/ha. Mean yield of the entries ranged from 3566 kg/ha (IET 29433) to 5062 kg/ha (IET 29412) while, the days to 50% flowering (DFF) ranged from 78 days (IET 29396) to 97 days (IET 29402). The plant height ranged from 91.42 cm (IET 29422) to 114 cm (IET 29405). The highest number of panicles/m² was in IET 29396 (343) while the lowest were in IET 29430 (275). Six entries (IETs 29412 [H], 29411, 29415, 29409, 29424 and 28631) showed yield superiority over the best variety check (BVC) and or hybrid check (HC). Among the six entries, IET 28631 was in 3rd year of testing and was found promising with yield superiority of 5.3% over BVC i.e., local check (LC).

Zone II – Northern

In Zone II, the trial was sent to Punjab (Ludhiana), and Haryana (Kaul and Karnal). The data was received from Ludhiana, Kaul and Karnal. The data from Ludhiana had low

experimental yield (2284 kg/ha). The mean yield ranged from 2284 kg/ha (Ludhiana) - 6388 kg/ha (Kaul) while, the mean CV range was 6.36% at Kaul to 18.04% at Karnal. The mean yield ranged from 2353 kg/ha (IET 29042) to 6365 kg/ha (IET 27951). DFF varied from 80 days (IET 29421) to 114 days (IET 29402). The plant height ranged from 83 cm (IET 29402) to 121 cm (IET 29405). The highest number of panicles/m² was in IET 29422 (471) while the lowest were in IET 29430 (308).

In Zone II, 15 entries exhibited a yield advantage over the BVC and or HC as listed in the table. Among these entries, **IET 27951** was in 3rd year of testing and was found promising with a yield advantage of 16.0% over the BVC, i.e., zonal check (ZC). Four entries, IET 29420 (AC – 27.77; GC – 22), IET 29446 (AC – 17.92; GC – 52), IET 29448 (AC – 26.86; GC – 22; ASV – 4.0) and IET 29430 (AC – 26.37; GC – 30; ASV – 4.0) were dropped owing to quality parameters as indicated.

Zone III - Eastern

The trial was sent to 10 centres across Odisha, Bihar, Jharkhand and Uttar Pradesh in Zone III. The data was received from all centres except Bhubaneswar. The data was not considered from Pusa, Ranchi, Hazaribag, Masodha and Gorakhpur due to low experimental yield (<3000 kg/ha). The experimental mean yield ranged from 1775 kg/ha (Ranchi) –5932 kg/ha (ICAR-Patna) while, the mean CV range was 5.28% at Bikramganj to 25.21% at Gorakhpur. The mean yield of test entries ranged from 3626 kg/ha (IET 29444) to 5218 kg/ha (IET 29412). DFF varied from 73 days (IET 28645) to 99 days (IET 29402). The plant height ranged from 98 cm (IET 29423) to 124 cm (IET 27937). The panicles/m² was highest in IET 29411 (328) while the lowest were in IETs 29426 and 28645 (237). **Five entries (IETs 29411, 29402, 29394, 29415 and 29410) in Zone III had yield superiority over the BVC and or HC.** Though, IET 29402 had yield advantage over the BVC i.e., ZC, it was dropped due to its grain quality traits (AC – 26.63; GC – 22; and ASV – 4.0).

Zone IV–North Eastern

In Zone IV, the trial was sent to only two centres in Tripura (Lembucherra and Arundhutinagar) and Haryana (Kaul and Karnal). The experiment failed at Arundhutinagar. The data was received from Lembucherra. The experimental mean yield was 3904 kg/ha and the CV was 27.53%. The mean yield of test entries ranged from 2218 kg/ha (IET 27951) - 6231 kg/ha (IET 29411) while, the DFF ranged from 69 days (IET 29431) to 83 days (IET 29402). The plant height ranged from 91.5 cm (IET 29422) to 125 cm (IET 28631). The highest number of panicles/m² was in IET 29396 (438) while the lowest were in IET 29430 (250). **IET 29411 was the only test entry that out-yielded the BVC i.e., LC by 21.5%, hence it is promoted.**

Zone V - Central

The trials were sent to Madhya Pradesh (Rewa and Jabalpur) and Chhattisgarh (Raipur and Jagdalpur). The data was not received from Jabalpur and data was not considered from Rewa owing to low experimental mean yield (932 kg/ha). The test entries mean yield ranged from 2739 kg/ha (IET 29402) - 4550 kg/ha (IET 27937). The DFF ranged from 80 days (IET 29396) to 105 days (IET 29402). The plant height among the test entries ranged from 82.48 cm (IET 29422) to 110.83 cm (IET 29405). The highest number of panicles/m² was in IET 28650 (369) while the lowest were in IET 29430 (139). None of the entries exhibited the required yield advantage over the BVC or HC, **hence no entry was promoted.**

Zone VI - Western

In Zone VI, the trial was sent to Parbhani (Maharashtra) along with Navsari, Derol and Vyara in Gujarat. The data was received from all the four centres but, data from Derol was not considered due to very low experimental mean yield of 619 kg/ha. The CV% ranged from 9.35 at Parbhani to 22.33 at Derol. The test entries mean yield ranged from 3571 kg/ha (IET 29427) - 5748 kg/ha (IET 27937). The DFF ranged from 79 days (IETs 29412, 29396, 29405, 29420, 29446, and 29409) to 92 days (IET 29402). The plant height among the test entries ranged from 95.0 cm (IET 29422) to 115.88 cm (IET 29402). Panicles/m² were highest in IET 29421 (24) and lowest in IET 29423 (194).

In Zone VI, 13 entries have shown a yield superiority over the BVC i.e., National Check (NC) and or HC as listed in the table. Among these entries, **IET 27937 (H) and IET 28631** were in 3rd year of testing and were found promising. IET 27937 (H) had a yield advantage of 42.7% and 8.9% over BVC and HC respectively while, IET 28631 had 14.1% over the BVC. Four entries, IET 29448 (AC – 26.86; GC – 22; ASV – 4.0), IET 29420 (AC – 27.77; GC – 22), IET 29446 (AC – 17.92; GC – 22; ASV – 4.0) and IET 29402 (AC – 26.63; GC – 22; ASV – 4.0) were dropped owing to quality parameters as indicated. *The remaining seven entries (IETs 29411, 29415, 29409, 29436, 29421, 29424 and 29405) were promoted based on yield advantage and desirable grain quality.*

Zone VII – Southern

In Zone VII, the trial was sent to locations across three states, Telangana (Rudrur and Jagtial), Karnataka (Mandya) and Tamil Nadu (Coimbatore). The data was not received from Rudrur and Jagtial. The experimental mean yield of Coimbatore and Mandya was 3428 kg/ha and 4371 kg/ha respectively while, the CV % was 12.32 and 8.82 respectively. The mean yield range in the test entries was 2588 kg/ha (IET 29433) to 5256 kg/ha (IET 29421). The DFF ranged from 81 days (IET 29396) to 101 days (IET 29430). The plant height varied from 72.85 cm (IET 29423) to 109.80 cm (IET 29405) while, panicles/m² ranged from 399 (IET 27951) to 539 (IET 29427). *IET 29421 was the only entry that out-yielded the BVC i.e., LC by 11.2% and it also had desirable grain quality, therefore it is promoted.*

Performance of the test entries in different zones

S. No.	Entry (IET Nos.)	Yield (kg/ha)	Yield Adv. over BVC or HC	Remarks
Overall				
1	29412 (H)	5062	20.1 / 5.7	Promoted
2	29411	5024	19.2	Promoted
3	29415	4614	9.5	Promoted
4	29409	4589	8.9	Promoted
5	29424	4580	8.7	Promoted
6	28631 (3rdYr)	4442	5.3	Promising
	CR Dhan 201 (NC)	4053		
	Zonal Check	4025		
	Local Check	4215		
	PA 6129 (HC)	4791		
Zone II-Northern				
1	29412 (H)	6365	39.9/10.4	Promoted
2	29436	6020	32.3	Promoted

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S. No.	Entry (IET Nos.)	Yield (kg/ha)	Yield Adv. over BVC or HC	Remarks
3	29424	5886	29.4	Promoted
4	29420	5652	24.2	Dropped due to AC-27.77 & GC-22
5	29423	5552	22.0	Promoted
6	29446	5396	18.6	Dropped due to AC-17.92 & GC-52
7	29409	5361	17.8	Promoted
8	29396	5323	17.0	Promoted
9	27951 (3rdYr)	5278	16.0	Promising
10	29415	5218	14.7	Promoted
11	29411	5174	13.7	Promoted
12	29448	5130	12.7	Dropped due to AC-26.86, GC-22 & ASV-4.0
13	29427	5040	10.8	Dropped due to AC-26.37, GC-30 & ASV-4.0
14	29430	4965	9.1	Promoted
15	29422	4951	8.8	Promoted
	CR Dhan 201 (NC)	4515		
	Zonal Check	4550		
	Local Check	4387		
	PA 6129 (HC)	5763		
Zone III-Eastern				
1	29411	5044	13.1	Promoted
2	29402	4998	12.0	Dropped due to AC-26.63, GC-22 & ASV-4.0
3	29394	4801	7.6	Promoted
4	29415	4793	7.4	Promoted
5	29410	4715	5.7	Promoted
	CR Dhan 201 (NC)	4234		
	Zonal Check	4461		
	Local Check	3916		
	PA 6129 (HC)	5251		
Zone IV-North Eastern				
1	29411	6231	21.5	Promoted
	CR Dhan 201 (NC)	4200		
	Zonal Check	3525		
	Local Check	5130		
	PA 6129 (HC)	3446		
Zone V-Central				
None Promoted				
Zone VI-Western				
1	27937 (3rd Year/H)	5748	42.7/8.9	Promising
2	29411	5667	40.7	Promoted
3	29415	5072	25.9	Promoted
4	29409	5030	24.8	Promoted
5	29448	4953	22.9	Dropped due to AC-26.86, GC-22 & ASV-4.0
6	29436	4711	16.9	Promoted
7	29420	4699	16.6	Dropped due to AC-27.77 & GC-22
8	29421	4634	15.0	Promoted

S. No.	Entry (IET Nos.)	Yield (kg/ha)	Yield Adv. over BVC or HC	Remarks
9	28631 (3rdYr)	4599	14.1	Promising
10	29424	4590	13.9	Promoted
11	29446	4553	13.0	Dropped due to AC-17.92, GC-22 & ASV-4.0
12	29405	4461	10.7	Promoted
13	29402	4310	6.5	Dropped due to AC-26.63, GC-22 & ASV-4.0
	CR Dhan 201 (NC)	4029		
	Zonal Check	3986		
	Local Check	3879		
	PA 6129 (HC)	5280		
Zone VII-Southern				
	29421	5256	11.2	Promoted
	CR Dhan 201 (NC)	4414		
	Zonal Check	3438		
	Local Check	4727		
	PA 6129 (HC)	3976		

INITIAL VARIETY TRIAL - AEROBIC (IVT-AEROB)

Locations: 27

Test Entries: 60

Checks: CR Dhan 201-National; CR Dhan 202 (Northern, Eastern, North Eastern & Central), AAUDR-1 (Western), MAS 946-1 (Southern)-Zonal; PA6129 (Hybrid) and Local Check **Table: 2.7**

The Initial Variety Trial – Aerobic (IVT-Aerob) was constituted with 60 test entries and four checks (NC, ZC, HC and LC). The trial was sent to 27 locations but data was not received from 6 locations that including Karnal-CSSRI, Bhubaneswar, Arundhutinagar, Rewa, Jabalpur and Jagtial. Further, the data received from the following centers were not considered for analysis due to low mean yield at Ludhiana, Ranchi, Hazaribagh, Masodha, Gorakhpur, Derol, Vyara and due to high CV % Lembucherra. CV% at experimental locations varied from 6.2% (Kaul) to 16.53% at Pusa. The experimental mean of grain yield ranged from 3051 kg/ha at Raipur to 4978 kg/ha at Bikramganj.

Overall performance of entries:

Overall mean yield ranged from 2514 kg/ha (IET 30030) to 4554 kg/ha (IET 30020); days to 50% flowering ranged from 79 days (IET 30034 and IET 30045) to 100days (IET 30030); plant height varied from 76.19 cm (IET 30036) to 104.84 cm (IET 30028) and number of panicles/m² ranged from 205 (IET 30007) to 297 (IET 30032). The data pertaining to yield, flowering, plant height and panicles/m² were presented in tables 2.8 and 2.9. The performance of the test entries was discussed below.

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On an overall basis, 17 entries are found significantly superior to the local check (3852 kg/ha) and recorded required yield improvement over the best check. While among the entries IET 30005 (US 391), a hybrid with a grain yield of 4525 kg/ha was out-yielded the LC (3236 kg/ha) the BVC and HC (4099kg/ha) with a yield superiority of 17.47 % and 10.39 % respectively. The days to 50% flowering, plant height, and panicles/m² of IET 30005 were 81 days, 89 cm and 269 panicles/m² respectively. The performance of the entries was furnished below.

Overall and zonal performance of promoting entries in IVT-Aerobic Kharif2020

Rank	IET No/Designation	Overall GY	Performance of entries in different zones						Promoted/Dropped
			Zone II	Zone III	Zone IV	Zone V	Zone VI	Zone VII	
1	IET 30020 CRR 842-IR14L159	4554*	6300*	-	-	-	-	-	Promoted
2	IET 30005 <i>US 391(Hybrid)</i>	4525*	7000*	-	-	-	5060*	-	Promoted
3	IET 30022 RCPR 80-IR 14L 157	4426*	6600*	-	-	4502*	5252*	-	Promoted
4	IET 30008 BRR-0180-IR14L157	4359*	6900*	-	-	4654*	5228*	-	Promoted
5	IET 30052 R 1672-126-1-24-1	4341*	-	-	-	-	5439*	-	Promoted
6	IET 30013 BRR 2137	4328*	6100*	-	-	-	-	-	Promoted
7	IET 30006 TRC H2TN 203-B-B-67-3	4325*	-	-	-	5151*	5232*	-	Promoted
8	IET 30032 BRR-0181-IR 93827-29-1-1-4	4320*	-	-	-	-	-	-	Promoted
9	IET 30004 CSR PET 27	4281*	6500*	-	-	-	5236*	-	Promoted
10	IET 30000 CRR 780-B-B-14-1	4270*	6700*	-	-	4444*	-	-	Promoted
11	IET 30041 BRR 2184	4250*	-	-	-	-	-	-	Promoted
12	IET 30034 TRC 185-B-B-82-2-11	4210*	-	-	-	-	5697*	-	Promoted
13	IET 30001 R 2220-381-1-243-1	4197*	-	-	-	4626*	-	-	Promoted
14	IET 30038 HURS 21-5-IR 10L 14	4140*	-	-	-	-	-	-	Promoted
15	IET 30045 BRR 2185	4113*	6950*	-	-	4883*	-	-	Promoted
16	IET 30023 TRC 184-B-B-76-1-1	4109*	-	-	-	4186*	-	-	Promoted
17	IET 30028 CR 3937-1-1-1-1-2-3	4107*	-	-	-	-	-	-	Promoted
18	IET 30035 NVSR-726	-	6650*	-	-	4215*	-	-	Promoted
19	IET 30003 RCPR 79-IR-84899-B-185-8-1-1-1	-	6550*	-	-	4349*	-	-	Promoted
20	IET 30027 CSR YET 78	-	6200*	-	-	-	-	-	Promoted
21	IET 30051 CRR 790-69	-	6100*	-	-	4318*	-	-	Promoted
22	IET 30024 NVSR 3110	-	-	-	-	4333*	-	-	Promoted

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Rank	IET No/Designation	Overall GY	Performance of entries in different zones						Promoted/ Dropped
			Zone II	Zone III	Zone IV	Zone V	Zone VI	Zone VII	
23	IET 30029 BRR 2183	-	-	-	-	4323*	-	-	Promoted
24	IET 30037 PAU 5729-60-5-4-1 (RYT 3704)	-	-	-	-	4634*	-	-	Promoted
25	IET 30021 HURS 21-2-IR- 15T1473	-	-	-	-	-	5106*	-	Promoted
	National Check (NC)	2983	-	-	-	2264	2878	-	
	Zonal Check (ZC)	3849	4550	-	-	3303	3355	-	
	Hybrid Check (HC)	4099	4800	-	-	4170	3849	-	
	Local Check (LC)	3852	5300	-	-	3226	4214	-	
	CD	254	668	438	2233	844	839	580	

*Significantly superior over Best check

In zonal performance, only three zones namely Zone-II, Zone-V, and Zone-VI had entries significant superiority over the best check, rest zones none of the entries showed significant superior performance over the best check. Zone II had only one location in which 12 entries showed significant superior performance over the best check; Zone V had two locations in which 13 entries showed significant performance over the best check; whereas zone VI had two locations and 8 entries recorded significant performance over the best check.

List of entries promoted to AVT 1- Aerobic:

Zones	No.	Entries promoted
Overall	17	IET's 30020, 30005, 30022, 30008, 30052, 30013, 30006, 30032, 30004, 30000, 30041, 30034, 30001, 30038, 30045, 30023, 30028
Zone II	12	IET's 30020, 30005, 30022, 30008, 30013, 30004, 30000, 30045, 30035, 30003, 30027, 30051
Zone III	-	None
Zone IV	-	None
Zone V	13	IET's 30022, 30008, 30006, 30000, 30001, 30045, 30023, 30035, 30003, 30051, 30024, 30029, 30037
Zone VI	8	IET's 30005, 30022, 30008, 30052, 30006, 30004, 30034, 30021
Zone VII	-	None

Table No. 2.1: Composition of entries in Advance Variety Trial 2 & 1–Aerobic (AVT 2 & AVT1-Aerob), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT
2nd Year of testing:				
4101	29427	RCPR 71- IR 93827-29-2-1-3	IR 81039-B-173-U 3-3 / IR 81063-B-94-U 3-1	LS
4102	29423	TRC 2020-3	Hakuchuk 2 / Tripura Nirog	LS
4103	29422	CRR 756-21	IR08L183 / MTU 1010	LS
4104	29431	RP 6326-124-54-1	MTU 1010 / WGL 505	LB
4105	28650	<i>IIRRH-128 (Hybrid)</i>	-	LB
3rd Year of testing:				
4106	28645	<i>YRH 2027 (Hybrid)</i>	NPS 2030 A / NPS 4069	LS
2nd Year of testing:				
4107	29426	CR 3564- 7-1-1-1-1-1	Vijetha / N22	SB
4108	29412	<i>US 393 (Hybrid)</i>	-	LB
3rd Year of testing:				
4109	27951	HURS 18-2-IR 98976-20-1-2-2	IR11L152 / Sabitri	LB
2nd Year of testing:				
4110	29396	CRR 822-20-1-2-2	IR11L152 / Sabitri	LS
4111	29402	MTU 1355 (MTU 2650-60-1-1-1)	MTU 1075 / NLR 34449	SB
4112	CR Dhan 201 (NC)			
4113	29410	RP 5594-147-23-1	MTU 1010 / RPHR 1005	LB
4114	29405	RCPR 70- IR 84899-B-184-16-1-1-1	IR 78877-208-B-1-1 / IRR1 132	LB
4115	29398	RP 6112-MS-M-27-3-9-6-5-4-2	BPT 5204 Mutant	LS
3rd Year of testing:				
4116	27937	<i>IIRRH 124 (Hybrid)</i>	-	LB
2nd Year of testing:				
4117	29411	CR 4161-5-6-IR 14L572	IR10L146 / IR10L149	LS
4118	29448	R 2272-515-2-287-1	R 1243-1224-578-1 / Danteshwari	LB
4119	29444	CRR 751-48-B-B	IR 64 Sub1*4 / IR 88287-367-B-B	LS
4120	CR Dhan 202-Northern, Eastern, North Eastern & Central, AAUDR-1- Western, MAS 946-1- Southern---ZC			
4121	29420	CSR 57	CSR 21 / CSR10	LB
3rd Year of testing:				
4122	28631	RCPR 63-IR 97034-21-2-1-3	IR09L337 / IR09L154	LS
2nd Year of testing:				
4123	29415	RP 6326-278-14-1	MTU 1010 / WGL 505	LB
4124	29424	CR 4317-2-IR 97034-21-2-1-3	IR09L337 / IR09L154	LB
4125	Local Check			
4126	29394	CSR 88	CSR30 / CSR36	LS
4127	PA 6129 (HC)			
4128	29446	CR 3918-109-5-6-4-1	Savithri / Pokkali	LB
4129	29436	CRR 821-21-2-1-3	IR09L337 / IR09L154	LS
4130	29421	RP 6324-123-14-4-1	CR 691-1 / CR Dhan 202	MS
4131	29409	TRC 2020-14	Hakuchuk 1 / Naveen	LB
4132	29433	CR 3985-1-3-1-2-1	Satyabhama / IET 21920	LB
4133	29430	CR 4118-1-1-2-2-1	CR Dhan 201 / IR 84549-B-183-13-1-1-2	LS

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Table No. 2.2: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN										ZONE III-EASTERN									
		PUNJAB		HARYANA			HARYANA (2)		Z2 (2)			ODISHA (1)									
		@LUDHIANA	KAUL	Karnal (ICAR-CSSRI)		Mean		Mean			ICAR-NRRI (Cuttack)										
4101	29427	2399		6547		3533		5040	11%		5040	11%		3767							
4102	29423	2988	3	7010	8 *	4093	7	5552	7	*22%	5552	7	*22%		3651						
4103	29422	2593		6574		3327		4951	9%		4951	9%			3748						
4104	29431	2074		5892		2453		4173			4173				4328						
4105	28650	1399		5756		4000	9	4878	7%		4878	7%			3810						
4106	28645 ^	1868		7365	6 *	4087	8	5726	5	*26%	5726	5	*26%		3443						
4107	29426			5428		3107		4268			4268			5244	5 *19%						
4108	29412	2938	5	7856	2 *	4873	2 *	6365	1	*40%	10%	6365	1	*40%	10%	3889					
4109	27951 ^	2572		6683	*	3873		5278		*16%		5278		*16%		3138					
4110	29396	2955	4	6738	*	3907	10	5323	10	*17%		5323	10	*17%		3248					
4111	29402	2140				2353		2353				2353									
4112	CR Dhan 201 (NC)	2930	6	5237		3793		4515				4515				3547					
4113	29410	1387		4037		2673		3355				3355			5726	1 *30%					
4114	29405	2564		6110		2827		4469				4469				3327					
4115	29398	3074	2	4746		2980		3863				3863				3321					
4116	27937 ^	1823		6219		4327	4	5273		*16%		5273		*16%		5079	7 *16%				
4117	29411	2901	7	6574		3773		5174	14%			5174	14%			5720	2 *30%				
4118	29448	2016		7392	4 *	2867		5130	13%			5130	13%				3449				
4119	29444	2000		5646		3253		4450				4450					2241				
4120	Zonal Check (ZC)	1724		5947		3153		4550				4550					4389	10			
4121	29420	1444		6410		4893	1 *	5652	6	*24%		5652	6	*24%				3462			
4122	28631 ^	2605	10	6601		3607		5104	12%			5104	12%					5012	8 *14%		
4123	29415	2284		6983	9 *	3453		5218		*15%		5218		*15%					5238	6 *19%	
4124	29424	2564		7911	1 *	3860		5886	3	*29%		5886	3	*29%					4847	9 10%	
4125(LC)	Local Check (LC)	3202	1	6001		2773		4387				4387								3126	
4126	29394	1253		5646		4607	3	5127	13%			5127	13%							5708	3 *30%
4127	PA 6129 (HC)	2687	9	7365	6 *	4160	6	5763	4	*27%		5763	4	*27%						5507	4 *25%
4128	29446	2263		7392	4 *	3400		5396	8	*19%		5396	8	*19%							3217
4129	29436	2757	8	7720	3 *	4320	5	6020	2	*32%		6020	2	*32%							3987
4130	29421	1753		6137		3833		4985	10%			4985	10%								4274
4131	29409	1470		6929	10 *	3793		5361	9	*18%		5361	9	*18%							3217
4132	29433	2099		5428		3187		4308				4308									3516
4133	29430	2366		6137		3793		4965	9%			4965	9%								3663
Exp. Mean		2284.17		6388.09		3604.04		4934.93				4934.93									4057.54
CD		660.95		663.26		1060.69		665.59				665.59									465.01
CV%		17.73		6.36		18.04		8.27				8.27									7.02
D/S		01-07-2021		02-07-2021		02-07-2021															29-06-2021
D/P																					
Local Check Name		PR 126		HKR-48		CSR 27															CR Dhan 205
		^ 3rd year of testing		*Superior to best check		#Superior over hybrid check		%superior over best check													

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Table No. 2.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		BIHAR					BIHAR (2)			JHARKHAND	
		BIKRAMGANJ (Dhangain)		@PUSA		Patna-ICAR	Mean			@RANCHI	
4101	29427	3869		4444	2 *	5693		4781		2402	7 #
4102	29423	3447		2707		5580		4514		1678	
4103	29422	4131		2336		6920	3 *	5526	4 *11%	4948	1 * #
4104	29431	4183	9	3077		5960		5072		1302	#
4105	28650	4091		4450	1 *	6247		5169		2286	8 #
4106	28645 ^	4297	8	2849		7300	2 *	5799	2 *17% # 14%	1910	
4107	29426	4842	3 *	2906		5247		5045		3067	5 #
4108	29412	5353	1 *	3191	8 #	7753	1 *	6553	1 *32% #29%	1215	
4109	27951 ^	3601		2564		6313	9 #	4957		2228	9 #
4110	29396	4180	10	4274	4 *	6627	6 *	5404	6 * 9%	4398	2 * #
4111	29402	3745		2456		6250	10	4998		2546	6 #
4112	CR Dhan 201 (NC)	4000		2262		5920		4960		781	
4113	29410	4013		2114		6093		5053		1215	
4114	29405	3411		2410		5647		4529		1273	
4115	29398	4012		2553		5900		4956		1215	
4116	27937 ^	3865		2268		4733		4299		1505	
4117	29411	4625	4 *	2410		6720	4 *	5673	3 * 14% #11%	1360	
4118	29448	3354		2632		5007		4181		1389	
4119	29444	3791		2564		5460		4626		1013	
4120	Zonal Check (ZC)	3868		3191	8	5880		4874		3356	3
4121	29420	4065		2467		5210		4638		1418	
4122	28631 ^	4109		2279		5187		4648		1563	
4123	29415	3906		2462		6227		5067		810	
4124	29424	4064		3162	10	6413	7 #	5239	9 6%	3212	4 #
4125(LC)	Local Check (LC)	3933		3533	6	5290		4612		1389	
4126	29394	3812		2764		6640	5 *	5226	10 5%	926	
4127	PA 6129 (HC)	4573	5 *	2422		5607		5090		723	
4128	29446	5087	2 *	2456		5690		5389	7 *9%	1042	
4129	29436	3498		3487	7 #	5080		4289		1534	
4130	29421	3947		2929		5087		4517		2025	10 #
4131	29409	4422	7 *	2199		6197		5310	8 7%	984	
4132	29433	3512		4274	4 *	5507		4510		955	
4133	29430	4492	6 *	4348	3 *	6380	8 #	5436	5 *10%	926	
Exp. Mean		4063.5		2922.39		5932.22		4997.86		1775.57	
CD		349.91		590.69		655.75		382.15		336.58	
CV%		5.28		12.39		6.78		4.69		11.62	
D/S		10-07-2021		03-07-2021		08-07-2021				05-07-2021	
D/P											
Local Check Name		Sabour Harshit (4125)		Rajendra Nilam (4134)		Rajendra Bhagwati				BVD-203	
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check			

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Table No. 2.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE III-EASTERN											
		JHARKHAND		UTTAR PRADESH				UTTAR PRADESH (1)			Z3 (4)		
		@HAZARIBAGH		@MASODHA		VARANASI		@GORAKHPUR		Mean		Mean	
4101	29427	4094	1 * #	3464	3	#3017		2355		3017		4087	
4102	29423	3344	2 * #	3110	8	#3020		1893		3020		3925	
4103	29422	2668	7	2646		3248		2926	8	3248		4512	
4104	29431	1736		1909		3010		1712		3010		4370	
4105	28650	1645		2209		3316		3016	7	3316		4366	
4106	28645 ^	2577	9	2564		3333		2129		3333		4593	10
4107	29426	1919		2673		3044		3293	5	3044		4594	9
4108	29412	2540		3028	10	#3878	5	1617		3878	5	5218	2 *17%
4109	27951 ^	2102		2728		3102		1975		3102		4039	
4110	29396	1517		3382	4	#3342		2600		3342		4349	
4111	29402	2010		2728	#			3967	1			4998	4 *12%
4112	CR Dhan 201 (NC)	1389		2837		3469	9	2681		3469	9	4234	
4113	29410	1188		2973		3027		3401	4	#3027		4715	8 6%
4114	29405	2961	5 *	3164	6	#3359	10	2292		3359	10	3936	
4115	29398	2778	6 *	2346		3061		2808	9	3061		4074	
4116	27937 ^	2577	9	2946		5918	1 *	2129		5918	1 *60% 11%	4899	5 *10%
4117	29411	2376		3110	8	#3109		3845	2	#3109		5044	3 *13%
4118	29448	1352		2837		4005	4	1540		4005	4 8%	3954	
4119	29444	1298		2564		3010		2600		3010		3626	
4120	Zonal Check (ZC)	1955		3628	2	3707	7	2020		3707	7	4461	
4121	29420	1371				4524	3 *	1721		4524	3 *22%	4315	
4122	28631 ^	2431		2346		3053		1947		3053		4340	
4123	29415	1901		2346		3801	6	3170	6	3801	6	4793	7 *7%
4124	29424	3344	2 * #	3764	1	#3027		2699	10	3027		4588	
4125(LC)	Local Check (LC)	2394		3191	5	3316		3410	3	3316		3916	
4126	29394	1499		3164	6	#3044		1993		3044		4801	6 *8%
4127	PA 6129 (HC)	2632	8	2073		5315	2 *	2219		5315	2	5251	1 *18%
4128	29446	2321		2209		3095		2188		3095		4272	
4129	29436	2029		2019		3257		1784		3257		3956	
4130	29421	2266		2346		3180		1495		3180		4122	
4131	29409	3034	4 * #	1391		3563	8	1753		3563	8	4350	
4132	29433	1572		2128		3061		1952		3061		3899	
4133	29430	1992		1909		3031		1599		3031		4392	
Exp. Mean		2206.27		2679.2		3445.2		2385.7		3445.15		4393.49	
CD		380.9		317.75		745.75		980.9		745.75		277.83	
CV%		10.58		7.27		13.26		25.21		13.26		3.88	
D/S		16-07-2021		17-07-2021		02-07-2021		10-07-2021					
D/P									11-08-2021				
Local Check Name		Sahbhagidhan		Shushak Smart		HUR-3022		SAMBA SUB-1					
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		%superior over best check					

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Table No. 2.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN (1)				ZONE-V - CENTRAL					
		TRIPURA (1)		MADHYA PRADESH		CHHATTISGARH			CHHATTISGARH (2)		
		Lembucherra		@REWA		RAIPUR		JAGADALPUR	Mean		
4101	29427	2880		977		3600		4153	#	3877	
4102	29423	2880		998		3835	9	4049		3942	
4103	29422	4312	25%	347		2467		4509	1 #	3488	
4104	29431	3005		629		2480		3892		3186	
4105	28650	4044	17%	1259	9	3598		4434	3 #	4016	8
4106	28645 ^	3619		1649	4	4482	3	4383	5 #	4433	2 6% # 21%
4107	29426	3918	14%			2576		3753		3165	
4108	29412	4390	9 27%	1758	3	3939	7	4276	9 #	4108	6 12%
4109	27951 ^	2218		1107		2591		3787		3189	
4110	29396	3065		1237	10	3480		4065		3773	
4111	29402	5035	5 #46%			2048		3429		2739	
4112	CR Dhan 201 (NC)	4200		347		1910		3758		2834	
4113	29410	2817		378		2362		3742		3052	
4114	29405	5067	4 #47%	1823	2	3411		4476	2 #	3944	10
4115	29398	4878	6 42%	304		1798		4036		2917	
4116	27937 ^	4799	7 39%	2431	1	4737	2	4362	6 #	4550	1 9% #25%
4117	29411	6231	1 21% #81%	781		4169	5	4156	10 #	4163	5 14%
4118	29448	3918	14%	1628	6	3512		4420	4 #	3966	9
4119	29444	2565		629		2964		3488		3226	
4120	Zonal Check (ZC)	3525		868		2697		4314	7	3506	
4121	29420	5114	3 #48%	130		2693		3427		3060	
4122	28631 ^	4673	8 36%	1345	8	3440		4089		3765	
4123	29415	3965	15%	1411	7	4290	4	4295	8 #	4293	3 #18%
4124	29424	3588		781		4040	6	4049		4045	7 11%
4125(LC)	Local Check (LC)	5130	2	117		4914	1	3438		4176	4
4126	29394	4374	10 27%	412		2297		3328		2813	
4127	PA 6129 (HC)	3446		1649	4	3879	8	3427		3653	
4128	29446	3053		1215		3277		3742		3510	
4129	29436	3446		911		3712	10	3795		3754	
4130	29421	3462		803		2973		3918		3446	
4131	29409	4327	26%	651		3572		3988		3780	
4132	29433	3068		260		2391		4065		3228	
4133	29430	3839	11%	74		2616		3478		3047	
Exp. Mean		3904.7		932.6		3234.86		3955.17		3595.01	
CD		2189.7		332.27		885.3		700.03		571.18	
CV%		27.53		21.81		16.78		10.85		9.74	
D/S		19-07-2021		02-07-2021		02-07-2021		27-06-2021			
D/P											
Local Check Name		HAKUCHUK-2				Indira Aerobic-1		Indira Aerobic 1			
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check			%superior over best check		

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Table No. 2.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL				ZONE VI - WESTERN								
		Z5 (2)				MAHARASHTRA (1)		GUJARAT						
		Mean				Parbhani		NAVSARI		@Derol		Vyara		
4101	29427	3877				2356		4023		661		4334		
4102	29423	3942				2255		4962		728		3992		
4103	29422	3488				2439		4649		301		4792		
4104	29431	3186				2270		5287		838	8	3427		
4105	28650	4016	8			3443		4960		636		4513		
4106	28645 ^	4433	2	6%	#21%	2246		6807	3 *	348		6277	3 * #	
4107	29426	3165				2519		6048		903	7 #	3909		
4108	29412	4108	6	12%		2619		6156	9	248		7431	1 * #	
4109	27951 ^	3189				2886		3981		245		3907		
4110	29396	3773				3052		4588		408		3770		
4111	29402	2739				3873	4	5%	5595			3463		
4112	CR Dhan 201 (NC)	2834				3680	8		4965		576		3441	
4113	29410	3052				2764		4937		338		3677		
4114	29405	3944	10			2545		6723	6 *	927	5 #	4116		
4115	29398	2917				3107		5554		280		3322		
4116	27937 ^	4550	1	9%	#25%	3757	5		7408	1 *	915	6 #	6080	4 *
4117	29411	4163	5	14%		3727	6		6899	2 *	298		6376	2 * #
4118	29448	3966	9			3707	7		6412	8 *	382		4739	
4119	29444	3226				3319		5341		361		3138		
4120	Zonal Check (ZC)	3506				3013		4959						
4121	29420	3060				3901	3	6%	5367		1042	3 #	4829	
4122	28631 ^	3765				2898		6539	7 *	1219	2 #	4361		
4123	29415	4293	3		#18%	2714		6767	4 *	960	4 #	5735	5 *	
4124	29424	4045	7	11%		2978		6084		600		4709		
4125(LC)	Local Check (LC)	4176	4			2643		5174		1843	1	3820		
4126	29394	2813				3440		4864				4453		
4127	PA 6129 (HC)	3653				4006	2		6725	5 *	631		5110	8
4128	29446	3510				3508	10		5276		192		4875	10
4129	29436	3754				3147		5545		730	10	5442	6 *	
4130	29421	3446				3342		5272		540		5287	7 *	
4131	29409	3780				4018	1	9%	6099	10	310		4974	9 *
4132	29433	3228				2610		4108		406		4293		
4133	29430	3047				3633	9		5277		732	9	3616	
Exp. Mean		3595.01				3103.39		5556.05		619.89		4568.98		
CD		571.18				473.53		1158.61		226.19		1080.28		
CV%		9.74				9.35		12.78		22.33		14.49		
D/S						03-07-2021		01-07-2021		09-07-2021		29-06-2021		
D/P														
Local Check Name						PBNR 03-2		NAUR-1		GR 9		NAUR-1		
	^ 3rd year of testing.					*Superior to best check		#Superior over hybrid check		%superior over best check				

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Table No. 2.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN				ZONE VII - SOUTHERN						Overall Mean (14)						
		GUJARAT (2)		Z6 (3)		TAMIL NADU (1)		KARNATAKA (1)		Z7(2)								
		Mean		Mean		COIMBATORE		MANDYA										
4101	29427	4179		3571		4016	9	4206		4111		4000						
4102	29423	4477		3736		3658		4649	14%	4154		4077						
4103	29422	4721		3960		2332		4700	15%	3516		4153						
4104	29431	4357		3661		2355		5113	6	#25	3734	3833						
4105	28650	4737		4305	7%	2682		3350		3016		4160						
4106	28645 ^A	6542	4	*32% 11%	5110	5	*27%	2727	6542	1	*17% #609	4635	5	#17%	4779	4	*13%	
4107	29426	4979		4159		3659		4150		3905		4103						
4108	29412	6794	1	*37% # 15%	5402	3	*34%	3409	5051	8	#24	4230	5062	1	*20%	#		
4109	27951 ^A	3944		3591		5139	2	*33% #33%	4552	11%	4846	2	#22%	3984				
4110	29396	4179		3803		3319		4501	10%	3910		4134						
4111	29402	4529		4310	7%	3307		4161		3734		3933						
4112	CR Dhan 201 (NC)	4203		4029		3715		5113	6	4414	8	4053						
4113	29410	4307		3793		2464		3475		2970		3701						
4114	29405	5420	9%	4461	11%	3263		4864	9	#19%	4064	4225						
4115	29398	4438		3994		2120		3776		2948		3758						
4116	27937 ^A	6744	2	*36% 14%	5748	1	*43%	1815	3764	2790		4776	5	*13%				
4117	29411	6638	3	*34% 12%	5667	2	*41%	4240	4	10%	4019	4130	5024	2	*19%			
4118	29448	5576	7	12%	4953	8	*23%	3230	5918	2	6% # 45%	4574	6	#15%	4424	10		
4119	29444	4240		3933		3548		4008		3778		3698						
4120	Zonal Check (ZC)	4959		3986		2465		4410		3438		4025						
4121	29420	5098		4699	10	*17%	3795	3163		3479		4347						
4122	28631 ^A	5450	10	10%	4599	14%	4205	5	9%	4416		4311	9	4442	9	5%		
4123	29415	6251	5	*26%	5072	6	*26%	3005	4218		3612	4614	6	*9%				
4124	29424	5397	9%	4590	14%	4107	7	6%	4444		4276	10	4580	8	*9%			
4125(LC)	Local Check (LC)	4497		3879		3869	10	5584	4	4727	3	4215						
4126	29394	4659		4252	6%	4267	3	10% 10%	5176	5	#27%	4722	4	#19%	4404			
4127	PA 6129(HC)	5918	6	5280	4	3864		4087		3976		4791	3					
4128	29446	5076		4553	13%	2647		3203		2925		4104						
4129	29436	5494	9	11%	4711	9	*17%	4088	8	6%	3719	3904	4340					
4130	29421	5280	6%	4634	*15%	5732	1	*48% #48%	4779	10	#17%	5256	1	*11%	#32%	4373		
4131	29409	5537	8	12%	5030	7	*25%	3318	5828	3	#43%	4573	7	#15%	4589	7	*9%	
4132	29433	4201		3670		2642		2534		2588		3566						
4133	29430	4447		4175		4143	6	7%	2789		3466	4063						
Exp. Mean		5068		4404		3429		4372		3900		4261						
CD		844.5		588.06		688.8		628.7		466.3		240						
CV%		10.2		8.19		12.32		8.82		7.33		3.45						
D/S							17-09-2021			13-07-2021								
D/P																		
Local Check Name							CO 53			KMP-175 (Daksha)								
			^A 3rd year of testing.				*Superior to best check		#Superior over hybrid check									%superior over best check

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Table No. 2.3: Days to 50% flowering of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN		
		PUNJAB		HARYANA		HARYANA (2)	Z2 (2)	ODISHA (1)	BIHAR
		@LUDHIANA	KAUL	Karnal (ICAR-CSSRI)	Mean	Mean	ICAR-NRRI (Cuttack)	BIKRAMGANJ (Dhangain)	
4101	29427	87	81	93	87	87	74	74	
4102	29423	83	81	94	88	88	75	73	
4103	29422	87	84	92	88	88	74	76	
4104	29431	94	88	94	91	91	76	83	
4105	28650	95	90	95	93	93	80	85	
4106	28645	81	76	83	80	80	66	70	
4107	29426		94	106	100	100	82	113	
4108	29412	86	82	85	84	84	76	82	
4109	27951	87	80	88	84	84	73	71	
4110	29396	83	77	88	83	83	73	73	
4111	29402	96		114	114	114		98	
4112	CR Dhan 201 (NC)	87	87	95	91	91	82	92	
4113	29410	85	83	91	87	87	74	79	
4114	29405	84	80	88	84	84	76	110	
4115	29398	86	87	91	89	89	75	74	
4116	27937	90	88	92	90	90	79	79	
4117	29411	86	84	91	88	88	77	89	
4118	29448	86	85	90	87	87	73	77	
4119	29444	84	86	89	87	87	74	76	
4120	Zonal Check (ZC)	82	85	86	86	86	74	74	
4121	29420	91	85	85	85	85	77	87	
4122	28631	84	82	92	87	87	72	88	
4123	29415	87	83	89	86	86	74	78	
4124	29424	89	83	89	86	86	74	76	
4125(LC)	Local Check (LC)	81	82	90	86	86	73	89	
4126	29394	85	82	84	83	83	74	82	
4127	PA 6129 (HC)	85	81	84	83	83	74	78	
4128	29446	82	81	87	84	84	74	67	
4129	29436	87	80	88	84	84	75	76	
4130	29421	81	77	83	80	80	75	80	
4131	29409	86	83	92	87	87	77	78	
4132	29433	87	83	106	95	95	77	74	
4133	29430	96	89	95	92	92	83	110	
Exp. Mean		86	83	91	88	88	75	82	

Table No.2.3 Contd.: Days to 50% flowering of entries in AVT 2 & AVT 1-AEROB Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		BIHAR		BIHAR (2)	JHARKHAND		UTTAR PRADESH			UTTAR PRADESH (1)	Z3 (4)
		@PUSA	Patna-ICAR	Mean	@RANCHI	@HAZARIBAGH	@MASODHA	VARANASI	@GORAKHPUR	Mean	Mean
4101	29427	71	78	76	80	84	88	87	86	87	78
4102	29423	71	77	75	82	84	87	85	88	85	78
4103	29422	79	79	78	80	81	94	87	89	87	79
4104	29431	78	81	82	88	85	103	96	93	96	84
4105	28650	79	84	84	88	86	104	93	93	93	85
4106	28645	67	73	72	81	82	90	82	85	82	73
4107	29426	101	94	104	108	93	103	101	99	101	97
4108	29412	72	77	79	88	81	89	81	87	81	79
4109	27951	76	74	73	82	82	88	85	87	85	76
4110	29396	67	74	73	79	82	87	80	83	80	75
4111	29402	103	99	99	104	96	88		99		99
4112	CR Dhan 201 (NC)	75	81	87	88	85	90	87	88	87	86
4113	29410	75	77	78	88	84	87	84	104	84	79
4114	29405	70	78	94	84	82	93	86	88	86	88
4115	29398	74	81	78	89	81	103	83	88	83	78
4116	27937	75	78	79	88	82	94	85	91	85	80
4117	29411	76	77	83	88	85	82	86	89	86	82
4118	29448	73	74	76	88	85	89	81	88	81	76
4119	29444	71	75	75	88	86	89	85	87	85	77
4120	Zonal Check (ZC)	70	78	76	80	82	88	85	85	85	78
4121	29420	78	80	83	85	87		96	87	96	85
4122	28631	72	77	82	87	84	88	86	89	86	81
4123	29415	72	77	77	88	83	101	84	89	84	78
4124	29424	74	78	77	83	83	87	85	88	85	78
4125(LC)	Local Check (LC)	78	82	85	94	77	78	90	105	90	83
4126	29394	71	78	80	83	83	89	87	88	87	80
4127	PA 6129 (HC)	75	76	77	88	86	88	86	89	86	78
4128	29446	71	75	71	83	77	89	80	86	80	74
4129	29436	67	77	77	85	84	92	82	93	82	78
4130	29421	71	76	78	83	81	92	86	93	86	79
4131	29409	70	78	78	84	81	98	80	85	80	78
4132	29433	74	81	78	88	85	94	89	88	89	80
4133	29430	76	84	97	102	93	104	99	86	99	94
Exp. Mean		75	79	81	87	84	92	87	90	87	81

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Table No.2.3 Contd.: Days to 50% flowering of entries in AVT 2 & AVT 1-AEROB Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN		ZONE-V – CENTRAL					ZONE VI – WESTERN
		TRIPURA (1)	Z4 (1)	MADHYA PRADESH	CHHATTISGARH		CHHATTISGARH (2)	Z5 (2)	MAHARASHTRA (1)
		Lembucherra	Mean	@REWA	RAIPUR	JAGADALPUR	Mean	Mean	Parbhani
4101	29427	70	70	92	88	82	85	85	80
4102	29423	70	70	104	89	82	86	86	82
4103	29422	70	70	91	90	81	85	85	82
4104	29431	69	69	104	98	82	90	90	85
4105	28650	71	71	112	96	82	89	89	87
4106	28645	70	70	88	83	81	82	82	85
4107	29426	72	72		99	97	98	98	79
4108	29412	77	77	87	92	92	92	92	75
4109	27951	73	73	105	89	83	86	86	77
4110	29396	70	70	88	84	75	80	80	76
4111	29402	83	83	111	106	103	105	105	77
4112	CR Dhan 201 (NC)	70	70	105	96	92	94	94	82
4113	29410	73	73	94	93	85	89	89	81
4114	29405	73	73	89	85	92	89	89	76
4115	29398	71	71	89	97	92	95	95	82
4116	27937	71	71	88	87	83	85	85	88
4117	29411	76	76	90	90	82	86	86	81
4118	29448	72	72	94	91	85	88	88	80
4119	29444	71	71	107	88	92	90	90	80
4120	Zonal Check (ZC)	70	70	84	84	87	86	86	79
4121	29420	74	74	102	95	92	94	94	74
4122	28631	71	71	103	85	84	84	84	77
4123	29415	72	72	90	89	81	85	85	83
4124	29424	71	71	92	86	81	83	83	81
4125(LC)	Local Check (LC)	91	91	111	86	90	88	88	72
4126	29394	70	70	101	95	88	92	92	80
4127	PA 6129 (HC)	73	73	89	88	87	88	88	80
4128	29446	70	70	89	88	76	82	82	76
4129	29436	72	72	103	93	92	92	92	76
4130	29421	75	75	84	88	85	87	87	77
4131	29409	71	71	91	92	90	91	91	75
4132	29433	73	73	107	94	88	91	91	76
4133	29430	77	77	107	99	99	99	99	83
Exp. Mean		73	73	97	91	87	89	89	79

Table No.2.3 Contd.: Days to 50% flowering of entries in AVT 2 & AVT 1-AEROB Kharif 2021

Entry No	IET No	ZONE VI – WESTERN					ZONE VII – SOUTHERN			Overall Mean (14)
		GUJARAT			GUJARAT (2)	Z6 (3)	TAMIL NADU (1)	KARNATAKA (1)		
		NAVSARI	@Derol	Vyara	Mean	Mean	COIMBATORE	MANDYA	Z7(2)	
4101	29427	78	90	90	84	83	84	85	84	82
4102	29423	78	85	92	85	84	85	85	85	82
4103	29422	77	87	88	83	83	85	92	88	83
4104	29431	78	84	99	89	87	82	84	83	85
4105	28650	79	76	99	89	88	83	93	88	87
4106	28645	73	76	83	78	80	85	91	88	79
4107	29426	91	76	103	97	91	84	101	93	94
4108	29412	74	73	89	81	79	83	94	89	83
4109	27951	75	85	95	85	82	84	91	88	81
4110	29396	73	82	89	81	79	74	88	81	78
4111	29402	91		109	100	92	85	101	93	97
4112	CR Dhan 201 (NC)	80	88	97	89	86	85	88	87	87
4113	29410	76	76	90	83	82	78	92	85	83
4114	29405	75	73	87	81	79	84	88	86	84
4115	29398	77	93	97	87	85	90	95	92	85
4116	27937	80	79	89	84	85	83	92	88	84
4117	29411	76	78	95	86	84	85	90	87	84
4118	29448	74	95	94	84	83	84	94	89	82
4119	29444	74	76	92	83	82	86	94	90	83
4120	Zonal Check (ZC)	88			88	83	83	100	92	83
4121	29420	71	70	92	82	79	86	102	94	85
4122	28631	74	75	96	85	82	84	94	89	83
4123	29415	75	85	91	83	83	81	90	86	82
4124	29424	75	74	91	83	82	74	96	85	81
4125(LC)	Local Check (LC)	73	69	95	84	80	81	89	85	84
4126	29394	75		97	86	84	85	102	93	84
4127	PA 6129 (HC)	75	73	87	81	81	85	102	93	83
4128	29446	74	78	87	80	79	84	96	90	80
4129	29436	74	89	93	84	81	81	98	90	83
4130	29421	74	75	88	81	80	87	90	89	81
4131	29409	76	80	86	81	79	83	93	88	82
4132	29433	77	82	98	87	83	88	95	91	86
4133	29430	77	69	104	90	88	98	103	101	93
Exp. Mean		77	80	93	85	83	84	94	89	84

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Table No. 2.4: Plant Height (cm) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN			
		PUNJAB		HARYANA		HARYANA (2)	Z2 (2)	ODISHA (1)		BIHAR
		@LUDHIANA	KAUL	Karnal (ICAR-CSSRI)		Mean	Mean	ICAR-NRRI (Cuttack)	BIKRAMGANJ (Dhangain)	
4101	29427	99	107.00	90.20		99	99	124.6	106	
4102	29423	95	97.00	92.10		95	95	114.1	86	
4103	29422	87	93.00	89.20		91	91	110.2	111	
4104	29431	94	101.00	96.00		99	99	127.1	102	
4105	28650	91	112.00	97.60		105	105	123.7	106	
4106	28645	102	107.00	97.80		102	102	123.1	101	
4107	29426		113.00	109.50		111	111	131	108	
4108	29412	89	106.00	91.20		99	99	119.8	95	
4109	27951	88	100.00	100.90		100	100	121.4	100	
4110	29396	95	106.00	91.90		99	99	118.5	89	
4111	29402	88		82.70		83	83		107	
4112	CR Dhan 201 (NC)	94	108.00	104.90		106	106	125.6	95	
4113	29410	109	127.00	101.80		114	114	119.7	96	
4114	29405	110	132.00	109.10		121	121	146	98	
4115	29398	88	95.00	96.20		96	96	119.7	92	
4116	27937	112	127.00	107.90		117	117	144.2	114	
4117	29411	98	107.00	106.80		107	107	126.9	94	
4118	29448	93	103.00	101.00		102	102	119.5	98	
4119	29444	95	107.00	96.20		102	102	116.8	111	
4120	Zonal Check (ZC)	100	110.00	117.30		114	114	111.1	103	
4121	29420	93	111.00	106.10		109	109	125.9	110	
4122	28631	105	115.00	109.20		112	112	128.6	107	
4123	29415	101	115.00	109.50		112	112	120.8	109	
4124	29424	91	110.00	107.60		109	109	117.1	106	
4125(LC)	Local Check (LC)	90	106.00	100.60		103	103	115.6	112	
4126	29394	99	104.00	109.90		107	107	127.8	108	
4127	PA 6129 (HC)	92	94.00	92.00		93	93	116	87	
4128	29446	91	111.00	98.80		105	105	121.7	97	
4129	29436	105	117.00	107.90		112	112	127.6	101	
4130	29421	103	116.00	110.00		113	113	139.8	105	
4131	29409	110	112.00	118.00		115	115	120.7	107	
4132	29433	106	114.00	113.10		114	114	127.9	109	
4133	29430	98	110.00	107.30		109	109	131.1	111	
Exp. Mean		97	109	102		105	105	124	102	

Table No.2.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-AEROB Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		BIHAR		BIHAR (2)	JHARKHAND		UTTAR PRADESH			UTTAR PRADESH (1)	Z3 (4)
		@PUSA	Patna-ICAR	Mean	@RANCHI	@HAZARIBAGH	@MASODHA	VARANASI	@GORAKHPUR	Mean	Mean
4101	29427	81.60	113.1	109	84	71.3	86	87	124.53	87	108
4102	29423	73.30	109.4	98	71	74.7	82	84	101.33	84	98
4103	29422	81.00	107.1	109	73	67.0	90	75	90.47	75	101
4104	29431	94.30	114.1	108	76	86.7	89	89	104.2	89	108
4105	28650	85.30	121.4	114	81	70.3	87	94	113.13	94	111
4106	28645	99.30	115.4	108	83	70.3	92	88	113.27	88	107
4107	29426	92.60	121.2	115	90	90.0	83	100	121.27	100	115
4108	29412	93.00	117.4	106	84	79.7	88	86	110	86	104
4109	27951	83.30	109.8	105	78	58.1	77	81	97.93	81	103
4110	29396	78.60	107.1	98	85	89.0	83	82	105.33	82	99
4111	29402	95.00	120.2	114	89	71.7	83		111.4		114
4112	CR Dhan 201 (NC)	90.00	119.2	107	88	87.8	84	95	101.93	95	109
4113	29410	100.00	131.1	114	79	80.8	99	100	94.07	100	112
4114	29405	103.00	121.2	110	88	98.4	98	105	120.27	105	118
4115	29398	88.00	119.6	106	76	91.0	80	87	107.93	87	105
4116	27937	102.30	131.2	123	81	91.7	100	107	112.2	107	124
4117	29411	90.60	117.8	106	82	77.5	94	92	110.47	92	108
4118	29448	83.60	102.8	101	79	70.3	84	83	108.37	83	101
4119	29444	92.30	122.5	117	84	80.3	89	96	109.33	96	112
4120	Zonal Check (ZC)	85.00	115.3	109	86	89.0	95	102	115.53	102	108
4121	29420	99.30	115.7	113	82	95.5		102	109	102	113
4122	28631	98.30	114.6	111	86	83.5	89	96	120.53	96	111
4123	29415	90.30	128.1	118	79	71.3	77	93	105.73	93	113
4124	29424	88.60	126.1	116	90	81.3	98	91	112.87	91	110
4125(LC)	Local Check (LC)	85.00	112.2	112	85	82.0	86	86	95.67	86	106
4126	29394	92.00	121.3	115	78	85.7	90	96	110.8	96	113
4127	PA 6129 (HC)	98.00	116.8	102	78	72.1	78	92	119.47	92	103
4128	29446	87.00	127.7	112	78	89.3	72	83	109.47	83	107
4129	29436	100.30	119.9	111	78	88.7	82	97	112.2	97	111
4130	29421	101.30	114.9	110	95	88.3	98	97	115	97	114
4131	29409	101.00	131.3	119	83	93.3	90	97	115.33	97	114
4132	29433	95.30	123.1	116	87	71.0	100	109	133.67	109	117
4133	29430	98.60	126.9	119	79	79.3	89	102	120.47	102	118
Exp. Mean		92	119	111	82	81	88	93	111	93	110

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Table No. 2.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN		ZONE-V – CENTRAL					ZONE VI – WESTERN
		TRIPURA (1)	Z4 (1)	MADHYA PRADESH	CHHATTISGARH		CHHATTISGARH (2)	Z5 (2)	MAHARASHTRA (1)
		Lembucherra	Mean	@REWA	RAIPUR	JAGADALPUR	Mean	Mean	Parbhani
4101	29427	102.00	102.00	91.33	98.17	101.60	99.88	99.88	94.00
4102	29423	92.50	92.50	79.67	97.62	89.00	93.31	93.31	79.00
4103	29422	91.50	91.50	69.33	95.77	69.20	82.48	82.48	69.00
4104	29431	97.50	97.50	87.67	97.85	74.80	86.33	86.33	59.00
4105	28650	103.00	103.00	88.33	98.99	87.80	93.39	93.39	67.00
4106	28645	108.00	108.00	95.33	104.37	87.40	95.89	95.89	69.00
4107	29426	99.50	99.50	83.00	114.41	85.20	99.80	99.80	84.00
4108	29412	104.50	104.50	85.67	98.37	76.80	87.59	87.59	68.00
4109	27951	100.00	100.00	81.67	97.87	80.00	88.94	88.94	75.00
4110	29396	92.50	92.50	87.00	101.79	105.00	103.40	103.40	73.00
4111	29402	105.00	105.00	94.00	97.32	84.60	90.96	90.96	98.00
4112	CR Dhan 201 (NC)	110.00	110.00	84.00	111.62	96.40	104.01	104.01	72.00
4113	29410	107.50	107.50	92.33	112.50	91.00	101.75	101.75	69.00
4114	29405	120.00	120.00	99.33	126.06	95.60	110.83	110.83	75.00
4115	29398	105.50	105.50	78.67	95.92	85.80	90.86	90.86	79.00
4116	27937	113.00	113.00	112.67	120.67	92.00	106.34	106.34	69.00
4117	29411	108.50	108.50	90.67	107.77	79.40	93.58	93.58	77.00
4118	29448	98.50	98.50	95.67	107.65	82.40	95.03	95.03	74.00
4119	29444	107.50	107.50	89.00	113.77	91.40	102.59	102.59	82.00
4120	Zonal Check (ZC)	108.00	108.00	95.00	109.89	115.20	112.54	112.54	88.00
4121	29420	100.50	100.50	95.33	117.33	92.60	104.97	104.97	74.00
4122	28631	125.00	125.00	88.33	120.73	92.00	106.36	106.36	79.00
4123	29415	101.00	101.00	92.00	103.37	84.60	93.98	93.98	72.00
4124	29424	104.50	104.50	87.67	113.92	99.40	106.66	106.66	82.00
4125(LC)	Local Check (LC)	96.50	96.50	98.00	103.19	0.00	51.60	51.60	84.00
4126	29394	104.50	104.50	91.67	107.09	89.60	98.34	98.34	74.00
4127	PA 6129 (HC)	94.00	94.00	89.33	104.99	0.00	52.49	52.49	89.00
4128	29446	94.00	94.00	83.33	97.64	83.60	90.62	90.62	95.00
4129	29436	104.00	104.00	90.67	109.27	88.60	98.94	98.94	86.00
4130	29421	111.50	111.50	99.00	100.47	90.80	95.63	95.63	76.00
4131	29409	105.00	105.00	97.67	105.99	91.40	98.69	98.69	81.00
4132	29433	123.50	123.50	97.67	102.00	82.40	92.20	92.20	69.00
4133	29430	116.00	116.00	83.67	104.30	96.40	100.35	100.35	89.00
Exp. Mean		105	105	90.14	106.02	83.70	94.86	94.86	77.88

Table No. 2.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN					ZONE VII – SOUTHERN			Overall Mean (14)
		GUJARAT			GUJARAT (2)	Z6 (3)	TAMIL NADU (1)	KARNATAKA (1)		
		NAVSARI	@Derol	Vyara	Mean	Mean	COIMBATORE	MANDYA	Z7(2)	
4101	29427	127.10	87.20	109.74	118.42	110.28	92.63	74.33	83.48	101.91
4102	29423	132.50	79.60	100.04	116.27	103.85	81.57	64.13	72.85	94.19
4103	29422	116.70	58.60	99.31	108.01	95.00	79.43	74.00	76.72	91.42
4104	29431	124.80	77.20	107.12	115.96	96.97	84.00	100.87	92.43	98.21
4105	28650	114.30	83.20	110.63	112.46	97.31	82.90	90.93	86.92	100.77
4106	28645	125.70	73.20	116.14	120.92	103.61	85.70	82.60	84.15	100.78
4107	29426	124.30	101.20	120.25	122.28	109.52	106.40	92.73	99.57	107.84
4108	29412	126.20	62.40	107.82	117.01	100.67	80.13	83.07	81.60	97.13
4109	27951	124.20	75.40	108.12	116.16	102.44	79.35	73.13	76.24	96.45
4110	29396	124.50	90.20	99.50	112.00	99.00	94.55	77.80	86.18	97.34
4111	29402	135.10		114.53	124.82	115.88	95.00	85.87	90.43	102.30
4112	CR Dhan 201 (NC)	137.90	76.20	111.47	124.68	107.12	90.63	75.93	83.28	103.78
4113	29410	114.80	86.80	116.09	115.45	99.96	102.10	103.20	102.65	106.55
4114	29405	125.70	109.40	122.27	123.99	107.66	113.13	106.47	109.80	114.00
4115	29398	120.80	64.60	108.07	114.43	102.62	75.67	74.00	74.83	96.78
4116	27937	127.50	106.60	115.94	121.72	104.15	93.91	93.13	93.52	111.15
4117	29411	124.70	76.60	113.24	118.97	104.98	83.57	85.60	84.58	101.71
4118	29448	112.60	71.80	106.28	109.44	97.63	92.57	102.33	97.45	98.87
4119	29444	111.90	79.20	111.85	111.88	101.92	88.00	84.33	86.17	102.89
4120	Zonal Check (ZC)	127.70			127.70	107.85	104.20	94.40	99.30	108.12
4121	29420	127.30	95.20	114.85	121.07	105.38	79.67	93.73	86.70	105.02
4122	28631	114.70	100.60	116.27	115.49	103.32	100.83	100.73	100.78	108.49
4123	29415	119.30	92.20	118.53	118.92	103.28	89.73	88.80	89.27	103.76
4124	29424	118.70	79.80	113.93	116.32	104.88	89.40	82.80	86.10	104.51
4125(LC)	Local Check (LC)	120.70	110.40	114.59	117.65	106.43	105.27	98.93	102.10	96.81
4126	29394	118.70		116.95	117.82	103.22	90.13	93.33	91.73	104.38
4127	PA 6129 (HC)	114.70	76.00	104.99	109.85	102.90	88.13	89.20	88.67	91.66
4128	29446	124.50	72.00	109.81	117.16	109.77	83.67	84.33	84.00	100.87
4129	29436	123.90	89.80	108.92	116.41	106.27	81.79	92.73	87.26	104.72
4130	29421	135.00	102.60	117.37	126.18	109.46	105.50	92.80	99.15	107.95
4131	29409	132.90	76.00	110.53	121.72	108.14	98.87	101.87	100.37	108.14
4132	29433	126.50	92.80	122.37	124.43	105.96	103.90	84.87	94.38	107.91
4133	29430	115.40	88.20	118.17	116.78	107.52	103.07	105.73	104.40	109.74
Exp. Mean		123.37	84.50	112.05	117.95	104.39	91.68	88.75	90.21	102.61

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Table No. 2.5: Panicles/m² of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE III-EASTERN			
		PUNJAB		HARYANA		HARYANA (2)	Z2 (2)	ODISHA (1)		BIHAR
		@LUDHIANA	KAUL	Karnal (ICAR-CSSRI)		Mean	Mean	ICAR-NRRI (Cuttack)	BIKRAMGANJ (Dhangain)	
4101	29427	290	292	525		409	409	250	253	
4102	29423	350	282	452		367	367	229	255	
4103	29422	357	426	515		471	471	318	296	
4104	29431	267	235	430		333	333	228	204	
4105	28650	367	283	473		378	378	211	302	
4106	28645	300	259	452		355	355	225	232	
4107	29426		373	523		448	448	237	239	
4108	29412	327	255	526		391	391	205	295	
4109	27951	363	238	468		353	353	227	287	
4110	29396	263	296	453		375	375	316	310	
4111	29402	327		416		416	416		217	
4112	CR Dhan 201 (NC)	377	243	438		341	341	212	235	
4113	29410	337	251	431		341	341	323	256	
4114	29405	340	267	424		346	346	228	245	
4115	29398	373	246	462		354	354	286	233	
4116	27937	373	237	381		309	309	178	227	
4117	29411	370	255	477		366	366	354	272	
4118	29448	290	307	410		358	358	247	261	
4119	29444	367	294	463		379	379	334	277	
4120	Zonal Check (ZC)	263	276	501		388	388	266	304	
4121	29420	277	242	473		358	358	266	303	
4122	28631	353	249	479		364	364	341	297	
4123	29415	290	254	395		325	325	211	328	
4124	29424	297	268	504		386	386	270	274	
4125(LC)	Local Check (LC)	323	294	392		343	343	210	287	
4126	29394	380	256	386		321	321	375	205	
4127	PA 6129 (HC)	337	270	458		364	364	259	231	
4128	29446	340	282	412		347	347	217	317	
4129	29436	337	295	469		382	382	257	221	
4130	29421	343	270	426		348	348	273	287	
4131	29409	230	339	412		376	376	171	337	
4132	29433	273	256	426		341	341	255	284	
4133	29430	313	249	367		308	308	239	285	
Exp. Mean		325	276	449		365	365	257	268	

Table No. 2.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		BIHAR		BIHAR (2)	JHARKHAND		UTTAR PRADESH			UTTAR PRADESH (1)	Z3 (4)
		@PUSA	Patna-ICAR	Mean	@RANCHI	@HAZARIBAGH	@MASODHA	VARANASI	@GORAKHPUR	Mean	Mean
4101	29427	144	311	282	162	242	231	270	265	270	271
4102	29423	146	287	271	165	233	188	245	268	245	254
4103	29422	175	274	285	127	243	148	358	295	358	312
4104	29431	124	295	250	100	241	131	312	256	312	260
4105	28650	132	271	287	128	250	199	327	265	327	278
4106	28645	143	218	225	149	222	200	273	209	273	237
4107	29426	119	221	230	158	248	147	250	251	250	237
4108	29412	122	223	259	115	210	209	315	336	315	260
4109	27951	170	301	294	90	208	201	391	255	391	301
4110	29396	203	305	308	127	237	265	377	238	377	327
4111	29402	176	291	254	103	233	220		292		254
4112	CR Dhan 201 (NC)	172	227	231	121	236	188	307	227	307	245
4113	29410	115	264	260	107	257	208	319	359	319	290
4114	29405	140	290	268	110	236	153	247	332	247	253
4115	29398	132	221	227	109	247	202	257	282	257	249
4116	27937	172	315	271	89	245	206	292	233	292	253
4117	29411	135	301	287	158	255	193	384	265	384	328
4118	29448	138	243	252	119	213	180	320	249	320	268
4119	29444	145	219	248	133	216	165	292	258	292	281
4120	Zonal Check (ZC)	196	320	312	118	231	232	285	259	285	294
4121	29420	168	316	310	78	232		392	275	392	319
4122	28631	160	270	284	157	256	200	388	312	388	324
4123	29415	137	214	271	66	228	139	331	251	331	271
4124	29424	121	255	264	128	246	243	310	240	310	277
4125(LC)	Local Check (LC)	118	229	258	162	210	253	342	344	342	267
4126	29394	118	248	226	80	222	189	299	290	299	282
4127	PA 6129 (HC)	152	285	258	78	245	131	238	222	238	253
4128	29446	116	272	294	103	215	189	275	228	275	270
4129	29436	170	194	207	82	254	165	362	277	362	259
4130	29421	170	309	298	100	258	218	380	317	380	312
4131	29409	119	265	301	122	219	132	301	258	301	269
4132	29433	120	227	255	83	245	143	254	248	254	255
4133	29430	119	219	252	81	220	153	260	258	260	251
Exp. Mean		145	264	266	115	235	188	311	270	311	274

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Table No. 2.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN		ZONE-V – CENTRAL				ZONE VI – WESTERN	
		TRIPURA (1)	Z4 (1)	MADHYA PRADESH	CHHATTISGARH	CHHATTISGARH (2)	Z5 (2)	MAHARASHTRA (1)	
		Lembucherra	Mean	@REWA	RAIPUR	JAGADALPUR	Mean	Mean	Parbhani
4101	29427	342	342	186	245	306	275	275	240
4102	29423	408	408	136	214	241	228	228	211
4103	29422	313	313	101	267	457	362	362	225
4104	29431	425	425	100	159	296	228	228	234
4105	28650	375	375	141	214	524	369	369	230
4106	28645	313	313	170	172	339	256	256	197
4107	29426	300	300	66	207	330	269	269	226
4108	29412	338	338	144	205	288	247	247	224
4109	27951	388	388	111	194	258	226	226	224
4110	29396	438	438	177	259	360	310	310	239
4111	29402	300	300	99	141	136	139	139	240
4112	CR Dhan 201 (NC)	413	413	104	182	197	189	189	209
4113	29410	325	325	137	204	337	271	271	223
4114	29405	313	313	145	209	341	275	275	231
4115	29398	338	338	92	173	346	259	259	218
4116	27937	375	375	189	231	299	265	265	230
4117	29411	350	350	147	231	421	326	326	223
4118	29448	413	413	172	258	278	268	268	232
4119	29444	388	388	121	236	228	232	232	223
4120	Zonal Check (ZC)	375	375	132	212	212	212	212	248
4121	29420	350	350	97	205	316	261	261	254
4122	28631	263	263	141	223	360	292	292	228
4123	29415	363	363	143	202	320	261	261	240
4124	29424	400	400	124	218	354	286	286	238
4125(LC)	Local Check (LC)	375	375	92	226	257	241	241	220
4126	29394	375	375	149	151	187	169	169	243
4127	PA 6129 (HC)	400	400	178	189	246	218	218	254
4128	29446	350	350	88	248	256	252	252	252
4129	29436	400	400	115	213	301	257	257	230
4130	29421	363	363	184	265	232	249	249	240
4131	29409	338	338	136	219	286	253	253	264
4132	29433	325	325	90	150	302	226	226	229
4133	29430	250	250	97	148	212	180	180	284
Exp. Mean		357	357	130	208	298	253	253	233

Table No. 2.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-AEROB, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN				ZONE VII – SOUTHERN				Overall Mean (14)
		GUJARAT			GUJARAT (2)	Z6 (3)	TAMIL NADU (1)	KARNATAKA (1)	Z7(2)	
		NAVSARI	@Derol	Vyara	Mean	Mean	COIMBATORE	MANDYA	Mean	
4101	29427	243	257	196	220	227	388	689	539	325
4102	29423	206	245	166	186	194	442	458	450	292
4103	29422	205	288	192	198	207	422	511	466	341
4104	29431	233	315	174	204	214	405	484	445	294
4105	28650	232	336	247	240	236	423	476	449	328
4106	28645	219	204	216	217	211	377	500	438	285
4107	29426	283	196	201	242	236	393	456	424	303
4108	29412	213	293	221	217	219	418	396	407	294
4109	27951	234	176	154	194	204	370	429	399	297
4110	29396	241	184	133	187	204	398	673	536	343
4111	29402	239		152	196	210	408	638	523	289
4112	CR Dhan 201 (NC)	251	211	140	196	200	393	598	496	289
4113	29410	242	176	161	202	209	358	518	438	301
4114	29405	322	207	142	232	232	407	660	533	309
4115	29398	250	292	149	200	206	438	389	414	286
4116	27937	270	239	197	234	233	392	460	426	292
4117	29411	236	179	196	216	218	425	556	490	334
4118	29448	229	244	207	218	223	402	569	485	313
4119	29444	305	221	165	235	231	412	553	482	313
4120	Zonal Check (ZC)	209			209	228	435	456	445	315
4121	29420	303	229	149	226	235	433	507	470	322
4122	28631	264	235	142	203	211	430	604	517	324
4123	29415	244	187	175	210	220	450	469	459	300
4124	29424	232	301	152	192	207	412	558	485	317
4125(LC)	Local Check (LC)	215	276	168	192	201	457	531	494	300
4126	29394	196		185	190	208	388	533	461	288
4127	PA 6129 (HC)	226	224	207	217	229	388	658	523	308
4128	29446	249	203	184	217	228	395	504	450	301
4129	29436	244	207	163	204	212	410	600	505	311
4130	29421	300	277	191	246	244	408	504	456	318
4131	29409	231	216	205	218	233	404	507	455	306
4132	29433	250	161	177	214	219	387	493	440	287
4133	29430	242	117	175	209	234	400	516	458	275
Exp. Mean		244	230	178	211	219	408	529	468	306

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Table No. 2.6: Grain quality characteristics of entries in AVT 2 & AVT 1-AEROB Kharif, 2021.

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
4101	29427	80.4	73.9	72.5	6.70	2.16	3.10	LS	VOC	7.0	24.69	22
4102	29423	79.2	73.9	71.1	6.94	1.95	3.55	LS	VOC	4.0	22.11	53
4103	29422	79.8	72.9	70.0	6.69	2.16	3.09	LS	VOC	4.0	23.64	43
4104	29431	81.8	76.7	65.1	6.52	2.19	2.97	LB	VOC	4.0	24.81	22
4105	28650	82.7	76.0	73.5	6.28	2.28	2.75	LB	VOC	4.0	26.31	22
4106	28645	81.1	73.8	71.1	7.13	2.34	3.05	LS	VOC	4.0	23.17	48
4107	29426	80.4	75.8	69.9	5.62	2.56	2.19	SB	VOC	4.0	24.46	22
4108	29412	81.3	74.4	71.2	6.39	2.24	2.85	LB	VOC	7.0	23.78	22
4109	27951	80.4	74.1	71.7	6.42	2.21	2.90	LB	VOC	7.0	24.14	54
4110	29396	81.0	74.6	72.7	6.95	2.20	3.15	LS	VOC	4.0	23.84	51
4111	29402	80.3	75.8	71.6	5.23	2.21	2.36	SB	A	4.0	26.63	22
4112	CR Dhan 201 (NC)	80.2	73.6	72.8	6.41	2.17	2.95	LB	VOC	7.0	23.49	22
4113	29410	78.9	73.1	71.4	6.15	2.43	2.53	LB	VOC	4.0	24.31	22
4114	29405	79.2	72.6	70.8	6.15	2.43	2.53	LB	VOC	4.0	23.34	36
4115	29398	78.5	72.0	71.2	7.07	2.13	3.31	LS	A	4.0	24.02	22
4116	27937	81.1	73.5	70.2	6.60	2.39	2.76	LB	VOC	4.0	24.43	22
4117	29411	80.5	74.8	73.2	7.30	2.20	3.31	LS	VOC	7.0	24.93	22
4118	29448	80.6	74.3	72.9	6.02	2.22	2.71	LB	VOC	4.0	26.86	22
4119	29444	81.4	75.8	67.8	6.95	2.16	3.21	LS	VOC	4.0	22.23	35
4120	MAS-946-1 (ZC)	79.5	73.8	72.8	5.53	2.03	2.72	MS	VOC	3.0	22.99	60
4121	29420	82.8	76.1	73.9	6.88	2.39	2.87	LB	VOC	5.0	27.77	22
4122	28631	80.4	74.6	73.2	6.81	2.09	3.25	LS	VOC	7.0	24.17	52
4123	29415	81.3	74.2	70.0	6.24	2.26	2.76	LB	VOC	3.0	21.23	37
4124	29424	80.8	73.9	68.9	6.75	2.25	2.95	LB	VOC	4.0	23.84	22
4125	Local Check (LC)											
4126	29394	79.7	73.3	72.1	7.87	2.13	3.69	LS	VOC	7.0	22.20	22
4127	PA 6129 (HC)	82.2	75.6	73.3	6.38	2.25	2.83	LB	VOC	7.0	24.34	57
4128	29446	81.2	75.7	69.5	6.62	2.24	2.95	LB	VOC	4.0	17.92	52
4129	29436	80.3	73.8	72.5	6.87	2.23	3.08	LS	VOC	7.0	22.38	42
4130	29421	78.7	73.0	72.4	5.93	2.11	2.81	MS	A	7.0	24.78	22
4131	29409	79.5	74.2	72.6	6.18	2.51	2.46	LB	VOC	7.0	21.73	22
4132	29433	79.9	74.7	72.8	6.36	2.23	2.85	LB	VOC	4.0	21.79	22
4133	29430	80.2	72.6	67.8	7.12	2.12	3.35	LS	VOC	4.0	26.37	30

HULL: Hulling (%); **MILL:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length(mm); **KB:** Kernel Breadth(mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content(%); **GC:** Gel Consistency; **LB:** Long Bold; **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

Table No. 2.7: Composition of entries in Initial Variety Trial – Aerobic (IVT-Aerob), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT
1st Year of testing:				
4201	29998	HURS 21-4-IR17L 1056	BR 29*3/ BEAQPENDJALI	MS
4202	29999	NVSR 756	(CST-7-1 / IRGC 26872) / CSR-36	LS
4203	30000	CRR 780-B-B-14-1	Naveen / IR 87707-446-B	LS
4204	30001	R 2220-381-1-243-1	R 156-1328-1-40-1 / Mahamaya	MB
4205	30002	PAU 7180-9-17-0-0-0 (RYT 3853)	PR 121 / IR 96321 // PR 121 /// PR 121 / IR 71033-121-15-B // PR 121	LS
4206	30003	RCPR 79-IR 84899-B-185-8-1-1-1	IR 78877-208-B-1-1 / IRRI 132	LS
4207	30004	CSR PET 27	CSR 30 / CSR 27	LS
4208	30005	<i>US 391 (Hybrid)</i>	-	MB
4209	30006	TRC H2TN 203-B-B-67-3	Hakuchuk 2 / Tripura Nirog	MB
4210	30007	RP Bio 4919-B-B-NSR114	KMR 3/ O.rufipogon	SB
4211	30008	BRR-0180-IR14L157	IR 81039-B-173-U 3-3 / IR 81063-B-94- U 3-1	LS
4212	30009	RP 6112-MS-M-92-2-4-5-7-9-2	BPT 5204 Mutant	MB
4213	30010	CR3506-1-2-3-2-2-1	IR 36 / Tapaswini	MS
4214	30011	MTU 1385 (IR10F559)	IR 80410-B-197-4 /IRRI 149 // NSIC RC 158	LS
4215	30012	RP 6492-MAID-177-81-14-3-1-1	Krishna Hamsa / IRBB60 // Krishna Hamsa / Tetep /// Krishna Hamsa / DSB2 // Krishna Hamsa / IR 81896-96- B-B-195 /// Krishna Hamsa / IR74371- 46-1-1-13	MS
4216	30013	BRR 2137	CR 3939-18 Selection (IR 73907-753-2- 3/ Pratiksyta)	LS
4217	30014	CR3996-1415-2-4-7-5-1-1	IR 20 / Mahulatha	MB
4218	30015	NVSR 825	GAR-13 / RP Bio-226	LB
4219	CR Dhan 201 (NC)			
4220	30016	BRR-0182-IR 93827-29-2-1-3	IR 81039-B-173-U 3-3 / IR 81063-B-94- U 3-1	LS
4221	30017	IIRRH 158 (<i>Hybrid</i>)	-	LS
4222	30018	CSR YET 47	CSR 30 / CSR 23	LS
4223	30019	CR 3856-44-11-1-3-1-1-1-1	IR 73963-86-1-5-2-2 / CR 2324-1-1	SB
4224	30020	CRR 842-IR14L159	IR 10N102 / IR 86931-B-400	LS
4225	30021	HURS 21-2-IR15T1473	IR11T252 / IR09N522	MB
4226	30022	RCPR 80-IR 14L 157	IR 81039-B-173-U 3-3 / IR 81063-B-94- U 3-1	LS
4227	30023	TRC 184-B-B-76-1-1	Tripura Nirog / TRC 87-251	MB
4228	30024	NVSR 3110	IR28 / GAR 13	MS
4229	30025	PAU 5533-56-3-1-3-1-1-1 (RYT 4007)	PR 120 / MASARB 868	LS
4230	30026	MTU 1386 (IR 103294-B-B-B-7)	IRRI 149 / COLOMBIA XXI	LS
4231	30027	CSR YET 78	CSR 30 / CSR 23	LS
4232	30028	CR 3937-1-1-1-1-1-2-3	IR 73895-33-1-3-2 / Lalat	SB
4233	CR Dhan 202- Northern, Eastern, North Eastern & Central; AAUDR-1- Western; MAS 946-1- Southern---ZC			
4234	30029	BRR 2183	IR 74355-CN3/CN 6-78	MS
4235	30030	RP 5405-JBB-631-1-1-1-1-1-1	Swarna / IRGC 4105 // Swarna	MB
4236	30031	CR 4075-1341-3-3-2-2-1-3-2	Jaya / PKV HMT	LS
4237	30032	BRR-0181-IR 93827-29-1-1-4	IR 81039-B-173-U 3-3 / IR 81063-B-94- U 3-1	LS
4238	30033	RP 5977-MS-M-139-4-3-11-8-5-3	BPT 5204 Mutant	LS

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Entry No.	IET No.	Designation	Cross combination	GT
4239	30034	TRC 185-B-B-82-2-11	Tripura Nirog / TRC 87-251	MB
4240	30035	NVSR-726	GAR-13 / Z-31	LB
4241	30036	CRR 749-109-B-B-1	IR64*3 / IR88287-367-B-B	LS
4242	30037	PAU 5729-60-5-4-1(RYT 3704)	IRBB 60 / PAU 3699-13-2-2-4	LS
4243	30038	HURS 21-5-IR 10L 14	IR06L161 / IR 80508-B-57-3-B	MS
4244	30039	RP 6459-C2-168	166S Swarna / O. nivara // 14S Swarna / O. nivara	LS
4245	30040	IIRRH 157 (<i>Hybrid</i>)	-	LS
4246	PA 6129 (HC)			
4247	30041	BRR 2184	HHZ 14-Sal-10-DT-1-DT-1-Selection (Huang-Hua-Zhan * 2 / IR 64)	MS
4248	30042	CR 4070-1320-3-2-1-14-1-2-1	IET 22704 / Pyari	MB
4249	30043	RP 5599-33-2-1-1R	MTU 1010 / KMR3	LS
4250	30044	CR 3745-3-2-1-2-1-1	Pooja / Lalat	MS
4251	30045	BRR 2185	BP 11820-5F-KN-10-2-Selection	LS
4252	30046	CRR 667-15	Poornima / Salumpikit	LS
4253	30047	CR 4075-1341-3-3-2-3-1-2	Jaya / PKV HMT	LB
4254	30048	CR 4060-1318-5-2-2-2-1-5-2-1	IET 22729 / Browngora	LB
4255	30049	RP 6517-MAID -103-4-3-2-2-1-1-1	WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Patho-3 /// WGL 14 / RP 5925-24 // WGL-14 / IR 81896-96-B-B-195	MS
4256	30050	CR 4312-5-1-1-4	CR 3856-44-22-2-1 / IR 64 MAS	SB
4257	30051	CRR 790-69	CR Dhan 40 / IR 73963-86-1-5-2-2 (NPT PSR 12)	MB
4258	30052	R 1672-126-1-24-1	R 1027-2282-2-1 / Danteshwari	MS
4259	30053	CR 4114-2-4-2-1-2-1	CR 3848-1-1-2-1-1 / Vandana	LS
4260	29414 (R)	CSR 87	IR 5 / IR 52713-2B-8-2B-1-2	MS
4261	30054	CR 3946-3-1-1-1-1	MTU 1010 / Dular	LS
4262	30055	NVSR 2865	Gurjari / IET 23947	LS
4263	30056	RP 6496- MAID-246-6-6-2-1-1-1	Krishna Hamsa / IRBB 60 // Krishna Hamsa / Tetep /// Krishna Hamsa // IR 81896-96-B-B-195	MS
4264	Local Check			

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Table No. 2.8: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - AEROB, Kharif 2021.

Entry No	IET No	ZONE II-NORTHERN						ZONE III-EASTERN																				
		HARYANA (1)			Z2 (1)			ODISHA (1)			BIHAR																	
		KAUL			Mean			ICAR-NRRI (Cuttack)			BIKRAMGANJ			PUSA														
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF												
4201	29998	5600	#	80	5600	#	80	4230		69	4927		73	3220		74												
4202	29999	4800		74	4800		74	3763		72	4552		86	3125		68												
4203	30000	6700	4 * #	82	6700	4 * #	82	4861	#	73	5308		78	2936		78												
4204	30001	5850	#	78	5850	#	78	4003		67	5483	*	79	2652		70												
4205	30002	5100		90	5100		90	4520		68	5211		87	2557		88												
4206	30003	6550	7 * #	77	6550	7 * #	77	3990		79	5306		72	2652		69												
4207	30004	6500	8 * #	79	6500	8 * #	79	5215	1 #	70	4547		74	2462		73												
4208	30005	7000	1 * #	80	7000	1 * #	80	4306		71	6059	3 *	74	4356	6 #	74												
4209	30006	5050		82	5050		82	4848	#	70	5213		69	3485		69												
4210	30007							3763		70	2711		92	2869		70												
4211	30008	6900	3 * #	77	6900	3 * #	77	3245		74	5301		76	2273		72												
4212	30009	5500	#	79	5500	#	79	3889		69	4433		73	2652		70												
4213	30010	5200		92	5200		92	3548		72	4769		102	4072		88												
4214	30011	4950		93	4950		93	4116		69	5867	7 *	104	4034		94												
4215	30012	3950		92	3950		92				4818		106	2888		95												
4216	30013	6100	* #	93	6100	* #	93	5101	3 #	68	5490	*	106	2462		100												
4217	30014	5450		86	5450		86	3422		74	4843		75	3788		77												
4218	30015	5050		77	5050		77	4684		72	4562		78	3163		68												
4219	CR Dhan 201 (NC)										3591		79	4091		79												
4220	30016	5850	#	79	5850	#	79	2879		68	4863		77	2652		77												
4221	30017	5750	#	79	5750	#	79	4419		71	4866		74	3977		74												
4222	30018	5000		72	5000		72	3662		71	4966		75	3011		65												
4223	30019							4987	#	68	5139		78	2841		75												
4224	30020	6300	9 * #	80	6300	9 * #	80	5063	6 #	73	5936	6 *	73	3267		70												
4225	30021							3510		70	5963	5 *	87	3409		83												
4226	30022	6600	6 * #	79	6600	6 * #	79	3712		70	4528		77	2699		74												
4227	30023	5550	#	82	5550	#	82	5051	7 #	75	5186		78	2604		70												
4228	30024	5950	#	77	5950	#	77	3965		72	5834	8 *	75	2614		74												
4229	30025	4400		87	4400		87	3460		71	4743		76	3807		79												
4230	30026							5088	4 #	74	4970		80	3220		79												
4231	30027	6200	10 * #	87	6200	10 * #	87	2967		73	4416		84	2519		78												
4232	30028	5650	#	92	5650	#	92	5076	5 #	71	4229		104	4640	2 #	82												
4233	Zonal Check (ZC)	4550		82	4550		82	4861		67	4540		77	4479	4	66												
4234	30029	5100		93	5100		93	3194		74	5722	10 *	76	4356	6 #	95												
4235	30030										4733		105	3220		105												
4236	30031	3850			3850			4141		69	4618		73	4545	3 #	70												
4237	30032	5450		84	5450		84	4710		68	5816	9 *	72	3220		76												
4238	30033							2146		73	4517		84	4167	9 #	80												
4239	30034	4650			4650			3826		71	5367		69	4356	6 #	70												
4240	30035	6650	5 * #	87	6650	5 * #	87	4975	#	72	6032	4 *	85	4167	9 #	77												
4241	30036	4450		81	4450		81	2399		71	5421	*	76	3125		70												
4242	30037	4200		90	4200		90	4230		74	4077		76	3220		73												
4243	30038	5250		73	5250		73	4040		75	6537	2 *	69	2936		67												
4244	30039							3131		74	2856		92	3030		80												
4245	30040	4650		78	4650		78	3245		72	5030		79	4072		73												
4246	PA 6129 (HC)	4800		80	4800		80	4242		72	6711	1	79	3078		74												
4247	30041	5500	#	81	5500	#	81	5000	10 #	69	5597	*	78	2652		71												
4248	30042	4750		79	4750		79	5177	2 #	69	5628	*	79	3220		69												
4249	30043	4600		81	4600		81	3232		71	4353		77	4839	1 #	70												
4250	30044	3850		82	3850		82	3902		70	4977		78	3220		78												
4251	30045	6950	2 * #	80	6950	2 * #	80	3775		70	4806		71	3409		75												
4252	30046							2260		69	3074		68	3314		56												
4253	30047	5700	#	87	5700	#	87	3611		70	4778		77	2936		76												
4254	30048	4900		84	4900		84	5025	8 #	68	3978		77	4261	8 #	71												
4255	30049										5179		94	2850		87												
4256	30050							3965		70	4967		83	2434		84												
4257	30051	6100	* #	81	6100	* #	81	3838		73	4728		78	2377		76												
4258	30052	5350		80	5350		80	5025	8 #	71	5524	*	76	2585		73												
4259	30053	4350		87	4350		87	3725		71	4854		72	2727		75												
4260	29414 (R)	5150		87	5150		87	4003		68	5052		76	2443		75												
4261	30054							2854		68	5256		88	2680		84												
4262	30055							3952		71	5647	*	82	2955		81												
4263	30056	3800		93	3800		93	2955		68	5188		107	2652		95												
4264	Local Check (LC)	5300		82	5300		82	3169		71	4415		90	3409		82												
Exp. Mean		5361			5361			83			3999			71			4978			81			3249			76		
F Value		12.99(p<0.0001)			12.99(p<0.0001)			15.91(p<0.0001)			6.01(p<0.0001)S			3.14(p<0.0001)S														
CD		668			668			557			865			1073														
CV%		6.2			6.2			6.96			8.7			16.53														
D/S		07-07-2021						09-07-2021			10-07-2021			14-07-2021														
D/P																												
Local Check Name		HKR-48						CR Dhan 205			Sabour Harshit			Rajendra Nilam														

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 2.8 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - AEROB, Kharif 2021

Entry No	IET No	ZONE III-EASTERN									ZONE-V - CENTRAL					
		BIHAR			UTTARPRADESH			Z3 (5)			CHHATTISGARH					
		PATNA -ICAR			VARANASI			Mean			RAIPUR			JAGADALPUR		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4201	29998	3620		80	3112		83	3822		76	2745		87	3652		83
4202	29999				3138		96	3645		80	2466		92	3906		86
4203	30000	4370	*	81	4115	9	82	4318	9	78	4639	10 *	89	4249	9	85
4204	30001	2490		83	4063		86	3738		77	4889	6 *	87	4362	6	86
4205	30002	2670		93	4333	3 #	95	3858		86	1442		102	3796		96
4206	30003	2530		79	3641		80	3624		76	4558	*	83	3939		85
4207	30004	4620	6 *	80	3458		79	4060		75	3558		87	4030		83
4208	30005	4730	4 *	83	3984		78	4687	1 *	76	5750	1 * #	87	4193		85
4209	30006	2900		82	4479	1 #	72	4185		72	5712	2 * #	82	4590	4	84
4210	30007							3114		77				2799		83
4211	30008	4420	10 *	80	3698		82	3787		77	5337	3 * #	84	3971		85
4212	30009	2460		81	4286	5	85	3544		76	2755		88	4219	10	84
4213	30010	3520		99	3333		108	3848		94	1019		110	3177		103
4214	30011	2270		95	2250		107	3707		94	1577		106	3659		105
4215	30012	3491		100	3253		107	3613		102	2875		104	4063		97
4216	30013	4482	8 *	101				4384	5	93	1534		107	4115		97
4217	30014	4170	*	78	3151		85	3875		77	3505		93	3704		85
4218	30015	2340		86	3469		93	3644		79	2692		93	3529		88
4219	CR Dhan 201 (NC)	2310		86	3008		94	3250		84	1168		95	3359		93
4220	30016	3620		80	3568		78	3516		76	3240		87	4251	8	85
4221	30017	3020		76	3867		83	4030		75	4654	9 *	84	3040		84
4222	30018	3090		73	3490		71	3644		71	2149		80	3184		84
4223	30019	2950		81	3438		89	3871		78	2389		91	3477		85
4224	30020	4670	5 *	83	3073		89	4402	4	77	3938		85	4089		85
4225	30021	2440		94	3354		92	3735		85	1490		102	3633		94
4226	30022	5000	1 *	84	4036		82	3995		77	4889	6 *	86	4115		84
4227	30023	3010		78	3763		87	3923		77	4433	*	82	3939		85
4228	30024	4160	*	79	3711		79	4057		75	4962	4 *	87	3704		83
4229	30025	3190		87	3333		91	3707		81	3034		90	4258	7	95
4230	30026				4255	6	87	4383	6	80	2923		95	4056		86
4231	30027	2850		82	3750		81	3300		79	3630		90	4049		87
4232	30028	4430	9 *	90	3229		94	4321	7	88	1466		100	4069		89
4233	Zonal Check (ZC)	2880		80	4036		84	4159		75	3063		87	3542		85
4234	30029	2790		98	404		105	3293		89	3587		106	5059	3 *	105
4235	30030	2100		107				3351		105	130		118	3398		104
4236	30031	2410		84	3151		91	3773		77	1736		94	3242		88
4237	30032	2190		82	4245	7	87	4036		77	4779	8 *	80	3242		84
4238	30033	4310	*	88	3177		88	3663		83	2144		103	3737		97
4239	30034	4290	*	75	3190		79	4206		73	4317	*	80	3346		84
4240	30035	3860	*	88	3182		91	4443	3	83	4327	*	97	4102		95
4241	30036	2200		77	3138		87	3257		76	2774		84	4408	5	85
4242	30037	4100	*	86	3815		87	3888		79	3630		92	5638	1 * #	87
4243	30038	4400	*	73	3685		85	4320	8	74	2707		79	3743		76
4244	30039				3021		96	3010		85	543		97	4089		95
4245	30040	4240	*	82	3516		84	4021		78	3875		91	3587		87
4246	PA 6129 (HC)	4930	2	82	3268		86	4446	2	78	4317		88	4023		93
4247	30041	2750		85	4232	8	84	4046		77	3462		84	4121		85
4248	30042	3650		81	3125		87	4160		77	2365		91	3809		86
4249	30043	2360		78	3086		80	3574		75	3034		83	3893		86
4250	30044	2820		86	3333		92	3650		81	2346		94	4134		89
4251	30045	4920	3 *	77	3427		81	4067		74	4322	*	83	5443	2 * #	83
4252	30046	2460		66	3208		85	2863		69	1207		71	2949		97
4253	30047	3050		84	3086		92	3492		80	909		93	3978		86
4254	30048	4520	7 *	81	3469		86	4251	10	76	2558		88	3249		84
4255	30049	2610		92	3271		100	3478		93	2139		101	4017		95
4256	30050	3080		86	4427	2 #	91	3775		83	1197		102	3301		97
4257	30051	3230		82	3294		82	3493		78	4938	5 *	85	3698		84
4258	30052	3290		80	4089		86	4103		77	3721		93	3867		85
4259	30053	2920		90	3529		94	3551		80	3341		97	3255		98
4260	29414 (R)	3655		82	4289	4 #	91	3888		78	2514		85	3893		85
4261	30054	3120		92	4115	9	95	3605		85	3529		96	3132		98
4262	30055	2140		93	3271		96	3593		84	2697		99	3411		98
4263	30056	3791	*	100	2208		104	3359		94	1322		107	3073		104
4264	Local Check (LC)	2980		83	3260		87	3447		82	3274		88	3177		83
Exp. Mean		3364		84	3478		88	3810		80	3051		91	3824		89
F Value		10.74(p<0.0001)S			3.01(p<0.0001)S			6.04(p<0.0001)S			14.65(p<0.0001)S			1.83(p=0.0089)S		
CD		737			1019			438			986			1113		
CV%		10.95			14.65			5.75			16.17			14.56		
D/S		20-07-2021			10-07-2021						07-07-2021			08-07-2021		
D/P																
Local Check Name		Rajendra Bhagwati			HUR-3022						Indira Aerobic-1			Indira Aerobic 1		

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Table No. 2.8 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - AEROB, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL						ZONE VI – WESTERN									
		Z5 (2)			MAHARASHTRA (1)			GUJARAT			Z6 (2)						
		Mean			Parbhani			NAVASARI			Mean						
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP				
4201	29998	3199		85	2756		94	6729	9 * #	87	4743	#	90				
4202	29999	3186		89	2671		96	2833		86	2752		91				
4203	30000	4444	8 *	87	2813		97	5063		92	3938		94				
4204	30001	4626	6 *	87	3120		87	5333		86	4227		87				
4205	30002	2619		99	3040		89	3958		85	3499		87				
4206	30003	4249	*	84	3396	#	86	3283		88	3340		87				
4207	30004	3794		85	3618	#	83	6854	6 * #	82	5236	4 * #	82				
4208	30005	4972	2 *	86	3467	#	88	6653	* #	84	5060	8 * #	86				
4209	30006	5151	1 * #	83	3827	8 #	94	6636	* #	81	5232	5 * #	87				
4210	30007	2799		83	3316	#	91	2250		83	2783		87				
4211	30008	4654	4 *	84	3649	#	95	6806	7 * #	69	5228	6 * #	82				
4212	30009	3487		86	2756		97	3438		79	3097		88				
4213	30010	2098		107	2671		84	1882		86	2277		85				
4214	30011	2618		106	2849		86	3257		84	3053		85				
4215	30012	3469		100	3022		82	4851		82	3937		82				
4216	30013	2825		102	3262	#	95	5167		83	4215		89				
4217	30014	3605		89	2707		85	3729		85	3218		85				
4218	30015	3111		90	2849		76	6201		85	4525		80				
4219	CR Dhan 201 (NC)	2264		94	3658		92	2097		80	2878		86				
4220	30016	3746		86	2209		99	5125		88	3667		93				
4221	30017	3847		84	3738	#	93	5938		91	4838	#	92				
4222	30018	2667		82	2338		96	6347	*	88	4343		92				
4223	30019	2933		88	2782		92	2028		88	2405		90				
4224	30020	4014		85	2667		99	7076	3 * #	90	4872	#	94				
4225	30021	2562		98	3969	4 #	85	6243		90	5106	7 * #	87				
4226	30022	4502	7 *	85	3569	#	96	6934	5 * #	93	5252	3 * #	94				
4227	30023	4186	*	83	4080	3 #	84	4938		93	4509		88				
4228	30024	4333	9 *	85	3102		85	6250		81	4676		83				
4229	30025	3646		92	3249	#	87	6773	8 * #	93	5011	9 #	90				
4230	30026	3490		90	2991		86	1847		92	2419		89				
4231	30027	3840		88	3902	7 #	84	4792		80	4347		82				
4232	30028	2768		94	4102	2 #	85	5479		89	4791	#	87				
4233	Zonal Check (ZC)	3303		86	3960	5	84	2750		85	3355		84				
4234	30029	4323	10 *	105	3778	10 #	82	3333		85	3556		83				
4235	30030	1764		111	2880		86	1806		84	2343		85				
4236	30031	2489		91	3307	#	91	6431	*	84	4869	#	87				
4237	30032	4011		82	2680		96	6688	10 * #	82	4684		89				
4238	30033	2941		100	2951		87				2951		87				
4239	30034	3832		82	3818	9 #	84	7576	1 * #	93	5697	1 * #	88				
4240	30035	4215	*	96	2618		102	2090		76	2354		89				
4241	30036	3591		84	2778		88	4896		87	3837		87				
4242	30037	4634	5 *	89	2396		78	5125		81	3761		79				
4243	30038	3225		77	2756		95	7153	2 * #	92	4955	10 #	93				
4244	30039	2316		96	3289	#	103	3160		83	3225		93				
4245	30040	3731		89	2240		87	6063		90	4152		88				
4246	PA 6129 (HC)	4170		90	2600		95	5097		83	3849		89				
4247	30041	3792		84	3129		86	6347	*	85	4738	#	85				
4248	30042	3087		88	2773		95	4597		93	3685		94				
4249	30043	3464		84	2636		98	5333		87	3985		92				
4250	30044	3240		92	2627		86	2417		89	2522		87				
4251	30045	4883	3 *	83	2329		82	4875		75	3602		78				
4252	30046	2078		84	3649	#	95	3083		78	3366		86				
4253	30047	2444		89	3382	#	96	3778		92	3580		94				
4254	30048	2904		86	4173	1 #	78	4521		83	4347		80				
4255	30049	3078		98	3569	#	95	2500		91	3035		93				
4256	30050	2249		99	2142		86	4125		81	3134		83				
4257	30051	4318	*	84	2551		84	5403		85	3977		84				
4258	30052	3794		89	3940	6 #	90	6938	4 * #	88	5439	2 * #	89				
4259	30053	3298		98	3747	#	82	6000		89	4874	#	85				
4260	29414 (R)	3204		85	3778	10 #	89	4600		89	4189		89				
4261	30054	3331		97	3551	#	82	6146		82	4849	#	82				
4262	30055	3054		98	2133		90	2299		89	2216		89				
4263	30056	2198		106	2800		82	4403		85	3602		83				
4264	Local Check (LC)	3226		85	3573		77	4854		90	4214		83				
Exp. Mean		3436			90	3136			89	4781			85	3944			87
F Value		6.99(p<0.0001)S				6.53(p<0.0001)S				11.34(p<0.0001)S				9.60(p<0.0001)S			
CD		844				610				1399				839			
CV%		12.29				9.74				14.64				10.65			
D/S						12-07-2021				23-07-2021							
D/P																	
Local Check Name						PBNR 03-2				NAUR-1							

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Table No. 2.8 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - AEROB, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN												Overall Mean (13)		
		TELANGANA (1)			TAMIL NADU (1)			KARNATAKA (1)			Z7 (3)					
		RUDRUR			COIMBATORE			MANDYA			Mean					
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4201	29998	3301		97	4414	#	84	1974		92	3230		91	3868		83
4202	29999	3281		95	4907	#	87	1763		94	3317		92	3434		86
4203	30000	4738	4	87	2071		78	3651		94	3487		86	4270	10 *	84
4204	30001	4764	2	85	3971	#	82	3580		94	4105	#	87	4197	*	82
4205	30002	3911		91	4561	#	91	1551		113	3341		98	3588		91
4206	30003	2999		95	4313	#	80	4983	5 #	90	4098	#	88	4011		82
4207	30004	3386		89	5058	10 #	81	2343		95	3596		88	4281	9 *	81
4208	30005	3031		87	1863		74	3439		96	2778		85	4525	2 * #	81
4209	30006	4285		79	2463		82	2742		92	3163		84	4325	7 *	80
4210	30007	2946		93	3777	#	92				3362		92	3054		84
4211	30008	2618		88	3150		78	5296	3 #	91	3688		85	4359	4 * #	81
4212	30009	4062		83	2756		79	5837	2 * #	89	4218	#	84	3773		81
4213	30010	3714		95	5316	7 #	93	4826	7 #	114	4619	3 #	101	3619		96
4214	30011	4600	5	92	5432	6 #	87	3659		106	4564	4 #	95	3732		94
4215	30012	3012		102	4143	#	93	2155		105	3103		100	3543		97
4216	30013	3865		102	5631	4 * #	86	4732	9 #	99	4743	1 #	95	4328	6 *	94
4217	30014	3091		78	5576	5 * #	81	2821		94	3829		84	3843		82
4218	30015	3937		97	4865	#	85	1920		99	3574		94	3789		84
4219	CR Dhan 201 (NC)	4120		94	2929		87	2484		98	3178		93	2983		89
4220	30016	4547	7	90	4338	#	74	4419	#	93	4435	5 #	86	3966		82
4221	30017	4442	10	83	3705	#	76	3549		90	3899		83	4228	*	81
4222	30018	4429		90	5809	1 * #	82	3667		92	4635	2 #	88	3934		80
4223	30019	4311		92	3980	#	89	2695		90	3662		90	3418		85
4224	30020	4980	1	85	4073	#	81	4066	#	90	4373	7 #	85	4554	1 * #	83
4225	30021	3878		95	5042	#	93	1230		104	3383		97	3680		91
4226	30022	4068		91	4521	#	84	2868		94	3819		90	4426	3 * #	84
4227	30023	3829		97	2631		81	4403	#	90	3621		89	4109	*	83
4228	30024	3833		90	2221		73	2703		85	2919		82	4078		80
4229	30025	3963		96	3820	#	86	2789		103	3524		95	3909		88
4230	30026	2925		92	4656	#	85	3870		94	3817		90	3709		86
4231	30027	4420		93	3646	#	85	4262	#	95	4109	#	91	3954		84
4232	30028	2487		91	3929	#	89	4599	#	96	3672		92	4107	*	90
4233	Zonal Check (ZC)	3438		91	4280		87	3659		103	3792		93	3849		83
4234	30029	3549		101	3678	#	88	4717	10 #	103	3981		97	3790		93
4235	30030	2972		100	3272		97	627		101	2290		99	2514		100
4236	30031	3484		94	4819	#	81	2821		104	3708		93	3735		85
4237	30032	3891		92	4378	#	81	4873	6 #	92	4381	6 #	88	4320	8 *	83
4238	30033	3576		91	5690	2 * #	91	3103		112	4123	#	98	3593		90
4239	30034	3596		90	3035		75	3369		84	3333		83	4210	*	79
4240	30035	3871		91	4022	#	83	2546		105	3480		93	4034		88
4241	30036	3694		92	3201		89	2224		103	3040		94	3439		84
4242	30037	3255		91	4316	#	90	2176		112	3249		97	3860		86
4243	30038	4751	3	85	3941	#	75	1920		94	3537		84	4140	*	80
4244	30039	4442	10	89	1890		87	6456	1 * #	112	4263	9 #	96	3264		91
4245	30040	3432		94	2970		81	5108	4 #	94	3837		90	4002		84
4246	PA 6129 (HC)	4580	6	88	2210		83	3432		99	3407		90	4099		84
4247	30041	3773		93	5136	8 #	87	3549		96	4153	#	92	4250	*	83
4248	30042	3484		91	3306		74	4442	#	96	3744		87	3871		84
4249	30043	4029		90	2096		78	2585		94	2903		87	3544		82
4250	30044	2854		88	2000		84	2499		101	2451		91	3152		86
4251	30045	2927		89	3980	#	75	2303		96	3070		86	4113	*	79
4252	30046	3747		89	1448		96	705		98	1967		94	2592		80
4253	30047	3596		91	2799		81	1951		92	2782		88	3350		86
4254	30048	4173		91	4518	#	76	2225		95	3639		87	3967		81
4255	30049	2854		101	5131	9 #	93	995		112	2993		102	3192		96
4256	30050	3832		91	3043		97	595		108	2490		98	3092		89
4257	30051	4003		89	1548		78	3400		93	2984		86	3778		82
4258	30052	4455	9	92	4425	#	85	3220		93	4033	#	90	4341	5 *	84
4259	30053	4528	8	94	5646	3 * #	98	2766		99	4313	8 #	97	3953		88
4260	29414 (R)	3215		97	1223		96	4340	#	93	2926		95	3704		85
4261	30054	3281		101	4869	#	102	3400		95	3850		99	3828		90
4262	30055	3865		92	4798	#	92	3863		105	4175	#	96	3419		90
4263	30056	2894		101	4672	#	93	682		101	2749		98	3111		95
4264	Local Check (LC)	4081		87	3848	#	78	4740	8	91	4223		85	3852		83
Exp. Mean		3748		91	3840		85	3177		97	3589		91	3806		86
F Value		6.17(p<0.0001)S			6.97(p<0.0001)S			36.94(p<0.0001)S			8.72(p<0.0001)S			23.91(p<0.0001)S		
CD		947			1267			609			580			254		
CV%		12.64			16.51			9.59			8.08			3.34		
D/S		30-07-2021			23-07-2021			10-07-2021								
D/P																
Local Check Name		MTU-1010			CO 53			KMP-175								

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Table No. 2.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – AEROB (State Means), Kharif 2021

Entry No	IET No	HARYANA (1)			ODISHA (1)			BIHAR (3)			UTTAR PRADESH (1)			CHHATTISGARH (2)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4201	29998	5600	#	80	4230		69	3922		75	3112		83	3199		85
4202	29999	4800		74	3763		72	3839		77	3138		96	3186		89
4203	30000	6700	4 * #	82	4861	#	73	4205		79	4115	9	82	4444	8 *	87
4204	30001	5850	#	78	4003		67	3542		77	4063		86	4626	6 *	87
4205	30002	5100		90	4520		68	3479		89	4333	3 #	95	2619		99
4206	30003	6550	7 * #	77	3990		79	3496		73	3641		80	4249	*	84
4207	30004	6500	8 * #	79	5215	1 #	70	3876		76	3458		79	3794		85
4208	30005	7000	1 * #	80	4306		71	5048	1 *	77	3984		78	4972	2 *	86
4209	30006	5050		82	4848	#	70	3866		73	4479	1	72	5151	1 * #	83
4210	30007				3763		70	2790		81				2799		83
4211	30008	6900	3 * #	77	3245		74	3998		76	3698		82	4654	4 *	84
4212	30009	5500	#	79	3889		69	3182		75	4286	5	85	3487		86
4213	30010	5200		92	3548		72	4120		96	3333		108	2098		107
4214	30011	4950		93	4116		69	4057		97	2250		107	2618		106
4215	30012	3950		92				3732		100	3253		107	3469		100
4216	30013	6100	* #	93	5101	3 #	68	4145		102				2825		102
4217	30014	5450		86	3422		74	4267		76	3151		85	3605		89
4218	30015	5050		77	4684		72	3355		77	3469		93	3111		90
4219	CR Dhan 201 (NC)							3331		81	3008		94	2264		94
4220	30016	5850	#	79	2879		68	3712		78	3568		78	3746		86
4221	30017	5750	#	79	4419		71	3954		74	3867		83	3847		84
4222	30018	5000		72	3662		71	3689		71	3490		71	2667		82
4223	30019				4987	#	68	3643		78	3438		89	2933		88
4224	30020	6300	9 * #	80	5063	6 #	73	4624	5 *	75	3073		89	4014		85
4225	30021				3510		70	3937		88	3354		92	2562		98
4226	30022	6600	6 * #	79	3712		70	4076		78	4036		82	4502	7 *	85
4227	30023	5550	#	82	5051	7 #	75	3600		75	3763		87	4186	*	83
4228	30024	5950	#	77	3965		72	4203		76	3711		79	4333	9 *	85
4229	30025	4400		87	3460		71	3913		80	3333		91	3646		92
4230	30026				5088	4 #	74	4095		79	4255	6	87	3490		90
4231	30027	6200	10 * #	87	2967		73	3262		81	3750		81	3840		88
4232	30028	5650	#	92	5076	5 #	71	4433	8	92	3229		94	2768		94
4233	Zonal Check (ZC)	4550		82	4861		67	3966		74	4036		84	3303		86
4234	30029	5100		93	3194		74	4289		89	404		105	4323	10 *	105
4235	30030							3351		105				1764		111
4236	30031	3850			4141		69	3858		76	3151		91	2489		91
4237	30032	5450		84	4710		68	3742		77	4245	7	87	4011		82
4238	30033				2146		73	4331	10	84	3177		88	2941		100
4239	30034	4650			3826		71	4671	4 *	71	3190		79	3832		82
4240	30035	6650	5 * #	87	4975	#	72	4686	3 *	83	3182		91	4215	*	96
4241	30036	4450		81	2399		71	3582		74	3138		87	3591		84
4242	30037	4200		90	4230		74	3799		78	3815		87	4634	5 *	89
4243	30038	5250		73	4040		75	4624	5 *	69	3685		85	3225		77
4244	30039				3131		74	2943		86	3021		96	2316		96
4245	30040	4650		78	3245		72	4447	7	78	3516		84	3731		89
4246	PA 6129 (HC)	4800		80	4242		72	4906	2	78	3268		86	4170		90
4247	30041	5500	#	81	5000	10 #	69	3666		78	4232	8	84	3792		84
4248	30042	4750		79	5177	2 #	69	4166		76	3125		87	3087		88
4249	30043	4600		81	3232		71	3851		75	3086		80	3464		84
4250	30044	3850		82	3902		70	3672		80	3333		92	3240		92
4251	30045	6950	2 * #	80	3775		70	4378	9	74	3427		81	4883	3 *	83
4252	30046				2260		69	2949		63	3208		85	2078		84
4253	30047	5700	#	87	3611		70	3588		79	3086		92	2444		89
4254	30048	4900		84	5025	8 #	68	4253		76	3469		86	2904		86
4255	30049							3546		91	3271		100	3078		98
4256	30050				3965		70	3494		84	4427	2 #	91	2249		99
4257	30051	6100	* #	81	3838		73	3445		78	3294		82	4318	*	84
4258	30052	5350		80	5025	8 #	71	3800		76	4089		86	3794		89
4259	30053	4350		87	3725		71	3500		79	3529		94	3298		98
4260	29414 (R)	5150		87	4003		68	3717		78	4289	4 #	91	3204		85
4261	30054				2854		68	3685		88	4115	9	95	3331		97
4262	30055				3952		71	3581		85	3271		96	3054		98
4263	30056	3800		93	2955		68	3877		100	2208		104	2198		106
4264	Local Check (LC)	5300		82	3169		71	3601		85	3260		87	3226		85
Exp. Mean		5361		83	3999		71	3865		80	3478		88	3436		90
F Value		12.99(p<0.0001)			15.91(p<0.0001)			6.06(p<0.0001)S			3.01(p<0.0001)S			6.99(p<0.0001)S		
CD		668			557			524			1019			844		
CV%		6.2			6.96			6.79			14.65			12.29		

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Table No. 2.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - AEROB (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA (1)			GUJARAT (1)			TELANGANA (1)			TAMIL NADU (1)			KARNATAKA (1)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4201	29998	2756			6729	9 * #	87	3301		97	4414	#	84	1974		92
4202	29999	2671			2833		86	3281		95	4907	#	87	1763		94
4203	30000	2813			5063		92	4738	4	87	2071		78	3651		94
4204	30001	3120			5333		86	4764	2	85	3971	#	82	3580		94
4205	30002	3040			3958		85	3911		91	4561	#	91	1551		113
4206	30003	3396	#		3283		88	2999		95	4313	#	80	4983	5 #	90
4207	30004	3618	#		6854	6 * #	82	3386		89	5058	10 #	81	2343		95
4208	30005	3467	#		6653	* #	84	3031		87	1863		74	3439		96
4209	30006	3827	8 #		6636	* #	81	4285		79	2463		82	2742		92
4210	30007	3316	#		2250		83	2946		93	3777	#	92			
4211	30008	3649	#		6806	7 * #	69	2618		88	3150		78	5296	3 #	91
4212	30009	2756			3438		79	4062		83	2756		79	5837	2 * #	89
4213	30010	2671			1882		86	3714		95	5316	7 #	93	4826	7 #	114
4214	30011	2849			3257		84	4600	5	92	5432	6 #	87	3659		106
4215	30012	3022			4851		82	3012		102	4143	#	93	2155		105
4216	30013	3262	#		5167		83	3865		102	5631	4 * #	86	4732	9 #	99
4217	30014	2707			3729		85	3091		78	5576	5 * #	81	2821		94
4218	30015	2849			6201		85	3937		97	4865	#	85	1920		99
4219	CR Dhan 201 (NC)	3658			2097		80	4120		94	2929		87	2484		98
4220	30016	2209			5125		88	4547	7	90	4338	#	74	4419	#	93
4221	30017	3738	#		5938		91	4442	10	83	3705	#	76	3549		90
4222	30018	2338			6347	*	88	4429		90	5809	1 * #	82	3667		92
4223	30019	2782			2028		88	4311		92	3980	#	89	2695		90
4224	30020	2667			7076	3 * #	90	4980	1	85	4073	#	81	4066	#	90
4225	30021	3969	4 #		6243		90	3878		95	5042	#	93	1230		104
4226	30022	3569	#		6934	5 * #	93	4068		91	4521	#	84	2868		94
4227	30023	4080	3 #		4938		93	3829		97	2631		81	4403	#	90
4228	30024	3102			6250		81	3833		90	2221		73	2703		85
4229	30025	3249	#		6773	8 * #	93	3963		96	3820	#	86	2789		103
4230	30026	2991			1847		92	2925		92	4656	#	85	3870		94
4231	30027	3902	7 #		4792		80	4420		93	3646	#	85	4262	#	95
4232	30028	4102	2 #		5479		89	2487		91	3929	#	89	4599	#	96
4233	Zonal Check (ZC)	3960	5		2750		85	3438		91	4280	#	87	3659		103
4234	30029	3778	10 #		3333		85	3549		101	3678	#	88	4717	10 #	103
4235	30030	2880			1806		84	2972		100	3272		97	627		101
4236	30031	3307	#		6431	*	84	3484		94	4819	#	81	2821		104
4237	30032	2680			6688	10 * #	82	3891		92	4378	#	81	4873	6 #	92
4238	30033	2951						3576		91	5690	2 * #	91	3103		112
4239	30034	3818	9 #		7576	1 * #	93	3596		90	3035		75	3369		84
4240	30035	2618			2090		76	3871		91	4022	#	83	2546		105
4241	30036	2778			4896		87	3694		92	3201		89	2224		103
4242	30037	2396			5125		81	3255		91	4316	#	90	2176		112
4243	30038	2756			7153	2 * #	92	4751	3	85	3941	#	75	1920		94
4244	30039	3289	#		3160		83	4442	10	89	1890	#	87	6456	1 * #	112
4245	30040	2240			6063		90	3432		94	2970		81	5108	4 #	94
4246	PA 6129 (HC)	2600			5097		83	4580	6	88	2210		83	3432		99
4247	30041	3129			6347	*	85	3773		93	5136	8 #	87	3549		96
4248	30042	2773			4597		93	3484		91	3306		74	4442	#	96
4249	30043	2636			5333		87	4029		90	2096		78	2585		94
4250	30044	2627			2417		89	2854		88	2000		84	2499		101
4251	30045	2329			4875		75	2927		89	3980	#	75	2303		96
4252	30046	3649	#		3083		78	3747		89	1448		96	705		98
4253	30047	3382	#		3778		92	3596		91	2799		81	1951		92
4254	30048	4173	1 #		4521		83	4173		91	4518	#	76	2225		95
4255	30049	3569	#		2500		91	2854		101	5131	9 #	93	995		112
4256	30050	2142			4125		81	3832		91	3043		97	595		108
4257	30051	2551			5403		85	4003		89	1548		78	3400		93
4258	30052	3940	6 #		6938	4 * #	88	4455	9	92	4425	#	85	3220		93
4259	30053	3747	#		6000		89	4528	8	94	5646	3 * #	98	2766		99
4260	29414 (R)	3778	10 #		4600		89	3215		97	1223		96	4340	#	93
4261	30054	3551	#		6146		82	3281		101	4869	#	102	3400		95
4262	30055	2133			2299		89	3865		92	4798	#	92	3863		105
4263	30056	2800			4403		85	2894		101	4672	#	93	682		101
4264	Local Check (LC)	3573			4854		90	4081		87	3848	#	78	4740	8	91
Exp. Mean		3136			4781		85	3748		91	3840		85	3177		97
F Value		6.53(p<0.0001)S			11.34(p<0.0001)S			6.17(p<0.0001)S			6.97(p<0.0001)S			36.94(p<0.0001)S		
CD		610			1399			947			1267			609		
CV%		9.74			14.64			12.64			16.51			9.59		

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Table No. 2.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - AEROB (Data Not Considered), Kharif 2021

Entry No	IET No	PUNJAB			JHARKHAND						UTTAR PRADESH		
		@LUDHIANA			@RANCHI			@HAZARIBAGH			@MASODHA		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4201	29998	1332		86	2194		90	2278		91	3989	1	91
4202	29999				2061		91	2000		81	1529		102
4203	30000	1521		90	2926		89	2422		88	2527		98
4204	30001	1439		85	2593		87	2278		84	2593		93
4205	30002	1768		94	2394		94	1667		101	2992		94
4206	30003	2714		83	2460		79	2633		83	2726		91
4207	30004	1842		85	2261		84	2333		81	3324	10	94
4208	30005	2360		89	2527		88	2167		91	2660		93
4209	30006	3043	9	86	2992		80	1778		84	2527		92
4210	30007				2926		89	1244		91			
4211	30008	2796		87	2793		83	3500	3	86	1995		95
4212	30009	1217		82	2593		85	2667		89	1529		98
4213	30010				2593		84	1667		89	2261		103
4214	30011				1862		102	333		105	2394		101
4215	30012				2394		82	1111		102	1230		104
4216	30013				1795		105	1333		103	2327		102
4217	30014	1637		92	2859		91	1794		93	1862		97
4218	30015	1308		83	1928		91	2278		82	1330		101
4219	CR Dhan 201 (NC)				2859		86	272		108	2992		101
4220	30016	3684	3	80	2726		92	2833	8	86	2394		101
4221	30017	2459		81	2859		83	2917	7	79	2327		90
4222	30018	1431		75	2194		78	2333		84	2859		84
4223	30019	1653		84	2327		91	1556		86	1139		95
4224	30020	3413	6	83	3524	1	84	3289	4	84	2460		85
4225	30021				2261		85	972		104	1297		104
4226	30022	2928		85	2992		90	2333		83	3324	10	94
4227	30023	1365		81	3324	2	80	1917		87	1596		96
4228	30024	1538		84	2726		80	2333		83	3723	3	93
4229	30025	2944	10	83	2593		89	2333		92	1662		98
4230	30026	2755		90	2128		91	1667		97	3125		94
4231	30027	1275		86	2261		93	1967		92	2327		96
4232	30028				2460		95	1433		85	2926		100
4233	Zonal Check (ZC)	2755		98	2194		89	261		104	3391	8	86
4234	30029				3125	6	104	256		91	532		106
4235	30030				2992		76	128		110	1330		102
4236	30031	1719		87	3258	3	89	3600	2	87	1596		85
4237	30032	3602	4	85	2593		90	3022	6	86	3524	7	96
4238	30033	1382		97	2061		106	244		105	2660		85
4239	30034	2730		79	2859		82				2726		91
4240	30035	1949		92	2194		93	2750	10	90	2394		96
4241	30036	1324		86	3059	9	94	1667		93	1795		99
4242	30037	2262		86	2926		93	2461		90	3590	5	87
4243	30038	3232	8	74	3191	4	76	1917		88	3723	3	92
4244	30039				3125	6	96	767		90	1330		98
4245	30040	3240	7	85	2926		85	2278		88	1995		95
4246	PA 6129 (HC)	2689		83	2460		88				1995		91
4247	30041	4071	1	80	2327		91	2222		91	1729		92
4248	30042	2385		81	3059	9	81	2056		89	2926		82
4249	30043	2196		80	2593		82	1389		89	1596		93
4250	30044	1439		87	2394		90	1972		87	2128		98
4251	30045	3569	5	82	3191	4	87	1767		82	2793		91
4252	30046	1151		64	1795		93	3139	5	72	2726		82
4253	30047	1628		95	2859		89	1122		99	3125		84
4254	30048	1875		84	2327		80	578		98	3590	5	82
4255	30049				2061		91	544		106	1995		105
4256	30050	1686		95	2460		94	489		92	3059		95
4257	30051	1044		93	2460		89	3833	1	81	3324	10	98
4258	30052	1447		90	2261		91	1472		83	3723	3	91
4259	30053	1456		92	1995		94	1917		86	2327		102
4260	29414 (R)	1069		93	1928		92	2806	9	81	1596		100
4261	30054				2061		90	289		103	1662		102
4262	30055	1398		95	2128		100	944		91	1795		102
4263	30056				2327		92	1906		84	2660		100
4264	Local Check (LC)	3701	2	79	3059	9	88	2667		81	3125		71
Exp. Mean		2151		85	2557		89	1840		90	2419		94
F Value		5.55(p<0.0001)			8.21(p<0.0001)S			64.02(p<0.0001)S			20.99(p<0.0001)S		
CD		1013			413			325			482		
CV%		23.43			8.09			8.84			9.97		
D/S		07-07-2021			19-07-2021			28-07-2021			17-07-2021		
D/P													
Local Check Name		PR 126			LALAT			Sabhagi dhan			Shushak Smart		

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Table No. 2.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - AEROB (Data Not Considered), Kharif 2021

Entry No	IET No	UTTAR PRADESH			TRIPURA			GUJARAT					
		@Gorakhpur			@LEMBUCHERRA			@Derol			@VYARA		
		GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD
4201	29998	2106		88	3535		76				580		88
4202	29999	2174		91	3278		75	1302	7	92	1232		94
4203	30000	2785	6	92	3646		74	885		92	1556	5	91
4204	30001	2106		85	3802		82	1354	6	81	804		88
4205	30002	2378		86	4371		75	990		88	772		106
4206	30003	1698		87	3869		72	1615	4	76	1422	7	84
4207	30004	1563		87	4638	9	79	677		91	975		89
4208	30005	2514	10	88	3613		79	677		86	2153	1	89
4209	30006	3057	5	86	2776		75	677		79	896		89
4210	30007	1427		94	2252		73						
4211	30008	1630		87	2732		71	469		94	1983	2	87
4212	30009	1495		83	2308		73	964		84	956		91
4213	30010	2378		94	5642	2	82	1068		87	631		106
4214	30011	2106		100	4928	6	84	781		87	999		106
4215	30012	3193	4	97	5196	4	66	1042		96	353		106
4216	30013	2582	9	100	3737		81	1927	2	95	1458	6	106
4217	30014	951		87	3713		81	1068		92	911		91
4218	30015	1698		89	3442		77	990		77	1019		88
4219	CR Dhan 201 (NC)	2514	10	89	4126		83	417		86	227		96
4220	30016	1155		87	2665		70	573		87	1739	4	89
4221	30017	1155		85	2743		79	1042		84	1148		86
4222	30018	1495		81	1784		64	521		71	748		84
4223	30019	1970		83	3234		76	1406	5	83	654		96
4224	30020	1630		89	2029		72	365		87	1185		88
4225	30021	2785	6	94	4505	10	75	911		87	319		97
4226	30022	1495		85	2453		70	1086		90	1913	3	87
4227	30023	1427		86	2308		72	729		79	509		93
4228	30024	1902		88	2286		62	573		80	384		88
4229	30025	1970		89	3813		88	1094		82	550		93
4230	30026	1766		89	3601		69	1146		92	725		95
4231	30027	1834		84	2119		72	1173		93	954		92
4232	30028	1495		94	3947		83	469		92	437		98
4233	Zonal Check (ZC)	1291		83	3713		72						
4234	30029	5095	1	102	2230		77				775		106
4235	30030	2106		110	5932	1	95				125		107
4236	30031	1970		83	3111		77	729		88	583		92
4237	30032	883		86	2676		71	987		85	1256	10	90
4238	30033	2717	8	92	5040	5	78				978		99
4239	30034	1359		86	3546		69	1198	9	80	307		83
4240	30035	1902		85	4861	8	74	625		91	978		94
4241	30036	1630		82	2587		72	521		85	425		93
4242	30037	1902		88	4047		77	365		86	1173		92
4243	30038	2106		82	2899		72	990		77	422		88
4244	30039	1834		94	3523		78				105		99
4245	30040	2242		88	1751		70	1120		92	1103		93
4246	PA 6129 (HC)	1834		84	3100		72	885		74	864		92
4247	30041	2038		85	4337		62	1198	9	76	1111		87
4248	30042	1495		85	2754		77	521		80	669		91
4249	30043	1766		88	1996		69	521		79	310		88
4250	30044	2038		89	1935		76	677		83	271		95
4251	30045	2038		82	1606		76				920		91
4252	30046	476		67	1728		63	625		65	115		104
4253	30047	1087		88	1650		73	677		92	575		96
4254	30048	1427		85	3791		76	677		80	683		93
4255	30049	3465	3	95	2676		75	807		96	506		94
4256	30050	1291		89	2475		73	964		110	460		97
4257	30051	1563		89	2698		71	1146		81	974		88
4258	30052	2310		84	2888		82	1875	3	84	1267	9	93
4259	30053	1019		90	4215		75	677		93	855		93
4260	29414 (R)	1427		84	2029		70				952		94
4261	30054	1291		90	3100		77	1276	8	103	978		105
4262	30055	2446		90	5319	3	82	625		85	1296	8	102
4263	30056	2310		96	4895	7	80	1120		92	840		106
4264	Local Check (LC)	3601	2	99	3300		91	2292	1	69	730		97
Exp. Mean		1944		88	3305		75	929		85	852		94
F Value		7.20(p<0.0001)S			2.50(p=0.0002)S			6.49(p<0.0001)S			8.78(p<0.0001)S		
CD		839			2233			439			432		
CV%		21.61			33.81			23.6			25.38		
D/S		11-07-2021			18-07-2021			09-07-2021			09-07-2021		
D/P		44414											
Local Check Name					Hakuchuk-2			GR 9			NAUR-1		

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Table No. 2.9: Plant Height (cm) & Panicles/m² of entries in IVT - AEROB, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN				ZONE III-EASTERN					
		HARYANA (1)		Z2 (1)		ODISHA (1)		BIHAR			
		KAUL		Mean		ICAR-NRRI		BIKRAMGANJ		PUSA	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4201	29998	93	245	93	245	110	226	98	284	99	141
4202	29999	99	219	99	219	132	227	100	249	99	130
4203	30000	118	259	118	259	126	258	132	249	130	115
4204	30001	102	275	102	275	109	178	133	303	109	112
4205	30002	84	251	84	251	107	224	110	253	104	141
4206	30003	114	293	114	293	125	219	125	311	124	197
4207	30004	95	239	95	239	109	282	97	311	113	206
4208	30005	94	273	94	273	107	202	107	317	113	214
4209	30006	91	238	91	238	107	261	113	248	103	157
4210	30007	.	.	.	.	123	168	102	182	94	175
4211	30008	89	323	89	323	107	218	97	313	115	215
4212	30009	94	261	94	261	109	297	107	313	122	186
4213	30010	84	246	84	246	126	187	86	239	72	259
4214	30011	92	303	92	303	125	183	119	297	108	194
4215	30012	78	236	78	236	.	.	113	292	104	204
4216	30013	94	308	94	308	136	281	114	299	77	129
4217	30014	105	289	105	289	124	244	132	309	119	131
4218	30015	87	255	87	255	128	216	121	266	123	161
4219	CR Dhan 201 (NC)	94	.	94	.	.	.	.	175	103	154
4220	30016	85	264	85	264	102	184	97	296	88	136
4221	30017	94	257	94	257	108	192	112	218	99	146
4222	30018	80	223	80	223	97	238	85	304	109	176
4223	30019	.	.	.	.	127	286	122	278	122	178
4224	30020	94	254	94	254	99	219	103	266	123	206
4225	30021	93	.	93	.	107	191	100	302	122	191
4226	30022	94	260	94	260	111	232	104	310	102	165
4227	30023	103	231	103	231	120	221	122	260	123	138
4228	30024	86	205	86	205	88	266	95	216	104	213
4229	30025	84	241	84	241	109	191	124	209	108	219
4230	30026	.	.	.	.	112	278	96	222	87	130
4231	30027	102	234	102	234	110	229	109	276	100	140
4232	30028	105	253	105	253	129	285	123	315	119	184
4233	Zonal Check (ZC)	103	229	103	229	119	182	103	237	113	220
4234	30029	74	285	74	285	114	200	118	209	93	197
4235	30030	.	.	.	.	.	.	107	262	80	104
4236	30031	76	199	76	199	110	242	118	283	117	181
4237	30032	89	279	89	279	102	234	107	287	112	202
4238	30033	.	.	.	.	119	243	114	229	106	176
4239	30034	106	217	106	217	118	164	114	260	85	158
4240	30035	100	279	100	279	118	223	.	299	83	168
4241	30036	80	247	80	247	82	224	93	232	83	118
4242	30037	75	275	75	275	107	194	89	279	111	187
4243	30038	93	233	93	233	116	175	115	254	86	181
4244	30039	.	.	.	.	102	234	90	237	98	87
4245	30040	86	250	86	250	110	188	104	250	91	212
4246	PA 6129 (HC)	79	222	79	222	103	273	97	271	111	117
4247	30041	79	276	79	276	116	228	95	239	110	205
4248	30042	84	219	84	219	116	245	112	312	109	192
4249	30043	90	266	90	266	98	164	104	260	98	231
4250	30044	83	231	83	231	113	234	106	300	106	188
4251	30045	97	263	97	263	95	177	101	230	110	213
4252	30046	95	.	95	.	110	159	126	210	117	163
4253	30047	107	250	107	250	120	193	116	257	124	218
4254	30048	106	189	106	189	132	279	130	261	84	172
4255	30049	.	.	.	.	.	.	116	269	84	171
4256	30050	91	.	91	.	118	207	102	279	116	137
4257	30051	102	261	102	261	118	201	110	291	95	141
4258	30052	95	268	95	268	118	232	113	292	114	112
4259	30053	101	226	101	226	126	187	126	276	142	195
4260	29414 (R)	84	280	84	280	98	251	83	266	104	203
4261	30054	.	.	.	.	125	156	104	232	109	209
4262	30055	.	.	.	.	129	185	121	316	109	177
4263	30056	90	247	90	247	128	224	116	314	89	130
4264	Local Check (LC)	85	272	85	272	115	217	99	310	93	125
Exp. Mean		92	253	92	253	114	220	108	268	105	171

PH: Plant Height (cm) NP: No. of Panicles/sqm

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Table No. 2.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - AEROB, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE-V – CENTRAL			
		BIHAR		UTTARPRADESH		Z3 (5)		CHHATTISGARH			
		PATNA -ICAR		VARANASI		Mean		RAIPUR		JAGDALPUR	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4201	29998	98	247	87	250	98	229	81	163	75	232
4202	29999	.	.	104	250	109	214	104	158	72	168
4203	30000	113	317	103	229	121	233	111	179	98	187
4204	30001	94	236	95	247	108	215	92	216	72	120
4205	30002	85	254	91	293	100	233	79	145	85	238
4206	30003	105	239	107	240	117	241	98	196	87	187
4207	30004	103	224	89	251	102	255	101	164	88	245
4208	30005	97	240	98	249	104	244	89	207	81	233
4209	30006	100	251	98	220	104	227	93	194	81	159
4210	30007	.	.	.	.	106	175	.	.	100	24
4211	30008	89	288	93	324	100	271	91	253	72	231
4212	30009	99	274	99	277	107	269	86	196	71	270
4213	30010	78	264	83	232	89	236	89	148	52	153
4214	30011	98	242	101	237	110	230	95	94	80	334
4215	30012	85	238	99	278	100	253	83	150	75	315
4216	30013	91	222	.	.	104	233	110	125	95	214
4217	30014	113	278	99	257	117	244	94	202	100	181
4218	30015	86	260	98	220	111	224	90	153	89	166
4219	CR Dhan 201 (NC)	93	205	95	229	97	191	85	108	78	132
4220	30016	95	222	87	276	94	223	91	186	80	265
4221	30017	85	325	95	293	100	234	87	211	73	152
4222	30018	97	258	95	226	97	240	80	145	73	180
4223	30019	101	250	101	290	115	256	94	118	65	189
4224	30020	94	216	79	307	99	242	88	167	64	199
4225	30021	77	320	91	239	99	248	71	138	95	288
4226	30022	97	238	89	308	100	250	100	247	81	165
4227	30023	95	203	96	227	111	210	89	201	67	150
4228	30024	83	240	78	301	90	247	84	195	73	208
4229	30025	92	289	87	257	104	233	76	141	88	188
4230	30026	.	.	85	358	95	247	89	192	76	223
4231	30027	92	254	98	289	102	237	90	156	97	219
4232	30028	109	294	119	279	120	271	99	145	107	337
4233	Zonal Check (ZC)	107	269	110	282	110	238	103	114	83	152
4234	30029	88	285	85	249	99	228	93	211	67	255
4235	30030	71	236	.	.	86	201	95	86	76	295
4236	30031	92	256	97	251	107	242	88	196	83	242
4237	30032	79	261	88	367	98	270	86	221	80	175
4238	30033	111	214	90	364	108	245	.	137	94	189
4239	30034	111	234	92	226	104	208	95	187	.	161
4240	30035	101	209	90	242	98	228	88	177	88	201
4241	30036	82	250	73	295	83	224	79	127	70	172
4242	30037	82	245	89	272	96	235	81	176	95	263
4243	30038	93	258	100	310	102	235	76	217	77	150
4244	30039	.	.	79	152	92	177	87	54	88	191
4245	30040	97	237	97	338	100	245	87	177	77	212
4246	PA 6129 (HC)	94	196	85	246	98	220	90	180	85	227
4247	30041	75	178	85	247	96	219	86	217	81	135
4248	30042	98	193	102	217	107	232	96	162	71	201
4249	30043	102	222	92	233	99	222	86	143	77	176
4250	30044	91	301	85	280	100	260	92	207	81	188
4251	30045	94	256	83	254	97	226	94	213	74	210
4252	30046	103	211	95	254	110	199	78	121	63	160
4253	30047	96	211	107	239	113	224	88	101	81	265
4254	30048	111	207	120	267	115	237	99	141	97	102
4255	30049	94	255	98	231	98	231	94	145	91	190
4256	30050	86	197	99	238	104	211	86	116	94	177
4257	30051	93	285	84	296	100	243	88	223	77	206
4258	30052	92	309	93	242	106	237	90	198	96	181
4259	30053	93	259	107	301	117	244	96	172	83	135
4260	29414 (R)	84	273	85	273	91	253	66	127	65	120
4261	30054	96	242	104	250	107	218	97	157	89	185
4262	30055	103	272	111	237	115	237	78	142	93	184
4263	30056	80	269	76	205	98	228	85	91	63	175
4264	Local Check (LC)	106	242	78	273	98	233	96	204	80	221
Exp. Mean		94	248	94	263	103	233	90	165	81	197

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Table No. 2.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - AEROB, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL		ZONE VI – WESTERN						ZONE VII – SOUTHERN	
		Z5 (2)		MAHARASHTRA (1)		GUJARAT		Z6 (2)		TELANGANA (1)	
		Mean		Parbhani		NAVASARI		Mean		RUDRUR	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4201	29998	78	197	71	219	88	195	79	207	87	296
4202	29999	88	163	67	207	83	189	75	198	77	290
4203	30000	105	183	61	211	89	183	75	197	82	341
4204	30001	82	168	60	227	84	195	72	211	79	323
4205	30002	82	191	.	222	92	199	92	210	78	263
4206	30003	92	191	56	225	86	190	71	207	79	291
4207	30004	95	204	68	248	87	179	77	213	78	297
4208	30005	85	220	66	257	85	194	75	226	77	270
4209	30006	87	176	96	277	87	197	92	237	80	318
4210	30007	100	24	65	237	94	194	79	215	74	295
4211	30008	82	242	85	278	88	172	87	225	79	264
4212	30009	79	233	71	217	85	189	78	203	80	320
4213	30010	71	151	67	217	102	189	84	203	82	283
4214	30011	87	214	71	228	96	182	83	205	77	376
4215	30012	79	232	86	243	89	197	88	220	88	281
4216	30013	102	169	82	256	101	197	91	226	79	264
4217	30014	97	191	79	204	88	189	84	196	81	265
4218	30015	90	159	62	209	86	215	74	212	86	280
4219	CR Dhan 201 (NC)	82	120	74	258	89	176	81	217	87	264
4220	30016	86	225	74	198	94	193	84	196	77	293
4221	30017	80	181	62	274	87	200	74	237	75	340
4222	30018	76	162	55	198	87	207	71	203	85	320
4223	30019	79	153	77	226	91	195	84	211	75	310
4224	30020	76	183	56	219	81	196	69	207	84	384
4225	30021	83	213	84	286	88	174	86	230	81	271
4226	30022	90	206	63	256	92	202	77	229	85	270
4227	30023	78	175	65	295	81	162	73	228	79	263
4228	30024	79	201	53	243	83	199	68	221	75	268
4229	30025	82	164	60	270	96	176	78	223	79	292
4230	30026	83	207	72	242	86	201	79	222	88	235
4231	30027	93	187	67	287	89	162	78	225	93	322
4232	30028	103	241	72	292	90	208	81	250	92	236
4233	Zonal Check (ZC)	93	133	61	283	95	209	78	246	86	286
4234	30029	80	233	71	270	92	199	81	234	73	256
4235	30030	85	191	90	209	89	184	90	197	79	251
4236	30031	85	219	75	259	88	202	81	231	67	257
4237	30032	83	198	73	206	91	211	82	209	77	280
4238	30033	94	163	90	210	.	.	90	210	70	252
4239	30034	95	174	68	280	85	214	76	247	85	267
4240	30035	88	189	53	219	96	148	74	183	93	273
4241	30036	74	149	56	231	79	196	68	213	71	267
4242	30037	88	219	66	192	85	184	75	188	92	255
4243	30038	77	184	82	219	84	220	83	219	77	368
4244	30039	87	123	58	255	77	164	67	209	80	342
4245	30040	82	194	76	183	85	192	81	188	77	273
4246	PA 6129 (HC)	87	204	67	205	99	168	83	186	70	312
4247	30041	83	176	53	251	85	165	69	208	83	292
4248	30042	84	181	59	224	95	172	77	198	73	250
4249	30043	82	159	62	251	82	189	72	220	79	282
4250	30044	86	197	64	255	87	204	75	230	82	245
4251	30045	84	211	68	208	83	178	76	193	89	251
4252	30046	70	141	61	276	82	211	71	243	74	280
4253	30047	84	183	76	264	96	179	86	221	82	299
4254	30048	98	121	81	288	87	184	84	236	90	328
4255	30049	93	168	68	262	99	194	84	228	72	242
4256	30050	90	146	73	206	91	172	82	189	90	264
4257	30051	83	214	59	220	104	179	82	200	92	279
4258	30052	93	190	66	279	97	180	81	229	84	328
4259	30053	90	153	71	265	80	207	76	236	84	337
4260	29414 (R)	66	124	77	288	85	193	81	240	84	258
4261	30054	93	171	64	277	101	181	83	229	91	269
4262	30055	86	163	60	190	87	167	73	179	83	288
4263	30056	74	133	93	228	92	163	92	196	87	240
4264	Local Check (LC)	88	213	90	265	90	174	90	219	80	307
Exp. Mean		86	180	69	241	89	188	79	215	81	287

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Table No. 2.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - AEROB, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						Overall Mean (13)	
		TAMIL NADU		KARNATAKA (1)		Z7 (3)			
		COIMBATORE		MANDYA		Mean		PH	NP
		PH	NP	PH	NP	PH	NP		
4201	29998	85	368	73	477	81	380	88	257
4202	29999	94	366	83	403	85	353	93	238
4203	30000	93	355	93	370	89	355	104	250
4204	30001	81	343	73	383	78	350	91	243
4205	30002	90	438	63	343	77	348	89	251
4206	30003	100	423	103	443	94	385	101	265
4207	30004	102	368	99	520	93	395	95	272
4208	30005	74	373	72	470	74	371	89	269
4209	30006	106	320	95	407	93	348	96	250
4210	30007	94	363	.	.	84	329	93	205
4211	30008	83	343	72	490	78	365	89	285
4212	30009	89	383	96	457	88	386	93	280
4213	30010	87	418	93	503	87	401	85	257
4214	30011	94	410	101	500	91	429	97	275
4215	30012	80	395	93	517	87	397	89	279
4216	30013	97	383	111	593	96	413	99	272
4217	30014	102	428	87	537	90	410	102	270
4218	30015	94	385	83	403	87	356	95	245
4219	CR Dhan 201 (NC)	84	353	85	587	85	401	88	240
4220	30016	93	353	63	470	78	372	87	256
4221	30017	84	385	74	550	78	425	87	272
4222	30018	101	398	78	447	88	388	86	255
4223	30019	94	353	84	563	84	409	96	269
4224	30020	85	385	76	527	82	432	87	272
4225	30021	76	344	72	437	77	350	89	265
4226	30022	82	358	88	500	85	376	91	270
4227	30023	86	303	86	620	84	395	93	252
4228	30024	67	375	75	557	72	400	80	268
4229	30025	85	378	88	527	84	399	90	259
4230	30026	86	378	78	553	84	388	87	274
4231	30027	87	345	94	527	91	398	94	264
4232	30028	93	365	107	510	97	370	105	285
4233	Zonal Check (ZC)	95	353	88	503	89	380	97	255
4234	30029	78	350	65	543	72	383	85	270
4235	30030	81	363	67	377	76	330	83	237
4236	30031	97	363	82	443	82	354	91	259
4237	30032	84	415	80	727	80	474	88	297
4238	30033	101	380	.	460	85	364	99	259
4239	30034	98	370	88	510	90	382	95	250
4240	30035	92	385	83	567	89	408	90	261
4241	30036	71	430	71	497	71	398	76	252
4242	30037	80	360	70	480	81	365	86	258
4243	30038	88	351	79	483	81	401	90	263
4244	30039	90	303	89	560	86	401	85	234
4245	30040	86	403	85	643	83	440	89	274
4246	PA 6129 (HC)	83	310	92	477	82	366	89	246
4247	30041	93	375	86	520	87	396	87	256
4248	30042	82	350	80	447	78	349	90	245
4249	30043	78	340	67	533	75	385	86	253
4250	30044	81	385	77	527	80	386	88	272
4251	30045	89	378	80	477	86	368	89	254
4252	30046	106	308	70	487	83	358	91	236
4253	30047	97	395	81	473	87	389	98	257
4254	30048	100	348	86	547	92	407	102	255
4255	30049	101	343	95	603	89	396	92	264
4256	30050	82	364	89	503	87	377	94	238
4257	30051	81	360	77	617	83	419	91	274
4258	30052	91	370	91	643	88	447	95	279
4259	30053	101	433	98	563	95	444	99	273
4260	29414 (R)	69	353	69	533	74	381	81	263
4261	30054	99	435	94	470	95	391	98	255
4262	30055	91	398	111	477	95	387	98	252
4263	30056	81	390	89	513	86	381	90	245
4264	Local Check (LC)	101	443	99	623	93	458	93	283
Exp. Mean		89	372	84	508	85	388	91	260

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Table No. 2.9 Contd. Plant Height (cm) & Panicles/m² of entries in IVT – AEROB (State Means), Kharif 2021

Entry No	IET No	HARYANA (1)		ODISHA (1)		BIHAR (3)		UTTAR PRADESH (1)		CHHATTISGARH (2)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4201	29998	93	245	110	226	99	224	87	250	78	197
4202	29999	99	219	132	227	99	190	104	250	88	163
4203	30000	118	259	126	258	125	227	103	229	105	183
4204	30001	102	275	109	178	112	217	95	247	82	168
4205	30002	84	251	107	224	100	216	91	293	82	191
4206	30003	114	293	125	219	118	249	107	240	92	191
4207	30004	95	239	109	282	104	247	89	251	95	204
4208	30005	94	273	107	202	105	257	98	249	85	220
4209	30006	91	238	107	261	105	218	98	220	87	176
4210	30007	.	.	123	168	98	178	.	.	100	24
4211	30008	89	323	107	218	100	272	93	324	82	242
4212	30009	94	261	109	297	109	258	99	277	79	233
4213	30010	84	246	126	187	79	254	83	232	71	151
4214	30011	92	303	125	183	108	244	101	237	87	214
4215	30012	78	236	.	.	101	245	99	278	79	232
4216	30013	94	308	136	281	94	216	.	.	102	169
4217	30014	105	289	124	244	121	239	99	257	97	191
4218	30015	87	255	128	216	110	229	98	220	90	159
4219	CR Dhan 201 (NC)	94	.	.	.	98	178	95	229	82	120
4220	30016	85	264	102	184	93	218	87	276	86	225
4221	30017	94	257	108	192	98	229	95	293	80	181
4222	30018	80	223	97	238	97	246	95	226	76	162
4223	30019	.	.	127	286	115	235	101	290	79	153
4224	30020	94	254	99	219	106	229	79	307	76	183
4225	30021	93	.	107	191	100	271	91	239	83	213
4226	30022	94	260	111	232	101	237	89	308	90	206
4227	30023	103	231	120	221	113	200	96	227	78	175
4228	30024	86	205	88	266	94	223	78	301	79	201
4229	30025	84	241	109	191	108	239	87	257	82	164
4230	30026	.	.	112	278	92	176	85	358	83	207
4231	30027	102	234	110	229	100	223	98	289	93	187
4232	30028	105	253	129	285	117	264	119	279	103	241
4233	Zonal Check (ZC)	103	229	119	182	107	242	110	282	93	133
4234	30029	74	285	114	200	100	230	85	249	80	233
4235	30030	.	.	.	.	86	201	.	.	85	191
4236	30031	76	199	110	242	109	240	97	251	85	219
4237	30032	89	279	102	234	100	250	88	367	83	198
4238	30033	.	.	119	243	110	206	90	364	94	163
4239	30034	106	217	118	164	103	217	92	226	95	174
4240	30035	100	279	118	223	92	225	90	242	88	189
4241	30036	80	247	82	224	86	200	73	295	74	149
4242	30037	75	275	107	194	94	237	89	272	88	219
4243	30038	93	233	116	175	98	231	100	310	77	184
4244	30039	.	.	102	234	94	162	79	152	87	123
4245	30040	86	250	110	188	97	233	97	338	82	194
4246	PA 6129 (HC)	79	222	103	273	101	195	85	246	87	204
4247	30041	79	276	116	228	93	207	85	247	83	176
4248	30042	84	219	116	245	106	232	102	217	84	181
4249	30043	90	266	98	164	101	237	92	233	82	159
4250	30044	83	231	113	234	101	263	85	280	86	197
4251	30045	97	263	95	177	101	233	83	254	84	211
4252	30046	95	.	110	159	115	194	95	254	70	141
4253	30047	107	250	120	193	112	229	107	239	84	183
4254	30048	106	189	132	279	108	213	120	267	98	121
4255	30049	.	.	.	.	98	232	98	231	93	168
4256	30050	91	.	118	207	101	204	99	238	90	146
4257	30051	102	261	118	201	99	239	84	296	83	214
4258	30052	95	268	118	232	106	237	93	242	93	190
4259	30053	101	226	126	187	117	243	107	301	90	153
4260	29414 (R)	84	280	98	251	90	247	85	273	66	124
4261	30054	.	.	125	156	103	227	104	250	93	171
4262	30055	.	.	129	185	111	255	111	237	86	163
4263	30056	90	247	128	224	95	238	76	205	74	133
4264	Local Check (LC)	85	272	115	217	99	226	78	273	88	213
Exp. Mean		92	253	114	220	102	228	94	263	86	180

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Table No. 2.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – AEROB (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA (1)		GUJARAT (1)		TELANGANA (1)		TAMIL NADU (1)		KARNATAKA (1)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4201	29998	71	219	88	195	87	296	85	368	73	477
4202	29999	67	207	83	189	77	290	94	366	83	403
4203	30000	61	211	89	183	82	341	93	355	93	370
4204	30001	60	227	84	195	79	323	81	343	73	383
4205	30002	.	222	92	199	78	263	90	438	63	343
4206	30003	56	225	86	190	79	291	100	423	103	443
4207	30004	68	248	87	179	78	297	102	368	99	520
4208	30005	66	257	85	194	77	270	74	373	72	470
4209	30006	96	277	87	197	80	318	106	320	95	407
4210	30007	65	237	94	194	74	295	94	363	.	
4211	30008	85	278	88	172	79	264	83	343	72	490
4212	30009	71	217	85	189	80	320	89	383	96	457
4213	30010	67	217	102	189	82	283	87	418	93	503
4214	30011	71	228	96	182	77	376	94	410	101	500
4215	30012	86	243	89	197	88	281	80	395	93	517
4216	30013	82	256	101	197	79	264	97	383	111	593
4217	30014	79	204	88	189	81	265	102	428	87	537
4218	30015	62	209	86	215	86	280	94	385	83	403
4219	CR Dhan 201 (NC)	74	258	89	176	87	264	84	353	85	587
4220	30016	74	198	94	193	77	293	93	353	63	470
4221	30017	62	274	87	200	75	340	84	385	74	550
4222	30018	55	198	87	207	85	320	101	398	78	447
4223	30019	77	226	91	195	75	310	94	353	84	563
4224	30020	56	219	81	196	84	384	85	385	76	527
4225	30021	84	286	88	174	81	271	76	344	72	437
4226	30022	63	256	92	202	85	270	82	358	88	500
4227	30023	65	295	81	162	79	263	86	303	86	620
4228	30024	53	243	83	199	75	268	67	375	75	557
4229	30025	60	270	96	176	79	292	85	378	88	527
4230	30026	72	242	86	201	88	235	86	378	78	553
4231	30027	67	287	89	162	93	322	87	345	94	527
4232	30028	72	292	90	208	92	236	93	365	107	510
4233	Zonal Check (ZC)	61	283	95	209	86	286	95	353	88	503
4234	30029	71	270	92	199	73	256	78	350	65	543
4235	30030	90	209	89	184	79	251	81	363	67	377
4236	30031	75	259	88	202	67	257	97	363	82	443
4237	30032	73	206	91	211	77	280	84	415	80	727
4238	30033	90	210	.		70	252	101	380	.	460
4239	30034	68	280	85	214	85	267	98	370	88	510
4240	30035	53	219	96	148	93	273	92	385	83	567
4241	30036	56	231	79	196	71	267	71	430	71	497
4242	30037	66	192	85	184	92	255	80	360	70	480
4243	30038	82	219	84	220	77	368	88	351	79	483
4244	30039	58	255	77	164	80	342	90	303	89	560
4245	30040	76	183	85	192	77	273	86	403	85	643
4246	PA 6129 (HC)	67	205	99	168	70	312	83	310	92	477
4247	30041	53	251	85	165	83	292	93	375	86	520
4248	30042	59	224	95	172	73	250	82	350	80	447
4249	30043	62	251	82	189	79	282	78	340	67	533
4250	30044	64	255	87	204	82	245	81	385	77	527
4251	30045	68	208	83	178	89	251	89	378	80	477
4252	30046	61	276	82	211	74	280	106	308	70	487
4253	30047	76	264	96	179	82	299	97	395	81	473
4254	30048	81	288	87	184	90	328	100	348	86	547
4255	30049	68	262	99	194	72	242	101	343	95	603
4256	30050	73	206	91	172	90	264	82	364	89	503
4257	30051	59	220	104	179	92	279	81	360	77	617
4258	30052	66	279	97	180	84	328	91	370	91	643
4259	30053	71	265	80	207	84	337	101	433	98	563
4260	29414 (R)	77	288	85	193	84	258	69	353	69	533
4261	30054	64	277	101	181	91	269	99	435	94	470
4262	30055	60	190	87	167	83	288	91	398	111	477
4263	30056	93	228	92	163	87	240	81	390	89	513
4264	Local Check (LC)	90	265	90	174	80	307	101	443	99	623
Exp. Mean		69	241	89	188	81	287	89	372	84	508

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Table No. 2.9 Contd. Plant Height (cm) & Panicles/m² of entries in IVT-AEROB (Data Not Considered), Kharif 2021

Entry No	IET No	PUNJAB		JHARKHAND				UTTAR PRADESH	
		@LUDHIANA		@RANCHI		@Hazaribagh		@MASODHA	
		PH	NP	PH	NP	PH	NP	PH	NP
4201	29998	93	305	69	123	94	220	112	242
4202	29999	.	.	78	95	82	235	93	135
4203	30000	104	350	87	105	112	343	102	168
4204	30001	89	370	77	113	93	305	105	179
4205	30002	75	415	71	114	79	245	93	216
4206	30003	115	365	88	87	78	275	89	175
4207	30004	88	290	77	107	88	213	83	215
4208	30005	83	330	76	86	87	265	86	183
4209	30006	100	310	77	65	82	190	102	183
4210	30007	.	.	90	100	77	248	.	.
4211	30008	80	335	73	161	95	335	75	181
4212	30009	113	350	70	103	96	295	77	177
4213	30010	.	.	89	148	72	273	70	169
4214	30011	.	.	72	64	76	145	84	209
4215	30012	.	.	89	99	79	300	82	133
4216	30013	.	.	70	71	85	270	78	151
4217	30014	96	340	82	139	106	318	90	174
4218	30015	86	335	77	46	69	253	87	115
4219	CR Dhan 201 (NC)	.	.	82	113	74	233	77	179
4220	30016	94	400	70	119	84	298	82	179
4221	30017	101	315	72	122	99	320	89	167
4222	30018	91	330	71	120	100	323	95	201
4223	30019	95	280	75	74	89	248	82	132
4224	30020	102	350	74	94	92	365	94	196
4225	30021	.	.	71	201	79	298	87	161
4226	30022	87	335	71	93	96	288	125	225
4227	30023	100	345	80	128	77	270	88	123
4228	30024	81	330	62	178	87	283	89	231
4229	30025	98	360	80	108	90	310	81	118
4230	30026	90	340	66	140	80	240	78	184
4231	30027	87	380	79	78	95	220	86	197
4232	30028	.	.	94	133	86	238	118	184
4233	Zonal Check (ZC)	75	365	71	47	58	180	92	228
4234	30029	.	.	65	195	64	215	88	184
4235	30030	.	.	76	184	78	73	92	130
4236	30031	81	373	84	114	97	288	82	187
4237	30032	93	375	64	52	70	308	105	238
4238	30033	76	360	71	76	94	250	70	230
4239	30034	104	340	80	115	.	.	102	202
4240	30035	86	300	70	72	85	258	90	211
4241	30036	69	350	69	172	73	230	62	136
4242	30037	77	385	65	121	79	198	78	236
4243	30038	91	370	75	136	79	218	103	219
4244	30039	.	.	72	195	96	198	80	123
4245	30040	92	375	71	104	89	305	76	168
4246	PA 6129 (HC)	86	290	83	86	.	.	89	180
4247	30041	90	345	64	98	90	268	80	161
4248	30042	97	340	74	123	84	315	98	198
4249	30043	90	315	74	135	82	245	89	158
4250	30044	95	385	76	84	77	358	83	171
4251	30045	96	370	73	149	95	233	80	219
4252	30046	91	335	66	76	113	335	83	166
4253	30047	91	375	83	94	89	308	110	214
4254	30048	102	360	79	111	80	165	103	246
4255	30049	.	.	95	104	84	268	77	159
4256	30050	87	315	66	81	78	163	94	217
4257	30051	71	365	78	95	105	323	97	205
4258	30052	80	345	70	93	94	305	107	223
4259	30053	90	380	75	97	93	233	87	176
4260	29414 (R)	64	330	59	59	80	303	68	116
4261	30054	.	.	73	96	61	140	78	149
4262	30055	111	345	81	85	92	305	103	168
4263	30056	.	.	77	97	70	283	95	180
4264	Local Check (LC)	80	365	78	162	105	243	81	239
Exp. Mean		90	347	75	110	85	261	89	183

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Table No. 2.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-AEROB (Data Not Considered), Kharif 2021

Entry No	IET No	UTTAR PRADESH		TRIPURA		GUJARAT			
		@Gorakhpur		@LEMBUCHERRA		@Derol		@VYARA	
		PH	NP	PH	NP	PH	NP	PH	NP
4201	29998	100	212	97	288	.	.	83	193
4202	29999	106	263	113	375	97	226	93	165
4203	30000	123	279	122	325	102	218	96	170
4204	30001	111	237	112	275	78	192	84	190
4205	30002	108	309	92	338	102	148	67	153
4206	30003	112	226	122	225	111	284	101	198
4207	30004	103	253	105	288	105	120	71	193
4208	30005	107	220	109	313	88	264	78	190
4209	30006	106	226	112	338	86	160	78	155
4210	30007	109	301	127	388	.	.	.	.
4211	30008	111	295	104	325	73	246	83	243
4212	30009	105	272	104	325	91	214	80	180
4213	30010	103	275	103	300	75	212	67	215
4214	30011	88	288	115	338	87	192	75	193
4215	30012	101	270	106	313	92	250	76	173
4216	30013	112	258	110	388	93	262	97	185
4217	30014	130	260	117	275	98	284	94	223
4218	30015	98	278	105	250	92	218	83	195
4219	CR Dhan 201 (NC)	118	193	115	275	103	256	75	120
4220	30016	101	295	109	225	88	170	83	195
4221	30017	109	199	100	313	86	368	86	130
4222	30018	102	266	84	313	92	158	74	228
4223	30019	112	254	110	300	89	228	83	165
4224	30020	108	265	104	313	71	258	84	113
4225	30021	96	272	101	463	67	134	73	163
4226	30022	123	283	121	225	93	180	76	115
4227	30023	96	273	97	363	88	250	107	168
4228	30024	97	158	90	388	61	248	84	150
4229	30025	111	188	101	325	74	304	67	170
4230	30026	102	406	102	450	80	266	70	160
4231	30027	115	270	104	300	93	298	71	220
4232	30028	121	268	130	288	92	188	88	180
4233	Zonal Check (ZC)	113	283	110	375	.	.	.	.
4234	30029	94	378	.	338	.	.	68	250
4235	30030	106	236	95	413	.	.	75	145
4236	30031	107	247	107	250	92	168	77	140
4237	30032	103	248	108	400	73	290	80	178
4238	30033	114	340	113	438	.	.	90	215
4239	30034	113	182	110	275	90	296	73	180
4240	30035	107	280	102	338	83	258	84	203
4241	30036	90	343	95	350	69	316	79	165
4242	30037	91	270	95	425	63	188	83	223
4243	30038	95	262	104	413	79	208	78	145
4244	30039	114	293	129	450	.	.	68	70
4245	30040	102	196	106	375	70	262	81	170
4246	PA 6129 (HC)	100	267	97	350	75	254	74	140
4247	30041	95	278	97	388	70	246	73	150
4248	30042	99	248	107	250	68	186	78	125
4249	30043	102	236	100	400	76	212	75	110
4250	30044	117	197	113	400	79	190	69	133
4251	30045	99	275	92	400	.	.	78	133
4252	30046	112	251	101	225	84	254	76	73
4253	30047	124	227	112	275	90	242	70	195
4254	30048	127	177	131	200	94	184	87	135
4255	30049	117	290	108	238	92	238	88	205
4256	30050	115	202	103	250	90	178	65	125
4257	30051	104	245	102	338	93	276	75	215
4258	30052	103	263	90	488	89	248	85	230
4259	30053	107	286	109	275	86	148	95	128
4260	29414 (R)	92	275	93	375	.	.	74	148
4261	30054	106	205	124	275	102	208	90	130
4262	30055	118	259	126	325	69	110	100	180
4263	30056	97	357	94	463	89	230	78	178
4264	Local Check (LC)	94	388	93	588	107	364	86	180
Exp. Mean		107	262	106	337	86	228	80	169

**ADVANCE VARIETY TRIAL 2 & 1 – MEDIUM SLENDER
(AVT 2 & AVT 1 – MS)**

Locations: 42

Test Entries: 36

Checks: National (WGL 14, BPT 5204); Zonal: Improved Samba Mahsuri (Eastern and Central), Ketekejoha (North Eastern), Karjat-6 (Western) & ADT49 (Southern); Hybrid: JKRH 3333, 27P63 and Local Check **Table:3.1**

Advance Variety Trial 1 – Medium Slender (AVT 1- MS) was constituted with 36 entries (31 varieties and 5 hybrids) and two national checks (BPT 5204 and WGL 14), two hybrid checks (JKRH-3333 and 27P63), zonal check (Improved Samba Mahsuri for Eastern & Central, Ketekejoha for North Eastern, Karjat-6 for Western, ADT49 for Southern and a local check. Among the test entries, 4 entries (IET 28730, 28746, 28754 & 28757) are in 3rd year of testing and the remaining 26 entries are in 2nd year of testing.

The trial was sent to 42 locations spanning 6 zones *i.e.*, Zone II, Zone III, Zone IV, Zone V, Zone VI and Zone VII. The data was not received from seven locations *viz.*, Karnal, Kanpur, Bhubaneswar, Gerua-ICAR, Jabalpur, Radhanagari and Mugad. Further the data from Pusa, Ranchi, Bapatla, Sirsi was not included in analysis due to low experimental mean yield (<4000 Kg/ha) while at Lembucherra low mean yield (<4000 Kg/ha) and high CV (>20 %) was observed. At Sakoli incidence of gall midge was observed while at Maruteru and Bapatla entries lodged due to continuous cyclones occurred during October and November. At Gangavathi moderate to high incidence of stem borer was noticed. At Kurumbapet heavy rainfall and cyclone caused heavy inundation of entries during flowering and maturity stages.

Overall mean yield of the entries ranged from 4053 kg/ha (IET 28754) to 5980 kg/ha (IET 29536). Days to 50% flowering ranged from 92 days (IET 29515) to 113 days (IET 29511, 29494). Panicles/m² ranged from 268 (IET 29515) to 318 (IET 29023). The local check showed superior performance (5471 kg/ha) among varietal checks whereas 27P63 (5365 kg/ha) is the top yielder among hybrid checks. Each of the test entries, IET 29536 (2nd year) and 29489 (2nd year) excelled the best varietal check (local) by 9% yield superiority. IET 29536 is promoted to 3rd year in the trial. ***IET 29489 in spite of having yield advantage over the best check, it is dropped on account of LB grain type.***

The data pertaining to grain yield, days to 50% flowering, plant height, number of panicles/m² and quality parameters are presented in tables 3.2, 3.3, 3.4, 3.5 and 3.6 respectively.

AVT-2 (Entries which are in 3rd Year of testing):

Summary of three years performance of entries.

IET 28730 (KPS-6262) derived from the cross BPT 5204 / MTU 1010 recorded consistent yield performance over best varietal check in zone 7 during 1st year (2019: 7%) and 3rd year (2021: 6%) of testing. State-wise it exhibited yield superiority in Telangana for three consistent years. It ranked 3rd in Telangana with yield gain of 11% over the best varietal

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check during 1st year (2019) and 2nd year (2020). It also registered yield superiority of 13% over the best varietal check in Telangana during 3rd of testing (2021). In zone V, it showed yield gain continuously for the first two years in Maharashtra (2019: 11%; 2020: 12%) over the best varietal check but failed to record yield improvement in 3rd year (2021). Similarly, it was superior to best varietal check in zone VI in the first two years in Gujarat (2019: 18%; 2020: 7%) only but not in the 3rd year (2021). Hence it is found *promising for Telangana with consistent yield superiority across 3 years*. It showed good quality parameters including intermediate amylose (23.34%), GC: 38 mm, and ASV: 4.

Performance of IET 28730 (KPS-6262) across 3 years (2019 to 2021) in Medium Slender grain trial

S. No.	IET No.	Year	Zone	No. of Locations	Yield (kg/ha)	Yield adv. Over BVC/HC (%)	States	No. of Locations	Yield (Kg/ha)	Yield adv. Over BVC/HC (%)							
1	IET 28730	2019	VII	10	6881	7	PU	1	6414	8							
							AP	2	5520	-							
							TE	3	7619	11							
										TN	2	6546	-				
										KA	2	7703	-				
			III	06	6153	-	OD	2	8234	15							
										WB	1	4386	-				
										UP	2	5167	-				
			V	3	5097	-	CH	1	5313	-							
									MH	2	4989	11					
		VI	4	5799	-	MH	1	3808	-								
									GU	3	6462	18					
		2020	V	3	4659	12	CH	1	4785	7							
							MH	2	4596	12							
				III	6	4042	-	OD	3	3893	-						
											BI	1	3238	-			
											UP	2	4065	-			
											JH	1	5270	36			
				IV	1	5556	-	AS	1	5556	-						
				VI	6	4304	-	MH	2	4134	-						
											GU	4	4389	7			
											AP	2	4936	19			
											TE	4	6778	11			
											TN	2	5507	-			
											KA	4	6335	-			
											PU	1	7323	7			
				2021	VII	13	6759	6	TE	5	7772	13					
		AP	1						6030	-							
		TN	2						5663	-							
		KE	1						7022	-							
		KA	3						6019	-							
		PU	1						6575	-							
		III	6						4253	-	OD	3	4277	-			
														BI	1	4384	-
														UP	2	4150	-
		IV	2						4245	-	AS	1	4140	-			
												TR	1	4349	-		
V	3	5051	6						CH	1	6146	14					
							MH	2	4504	-							
VI	6	4181	-	MH	2	3218	-										
							GU	4	4662	-							

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IET 28757 (MTU 1321 (MTU 2284-103-1-7) derived from the cross MTU 5249 / IR 72 consistently out yielded the best varietal check in zone 5 during all three years of testing (2019: 6%, 2020: 11%, 2021: 5%). It showed consistent yield advantage of 10% in 1st year (2019) at a single location, 35% during 2nd year (2020) and the required 15% during 3rd year (2021) at a single location over the best varietal check in Chhattisgarh state. In **zone 3** it also out yielded the best varietal check 2nd year (2020:16%) and 3rd year (2021:5%). State wise it gave yield improvement for 3 continuous years *i.e.*, 12% in 2019, 16% in 2020 and 20% in 2021 in Odisha over the best varietal check. It also recorded yield gain in zone VI in the state of Gujarat during 2nd year (2020: 22%) and 3rd year (2021: 7%) only. It was superior to best varietal check in zone 7 for 1st two years (2019: 22% and 2020: 8%). State wise in Telangana of zone 7 it recorded yield gain of 36% during 1st year and 16 % during 2nd year only. Quality-wise exhibited high HRR (70.2%), AC (25.7%), GC (50 mm) and ASV 4 with medium slender grain type. *Hence this entry is recommended for Chhattisgarh in zone 5, Gujarat in zone 6 and Odisha in zone 3.*

Performance of IET 28757 (MTU 1321 (MTU 2284-103-1-7) across 3 years (2019 to 2021) in Medium Slender grain trial

S. No	IET No.	Year	Zone	No. of Locations	Yield (kg/ha)	Yield adv. Over BVC/HC (%)	States	No. of Locations	Yield (Kg/ha)	Yield adv. Over BVC/HC(%)
2	IET 28757	2019	III	6	6541	-	OD	2	7997	12
							BI	1	5729	-
							WB	1	5138	-
							UP	2	6192	-
			V	3	5164	6	CH	1	6261	10
							MH	2	4615	-
							MH	1	4815	-
							GU	3	5626	-
			VI	4	5424	-	MH	1	4815	-
							GU	3	5626	-
		VII	10	7853	22	TE	3	9299	36	
						PU	1	9978	69	
						AP	2	4620	-	
						TN	2	7019	-	
						KA	2	8689	-	
						OD	3	6110	16	
		2020	III	6	5422	16	OD	3	6110	16
							JH	1	5116	32
			V	3	4607	11	UP	1	4091	-
							CH	1	6019	35
			VI	6	4652	10	MH	2	3902	-
							GU	4	5017	22
			VII	13	6668	8	MH	2	3922	-
							TE	4	7102	16
							TN	2	7232	15
							PU	1	7202	5
		2021	III	6	5173	5	AP	2	4503	-
							KA	4	6900	-
			IV	2	5189	-	OD	3	6213	20
							BI	1	6093	37
V	3		5021	5	UP	1	3153	-		
					TR	1	5127	-		
VI	6	5488	-	CH	1	6202	15			
				MH	2	4430	-			
VII	13	6166	-	MH	2	5300	-			
				GU	4	5583	7			
				AP	1	3793	-			
					TE	5	6172	-		
					TN	2	6381	-		
					KA	3	6763	7		

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IET 28746 (RNR 28362) derived from cross Bhadrakali / NSN 20894 was found promising with yield gain of 14% and 8% during 1st year (2019) and 2nd year (2020) in zone 5 over the best varietal check. It showed consistent performance in Maharashtra for two years (2019: 22%, 2020: 8%) over the best varietal check. However during 3rd year (2021), in zone 5 it could not surpass the best varietal check both in zonal mean yield or in state mean yield of Maharashtra. It also showed yield gain over the best varietal check in zone 3 in the state of UP during 2nd year (2020: 13%) and 3rd year (2021: 6%). However data was reported from a single location (Varanasi) in 2nd year from UP and the yield gain was less than the required yield gain of 15%. Quality wise it had medium slender grains, high HRR 69.8%, intermediate amylose content 23.02% with soft gel consistency 22mm with 4 ASV. But due to the inconsistent yield superiority showed across the years it is *discontinued from the trial*.

Performance of 28746 (RNR 28362) across 3 years (2019 to 2021) in Medium Slender grain trial

S.No.	IET No.	Year	Zone	No. of Locations	Yield (kg/ha)	Yield adv. Over BVC/ HC (%)	States	No. of Locations	Yield (Kg/ha)	Yield adv. Over BVC/ HC (%)	
3	IET 28746	2019	III	6	5678	-	OD	2	6021	-	
							BI	1	6250	-	
							WB	1	4135	-	
			V	3	5574	14	MH	2	5449	22	
							CH	1	5824	-	
							MH	1	2928	-	
			VI	4	4536	-	GU	3	5071	-	
							AP	2	5497	-	
							TE	3	7709	13	
			VII	10	6376	-	TN	2	5142	-	
		KA					2	6855	-		
		PU					1	5647	-		
		2020	III	6	5109	9	OD	3	6005	14	
							UP	1	4596	13	
			IV	1	5053	-	AS	1	5053	-	
							V	3	4482	8	
			VI	6	4808	13	CH	1	4589	-	
							GU	4	5338	30	
							MH	2	3747	-	
			VII	13	6033	-	AP	2	4001	-	
							TE	4	5764	-	
							TN	2	6504	-	
			2021	V	3	4506	-	KA	4	6822	-
								PU	1	7082	-
				III	6	4895	-	MH	2	4394	-
		OD						3	4801	-	
		IV		2	4908	-	BI	1	4461	-	
							UP	1	5253	6	
							AS	1	5790	-	
		VI		6	4079	-	TR	1	4025	-	
							MH	2	4164	-	
							GU	4	4037	-	
		VII	13	6284	-	AP	1	7480	11		
TE	5					6488	-				
TN	2					5864	-				
					KA	3	5841	-			
					PU	1	4996	-			

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IET 28754 MTU 1326 (MTU 2513-24-2-2) derived from the cross BPT 5204 / NLR 34449 it recorded 9% yield gain over best check in zone 7 during 1st year (2019) only. It has out yielded the best varietal check in Andhra Pradesh with yield gain of 13% in the 1st year. In 2nd year (2020) it was superior to BVC by 12% in AP. However in 3rd year (2021) it could not show any yield improvement in Andhra Pradesh.

In Odisha state of zone 3 it could show yield gain only for the first 2 years (2019: 17% and 2020: 14%) but not in the 3rd year (2021).

Similarly, in zone 4 it recorded 10% yield advantage in 2nd year (2020) over the best varietal check. State wise it was superior to best varietal check by 10% in Assam state in 2nd year. But in the 3rd year (2021) it could not out yield the best check in the zonal mean and also in Assam state.

Although it recorded yield gain of 23% in zone 5 and 23% in Maharashtra state in zone 5 during 2nd year: 2020, it failed to exhibit yield advantage in mean yield of zone 5 as well as Maharashtra state during 3rd year: 2021.

It possessed long slender grains with high HRR 61.4%, medium amylose content (24.5%) and soft gel (GC 55mm) and 4 ASV. But on account of inconsistent yield performance across the years it is *discontinued from the trial*.

Performance of IET 28754 MTU 1326 (MTU 2513-24-2-2) across 3 years (2019 to 2021) in Medium Slender grain trial

S.No.	Entry	Year	Zone	No. of Locations	Yield (kg/ha)	Yield adv. Over BVC/HC (%)	States	No. of Locations	Yield (Kg/ha)	Yield adv. Over BVC/HC (%)
4	IET 28754	2019	VII	10	6965	9	AP	2	6194	13
							TE	3	7695	13
							PU	1	7566	28
							TN	2	6786	-
							KA	2	6518	-
			III	6	5669	-	OD	2	8347	17
							BI	1	3038	-
							WB	1	4699	-
							UP	2	4792	-
			V	3	4721	-	CH	1	4787	-
						MH	2	4689	-	
		VI	4	5285	-	MH	1	4294	-	
						GU	3	5615	-	
		2020	IV	1	6018	10	AS	1	6018	10
			III	6	4433	-	OD	3	5301	14
							BI	1	4472	-
							JH	1	2657	-
			V	3	5077	23	MH	2	5077	23
			VI	6	2911	-	GU	4	2911	-
			VII	13	6178	-	AP	2	4652	12
					TE	4	6017	-		
					TN	2	6790	-		
					KA	4	6795	-		
2021	IV	2	3328	-	AS	1	1230	-		
					TR	1	5425	-		
	III	6	3107	-	OD	3	2403	-		

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S.No.	Entry	Year	Zone	No. of Locations	Yield (kg/ha)	Yield adv. Over BVC/HC (%)	States	No. of Locations	Yield (Kg/ha)	Yield adv. Over BVC/HC (%)
							BI	1	2744	-
							UP	1	4344	-
			V	3	3556	-	MH	2	3886	-
			VI	6	3497	-	MH	2	3423	-
			VII	13	4972	-	GU	4	3535	-
							AP	1	3467	-
							TE	5	5229	-
							TN	2	4228	-
							KA	3	4873	-
							PU	1	6058	-

AVT-1 (Entries which are in 2nd Year of testing):

32 entries are in second year testing their performance is discussed below.

Overall mean performance of entries in AVT1-MS during Kharif 2021

Rank	IET No/ Designation / Cross Combination	GY (kg/ha) / DFF (days)/ GT	% yield increase NC/ZC/ HC/LC	% Yield increase over the best check				Remarks
				Zone		State		
				Rank	% BVC	Rank	% BVC	
1	IET 29536 OR 2674-14-6-2 CRMS 32A / OR 1889-5	5980 103 MS	11 23 11 9	ZV-2	14	CH-7	12	Promoted to 3 rd year.
						MH-5	15	
				ZVII-1	13	TE-3	7	
						TN-2	9	
						KA-2	18	
2	IET 29489 OR 2552-1 Pratikshya / IR 62140	5942 106 LB	10 22 11 9	ZV-1	17	CH-5	12	Dropped due to LB grain type
						MH-2	20	
				ZVII-2	8	TE-2	9	
						TN-1	13	
						KA-5	9	
	BPT 5204 (NC)	4794 105						
	WGL 14 (NC)	5392 106						
	27P63 (HC)- Best hybrid check	5365 102						
	JKRH 3333 (HC)	4968 100						
	Zonal Check (ZC)	4853 108						
	Local Check Best varietal check	5471 103						

Zone-wise performance of the entries is discussed below.

Zone II (Northern)

The Northern zone comprised of 2 locations *i.e.*, Karnal (Haryana) & Kanpur (UP). The trial was sent to both the locations but data is not received.

Zone III (Eastern)

In the Eastern Zone, trial was sent to nine locations i.e., Bhubaneswar, Cuttack, Jeypore & Chiplima (Odisha); Bikramganj & Pusa (Bihar); Ranchi (Jharkhand); Masodha & Varanasi (Uttar Pradesh). Data was not received from Bhubaneswar. On account of low experimental yield (<4000 kg/ha) observed at Pusa and Ranchi, data is not considered for analysis. The mean experimental yield ranged from 3513 kg/ha (Ranchi) to 4960 kg/ha (Masodha) while CV% ranged from 6.45 (Masodha) to 16.8 (Cuttack). Zonal mean yield ranged from 3107 kg/ha (IET 28754) to 5301 kg/ha (IET 29021). Days to 50% flowering ranged from 98 days (IET 29515) to 119 days (IET 29494). Panicles/m² ranged from 238 (IET 29515) to 299 (IET 29524, 27P63). Among the varietal checks, national check, WGL14 was the top yielder (4916 kg/ha) where as 27P63 was the superior hybrid check (4746 kg/ha). **Among test entries IET Nos 29538 and 29492 recorded superior performance over the best varietal check (WGL 14) with the yield gain of 7% each. Between them IET 29538 possessing SB grains is dropped from the trial while IET 29492 with MS grain type is promoted to AVT-2-MS in Zone III.** A hybrid entry, **29021** registered 12% yield gain over the hybrid check but exhibited 8% yield improvement over the best varietal check and so dropped from the trial.

Performance of entries in AVT-1 MS, Zone III during Kharif 2021

Rank	IET No/ Designation / Cross Combination	GY (kg/ha) / DF (days)/GT	% yield increase NC/ZC/ HC/LC	Performance across states				Remarks
				State/ rank	GY (kg/ha)	%BCV	%HC	
2	29021 RRX-708 (Hybrid)	5301 105 MS	8 - 12 16	OD-3	5501	6	25	Dropped (<10% yield gain over the varietal check)
3	29538 CR2889-208-1-18 Apo/CR 143-2-2	5274 111 SB	7 20 - 16	OD-10 BI-2	5154 6063	- -	17 36	Dropped (SB grain type)
4	29492 CSR 27SM160 CSR27 / BPT 5204	5236 112 MS	7 19 - 16	OD-8 BI-5	5227 5766	- -	18 29	Promoted to 3 rd year
	BPT 5204 (NC)	4383 109						
	WGL 14 (NC)- Best varietal check	4916 112						
	27P63 (HC) -Best hybrid check	4746 108						
	JKRH 3333 (HC)	4024 101						
	Zonal Check (Improved Samba mahsuri)	4404 113						
	Local Check	4531 110						

Zone IV (North-Eastern)

The trial was sent to Assam (Titabar & Gerua-ICAR) and Tripura (Arundhutinagar & Lembucherra). But Gerua-ICAR could not send the data. Due to low experimental mean yield (3598 Kg/ha) and high CV (34.6%) data from Lembucherra was excluded from analysis.

Zonal mean yield of the entries ranged from 3051 kg/ha (IET 29515) to 5607 kg/ha (WGL 14). Days to 50% flowering ranged from 89 days (IET 29527) to 124 days (zonal check). Panicles/m² from 195 (IET 29515) to 325 (IET 29492). Among the varietal checks, national check WGL14 is the top yielder (5607 kg/ha) where as 27P63 (5322 kg/ha) is the best check among hybrid checks. *None of the test entries could show significant yield superiority over the best varietal check.*

Zone V (Central)

In the Central Zone, trial was sent to four locations namely Jabalpur (Madhya Pradesh), Raipur (Chhattisgarh), Sakoli and Sindewahi (Maharashtra). Jabalpur centre could not furnish the data. Zonal mean yield of the entries ranged from 3556 kg/ha (IET 28754) to 5590 kg/ha (IET 29489). Days to 50% flowering ranged from 96 days (IET 29527) to 119 days (IET 29494). Panicles/m² ranged from 137 (IET 29538) to 275 (IET 29489). Local check is the superior check (4779 kg/ha) among varietal checks whereas JKRH 3333 is the top yielder (5398 kg/ha) among hybrid checks *Among the test entries IET Nos. 29489 (LB) & 29536 (MS) which are in 2nd year of testing recorded yield improvement of 17% & 14% respectively over the best varietal check (Local). IET 29489 in spite of having yield advantage over the best check, it is dropped on account of LB grain type while IET 29536 (MS) is promoted to 3rd year of testing. Hybrid entry IET 29023 recorded significant yield improvement over BVC (12%) but could not show over the hybrid check and so dropped.*

Performance of entries in AVT-1 MS, Zone V during Kharif 2021

Rank	IET No/Designation / Cross Combination	GY (kg/ha) / DFF (days)/ GT	% yield increase NC/ZC/ HC/LC	Performance across states				Remarks
				State/ rank	GY (kg/ha)	%BCV	%HC	
1	29489 OR 2552-1 Pratikshya / IR 62140	5590 110 LB	29 35 - 17	CH-5 MH-2	6060 5356	12 20	- -	Dropped (LB grains)
2	29536 OR 2674-14-6-2 CRMS 32A / OR 1889-5	5425 111 MS	25 31 - 14	CH-7 MH-5	6036 5120	12 15	15 -	Promoted to 3 rd year.
4	29023 MEPH-161 (Hybrid)	5362 MS	12 (BVC) -0.66 (HC)					Dropped due to no yield gain over HC
	BPT 5204 (NC)	3782 115						
	WGL 14 (NC)	4332 108						
	27P63 (HC)	4452 108						
	JKRH 3333 (HC) Best hybrid check	5398 106						
	Zonal Check	4134 111						
	Local Check (Best Varietal check)	4779 108						

Zone VI (Western)

In Zone VI the trial was sent to seven locations spanning two states namely Maharashtra (Karjat, Shirgaon, Radhanagari) and Gujarat (Navsari, Nawagam, Dabhoi and Vyara). Data was not received from Radhanagari. Zonal mean yield of the entries ranged from 3497 kg/ha (IET 28754) to 6196 kg/ha (IET 29017). Days to 50% flowering ranged from 87days (IET 29527 & 29515) to 142 days (IET 29021). Panicles/m² ranged from 199 (IET 29538, 29487) to 245 (IET 29523). Among the varietal checks, local check topped in yield (5258 kg/ha) while 27P63 is the top yielder among hybrid checks (4591 kg/ha). *Among test entries IET 29017 (Hybrid) out yielded the best varietal check by 18% and hybrid check by 35%. IET 29523 (Inbred) was found superior to best varietal check (Local) by 15%. Therefore, both IET 29017 (Hybrid) and 29523 (inbred) possessing MS grains are promoted to AVT-2 MS in Zone VI. However the varietal entries i.e., 29506 (16%), 29536 (15%), 29539 (14%), 29527 (14%) and 29489 (13%) recorded significant yield gain over the best hybrid check but not over the best varietal check. The hybrid entry IET 29018 recorded no improvement over the best varietal check and was significantly superior to hybrid check by 17%. Hence IET 29506, 29536, 29539, 29527, 29489 and 29018 were dropped.*

Performance of entries in AVT-1 MS, Zone VI during Kharif 2021

Rank	IET No/ Designation / Cross Combination	GY (kg/ha) / DFF (days)/ GT	% yield increase NC/ZC/ HC/LC	Performance across states				Remarks
				State/ rank	GY (kg/ha)	%BCV	%HC	
1	29017 RALLIS-19608 (Hybrid)	6196 97 MS	47 55 35 18	MH-5 GU-1	5051 6308	15.6 21	- 31	Promoted to 3 rd year
2	29523 R 2054-685-1- 205-1 R 1033-2559-1-1 / Gopalbhog	6030 100 MS	43 51 31 15	MH-10 GU-2	4893 6187	12 18	- 28	Promoted to 3 rd year
	BPT 5204 (NC)	4195 104						
	WGL 14 (NC)	4222 103						
	27P63 (HC)-Best hybrid check)	4591 95						
	JKRH 3333 (HC)	3931 98						
	Zonal Check (Karjat -6)	3986 102						
	Local Check (Best varietal check)	5258 98						

Zone VII (Southern Zone)

The trial was sent to 16 locations across 6 states: Andhra Pradesh (Maruteru, Bapatla); Telangana (Rajendranagar, Kampasagar, Kunaram, Warangal, Jagtial); Tamil Nadu (Aduthurai, Coimbatore); Karnataka (Mandya, Mugad, Sirsi, Gangavati, Malagi); Kerala

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(Pattambi) and Puducherry (Kurumbapet). Data was not received from Mugad. The data from Sirsi and Bapatla was not considered for analysis due to low experimental mean yield (< 4000 Kg/ha). Zonal mean yield of the entries ranged from 4746 kg/ha (IET 29515) to 7214 kg/ha (IET 29536). Days to 50% flowering ranged from 88 days (IET 29515) to 112 days (IET 29511). Panicles/m² ranged from 323 (IET 29526) to 399 (IET 29023). WGL 14 (6364 kg/ha) is the top yielder among checks while 27P63 is the best hybrid check (6225 kg/ha) among hybrid checks.

Three varietal test entries, IET 29536 (MS), 29489 (LB) and 29539(MS) showed yield improvement over the best varietal check (WGL 14) with yield superiority of 13, 8 and 5% respectively. IET 29489 in spite of having yield advantage over the best check, it is dropped on account of LB grain type. *IET 29536 (MS) and 29539 (MS) are promoted to 3rd year of testing (AVT-2-MS) in Zone VII.*

Performance of entries in AVT-1 MS, Zone VII during Kharif 2021

Rank	IET No/ Designation / Cross Combination	GY (kg/ha) / DFF (days)/ GT	% yield increase NC/ZC/HC/LC	Performance across states				Remarks
				State/ rank	GY (kg/ha)	%BCV	%HC	
1	29536 OR 2674-14-6-2 CRMS 32A / OR 1889-5	7214	13	TE-3	7345	7	17	Promoted to 3 rd year
		102	29	TN-2	6827	9	13	
		MS	16	KA-2	7490	18	13	
			13					
2	29489 OR 2552-1 Pratikshya / IR 62140	6899	8	TE-2	7438	9	18	Dropped due to LB grain type
		106	23	TN-1	7064	13	16	
		LB	11	KA-5	6919	9	-	
			8					
4	29539 MTU 1362 (MTU 2578-5-2-1-1-1) MTU 1156 / MTU 1081	6686	5	AP-1	10930	14	-	Promoted to 3 rd year
		106	19					
		MS	7					
			5					
	BPT 5204 (NC)	5477						
		102						
	WGL 14 (NC)-Best varietal check	6364						
		105						
	27P63 (HC) -Best hybrid check	6225						
		100						
	JKRH 3333 (HC)	5728						
		99						
	Zonal Check (ADT-49)	5598						
		105						
	Local Check (LC)	6359						
		100						

Entries promoted to AVT 2-MS

	Promoted to AVT2-MS
Overall mean	IET 29536
Zone III	IET 29492
Zone V	IET 29536
ZoneVI	IET 29017 and 29523
ZoneVII	IET 29536 and 29539

INITIAL VARIETY TRIAL – MEDIUM SLENDER GRAIN (IVT-MS)

Locations: 42

Test Entries: 60

Checks: National (WGL 14, BPT 5204); Zonal: Improved Samba Mahsuri (Eastern and Central), Ketekejoha (North Eastern), Karjat-6 (Western) & ADT49 (Southern) and Local Check **Table:3.7**

Initial Variety Trial - Medium Slender grain (IVT-MS) was constituted with 60 entries and four checks, National (WGL 14 & BPT 5204); Zonal-Improved Samba Mahsuri (Eastern and Central), Ketekejoha (North Eastern), Karjat-6 (Western), ADT49 (Southern) and Local Check. The trial was sent to 42 locations and data was received from 28 locations. Fourteen locations *viz.*, Karnal, Kanpur, Bhubaneshwar, NRRRI-Cuttack, Pusa, Varanasi, Gerua - ICAR, Jabalpur, Shirgoan, Radhanagari, Dabhoi, Kunaram, Jagtial and Malagi could not send data.

At Jeypore (2053 kg/ha) Chiplima (2992 kg/ha), Nawagam (3585 kg/ha), Vyara (3625 kg/ha), and Sirsi (3059 kg/ha) low experimental mean (<4000 kg/ha) was reported and therefore not considered for analysis. The CV values of Lembucherra (36.14%) and Titabar (4.42%) are not in the acceptable range (5-20%) and consequently the data from these centers was excluded from the analysis. Data from Pattambi location was not included in analysis due to non-significant F value for treatments. Across the locations the mean yield ranged from 2053 kg/ha (Jeypore) to 7257 kg/ha at (Kurumbapet), while CV ranged from 4.42 % at Titabar to 36.14% at Lembucherra. At Raipur IET 30062 and 30063 failed to germinate. At Sakoli infestation of gall midge and stem borer were reported. At Maruteru occurrence of continuous cyclones during October and november caused lodging of many of the entries. At Bapatla cyclone has affected the crop. At Warangal IET Nos.30099 and 30111 whereas 30092 and 30099 at Gangavathi did not germinate. Heavy unseasonal rains occurred during flowering and maturity stages of crop growth at Kurumbapet. The data pertaining to yield, days to 50% flowering, plant height and panicles/m² are presented in the tables 3.8 and 3.9 respectively.

Overall mean yield of the entries ranged from 4024 kg/ha (IET 30091) to 5926 kg/ha (IET 30078); days to 50% flowering ranged from 89 days (IET 30057, 30063, 30101 & 30079) to 109 days (IET 30106). Among the checks, local check was the highest yielder (5096 Kg/ha). Overall CD value was found to be 302. The performance of test entries is compared with the best check. ***Six entries viz., IET 30078 (5926 kg/ha), IET 30072 (5850 kg/ha), IET 30116 (5716 kg/ha), IET 30106 (5543 kg/ha), IET 30083 (5529 kg/ha) and IET 30107 (5485 kg/ha) were found to be significantly superior to the best check (local check) at CD (P=0.05) possessing MS grain type and thus promoted to AVT1-MS.***

Two entries namely IET 30095 (5730 Kg/ha, SB) and IET 30076 (5444 Kg/ha, SB) with significant yield superiority over the BVC were dropped due to SB grain type.

Overall mean performance of entries in IVT-MS, Kharif, 2021

Rank	IET No/Designation / Cross Combination	GY(kg/ha) / DFF (days)/ GT	Zone/rank /Yield (Kg/ha)	State/rank/ yield (Kg/ha)	Remarks
1	30078 MTU 1382 MTU 1075 / MTU 1001	5926* 101 MS	Z- VI- 6 6481	-	Promoted to 2 nd year
			Z -VII-4 6543	TN-2 7111	
2	30072 AGR 297 BPT 5204 mutant	5850* 104 MS	Z-VII-3 6628	TE-5 6573	Promoted to 2 nd year
4	30116 RP 6493-MAID-103-10-3-1-1-1 WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-2 /// WGL14 / RP 5925-24 // WGL14 / IR 81896-96-B-B-195	5716* 94 MS	Z-VI-3 6602	MH-1 5637	Promoted to 2 nd year
			Z-VII- 6 6246	-	
5	30106 MTU 1358 MTU 1061/TKM 6	5543* 109 MS	Z-VII-2 6695	TN-1 7411	Promoted to 2 nd year
				PUD-4 9127	
6	30083 BRR 2152 CR 2582-2 / Varshadhan / IR 82809-237	5529* 98 MS	Z-VII-5 6511	-	Promoted to 2 nd year
7	30107 RP6528-RMS 1421-43-25-29 Improved Samba Mahsuri *2 // Habataki / ST 12	5485* 97 MS	Z-III-7 5386	-	Promoted to 2 nd year
			Z-VI-8 6342	MH-2 5533	
	WGL 14 (NC)	5014 96			
	BPT 5204 (NC)	4999 100			
	Zonal Check	4554 99			
	Local Check (Best check)	5096 100			
	CD	302			

Zone-wise performance of entries are mentioned hereunder.

Eastern Zone (Zone III)

The trial was sent to nine locations viz., Odisha (Bhubaneshwar, NRRI-Cuttack, Jeypore & Chiplima); Bihar (Bikramganj & Pusa); Jharkand (Ranchi) and Uttar Pradesh (Masodha & Varanasi). However, data was not received from four locations i.e., Bhubaneshwar, NRRI-Cuttack, Pusa and Varanasi. Data from Jeypore (2053kg/ha) & Chiplima (2992 kg/ha) was excluded from analysis due to low experimental mean yield (<4000 kg/ha). Zonal mean yield of the entries ranged from 1729 kg/ha (IET 30106) to 5936 kg/ha (IET 30062); days to 50% flowering ranged from 86 days (IET 30094) to 116 days (IET 30106) and panicles/m² ranged from 140 (IET 30104) to 283 (IET 30063). BPT 5204 (National check) was found as the highest yielder 4656 kg/ha among the checks. CD value was found to be 545 in zone 3. *Six entries viz., IET Nos. 30102 (5785 Kg/ha), 30075 (5495 Kg/ha), 30109 (5710 kg/ha), 30071 (5652 kg/ha), 30088 (5569 kg/ha) and 30107 (5386 kg/ha) possessing MS grain type were found to be significantly superior to the best check (BPT 5204) at CD (P=0.05) and hence promoted to AVT1-MS in Zone III.*

IET 30062 is dropped in the trial due to LB grain type.

Performance of entries in IVT-MS Zone III, Kharif 2021

Rank	IET No/Designation / Cross Combination	GY(kg/ha) / DFF (days)/ GT	State - rank/ Yield (kg/ha)	Remarks
1	30062 Daftari 1 Daftari 741 / MTU 1001	5936* 95 LB	UP-5 5851	Dropped due to LB grain type
2	30102 TTB 1048-60-9 IRGC 25239 / Ranjit	5785* 95 MS	UP-5 5851	Promoted to 2 nd year
3	30109 KNM 11601 KNM 1638 / BPT 5204	5710* 93 MS	UP-2 6316	Promoted to 2 nd year
4	30071 NVSr 3314 GAR 13 / Purna	5652* 99 MS	UP-5 5851	Promoted to 2 nd year
5	30088 MSN 113 Meenakshi / CRMS 32 b (47-6)	5569* 95 MS	UP-5 5851	Promoted to 2 nd year
6	30075 RNR 31622 HHZ 5-SAL 10 DT2-DT-1 / RNR 15048	5495* 94 MS	JH-1 7580	Promoted to 2 nd year
7	30107 RP 6528-RMS 1421-43-25-29 Improved Samba Mahsuri *2 // Habataki / ST 12	5386* 105 MS	-	Promoted to 2 nd year
	WGL 14 (NC)	3865 98		
	BPT 5204 (NC) (Best check)	4656 99		
	Zonal Check (Improved Samba Mahsuri)	4020 109		
	Local Check(LC)	3753 104		
	CD	545		

North Eastern Zone (Zone IV)

The trial was sent to four locations viz., Assam (Titabar, Gerua-ICAR); Tripura (Arundhutinagar & Lembucherra). However, data was not received from Gerua-ICAR. Data from Titabar (4.42%) & Lembucherra (36.14%) was excluded from analysis due to deviation in CV limits. Zonal mean yield of the entries ranged from 3300 kg/ha (IET 30096) to 5250 kg/ha (IET 30114); days to 50% flowering ranged from 59 days (IET 30061) to 92 days (IET 30062) and panicles/m² ranged from 144 (IET 30088) to 386 (IET 30116). WGL 14 (National check) 4750 kg/ha is the top yielder among the checks. However, none of the test entries were found to be significantly superior to best varietal check at CD (P=0.05).

Central Zone (Zone V)

The trial was sent to four locations viz., Madhya Pradesh (Jabalpur); Chhattisgarh (Raipur); Maharashtra (Sakoli & Sindewahi). However, data was not received from Jabalpur. Zonal mean yield of the entries ranged from 3182 kg/ha (BPT 5204) to 5216 kg/ha (IET 30097); days to 50% flowering ranged from 81 days (IET 30101) to 114 days (IET 30106) and panicles/m² ranged from 162 (IET 30092) to 278 (IET 30071). Among the checks WGL

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14 national check is superior (4247 kg/ha) to all checks. CD value was found to be 533 in zone 5. *Four entries viz., IET 30097 (5216 kg/ha), 30108 (5122 kg/ha), 30093 (4933 kg/ha) and 30101 (4853 Kg/ha), possessing MS grains were found significantly superior to the best check (WGL 14) and so are promoted to AVT1-MS in Zone V.*

IET 30079 (4980 Kg/ha) with SB grain type is dropped as it doesn't fit into MS grain trial.

Performance of entries in IVT - MS Zone V, Kharif 2021

Rank	IET No/Designation / Cross Combination	GY(kg/ha) / DFF (days)/ GT	State - rank/ Yield (kg/ha)	Remarks
1	30097 NWGR 16050 NWGR-3119 / Mahisugandh (52-4-1-1-1-1-1)	5216* 91 MS	MH-2 5242	Promoted to 2 nd year
2	30108 NDR 9077 BKP 242 / NDR 30030 // Swarna	5122* 93 MS	MH-1 5363	Promoted to 2 nd year
3	30079 ACK 12024 Mutant of White Ponni-WP 22-2	4980* 88 SB	MH-3 5198	Dropped due to SB grain type
4	30093 CB 17135 CB 06651 / JGL 17197	4933* 89 MS	-	Promoted to 2 nd year
5	30101 CB 16605 CO 51 / JGL 17211	4853* 81 MS	-	Promoted to 2 nd year
	<i>WGL 14 (NC) Best check</i>	4247 98		
	BPT 5204 (NC)	3182 99		
	Zonal Check (Improved Samba Mahsuri) (ZC)	3647 101		
	Local Check(LC)	4175 96		
	CD	533		

Western Zone (Zone VI)

The trial was sent to seven locations viz., Maharashtra (Karjat, Shirgaon & Radhanagari); Gujarat (Nawagam, Navsari, Dabhoi & Vyara). Three centers viz., Shirgaon, Radhanagari & Dabhoi could not send data for analysis. Data from Nawagam (3585 kg/ha) & Vyara (3625 kg/ha) excluded from analysis due its low experimental mean yield (< 4000 kg/ha). Zonal mean yield of the entries ranged from 3667 kg/ha (Karjat-6) to 7020 kg/ha (IET 30076); days to 50% flowering ranged from 72 days (IET 30102) to 103 days (IET 30060 & 30073) while, panicles/m² ranged from 174 (IET 30083) to 232 (IET 30066). BPT 5204 and Local check are the top yielders (5311 kg/ha) among the checks. CD value was found to be 666 in zone 6. *Six entries viz., IET 30071 (6639 kg/ha), 30116 (6602 kg/ha), 30066 (6571 kg/ha), 30084 (6547 kg/ha), 30078 (6481 kg/ha), and 30107 (6342 kg/ha) showing significant yield superiority over the best check (BPT 5204) at CD (P=0.05) possessing MS grain type are promoted to AVT1-MS in Zone VI.*

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Two entries *i.e.*, IET 30076 (7020 Kg/ha) SB and IET 30080 (6362 Kg/ha) with significant yield gain over the best varietal check were dropped as they possessed SB grains.

Performance of entries in IVT - MS, Zone VI, Kharif 2021

Rank	IET No/Designation / Cross Combination	GY(kg/ha) / DFF (days)/ GT	State - rank/ Yield (kg/ha)	Remarks
1	30076 NVSR 710 JGL 11470 / 186	7020* 85 SB	MH-3 5531	Dropped (SB grain type)
2	30071 NVSR 3314 GAR 13 / Purna	6639* 81 MS	-	Promoted to 2 nd year
3	30116 RP 6493-MAID-103-10-3-1-1-1 WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-2 /// WGL14 / RP 5925-24 // WGL14 / IR 81896-96-B-B- 195	6602* 79 MS	MH-1 5637	Promoted to 2 nd year
4	30066 CSR 27 SM 132 CSR 27 / BPT 5204S	6571* 85 MS	-	Promoted to 2 nd year
5	30084 RP 6528-RMS-1693-13-15-29 Improved Samba Mahsuri *2 // Habataki / ST 12	6547* 80 MS	-	Promoted to 2 nd year
6	30078 MTU 1382 MTU 1075 / MTU 1001	6481* 95 MS	-	Promoted to 2 nd year
7	30080 KJT 1108-14-4-7-6-10-4-5 BPT 5204 / Mahusri	6362* 78 SB	-	Dropped (SB grain type)
8	30107 RP 6528-RMS 1421-43-25-29 Improved Samba Mahsuri *2 // Habataki / ST 12	6342* 88 MS	-	Promoted to 2 nd year
	WGL 14 (NC)	5053 89		
	BPT 5204 (NC) Best check	5311 93		
	Zonal Check (Karjat-6) (ZC)	3667 74		
	Local Check (LC) Best check	5311 89		
	CD	666		

Southern Zone (Zone VII)

The trial was sent to sixteen locations *viz.*, Andhra Pradesh (Maruteru & Bapatla); Telangana (Rajendranagar, Kampasagar, Kunaram, Warangal & Jagtial); Tamil Nadu (Aduthurai & Coimbatore); Kerala (Pattambi); Karnataka (Mandya, Mugad, Sirsi, Gangavati, Malagi); Puducherry (Kurumbapet). Data was not received from (Kunaram, Jagtial & Malagi). Data from Sirsi (3059 kg/ha) excluded from analysis due to its low experimental mean yield (< 4000 kg/ha). Zonal mean yield of the entries ranged from 4419 kg/ha (IET 30097) to 7044 kg/ha (IET 30095); days to 50% flowering ranged from 88 days (IET 30057) to 114 days (IET 30082) and panicles/m² ranged from 288 (IET 30092) to 494 (IET 30100).

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Local check is the top yielder (5743 kg/ha) among checks. CD value was found to be 429. *Five entries viz., IET 30106 (6695 kg/ha), 30072 (6628 kg/ha), 30078 (6543 kg/ha), 30083 (6511 kg/ha) and 30116 (6246 kg/ha) were found to be significantly superior to the best check (local check) at CD (P=0.05) possessing MS grain type and thus promoted to AVT1-MS in Zone VII.*

IET 30095 (7044 Kg/ha) is dropped as it had SB grains.

Performance of entries in IVT – MS, Zone VII, Kharif 2021

Rank	IET No/Designation / Cross Combination	GY(kg/ha) / DFF (days)/ GT	State - rank/ Yield (kg/ha)	Remarks
1	30095 MTU 1381 MTU 2077 / NLR 3042	7044* 107 SB	TE-3 6770 PU-3 9871	Dropped (SB grain type)
2	30106 MTU 1358 MTU 1061/TKM 6	6695* 113 MS	TN-1 7411 PUD-4 9127	Promoted to 2 nd year
3	30072 AGR 297 BPT 5204 mutant	6628* 107 MS	TE-5 6573	Promoted to 2 nd year
4	30078 MTU 1382 MTU 1075 / MTU 1001	6543* 106 MS	TN-2 7111	Promoted to 2 nd year
5	30083 BRR 2152 CR 2582-2 / Varshadhan / IR 82809-237	6511* 99 MS	-	Promoted to 2 nd year
6	30116 RP 6493-MAID-103-10-3-1-1-1 WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-2 /// WGL14 / RP 5925-24 // WGL14 / IR 81896-96-B- B-195	6246* 96 MS	-	Promoted to 2 nd year
	WGL 14 (NC)	5448 98		
	BPT 5204 (NC)	5572 103		
	Zonal Check (ADT- 49)	5109 100		
	Local Check (LC) Best check	5743 103		
	CD	429		

Entries promoted to AVT- 1-MS

	AVT -1-MS
Overall	IET 30078, IET 30072, IET 30116, IET 30106, IET 30083 and IET 30107
Zone III	IET 30102, 30075, 30109, 30071, 30088 and 30107
Zone V	IET30097, 30108,30093, 30101
Zone VI	IET 30071, 30116, 30066 , 30084 , 30078 and 30107
Zone VII	IET 30106, 30072, 30078 , 30083 and 30116

Table No. 3.1: Composition of entries in Advance Variety Trial 2 & 1- Medium Slender Grain (AVT 2 & AVT 1-MS), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT
3rd Year of testing:				
4301	27438	MTU 1281 (MTU 2385-187-1-1-1)	MTU 1075 / MTU 1081 / MTU 1121	LS
2nd Year of testing:				
4302	29539	MTU 1362 (MTU 2578-5-2-1-1-1)	MTU 1156 / MTU 1081	MS
4303	29495	RP 5594-97-5-1	MTU 1010 / RPHR 1005	LB
4304	27 P 63 (Hybrid Check)			
4305	29526	NVSR-566	(RP Bio-226 / IRGC 69910) / IET 22071	SB
3rd Year of testing:				
4306	28730	KPS-6262	BPT 5204 / MTU 1010	MS
2nd Year of testing:				
4307	29494	Pusa 5287-4-6-2-61-1-1	ADT 49 / MTU 1150	LS
3rd Year of testing:				
4308	28757	MTU 1321 (MTU 2284-103-1-7)	MTU 5249 / IR 72	MS
2nd Year of testing:				
4309	29502	WGL-1283	WGL-14 / JGL -17025	MS
4310	29535	JGL 34828	JGL 11470 / BPT 5204	MS
4311	29023	<i>MEPH-161 (Hybrid)</i>	-	MS
4312	BPT 5204 (NC)			
4313	29524	JGL 35071	(JGL 19621 / NLR 34449) / JGL 19621	MS
4314	29506	P.3289	PY7 / IR 50	MS
4315	29503	CR 3741-1-1-3-1-1-2	Pooja / Surendra	MS
4316	29523	R 2054-685-1-205-1	R 1033-2559-1-1 / Gopal bhog	MS
4317	29492	CSR 27SM160	CSR 27 / BPT 5204	MS
4318	29017	<i>RALLIS-19608 (Hybrid)</i>	-	
4319	29527	RNR 29176	GK 5022 / Krishna	MS
4320	29485	KNM 7715	RNR 15048 / GNV - 8 – 89 // WGL 32183	MS
4321	29490	CB 16217	CO 52 / JGL 17190	MS
4322	29515	NVSR 2965	GR-7 / GAR-13	MS
4323	29534	RP Bio 4918-B-B-248L	Swarna / O. nivara	SB
4324	29536	OR 2674-14-6-2	CRMS 32A / OR 1889-5	MS
4325	29511	AD 16148	AD 04072 / AD 08141	MS
4326	29021	<i>RRX-708 (Hybrid)</i>	-	MS
4327	WGL 14 (NC)			
4328	29538	CR 2889-208-1-18	Apo / CR 143-2-2	SB
3rd Year of testing:				
4329	28746	RNR 28362	Bhadrakali / NSN 20894	MS
4330	Improved Samba Mahsuri-Eastern & Central, Ketekejoha-North Eastern, Karjat 6-Western, ADT 49- Southern---ZC			
2nd Year of testing:				
4331	29514	CR 3993-514-2-15	CR 1009 / O. brachyantha // CR 1009	MS
4332	29489	OR 2552-1	Pratikshya / IR 62140	LB
4333	29508	NWGR-15026	GR-11 / IET 19554 (24-2-1-4-1-1-1-1)	LB
4334	29018	<i>NPH-X63 (Hybrid)</i>	-	MS
4335	29537	RP 6354-RMS-7-10-15-19	Samba Mashuri*2 / ST 12	MS
4336	29487	AD 16105	CO 51 / Tulasi	MS
4337	JKRH 3333 (Hybrid Check)			
4338	29543	AD 17033	Turandhan / IET 22075	LS
3rd Year of testing:				
4339	28754	MTU 1326 (MTU 2513-24-2-2)	BPT 5204 / NLR 34449	LS
2nd Year of testing:				
4340	28187	<i>CRHR 150 (Hybrid)</i>	-	MS
4341	29519	CR 3890-35-1-3-4	CN 1920 / Savitri // IR 71700-247-1-1-2	LB
4342	Local Check			

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Table No. 3.2: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN																	
		ODISHA						ODISHA (3)			BIHAR			BIHAR (1)					
		ICAR-NRRI (Cuttack)		JEYPORE	CHIPLIMA		Mean			BIKRAMGANJ (Dhangain)		@PUSA	Mean						
4301	27438 ^	6879	2 #	4469		6852	1 #	6067	2	*17%	#37%	5404	8 #	5983	1	5404	8	#21%	
4302	29539	5341		5258	6	5664		5421	5		#23%	4959	#	4244		4959		#11%	
4303	29495	5250		5138	8	4182		4857		10%		4649		2325		4649			
4304	27 P 63 (HC)	4774		2745		5725	10	4415				4454		5744	3	4454			
4305	29526	3689		6241	2	* #	4468	4799				3694		5641	4	3694			
4306	28730 ^	5467		2049		5316		4277				4384		3282		4384			
4307	29494	3799		4635		4961		4465				4445		4470		4445			
4308	28757 ^	5825	5	6039	3	* #	6775	2	6213	1	*20% #	41%	6093	1 #	4090		6093	1	#37%
4309	29502	4668		7046	1	* #	4622	5445	4	5% #	23%			4923	10				
4310	29535	5008		3470		6026	6	4835				4113		3966		4113			
4311	29023	4616		2424		4892		3977				3136		4650		3136			
4312	BPT 5204 (NC)	3382		4951	10		4653	4329				4009		5983	1	4009			
4313	29524	5357		3340		5903	9	4867		10%		4116		3145		4116			
4314	29506	4659		2543		6258	4	4487				5453	7 #	5197	7	5453	7	#22%	
4315	29503	6498	3 #	3748		5995	7	5414	6		#23%	4558		3368		4558			
4316	29523	4947		4228		4059		4411				5209	10 #	3953		5209	10	#17%	
4317	29492	4845		5243	7		5594	5227	8		#18%	5766	5 #	2444		5766	5	#29%	
4318	29017	5910	4	2954		5154		4673				4493		2500		4493			
4319	29527	3340		5854	4	* #	4660	4618				3483		3744		3483			
4320	29485	5435		4538		4375		4783				4699		3333		4699			
4321	29490	5303		4947		5131		5127		#16%		4019		4128		4019			
4322	29515	2288		4110		2955		3118				3013		3470		3013			
4323	29534	3198		1638		4182		3006				2692		4218		2692			
4324	29536	5571	9	2205		5455		4410				5510	6 #	3299		5510	6	#24%	
4325	29511	4425		4100		6042	5	4856				4714		5197	7	4714			
4326	29021	6959	1	* #	4414		5131	5501	3	6%	#25%	4492		4462		4492			
4327	WGL 14 (NC)	4871		4352		4552		4592				5805	4	4197		5805	4		
4328	29538	5806	6	4162		5494		5154	10		#17%	6063	2 #	2615		6063	2	#36%	
4329	28746 ^	5583	8	3389		5432		4801				4461		5017	9	4461			
4330	Zonal Check (ZC)	3993		2508		5926	8	4142				4209		3017		4209			
4331	29514	4044		3530		2924		3499				3113		5197	7	3113			
4332	29489	3974		4587		5440		4667				5912	3 #	2692		5912	3	#33%	
4333	29508			4597		4105		4351				4332		3201		4332			
4334	29018	5184		4584		4537		4768				4353		4291		4353			
4335	29537	5057		3469		4329		4285				5385	9 #	3239		5385	9	#21%	
4336	29487			5335	5	3488		4412				3707		2462		3707			
4337	JKRH 3333 (HC)			5022	9	2963		3993				3856		3829		3856			
4338	29543	3538		3413		3835		3595				3846		5470	5	3846			
4339	28754 ^	2384		1639		3187		2403				2744		4051		2744			
4340	28187	5533	10	4078		6265	3	5292	7		#20%	4559		3470		4559			
4341	29519	4122		4278		3233		3878				3829		2325		3829			
4342	Local Check (LC)	5629	7	4425		5455		5170	9		#17%	3984		4513		3984			
Exp. Mean		4799		4088		4909		4586				4432		3984		4432			
CD		1312		822		1079		658				494		726		494			
CV%		16.81		12.37		13.53		8.84				6.86		11.22		6.86			
D/S		10-07-2021		01-07-2021		16-07-2021						29-06-2021		01-07-2021					
D/P		20-08-2021		20-07-2021		17-08-2021						26-07-2021		21-07-2021					
Local Check Name		CR Dhan 910		Manaswini		Pratikshva						R.Sweta		Santosh (4342)					
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check											

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Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							ZONE IV-NORTH EASTERN										
		JHARKHAND (1)		UTTAR PRADESH			UTTAR PRADESH (2)		Z3 (6)			ASSAM (1)		TRIPURA					
		@RANCHI		MASODHA	VARANASI		Mean		Mean		TITABAR	ARUNDHUTINAGAR							
4301	27438 ^	4340		5210		4007		4609		5470	1	*11%	#15%	6060	4	6568	1	* #	
4302	29539	3704		4392		4014		4203		4938	9			4440		5765	2	#	
4303	29495	2431		4855		5279	4 *	5067	8	4892				6150	2	6%	4089		
4304	27 P 63 (HC)	4051		5483		5293	2	5388	2	4746				6120	3		4524		
4305	29526	1678		3819		4000		3910		4319				2820			4276		
4306	28730 ^	2836		4283		4017		4150		4253				4140			4349		
4307	29494	4659	5	5101		782		2942		3954				6030	5		4635		
4308	28757 ^	4745	3	5292		1014		3153		5173	5	5%	#	5250			5127	8	
4309	29502	4253		3983		5116	6	4550		5087	6			5640			4225		
4310	29535	2749		3628		4003		3816		4375				4230			4267		
4311	29023	4543	7	4201		4381		4291		3942				3030			4140		
4312	BPT 5204 (NC)	3183		5292		4010		4651		4383				4590			5219	6	
4313	29524	2431		5019		4143		4581		4646				5610			4686		
4314	29506	4890	1	5851	7	4007		4929		4795				5460			5498	3	
4315	29503	2865		3819		5701	1 *	4760		5053	7			4761			4117		
4316	29523	3356		4528		4490		4509		4577				5730			4124		
4317	29492	3704		5947	1	4020		4984	10	5236	4	7%	#10%	6000	6		4692		
4318	29017	4601	6	5483		5286	3 *	5385	3	4880				4950			4038		
4319	29527	2025		5210		1755		3483		4050				4860			4044		
4320	29485	3299		4010		4456		4233		4586				5040			4232		
4321	29490	3762		5892	3	4014		4953		4884				5280			4197		
4322	29515	1968		3983		4034		4009		3397				1950			4152		
4323	29534	2431		3164		4003		3584		3146				2760			4108		
4324	29536	3791		3519		4741	9	4130		4500				5610			5114	9	
4325	29511	3559		5428		4003		4716		4785				4230			5003	10	
4326	29021	4311		5865	5	4946	7	5406	1	5301	2	*8%	#12%	5280			4016		
4327	WGL 14 (NC)	2951		5619		4299		4959		4916				5820	10		5394	5	
4328	29538	3877		5483		4633	10	5058	9	5274	3	7%	#11%	5910	8		4010		
4329	28746 ^	3501		5947	1	4558		5253	5	4895				5790			4025		
4330	Zonal Check (ZC)	1823		5783	8	4007		4895		4404				5400			4686		
4331	29514	2720		5646	10	4010		4828		3878				4980			4692		
4332	29489	4311		5237		5170	5	5204	6	5053	7			5640			4762		
4333	29508	4109		5155		4000		4578		4438				6210	1	7%	4054		
4334	29018	4745	3	5701	9	4939	8	5320	4	4883				5970	7		4162		
4335	29537	4427	9	5865	5	4449		5157	7	4759				5850	9		4003		
4336	29487	2662		4392		4010		4201		4186				3630			4076		
4337	JKRH 3333 (HC)	4369	10	4255				4255		4024				4530			5194	7	
4338	29543	2807		4610		4619		4615		3977				4860			4111		
4339	28754 ^	2315		5892	3	2796		4344		3107				1230			5425	4	
4340	28187	4803	2	5155		4000		4578		4932	10			4200			3933		
4341	29519	3704		5346		4054		4700		4144				4140			4556		
4342	Local Check (LC)	4485	8	4992		2701		3847		4531				5250			4019		
Exp. Mean		3513		4960		4092		4528		4542				4891			4531		
CD		780		519		931		557		383				515			421		
CV%		13.67		6.45		14		7.57		5.19				6.48			5.72		
D/S		25-06-2021		27-06-2021		26-06-2021								06-07-2021			08-07-2021		
D/P		02-08-2021		28-07-2021		20-07-2021								05-08-2021			28-07-2021		
Local Check Name		swarna		samba Mahsuri-Sub		HUR-917								Ranjit Sub 1			CO-51 (4342)		
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check											

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Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN								ZONE-V - CENTRAL										
		TRIPURA		TRIPURA (1)			Z4 (2)			CHHATTISGARH (1)			MAHARASHTRA							
		@Lembucherra		Mean			Mean			RAIPUR			SAKOLI		SINDEWAHI					
4301	27438 ^	2656		6568	1	*22%	#26%	6314	1	*13%	#19%	5364		5060	6	*	4761			
4302	29539	4486		5765	2	7%	#11%	5103				5738	6%	3492			3767			
4303	29495	2466		4089				5120				4325		4064			4994	6		
4304	27 P 63 (HC)	3582		4524				5322	7			5264		3419			4674			
4305	29526	2969		4276				3548				4642		3213			4478			
4306	28730 ^	3404		4349				4245				6146	3	14%	#17%	4392		4615		
4307	29494	3136		4635				5333	6			5079		3355			5090	4		
4308	28757 ^	5189	7	5127	8			5189	9			6202	2	*15%	#18%	4009		4851	10	
4309	29502	3080		4225				4933				5045		3382			4977	8		
4310	29535	3169		4267				4249				4777		3614			4802			
4311	29023	4509		4140				3585				5658		5265	4	*	5163	2		
4312	BPT 5204 (NC)	2745		5219	6			4905				4588		3219			3540			
4313	29524	2120		4686				5148	10			5261		3410			4318			
4314	29506	4743	10	5498	3			5479	3			6122	4	13%	#16%	3614		4312		
4315	29503	3359		4117				4439				5412		3246			4988	7		
4316	29523	6227	2	4124				4927				6019	9	12%	#14%	3546		4595		
4317	29492	3873		4692				5346	5			5189		3942			4269			
4318	29017	3091		4038				4494				6241	1	*16%	#19%	4023		4237		
4319	29527	2143		4044				4452				3755		4555	8		4374			
4320	29485	5457	5	4232				4636				5832		8%	#11%	3260		4528		
4321	29490	4788	9	4197				4739				5127		4228			4068			
4322	29515	1016		4152				3051				4487		4079			5064	5		
4323	29534	3024		4108				3434				2865		4392			4257			
4324	29536	5602	3	5114	9			5362	4			6036	7	12%	#15%	5128	5	*	5111	3
4325	29511	3839		5003	10			4617				5605		4214			4784			
4326	29021	3783		4016				4648				5874	10	9%	#12%	3273		4604		
4327	WGL 14 (NC)	4710		5394	5			5607	2			5155		3737			4105			
4328	29538	3499		4010				4960				6027	8	12%	#14%	3219		4470		
4329	28746 ^	1645		4025				4908				4730		3969			4819			
4330	Zonal Check (ZC)	2511		4686				5043				4212		4146			4044			
4331	29514	5268	6	4692				4836				4398		3451			3584			
4332	29489	3460		4762				5201	8			6060	5	12%	#15%	5755	2	*	4956	9
4333	29508	5167	8	4054				5132				4518		4133			4376			
4334	29018	3605		4162				5066				6039	6	12%	#15%	4651	7	4578		
4335	29537	3772		4003				4927				5388		4474	9		4624			
4336	29487	2176		4076				3853				4517		5851	1	*	4595			
4337	JKRH 3333 (HC)	1038		5194	7			4862				5266		5728	3	*	5201	1		
4338	29543	2667		4111				4486				4031		3614			4723			
4339	28754 ^	2310		5425	4			3328				2897		3232			4540			
4340	28187	6529	1	3933				4067				4810		3955			4595			
4341	29519	2790		4556				4348				4580		3723			4487			
4342	Local Check (LC)	5527	4	4019				4635				5396		4460	10		4481			
Exp. Mean		3598		4531				4711				5111		4036			4557			
CD		2517		421				348				759		554			861			
CV%		34.64		5.72				4.54				9.14		8.45			11.63			
D/S		19-07-2021										24-06-2021		23-06-2021			23-06-2021			
D/P		09-08-2021										21-07-2021		30-07-2021			30-07-2021			
Local Check Name		Tripura Chikan										CG Devbhog		PDKV Kisan			PKV Ganesh			

^ 3rd year of testing. *Superior to best check #Superior over hybrid check % superior over best check

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Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN										ZONE VII - SOUTHERN			
		GUJARAT					GUJARAT (4)					Z6 (6)		ANDHRA PRADESH	
		NAVASARI	NAWAGAM	DABHOI	VYARA	Mean	Mean	Mean	Mean	Mean	MARUTERU				
4301	27438 ^	3232		5676	10	4867		3317		4273		4487		7270	
4302	29539	5782	8 #	5407		4662		4557		5102		5252	8 #14%	10930	1 * #
4303	29495	3293		5075		4031		4170		4142		4436		7577	
4304	27 P 63 (HC)	4000		6281	5	4749		4276		4827		4591		5717	
4305	29526	5132	#	5205		3268		5494	4 #	4775		4441		7687	
4306	28730 ^	4719		5433		5294	8	3202		4662		4181		6030	
4307	29494	4935	#	4489		3878		2853		4039		3940		5537	
4308	28757 ^	5973	6 * #	5721	9	7582	1 * #	3054		5583	3 7% #16%	5488	3 #20%	3793	
4309	29502	5761	9 #	5530		5882	6 * #	4687	9	5465	6 #13%	4999		#7167	
4310	29535	5906	7 * #	4721		4597		4427		4913		4720		8253	7 #
4311	29023	5549	10 #	5167		3987		4589		4823		5111	#11%	5087	
4312	BPT 5204 (NC)	4276		4716		4270		2956		4055		4195		9581	2
4313	29524	5240	#	5430		4532		3682		4721		4475		5670	
4314	29506	6849	3 * #	5377		6405	2 * #	3534		5541	4 6% #15%	5312	5 #16%	7247	
4315	29503	6308	4 * #	5914	7	4009		4097		5082		4772		6240	
4316	29523	7667	1 * #	5962	6	6209	4 * #	4911	8	6187	2 *18% #28%	6030	2 *15% #31%	6230	
4317	29492	6306	5 * #	4735		4183		4157		4845		5059	#10%	7873	#
4318	29017	7246	2 * #	5615		6405	2 * #	5965	2 * #	6308	1 *21% #31%	6196	1 *18% #35%	3533	
4319	29527	4274		4966		5534	7	6084	1 * #	5215	9	5242	9 #14%	5380	
4320	29485	5418	#	4853		5948	5 * #	3827		5012		4919		7277	
4321	29490	3353		4644		5054	9	3598		4162		4300		3047	
4322	29515	4090		5621		4314		5307	5 #	4833		4376		4520	
4323	29534	3461		3243		3355		3077		3284		3731		6610	
4324	29536	5500	#	6321	4*	3987		4335		5036		5270	6 #15%	8040	9 #
4325	29511	4577		4536		3878		1923		3729		4104		6607	
4326	29021	3739		5592		4031		3591		4238		4322		3527	
4327	WGL 14 (NC)	4283		4903		4227		3482		4224		4222		8613	6
4328	29538	5470	#	5756	8	4989	10	4215		5108	10	5008	#	7943	10 #
4329	28746 ^	3337		5388		3900		3523		4037		4079		7480	
4330	Zonal Check (ZC)	3591		4201		4074		2752		3655		3986		9417	4
4331	29514	3425		4356		4270		2808		3715		3689		4120	
4332	29489	5250	#	7576	1 * #	4793		4461		5520	5 6% #14%	5178	10 #13%	5613	
4333	29508	3418		5182		3246		2832		3670		3658		5677	
4334	29018	5009	#	6772	2*	3987		5533	3 #	5325	7 10%	5370	4 #17%	6140	
4335	29537	4205		5271		4946		5061	7	4871		4452		5877	
4336	29487	4455				3355		4224		4011		4372		9413	5 #
4337	JKRH 3333 (HC)					3577		2188		2883		3931		6763	
4338	29543	4107		4413		3220		4634	10	4094		4391		8103	8 #
4339	28754 ^	4738		2850		3510		3040		3535		3497		3467	
4340	28187	4393		5150		4610		4296		4612		4835		9427	3 #
4341	29519	4558		5210		3926		5065	6	4690		4747		7510	
4342	Local Check (LC)	5007	#	6461	3*	4815		4626		5227	8	5258	7 #15%	4750	
Exp. Mean		4825		5243		4532		4010		4557		4596		6589	
CD		885		1116		928		974		517		405		989	
CV%		11.28		10.52		12.61		14.95		6.98		5.42		9.25	
D/S		29-06-2021		30-06-2021		25-06-2021		28-06-2021						09-07-2021	
D/P		21-07-2021		06-08-2021		01-08-2021		15-07-2021						06-08-2021	
Local Check Name		GNR-7		GAR 13		GAR-13		GAR-13						MTU 1224	
		^ 3rd year of testing		*Superior to best check		#Superior over hybrid check		% superior over best check							

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Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN														
		ANDHRA PRADESH		ANDRAPRADESH (1)		TELANGANA										
		@BAPATLA	Mean	RAJENDRANAGAR	KAMPASAGAR	KUNARAM	WARANGAL	JAGITYAL								
4301	27438 ^	3393	7270	8910	8	5783	5840	6695	#	4648						
4302	29539	3606	10930	1 *14% #62%	9000	5	5529	6734	#	4937						
4303	29495	2435	7577	12%	6019		7122	5656	7623	6	5147					
4304	27 P 63 (HC)	2356	5717		8664	10	7836	2	5412		4632					
4305	29526	2825	7687	14%	6143		6524	4917		4385	3857					
4306	28730 ^	2963	6030		8475		7952	1	8078	2 * #	7319	9	7037	1 #		
4307	29494	3967	5537		7876		5476		4723		6801	#	5181			
4308	28757 ^	5764	2	3793		7263		5481		5567	7755	3	4795			
4309	29502	2997		7167		9212	2	7619	9	5516	7732	5	5326			
4310	29535	3244		8253	7	#22%	7243		7153		8199	1 * #	4699	4524		
4311	29023	3199		5087		8988	6	7757	5	6297	#	3884		5248		
4312	BPT 5204 (NC)	3675		9581	2	6498		5011		4815		4010		3954		
4313	29524	4456	8	5670		5876		7677	8	7670	4 #	5986	#	5556	9 #	
4314	29506	5322	4	7247		8196		7058		6110	#	8792	1 * #	5169		
4315	29503	4035		6240		8325		6460		5180		7190	10	5608	8 #	
4316	29523	3962		6230		9035	4	6365		5594		5655		6387	5 #	
4317	29492	3962		7873		#16%	8075		7153		5100		5959	#	3990	
4318	29017	4293		3533		10437	1 * #	5228		5778		6255	#	5342	10	
4319	29527	3951		5380		6400		7810	3	5687		5551		3901		
4320	29485	3777		7277		8527		6270		8037	3 * #	5243		4097		
4321	29490	3468		3047		7066		6095		6265	#	6131	#	4177		
4322	29515	3462		4520		5469		7804	4	6441	#	3986		3425		
4323	29534	4029		6610		7160		4328		6128	#	5590		3003		
4324	29536	5342	3	8040	9	#19%	8609		7243		6634	#	7492	7	6745	3 #
4325	29511	5831	1	6607		7966		5106		6418	#	5888	#	5706	7 #	
4326	29021	3810		3527		7872		7757	5	6076		4552		5203		
4327	WGL 14 (NC)	3698		8613	6	8228		6889		5326		7373	8	4722		
4328	29538	3726		7943	10	#17%	9111	3	5984		6343	#	6797	#	4211	
4329	28746 ^	3371		7480		11%	6761		7529	10	6911	9	#	7745	4	3492
4330	Zonal Check (ZC)	3925		9417	4	6239		4370		7077	6	4672		3035		
4331	29514	3726		4120		5782		4905		6194	#	4921		3481		
4332	29489	4551	7	5613		7783		7683	7	6318	#	8439	2 * #	6967	2 #	
4333	29508	3586		5677		7857		5418		6984	8	#	6547	#	5278	
4334	29018	3799		6140		8669	9	5476		6189	#	4911		6148	6 #	
4335	29537	3502		5877		8656		5873		5737		5612		4225		
4336	29487	4386	9	9413	5	#39%	5935		5545		7219	5	3444		4374	
4337	JKRH 3333 (HC)			6763				5122						3622		
4338	29543	4383	10	8103	8	#20%	6680		5714		6856	10	6888	#	4681	
4339	28754 ^	4910	5	3467		6311		7132		5922		3801		2979		
4340	28187	4235		9427	3	#39%	8321		4810		7014	7	6139	#	3951	
4341	29519	4231		7510		11%	8529		7037		6379	#	5083		4359	
4342	Local Check (LC)	4680	6	4750		8911	7	6497		6368	#	6028	#	6473	4 #	
Exp. Mean		3923		6589		7734		6371		6224		5982		4752		
CD		945		989		1347		1705		695		867		818		
CV%		14.83		9.25		10.72		16.48		6.87		8.92		10.59		
D/S		30-07-2021				23-06-2021		02-08-2021		30-06-2021		24-06-2021		26-06-2021		
D/P						19-07-2021		23-08-2021		05-08-2021		28-07-2021		26-07-2021		
Local Check Name		BPT 2782				JGL 11470		RNR-15048		KNM 733		WGL 32100		JGL 11470		
					^ 3rd year of testing.			*Superior to best check		#Superior over hybrid check				% superior over best check		

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Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN																				
		TELANGANA (5)			TAMIL NADU			TAMIL NADU (2)			KERALA (1)			KARNATAKA								
		Mean			ADUTHURAI	COIMBATORE		Mean			PATTAMBI			MANDYA	GANGAVATHI							
4301	27438 ^	6375		4784		6858	5	5821		7867	2	6%	11%	8367	5	9442	1	*	#			
4302	29539	6550		5201		6664	9	5933	9	7330				8186	8	7301						
4303	29495	6313		3534		5858		4696		7648	5			5969		8596	6	*				
4304	27 P 63 (HC)	6302		4506		6054		5280		6956				8672	3	7574						
4305	29526	5165		4475		4096		4286		7435				4186		5692						
4306	28730 ^	7772	1	*13%	#23%	4877		6449	10	5663				7022		6693		7705				
4307	29494	6011		6728	3	* #	6372		6550	4				7298		4786		5385				
4308	28757 ^	6172		5910	9		6852	6	6381	5				6971		5866		8923	3	* #		
4309	29502	7081	4	#12%		3488		6948	2	#	5218			8054	1	9%	13%	6465		7660		
4310	29535	6364		4398		5961		5180		7505				5804		5513						
4311	29023	6435		4306		6026		5166		7292				8357	6	7301						
4312	BPT 5204 (NC)	4858		6080	6		4649		5365					7270		4509		5250				
4313	29524	6553	9		4954		4361		4658					7156		4646		5397				
4314	29506	7065	5	#12%		4398		6410		5404				7254		6047		7654				
4315	29503	6553	9		5648		4153		4901					7225		8181	9	6006				
4316	29523	6607	8		4429		6781	8	5605					7714	4	6853		6051				
4317	29492	6055		6049	7		6068		6059	8				7508	10	5933		5910				
4318	29017	6608	7		5201		6047		5624					6892		7705	10	7513				
4319	29527	5870		3781		3907		3844		7790	3	5%		4997		6474						
4320	29485	6435		5494		6118		5806		7025				6419		6865						
4321	29490	5947		6636	4		4696		5666					6489		5204		7340				
4322	29515	5425		3503		4121		3812		7302				2367		5333						
4323	29534	5242		4537		4183		4360		7152				3550		6391						
4324	29536	7345	3	7%	#17%	6772	2	* #	6882	4	6827	2	*9%	#13%	6844		8269	7	9340	2	* #	
4325	29511	6217		6451	5		6907	3	#	6679	3	7%	#10%	7105		5380		7721				
4326	29021	6292		5617		5313		5465		7556	8			7669		8122	9	*				
4327	WGL 14 (NC)	6508		4985		6125		5555		7060				6098		6782						
4328	29538	6489		5123		6318		5721		7238				6848		8846	4	*				
4329	28746 ^	6488		5864		5864		5864	10	7533	9			5928		8154	8	*				
4330	Zonal Check (ZC)	5079		5315		5927		5621		7400				5514		4494						
4331	29514	5057		5046		3804		4425		6800				4341		4968						
4332	29489	7438	2	9%	#18%	7130	1	* #	6997	1	#	7064	1	*13%	#16%	6549		7499		8718	5	*
4333	29508	6417		5015		6120		5568		7616	6			8408	4	6372						
4334	29018	6279		4028		5940		4984		7460				9612	1	* #	7756	10				
4335	29537	6021		5889	10		5491		5690					7222		5783		7545				
4336	29487	5303		4167		4889		4528		6679				4088		5705						
4337	JKRH 3333 (HC)	4372		6019	8		6110		6065	7				7098		7530						
4338	29543	6164		4306		4422		4364		7613	7			5928		6083						
4339	28754 ^	5229		4275		4180		4228		5892				6424		5096						
4340	28187	6047		5278		5974		5626		7168				6904		6545						
4341	29519	6277		4444		4511		4478						5204		8369	7	*				
4342	Local Check (LC)	6855	6		5648		6833	7	6241	6				8739	2	7115						
Exp. Mean		6182		5102		5672		5387		7225				6332		6951						
CD		630		631		774		510		1278				709		1100						
CV%		6.27		7.61		8.4		5.83		10.88				6.9		7.82						
D/S					25-08-2021		19-07-2021					19-07-2021			28-06-2021		20-07-2021					
D/P					28-09-2021		17-08-2021					12-08-2021			17-07-2021		16-08-2021					
Local Check Name							CO 52					RED MASHURI		Thanu		GANGAVATHI SONA						
							^3rd year of testing.															
							*Superior to best check															
							#Superior over hybrid check															
							% superior over best check															

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Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN										Overall Mean (30)							
		KARNATAKA		KARNATAKA (3)			PUDUCHERRY (1)			Z7 (13)									
		@SIRSI	MALAGI	Mean			KURUMBAPET			Mean									
4301	27438 ^	3150		3620		7143	3	13%	5627		6593	6	#	5776	3	*6%	#		
4302	29539	3275	9	3220		6236			5197		6686	4	*5%	#	5675	7	*	#	
4303	29495	2025		3540		6035			5455		6134			5311					
4304	27 P 63 (HC)	2650		3680		6642	9		6259		6225			5365					
4305	29526	1225		3260		4379			4823		5191			4649					
4306	28730 ^	2175		3660		6019			6575	7	6759	3	*6%	#	5404				
4307	29494	2875		3500		4557			6948	4	8%	#11%	5893		4939				
4308	28757 ^	2500		5500	1 * #	6763	7	7%	5484		6166			5652	9		#		
4309	29502	1525		3120		5748			5053		6412	9		5588			#		
4310	29535	1650		2480		4599			5857		5968			5128					
4311	29023	1625		3480		6379			4967		6076			5219					
4312	BPT 5204 (NC)	1750		3140		4300			6431	9	5477			4794					
4313	29524	1075		3120		4388			4709		5598			5026					
4314	29506	4000	2	5200	4 *	6300			4594		6471	7		5659	8	*	#		
4315	29503	2450		3970		6052			5627		6139			5376					
4316	29523	3825	4	3380		5428			5943		6186			5602	10		#		
4317	29492	1600		3600		5148			6431	9	6127			5517					
4318	29017	3400	7	4360		6526	10		6747	6	6234			5699	5	*	#		
4319	29527	2625		3680		5050			5484		5449			4939					
4320	29485	1050		3620		5635			5599		6199			5350					
4321	29490	2075		4540		5695					5641			5024					
4322	29515	950		3700		3800			3732		4746			4269					
4323	29534	1675		3810		4584			4364		5139			4215					
4324	29536	3350	8	4860	10	7490	2 *	18%	#13%	6058		7214	1	*13%	#16%	5980	1	*9%	#11%
4325	29511	2675		4440		5847			7379	2	15%	18%	6390	10		5342			
4326	29021	2775		5000	6	6930	4	9%	5512		6137			5352					
4327	WGL 14 (NC)	1900		4360		5747			6173		6364			5392					
4328	29538	3625	5	4920	7	6871	6	8%	7149	3	11%	14%	6679	5	#	5739	4	*	#
4329	28746 ^	3250		3440		5841			4996		6284			5296					
4330	Zonal Check (ZC)	2675		3460		4489			5857		5598			4853					
4331	29514	3275	9	3180		4163			6489	8	4925			4351					
4332	29489	3550	6	4540		6919	5	9%	5455		6899	2	*8%	#11%	5942	2	*9%	#11%	
4333	29508	3025		5400	3 * #	6727	8	6%	5512		6323			5160					
4334	29018	4000	2	5480	2 * #	7616	1	*20%	#15%	5599		6416	8		5677	6	*	#	
4335	29537	2900		5020	5	6116			6919	5	8%	11%	6142		5315				
4336	29487	2625		4860	10	4884			7465	1	16%	19%	5676		4973				
4337	JKRH 3333 (HC)	2225		4640		6085			4651		5728			4968					
4338	29543	2213		3520		5177			4651		5803			4900					
4339	28754 ^	2575		3100		4873			6058		4972			4053					
4340	28187	3125		4920	7	6123			4910		6259			5382					
4341	29519	2525		4900	9	6158			4680		5917			5029					
4342	Local Check (LC)	4000	2	3180		6345			5771		6359			5471					
Exp. Mean		2558		4010		5971			5688		6073			5217					
CD		362		753		968			1539		318			184					
CV%		7.01		9.3		9.98			16.66		3.22			2.17					
D/S		26-06-2021		26-06-2021					18-09-2021										
D/P		19-07-2021		19-07-2021					15-10-2021										
Local Check Name		SIRI 1253		MUGAD SIRI-1253					TKM 13										

^ 3rd year of testing; * Superior to best check # Superior over hybrid check % superior over best check

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Table No. 3.3: Days to 50%flowering of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		ODISHA			ODISHA (3)	BIHAR		BIHAR (1)	JHARKHAND (1)
		ICAR-NRRI (Cuttack)	JEYPORE	CHIPLIMA	Mean	BIKRAMGANJ (Dhangain)	@PUSA	Mean	@RANCHI
4301	27438	127	96	130	118	106	108	106	118
4302	29539	127	104	125	119	108	107	108	116
4303	29495	114	112	128	118	99	87	99	102
4304	27 P 63 (HC)	119	98	128	115	94	96	94	108
4305	29526	115	96	117	109	92	82	92	100
4306	28730	120	88	127	112	106	108	106	113
4307	29494	128	102	136	122	119	112	119	121
4308	28757	129	115	129	124	113	108	113	119
4309	29502	120	111	119	116		101		111
4310	29535	121	92	129	114	106	103	106	112
4311	29023	117	103	124	115	99	91	99	101
4312	BPT 5204 (NC)	119	93	124	112	113	107	113	115
4313	29524	116	107	124	115	106	95	106	104
4314	29506	128	92	127	116	116	112	116	119
4315	29503	121	108	120	116	94	97	94	106
4316	29523	119	97	119	112	103	101	103	111
4317	29492	128	102	125	118	107	106	107	114
4318	29017	118	105	127	117	104	93	104	108
4319	29527	129	95	119	114	92	79	92	97
4320	29485	121	91	125	112	107	106	107	116
4321	29490	127	105	131	121	111	100	111	110
4322	29515	92	105	113	103	94	84	94	96
4323	29534	103	88	123	104	97	96	97	111
4324	29536	123	102	131	119	99	95	99	113
4325	29511	127	98	135	120	121	117	121	122
4326	29021	119	110	125	118	97	95	97	109
4327	WGL 14 (NC)	126	88	130	115	107	106	107	115
4328	29538	119	101	118	112	105	101	105	117
4329	28746	118	96	128	114	109	99	109	111
4330	Zonal Check (ZC)	126	98	129	118	110	106	110	112
4331	29514	125	108	132	122	108	98	108	115
4332	29489	126	94	120	113	111	106	111	116
4333	29508		91	113	102	109	104	109	110
4334	29018	114	103	121	113	95	94	95	103
4335	29537	119	96	125	113	100	106	100	110
4336	29487		100	113	107	91	100	91	97
4337	JKRH 3333 (HC)		96	113	105	97	99	97	111
4338	29543	118	90	119	109	106	90	106	104
4339	28754	118	90	117	109	95	95	95	101
4340	28187	127	104	125	119	108	103	108	111
4341	29519	115	99	117	110	95	89	95	101
4342	Local Check (LC)	119	90	117	109	110	99	110	121
	Exp. Mean	128	97	131	118	106	108	106	119

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Table No. 3.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE IV- NORTH EASTERN				
		UTTAR PRADESH	UTTAR PRADESH	UTTAR PRADESH (2)	Z3 (6)	ASSAM (1)	TRIPURA		TRIPURA (1)	Z4 (2)
		MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHUTINAGAR	@Lembucherra	Mean	Mean
4301	27438	110	115	113	114	123	99	81	99	107
4302	29539	105	111	108	113	120	96	81	96	104
4303	29495	103	94	98	108	105	85	78	85	92
4304	27 P 63 (HC)	106	101	104	108	112	101	77	101	105
4305	29526	103	88	96	102	104	87	74	87	93
4306	28730	94	106	100	107	116	94	79	94	102
4307	29494	103	125	114	119	122	77	102	77	92
4308	28757	94	122	108	117	120	102	84	102	108
4309	29502	97	101	99	110	108	94	75	94	99
4310	29535	94	106	100	108	110	95	77	95	100
4311	29023	94	95	95	105	107	92	72	92	97
4312	BPT 5204 (NC)	91	112	102	109	108	91	72	91	97
4313	29524	79	99	89	105	109	92	72	92	98
4314	29506	84	125	104	112	117	97	84	97	104
4315	29503	93	95	94	105	110	98	75	98	102
4316	29523	98	104	101	107	114	88	77	88	97
4317	29492	104	106	105	112	117	98	80	98	104
4318	29017	108	101	104	111	105	86	77	86	93
4319	29527	103	85	94	104	104	82	72	82	89
4320	29485	112	107	110	111	114	93	80	93	100
4321	29490	105	112	109	115	118	98	81	98	105
4322	29515	93	90	92	98	104	98	68	98	100
4323	29534	109	95	102	103	107	84	78	84	92
4324	29536	109	99	104	111	112	100	81	100	104
4325	29511	97	123	110	117	123	105	77	105	111
4326	29021	104	106	105	110	111	102	76	102	105
4327	WGL 14 (NC)	110	111	111	112	118	103	80	103	108
4328	29538	108	114	111	111	113	96	78	96	102
4329	28746	103	100	102	109	109	88	80	88	95
4330	Zonal Check (ZC)	107	107	107	113	112	130	82	130	124
4331	29514	109	104	107	114	110	80	82	80	90
4332	29489	102	108	105	110	116	92	81	92	100
4333	29508	94	103	98	102	112	97	80	97	102
4334	29018	83	104	94	103	106	93	76	93	97
4335	29537	101	103	102	107	113	86	81	86	95
4336	29487	97	100	98	100	104	89	74	89	94
4337	JKRH 3333 (HC)	100		100	101	106	87	78	87	94
4338	29543	105	105	105	107	106	89	75	89	95
4339	28754	97	101	99	103	104	88	77	88	94
4340	28187	99	104	102	111	117	97	80	97	104
4341	29519	105	100	103	105	104	87	76	87	92
4342	Local Check (LC)	109	115	112	110	116	86	72	86	96
	Exp. Mean	110	116	113	114	123	101	80	101	108

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Table No. 3.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	JET No	ZONE-V – CENTRAL					ZONE VI – WESTERN			
		CHHATTISGARH (1)	MAHARASHTRA		MAHARASHTRA 1 (2)	Z5 (3)	MAHARASHTRA 2		MAHARASHTRA2 (2)	
		RAIPUR	SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON	Mean	
4301	27438	114	114	118	116	115	106	111	108	
4302	29539	114	111	119	115	114	109	110	110	
4303	29495	95	95	114	105	102	93	99	96	
4304	27 P 63 (HC)	104	106	115	111	108	94	101	98	
4305	29526	90	91	114	102	98	88	90	89	
4306	28730	111	111	119	115	114	100	106	103	
4307	29494	116	120	120	120	119	109	116	112	
4308	28757	112	114	121	118	116	104	105	105	
4309	29502	106	101	113	107	107	97	99	98	
4310	29535	108	106	116	111	110	94	105	99	
4311	29023	97	99	100	100	99	96	103	100	
4312	BPT 5204 (NC)	113	111	122	117	115	100	106	103	
4313	29524	100	99	114	107	104	96	107	101	
4314	29506	112	114	128	121	118	105	114	110	
4315	29503	104	101	114	108	107	96	98	97	
4316	29523	107	107	116	111	110	98	103	101	
4317	29492	109	113	114	114	112	102	105	104	
4318	29017	101	101	113	107	105	96	99	98	
4319	29527	88	89	111	100	96	87	87	87	
4320	29485	111	106	117	111	111	99	105	102	
4321	29490	109	106	118	112	111	95	101	98	
4322	29515	91	94	111	103	99	85	87	86	
4323	29534	99	113	111	112	108	94	97	96	
4324	29536	105	105	122	114	111	93	98	96	
4325	29511	118	108	126	117	117	109	115	112	
4326	29021	106	104	112	108	108	97	100	99	
4327	WGL 14 (NC)	103	110	111	110	108	100	106	103	
4328	29538	110	113	126	119	116	101	102	101	
4329	28746	109	104	114	109	109	95	102	98	
4330	Zonal Check (ZC)	111	111	111	111	111	103	107	105	
4331	29514	101	106	109	108	105	97	102	100	
4332	29489	109	103	119	111	110	100	107	104	
4333	29508	108	105	117	111	110	99	104	101	
4334	29018	102	102	116	109	107	91	100	96	
4335	29537	109	105	115	110	109	93	106	99	
4336	29487	97	95	111	103	101	90	90	90	
4337	JKRH 3333 (HC)	102	101	115	108	106	96	106	101	
4338	29543	100	98	112	105	103	94	90	92	
4339	28754	101	100	110	105	104	95	99	97	
4340	28187	109	106	112	109	109	101	105	103	
4341	29519	97	92	114	103	101	97	98	98	
4342	Local Check (LC)	109	104	110	107	108	97	106	102	
	Exp. Mean	113	115	121	118	116	106	111	108	

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Table No. 3.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN							ZONE VII – SOUTHERN	
		MAHARASHTRA (4)	GUJARAT				GUJARAT (4)	Z6 (6)	ANDRAPRADESH	
		Mean	NAVASARI	NAWAGAM	DABHOI	VYARA	Mean	Mean	MARUTERU	@BAPATLA
4301	27438	112	105	113	116	101	109	109	102	96
4302	29539	112	103	107	108	98	104	106	103	96
4303	29495	100	89	101	93	88	93	94	81	90
4304	27 P 63 (HC)	104	92	94	101	90	94	95	94	89
4305	29526	96	93	94	96	86	92	91	83	86
4306	28730	109	102	106	105	103	104	104	104	92
4307	29494	116	105	115	117	101	109	110	106	110
4308	28757	111	99	114	113	98	106	106	104	100
4309	29502	103	93	96	102	90	95	96	92	96
4310	29535	105	98	105	105	93	101	100	95	97
4311	29023	100	91	95	97	89	93	95	89	97
4312	BPT 5204 (NC)	110	95	112	111	99	104	104	103	95
4313	29524	104	90	95	99	88	93	96	93	96
4314	29506	115	92	110	114	102	105	106	104	98
4315	29503	103	92	97	102	87	95	96	94	91
4316	29523	106	94	100	107	98	100	100	94	91
4317	29492	109	98	108	106	96	102	103	102	96
4318	29017	102	92	102	101	90	96	97	89	96
4319	29527	94	82	92	90	86	87	87	81	81
4320	29485	107	101	109	108	97	104	103	101	96
4321	29490	105	98	108	101	90	99	99	101	97
4322	29515	95	83	93	88	87	88	87	77	90
4323	29534	104	83	100	97	89	92	93	87	98
4324	29536	105	87	94	101	88	93	94	100	97
4325	29511	114	101	116	115	97	107	109	107	106
4326	29021	104	370	95	102	87	163	142	101	94
4327	WGL 14 (NC)	107	100	110	106	97	103	103	103	97
4328	29538	110	101	102	105	98	102	102	99	93
4329	28746	104	91	99	98	90	95	96	95	95
4330	Zonal Check (ZC)	108	99	103	102	100	101	102	101	97
4331	29514	104	87	97	107	91	95	97	103	100
4332	29489	107	100	101	106	90	99	101	102	93
4333	29508	106	99	103	106	97	101	101	103	93
4334	29018	102	88	97	100	89	94	94	92	85
4335	29537	105	95	103	102	95	99	99	100	99
4336	29487	97	86		93	85	88	89	86	99
4337	JKRH 3333 (HC)	104			100	91	96	98	93	
4338	29543	98	89	96	100	87	93	93	89	97
4339	28754	101	87	98	96	89	93	94	89	99
4340	28187	106	93	110	108	98	103	103	95	96
4341	29519	101	85	94	94	88	90	93	87	90
4342	Local Check (LC)	104	88	104	100	91	96	98	106	104
	Exp. Mean	113	106	113	116	101	109	109	100	96

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Table No. 3.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						
		ANDRAPRADESH (1)	TELANGANA					TELANGANA (5)
		Mean	RAJENDRANAGAR	KAMPASAGAR	KUNARAM	WARANGAL	JAGITYAL	Mean
4301	27438	102	115	113	110	117	112	113
4302	29539	103	111	118		118	110	114
4303	29495	81	101	99	95	99	101	99
4304	27 P 63 (HC)	94	103	100	99	100	101	101
4305	29526	83	93	93	93	93	91	93
4306	28730	104	107	111	112	111	108	110
4307	29494	106	112	110	121	110	116	114
4308	28757	104	113	113	116	113	112	113
4309	29502	92	104	100	99	100	104	101
4310	29535	95	106	107	114	107	103	108
4311	29023	89	100	101	97	101	94	99
4312	BPT 5204 (NC)	103	104	109	109	109	101	106
4313	29524	93	100	102	97	102	93	99
4314	29506	104	110	118	110	118	111	114
4315	29503	94	98	107	101	105	100	102
4316	29523	94	105	109	102	111	102	106
4317	29492	102	106	109	110	109	112	109
4318	29017	89	103	101	101	101	97	100
4319	29527	81	98	91	92	91	91	93
4320	29485	101	105	113	106	113	111	110
4321	29490	101	108	108	106	108	105	107
4322	29515	77	85	91	86	91	90	89
4323	29534	87	99	99	95	99	95	97
4324	29536	100	101	105	102	105	104	103
4325	29511	107	113	125	124	125	113	120
4326	29021	101	103	105	101	105	96	102
4327	WGL 14 (NC)	103	104	108	108	108	110	107
4328	29538	99	105	111	107	111	112	109
4329	28746	95	99	107	101	107	102	103
4330	Zonal Check (ZC)	101	106	107	108	107	105	107
4331	29514	103	107	107	105	107	101	106
4332	29489	102	107	132	103	132	106	116
4333	29508	103	105	112	109	112	101	108
4334	29018	92	102	102	105	102	100	102
4335	29537	100	104	107	101	107	102	104
4336	29487	86	96	100	92	100	94	96
4337	JKRH 3333 (HC)	93		97			96	96
4338	29543	89	96	100	98	100	93	97
4339	28754	89	98	100	95	100	95	98
4340	28187	95	103	107	109	107	110	107
4341	29519	87	110	100	95	100	93	100
4342	Local Check (LC)	106	100	98	91	105	107	100
	Exp. Mean	100	114	115	110	117	112	113

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Table No. 3.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		TAMIL NADU		TAMIL NADU (2)	KERALA (1)	KARNATAKA	
		ADUTHURAI	COIMBATORE	Mean	PATTAMBI	MANDYA	GANGAVATHI
4301	27438	99	104	102	111	112	106
4302	29539	101	103	102	99	103	102
4303	29495	93	95	94	100	105	97
4304	27 P 63 (HC)	99	101	100	102	104	102
4305	29526	101	95	98	99	96	96
4306	28730	70	103	87	100	105	103
4307	29494	115	111	113	96	122	117
4308	28757	95	103	99	101	112	106
4309	29502	96	96	96	99	102	97
4310	29535	102	102	102	95	106	101
4311	29023	92	98	95	94	102	98
4312	BPT 5204 (NC)	96	95	96	98	106	98
4313	29524	93	88	91	98	120	97
4314	29506	95	103	99	100	110	109
4315	29503	95	97	96	95	102	96
4316	29523	98	102	100	97	108	109
4317	29492	110	104	107	96	104	101
4318	29017	110	102	106	99	105	105
4319	29527	101	88	94	110	95	88
4320	29485	102	101	102	111	105	106
4321	29490	102	103	102	99	106	104
4322	29515	101	84	92	100	86	83
4323	29534	97	97	97	99	104	99
4324	29536	92	102	97	98	104	107
4325	29511	102	104	103	105	119	109
4326	29021	94	97	96	99	107	98
4327	WGL 14 (NC)	94	105	100	99	105	111
4328	29538	95	102	98	98	112	104
4329	28746	95	96	96	101	118	98
4330	Zonal Check (ZC)	93	107	100	99	116	106
4331	29514	106	103	105	97	106	107
4332	29489	95	96	96	99	106	104
4333	29508	99	100	99	98	111	109
4334	29018	93	102	98	97	103	100
4335	29537	97	104	100	97	111	103
4336	29487	93	88	91	97	106	104
4337	JKRH 3333 (HC)	103	97	100	112	107	
4338	29543	93	95	94	112	106	96
4339	28754	91	97	94	99	106	101
4340	28187	97	105	101	101	105	105
4341	29519	95	96	96		105	96
4342	Local Check (LC)	106	106	106		103	101
Exp. Mean		100	104	102	111	112	107

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Table No. 3.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					Overall Mean (30)
				KARNATAKA (3)	PUDUCHERRY (1)	Z7 (13)	
		@SIRSI	MALAGI	Mean	KURUMBAPET	Mean	
4301	27438	107	111	110	92	108	110
4302	29539	105	109	104	91	106	109
4303	29495	100	102	101	87	97	99
4304	27 P 63 (HC)	105	109	105	90	100	102
4305	29526	93	91	94	89	93	95
4306	28730	100	108	105	95	103	105
4307	29494	107	110	116	101	111	113
4308	28757	107	111	110	96	107	110
4309	29502	103	106	102	89	99	101
4310	29535	105	106	104	95	103	104
4311	29023	100	101	100	85	96	98
4312	BPT 5204 (NC)	105	105	103	95	102	105
4313	29524	93	100	106	93	98	100
4314	29506	108	108	109	91	107	109
4315	29503	97	100	99	95	99	101
4316	29523	107	112	110	92	103	104
4317	29492	103	104	103	97	105	107
4318	29017	105	109	106	88	101	102
4319	29527	105	91	91	88	93	94
4320	29485	91	109	106	90	106	107
4321	29490	105	104	105	0	96	103
4322	29515	88	91	86	84	88	92
4323	29534	105	108	104	90	98	99
4324	29536	107	109	106	94	102	103
4325	29511	112	119	116	98	112	113
4326	29021	100	103	103	90	100	112
4327	WGL 14 (NC)	108	109	108	98	105	106
4328	29538	105	110	109	90	104	107
4329	28746	104	104	107	93	101	103
4330	Zonal Check (ZC)	108	110	110	101	105	108
4331	29514	107	110	108	98	104	104
4332	29489	105	108	106	89	106	106
4333	29508	103	100	107	95	104	104
4334	29018	105	102	102	91	99	100
4335	29537	105	103	106	92	102	103
4336	29487	93	98	102	89	96	96
4337	JKRH 3333 (HC)	100	97	102	93	99	100
4338	29543	93	92	98	89	97	99
4339	28754	100	102	103	91	97	98
4340	28187	107	111	107	97	104	106
4341	29519	100	102	101	89	97	98
4342	Local Check (LC)	117	92	99	87	100	103
	Exp. Mean	107	112	110	95	108	111

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Table No. 3.4: Plant Height (cm) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		ODISHA			ODISHA (3)	BIHAR		BIHAR (1)	JHARKHAND (1)
		ICAR-NRRI (Cuttack)	JEYPORE	CHIPLIMA	Mean	BIKRAMGANJ (Dhangain)	@PUSA	Mean	@RANCHI
4301	27438	106.47	110.07	108.33	108.29	129.16	136.00	129.16	101.60
4302	29539	87.10	103.73	85.83	92.22	105.16	104.30	105.16	96.13
4303	29495	91.70	87.03	93.67	90.80	114.50	112.60	114.50	91.87
4304	27 P 63 (HC)	88.53	108.73	83.00	93.42	106.00	122.30	106.00	95.00
4305	29526	91.97	106.23	83.17	93.79	106.60	121.60	106.60	92.67
4306	28730	88.53	95.27	80.67	88.16	119.66	118.00	119.66	94.47
4307	29494	91.63	110.83	91.17	97.88	121.33	103.00	121.33	98.20
4308	28757	94.80	88.27	92.83	91.97	117.66	109.00	117.66	96.60
4309	29502	104.30	111.27	88.67	101.41		126.30		99.27
4310	29535	87.40	104.17	87.17	92.91	115.66	118.30	115.66	96.67
4311	29023	91.27	97.50	85.17	91.31	111.16	118.30	111.16	96.93
4312	BPT 5204 (NC)	88.47	93.23	78.33	86.68	101.00	105.00	101.00	97.73
4313	29524	94.70	76.40	82.00	84.37	122.33	114.30	122.33	89.60
4314	29506	101.40	109.47	90.83	100.57	122.66	124.60	122.66	96.27
4315	29503	103.93	111.07	90.17	101.72	122.33	130.30	122.33	97.80
4316	29523	84.33	102.90	88.33	91.86	108.16	106.30	108.16	89.87
4317	29492	88.03	97.93	90.83	92.27	110.16	111.60	110.16	89.67
4318	29017	95.27	80.40	86.67	87.44	110.66	124.30	110.66	94.93
4319	29527	87.23	111.27	88.00	95.50	108.50	122.30	108.50	97.20
4320	29485	93.27	102.73	87.67	94.56	110.33	113.30	110.33	94.53
4321	29490	91.43	83.60	82.50	85.84	108.33	122.60	108.33	97.73
4322	29515	80.97	115.43	69.50	88.63	121.66	115.00	121.66	93.53
4323	29534	89.07	97.27	80.67	89.00	104.50	115.30	104.50	93.33
4324	29536	100.93	97.13	99.83	99.30	130.33	131.00	130.33	95.40
4325	29511	109.07	119.13	94.00	107.40	111.66	130.60	111.66	92.00
4326	29021	98.90	111.60	85.67	98.72	115.16	131.00	115.16	93.33
4327	WGL 14 (NC)	105.30	94.53	96.00	98.61	125.16	113.00	125.16	94.40
4328	29538	98.93	111.13	87.83	99.30	117.83	151.30	117.83	98.13
4329	28746	95.50	106.83	84.50	95.61	121.33	130.00	121.33	96.73
4330	Zonal Check (ZC)	82.53	99.87	91.50	91.30	102.66	100.60	102.66	96.87
4331	29514	127.97	92.13	102.17	107.42	129.50	146.00	129.50	95.47
4332	29489	96.60	124.07	82.00	100.89	118.16	129.60	118.16	89.93
4333	29508		107.47	84.00	95.73	113.00	133.00	113.00	95.33
4334	29018	100.00	106.27	86.17	97.48	129.00	134.00	129.00	93.80
4335	29537	86.07	111.47	83.50	93.68	110.00	114.60	110.00	93.40
4336	29487		90.87	89.33	90.10	113.83	101.30	113.83	90.00
4337	JKRH 3333 (HC)		95.67	82.17	88.92	111.16	114.30	111.16	91.33
4338	29543	88.40	94.80	77.00	86.73	117.66	122.60	117.66	92.40
4339	28754	100.00	118.13	88.17	102.10	115.50	138.00	115.50	96.13
4340	28187	86.07	96.93	85.33	89.44	122.66	116.30	122.66	94.73
4341	29519	83.67	96.07	77.50	85.74	124.50	113.00	124.50	94.87
4342	Local Check (LC)	97.60	89.47	86.33	91.13	92.00	147.30	92.00	93.47
Exp. Mean		94.34	101.63	87.10	94.29	115.09	121.24	115.09	94.75

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Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE IV- NORTH EASTERN				
		UTTAR PRADESH		UTTAR PRADESH (2)	Z3 (6)	ASSAM (1)	TRIPURA		TRIPURA (1)	Z4 (2)
		MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHUTINAGAR	@Lembucherra	Mean	Mean
4301	27438	108.00	102.90	105.45	110.82	109.93	127.00	109.50	127.00	118.47
4302	29539	89.00	85.90	87.45	92.79	98.27	111.00	97.50	111.00	104.63
4303	29495	92.00	105.30	98.65	97.37	115.00	125.00	111.00	125.00	120.00
4304	27 P 63 (HC)	96.00	100.80	98.40	97.18	111.93	121.00	104.00	121.00	116.47
4305	29526	103.00	100.40	101.70	98.56	108.67	120.00	109.50	120.00	114.33
4306	28730	106.00	98.00	102.00	98.02	103.80	122.00	97.00	122.00	112.90
4307	29494	110.00	81.50	95.75	101.08	96.87	123.00	95.00	123.00	109.93
4308	28757	103.00	94.00	98.50	98.43	107.53	130.00	95.50	130.00	118.77
4309	29502	104.00	98.50	101.25	101.35	119.93	127.00	102.50	127.00	123.47
4310	29535	110.00	88.80	99.40	98.87	107.60	119.00	99.00	119.00	113.30
4311	29023	115.00	99.50	107.25	99.93	104.53	112.00	99.00	112.00	108.27
4312	BPT 5204 (NC)	120.00	92.50	106.25	95.59	98.87	111.00	83.50	111.00	104.93
4313	29524	115.00	105.60	110.30	99.34	118.53	118.00	119.00	118.00	118.27
4314	29506	116.00	89.70	102.85	105.01	100.27	133.00	100.00	133.00	116.63
4315	29503	101.00	106.40	103.70	105.82	110.33	139.00	118.50	139.00	124.67
4316	29523	116.00	87.90	101.95	97.94	107.27	110.00	92.00	110.00	108.63
4317	29492	101.00	91.40	96.20	96.56	102.00	98.00	95.50	98.00	100.00
4318	29017	115.00	103.70	109.35	98.62	114.00	118.00	105.00	118.00	116.00
4319	29527	112.00	94.70	103.35	100.28	105.67	107.00	105.50	107.00	106.33
4320	29485	101.00	96.00	98.50	98.50	108.20	125.00	98.00	125.00	116.60
4321	29490	89.00	92.70	90.85	91.26	111.00	128.00	104.50	128.00	119.50
4322	29515	93.00	100.70	96.85	96.88	104.80	128.00	97.00	128.00	116.40
4323	29534	101.00	86.80	93.90	93.22	102.53	112.00	94.00	112.00	107.27
4324	29536	110.00	100.05	105.03	106.38	126.87	132.00	121.00	132.00	129.43
4325	29511	99.00	105.00	102.00	106.31	109.13	129.00	112.50	129.00	119.07
4326	29021	110.00	98.10	104.05	103.24	117.67	121.00	104.00	121.00	119.33
4327	WGL 14 (NC)	115.00	96.60	105.80	105.43	114.53	114.00	97.00	114.00	114.27
4328	29538	113.00	111.60	112.30	106.72	134.73	135.00	119.00	135.00	134.87
4329	28746	117.00	107.60	112.30	105.46	119.73	123.00	136.00	123.00	121.37
4330	Zonal Check (ZC)	101.00	87.30	94.15	94.14	143.67	118.00	139.00	118.00	130.83
4331	29514	111.00	129.70	120.35	115.41	136.53	126.00	119.50	126.00	131.27
4332	29489	89.00	103.40	96.20	102.20	113.07	127.00	110.00	127.00	120.03
4333	29508	103.00	103.20	103.10	102.13	124.40	148.00	114.00	148.00	136.20
4334	29018	115.00	103.50	109.25	106.66	118.60	133.00	106.50	133.00	125.80
4335	29537	103.00	88.90	95.95	97.16	101.60	114.00	97.00	114.00	107.80
4336	29487	101.00	91.00	96.00	97.21	100.53	111.00	94.00	111.00	105.77
4337	JKRH 3333 (HC)	115.00		115.00	101.00	115.27	135.00	106.00	135.00	125.13
4338	29543	123.00	106.30	114.65	101.19	114.00	121.00	112.00	121.00	117.50
4339	28754	101.00	114.30	107.65	106.18	120.87	143.00	121.50	143.00	131.93
4340	28187	105.00	83.90	94.45	96.65	102.93	130.00	92.00	130.00	116.47
4341	29519	115.00	95.70	105.35	98.74	111.13	117.00	104.50	117.00	114.07
4342	Local Check (LC)	89.00	75.90	82.45	88.38	114.53	124.00	97.00	124.00	119.27
Exp. Mean		105.98	97.70	102.04	100.33	112.08	122.98	105.58	122.98	117.53

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Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL					ZONE VI - WESTERN	
		CHHATTISGARH (1)	MAHARASHTRA		MAHARASHTRA1 (2)	Z5 (3)	MAHARASHTRA 2	
		RAIPUR	SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON
4301	27438	132.83	97.00	103.50	100.25	111.11	125.00	113.47
4302	29539	103.23	75.00	72.50	73.75	83.58	112.67	88.93
4303	29495	119.99	124.00	122.00	123.00	122.00	130.33	107.67
4304	27 P 63 (HC)	122.01	95.00	75.30	85.15	97.44	130.67	108.13
4305	29526	119.81	106.00	97.40	101.70	107.74	116.67	92.73
4306	28730	113.55	97.00	85.40	91.20	98.65	127.00	96.20
4307	29494	109.11	76.00	92.00	84.00	92.37	113.67	92.80
4308	28757	116.48	95.00	92.70	93.85	101.39	119.67	107.07
4309	29502	132.36	95.00	109.30	102.15	112.22	131.67	117.00
4310	29535	102.83	105.00	84.70	94.85	97.51	113.67	89.47
4311	29023	121.08	115.00	93.40	104.20	109.83	130.33	109.93
4312	BPT 5204 (NC)	99.46	83.00	74.40	78.70	85.62	118.33	91.07
4313	29524	119.35	104.00	94.10	99.05	105.82	111.67	105.73
4314	29506	124.25	102.00	84.60	93.30	103.62	128.33	105.27
4315	29503	132.35	114.00	94.90	104.45	113.75	138.67	98.13
4316	29523	111.42	84.00	73.10	78.55	89.51	116.33	94.93
4317	29492	109.31	75.00	75.70	75.35	86.67	112.00	81.13
4318	29017	124.35	97.00	94.00	95.50	105.12	128.00	105.67
4319	29527	111.09	97.00	105.80	101.40	104.63	117.67	96.13
4320	29485	108.57	95.00	72.80	83.90	92.12	113.67	88.13
4321	29490	116.45	95.00	87.50	91.25	99.65	127.33	99.73
4322	29515	109.94	97.00	86.90	91.95	97.95	114.67	77.47
4323	29534	104.77	83.00	83.30	83.15	90.36	124.67	86.60
4324	29536	127.06	102.00	101.90	101.95	110.32	135.33	115.13
4325	29511	127.39	102.00	104.30	103.15	111.23	138.00	124.60
4326	29021	120.33	96.00	100.30	98.15	105.54	135.67	112.27
4327	WGL 14 (NC)	121.71	85.00	81.20	83.10	95.97	138.00	114.40
4328	29538	137.47	94.00	85.90	89.95	105.79	153.67	112.27
4329	28746	126.05	84.00	94.50	89.25	101.52	128.00	98.93
4330	Zonal Check (ZC)	156.27	96.00	73.60	84.80	108.62	115.33	95.20
4331	29514	154.80	73.00	121.10	97.05	116.30	167.67	131.40
4332	29489	131.02	105.00	110.40	107.70	115.47	127.67	101.00
4333	29508	139.64	105.00	102.50	103.75	115.71	145.00	103.87
4334	29018	121.77	116.00	92.50	104.25	110.09	138.00	106.47
4335	29537	105.65	97.00	71.20	84.10	91.28	115.67	99.73
4336	29487	99.61	96.00	93.20	94.60	96.27	112.33	93.67
4337	JKRH 3333 (HC)	192.09	105.00	91.90	98.45	129.66	126.00	96.27
4338	29543	117.49	115.00	109.40	112.20	113.96	116.67	100.33
4339	28754	137.84	123.00	106.60	114.80	122.48	143.67	129.27
4340	28187	101.22	85.00	82.50	83.75	89.57	112.67	92.07
4341	29519	113.51	108.00	72.00	90.00	97.84	114.00	104.40
4342	Local Check (LC)	104.75	125.00	111.80	118.40	113.85	116.00	97.80
Exp. Mean		121.43	98.05	91.95	95.00	103.81	125.76	101.96

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Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN								ZONE VII - SOUTHERN
		MAHARASHTRA2 (2)	MAHARASHTRA (4)	GUJARAT				GUJARAT (4)	Z6 (6)	ANDRAPRADESH
		Mean	Mean	NAVASARI	NAWAGAM	DABHOI	VYARA	Mean	Mean	MARUTERU
4301	27438	119.23	109.74	142.80	109.20	136.60	138.00	131.65	127.51	134.73
4302	29539	100.80	87.28	127.60	91.80	113.00	116.00	112.10	108.33	112.27
4303	29495	119.00	121.00	133.70	115.60	125.10	141.00	128.85	125.57	128.93
4304	27 P 63 (HC)	119.40	102.28	127.50	100.60	126.00	136.00	122.53	121.48	131.47
4305	29526	104.70	103.20	117.50	110.00	125.70	132.00	121.30	115.77	128.93
4306	28730	111.60	101.40	127.10	105.00	126.40	122.00	120.13	117.28	113.40
4307	29494	103.23	93.62	126.40	90.00	119.40	115.00	112.70	109.54	124.13
4308	28757	113.37	103.61	126.90	99.40	131.70	129.00	121.75	118.96	116.60
4309	29502	124.33	113.24	143.80	113.00	133.80	141.00	132.90	130.04	144.53
4310	29535	101.57	98.21	106.30	93.00	113.00	116.00	107.08	105.24	123.47
4311	29023	120.13	112.17	133.80	111.60	129.90	138.00	128.33	125.59	131.27
4312	BPT 5204 (NC)	104.70	91.70	114.30	85.40	117.40	112.00	107.28	106.42	112.00
4313	29524	108.70	103.88	119.20	101.20	130.30	132.00	120.68	116.68	130.67
4314	29506	116.80	105.05	116.30	104.40	131.40	126.00	119.53	118.62	130.47
4315	29503	118.40	111.43	130.90	119.40	128.00	135.00	128.33	125.02	140.47
4316	29523	105.63	92.09	120.10	94.00	123.80	116.00	113.48	110.86	123.73
4317	29492	96.57	85.96	132.10	100.60	127.70	111.00	117.85	110.76	110.27
4318	29017	116.83	106.17	137.40	100.40	131.30	131.00	125.03	122.29	132.67
4319	29527	106.90	104.15	125.40	94.60	113.10	128.00	115.28	112.48	130.07
4320	29485	100.90	92.40	127.90	101.00	119.80	126.00	118.68	112.75	120.47
4321	29490	113.53	102.39	139.40	103.80	125.20	138.00	126.60	122.24	116.87
4322	29515	96.07	94.01	134.80	105.40	114.90	126.00	120.28	112.21	119.50
4323	29534	105.63	94.39	124.20	106.80	121.80	118.00	117.70	113.68	119.93
4324	29536	125.23	113.59	155.30	106.60	142.00	149.00	138.23	133.89	128.67
4325	29511	131.30	117.23	158.90	99.40	138.90	143.00	135.05	133.80	143.67
4326	29021	123.97	111.06	158.30	110.00	133.90	145.00	136.80	132.52	148.47
4327	WGL 14 (NC)	126.20	104.65	134.30	108.40	127.20	137.00	126.73	126.55	127.80
4328	29538	132.97	111.46	141.50	109.40	145.90	152.00	137.20	135.79	157.73
4329	28746	113.47	101.36	145.50	114.40	136.60	140.00	134.13	127.24	140.07
4330	Zonal Check (ZC)	105.27	95.03	112.80	106.00	114.60	114.00	111.85	109.66	133.33
4331	29514	149.53	123.29	167.70	113.00	152.30	168.00	150.25	150.01	147.47
4332	29489	114.33	111.02	142.70	106.20	173.00	136.00	139.48	131.09	137.67
4333	29508	124.43	114.09	156.00	99.20	139.20	152.00	136.60	132.54	119.27
4334	29018	122.23	113.24	146.90	109.20	133.70	149.00	134.70	130.54	137.80
4335	29537	107.70	95.90	129.40	103.00	119.00	120.00	117.85	114.47	115.60
4336	29487	103.00	98.80	116.60		119.50	122.00	119.37	112.82	119.00
4337	JKRH 3333 (HC)	111.13	104.79			137.20	132.00	134.60	122.87	126.40
4338	29543	108.50	110.35	138.60	107.00	126.80	132.00	126.10	120.23	128.27
4339	28754	136.47	125.63	153.30	119.40	146.40	152.00	142.78	140.67	158.60
4340	28187	102.37	93.06	118.00	90.60	120.70	119.00	112.08	108.84	120.87
4341	29519	109.20	99.60	129.10	106.60	124.60	113.00	118.33	115.28	128.53
4342	Local Check (LC)	106.90	112.65	124.80	106.00	126.40	131.00	122.05	117.00	111.60
Exp. Mean		113.86	104.43	133.30	104.27	129.12	131.64	124.86	121.08	128.75

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Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN							
		ANDRAPRADESH (1)		TELANGANA					TELANGANA (5)
		@BAPATLA	Mean	RAJENDRANAGAR	KAMPASAGAR	KUNARAM	WARANGAL	JAGITYAL	Mean
4301	27438	133.40	134.73	114.20	112.00	104.80	121.40	127.60	116.00
4302	29539	107.40	112.27	102.47	92.00		111.40	95.00	100.22
4303	29495	122.60	128.93	108.40	115.00	105.67	118.93	115.70	112.74
4304	27 P 63 (HC)	109.40	131.47	112.00	102.00	97.53	117.33	114.00	108.57
4305	29526	111.00	128.93	105.20	98.00	94.23	121.80	108.40	105.53
4306	28730	155.00	113.40	112.27	112.33	106.23	119.07	110.90	112.16
4307	29494	124.00	124.13	98.73	89.33	86.39	109.87	96.80	96.23
4308	28757	127.00	116.60	118.47	112.33	97.17	119.60	111.30	111.77
4309	29502	114.00	144.53	118.93	107.33	112.13	127.47	118.50	116.87
4310	29535	106.00	123.47	101.33	97.33	94.23	108.53	98.90	100.07
4311	29023	112.60	131.27	121.13	120.00	109.47	116.00	120.20	117.36
4312	BPT 5204 (NC)	108.20	112.00	101.73	94.33	97.67	106.33	95.30	99.07
4313	29524	108.00	130.67	104.00	96.67	116.57	119.67	108.90	109.16
4314	29506	101.00	130.47	114.20	107.67	104.80	120.73	104.20	110.32
4315	29503	120.80	140.47	112.13	118.67	114.43	132.47	127.70	121.08
4316	29523	125.60	123.73	103.13	98.33	102.47	116.93	100.40	104.25
4317	29492	107.80	110.27	95.27	98.33	82.70	103.60	97.70	95.52
4318	29017	131.00	132.67	114.53	102.33	102.70	118.80	109.10	109.49
4319	29527	97.80	130.07	103.00	102.67	104.13	118.40	101.20	105.88
4320	29485	119.60	120.47	102.00	94.33	102.03	116.07	99.00	102.69
4321	29490	107.00	116.87	115.27	106.33	98.90	117.07	109.80	109.47
4322	29515	104.80	119.50	101.33	92.33	98.17	101.73	92.10	97.13
4323	29534	105.60	119.93	107.40	97.33	94.07	110.00	99.20	101.60
4324	29536	127.80	128.67	125.60	111.67	120.20	137.20	122.10	123.35
4325	29511	137.20	143.67	131.07	119.33	114.67	135.73	129.60	126.08
4326	29021	115.00	148.47	117.33	94.00	107.67	123.80	115.60	111.68
4327	WGL 14 (NC)	115.00	127.80	110.27	98.67	103.43	122.67	116.00	110.21
4328	29538	141.20	157.73	126.00	109.67	113.70	138.80	124.30	122.49
4329	28746	105.80	140.07	108.60	106.00	117.00	126.00	120.60	115.64
4330	Zonal Check (ZC)	113.00	133.33	99.40	84.33	99.33	119.53	96.50	99.82
4331	29514	154.40	147.47	156.40	137.00	121.17	166.00	146.90	145.49
4332	29489	122.80	137.67	105.07	113.67	119.40	120.60	120.90	115.93
4333	29508	132.60	119.27	130.67	115.67	112.80	141.47	129.10	125.94
4334	29018	117.80	137.80	113.47	104.00	106.83	123.40	119.80	113.50
4335	29537	122.40	115.60	104.00	108.00	103.67	103.27	106.00	104.99
4336	29487	121.80	119.00	101.87	111.67	101.33	108.20	98.00	104.21
4337	JKRH 3333 (HC)		126.40		119.33			102.00	110.67
4338	29543	106.80	128.27	105.20	120.00	107.17	119.47	115.00	113.37
4339	28754	122.60	158.60	128.93	106.33	114.43	142.27	131.50	124.69
4340	28187	118.80	120.87	102.80	113.67	96.37	110.53	102.80	105.23
4341	29519	108.00	128.53	103.40	109.67	104.13	108.20	105.60	106.20
4342	Local Check (LC)	107.60	111.60	102.27	89.33	95.63	113.00	109.30	101.91
Exp. Mean		118.30	128.75	111.21	105.69	104.64	120.33	111.27	110.59

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Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		TAMIL NADU		TAMIL NADU (2)	KERALA (1)	KARNATAKA	
		ADUTHURAI	COIMBATORE	Mean	PATTAMBI	MANDYA	GANGAVATHI
4301	27438	90.00	118.00	104.00	98.00	99.07	119.50
4302	29539	88.40	102.00	95.20	96.12	84.60	90.00
4303	29495	87.40	117.00	102.20	96.00	97.00	122.00
4304	27 P 63 (HC)	82.60	104.00	93.30	98.00	94.53	106.00
4305	29526	87.20	109.00	98.10	102.10	96.47	105.00
4306	28730	77.80	98.00	87.90	102.30	94.13	99.00
4307	29494	103.60	110.00	106.80	101.60	91.53	93.50
4308	28757	85.40	110.00	97.70	92.60	93.20	110.00
4309	29502	100.20	110.00	105.10	86.80	104.20	107.00
4310	29535	83.20	93.00	88.10	98.00	87.80	91.00
4311	29023	108.20	105.00	106.60	98.20	95.07	108.50
4312	BPT 5204 (NC)	107.20	101.00	104.10	96.20	86.13	92.00
4313	29524	79.80	108.00	93.90	94.80	91.53	104.50
4314	29506	95.60	113.00	104.30	100.50	95.80	112.50
4315	29503	89.40	102.00	95.70	96.80	87.33	110.50
4316	29523	100.20	102.00	101.10	99.60	88.07	92.50
4317	29492	81.60	98.00	89.80	99.40	85.47	87.00
4318	29017	99.20	109.00	104.10	118.60	108.07	103.50
4319	29527	88.40	94.00	91.20	76.00	84.93	104.00
4320	29485	88.60	91.00	89.80	89.20	86.20	105.50
4321	29490	96.20	106.00	101.10	77.20	97.27	103.00
4322	29515	80.00	85.00	82.50	98.00	75.20	99.50
4323	29534	80.00	103.00	91.50	96.20	84.07	102.00
4324	29536	99.20	120.00	109.60	95.20	111.00	126.50
4325	29511	117.20	127.00	122.10	98.12	101.60	132.00
4326	29021	101.60	121.00	111.30	96.10	101.67	105.50
4327	WGL 14 (NC)	110.40	109.00	109.70	100.00	107.87	103.00
4328	29538	99.80	128.00	113.90	102.00	115.33	127.00
4329	28746	107.20	113.00	110.10	104.00	102.07	108.50
4330	Zonal Check (ZC)	100.20	109.00	104.60	112.10	100.00	99.50
4331	29514	119.00	149.00	134.00	120.10	152.40	142.00
4332	29489	110.60	109.00	109.80	99.01	91.73	119.50
4333	29508	110.40	121.00	115.70	98.10	123.07	122.00
4334	29018	90.60	113.00	101.80	98.10	110.33	108.00
4335	29537	90.40	104.00	97.20	102.30	83.73	105.00
4336	29487	109.80	97.00	103.40	112.30	82.80	93.50
4337	JKRH 3333 (HC)	99.60	127.00	113.30	104.00	92.60	
4338	29543	101.60	113.00	107.30	104.00	90.60	107.50
4339	28754	98.20	108.00	103.10	112.00	105.13	125.00
4340	28187	80.00	88.00	84.00	105.00	90.40	92.00
4341	29519	80.40	108.00	94.20		93.93	107.50
4342	Local Check (LC)	109.50	111.00	110.25		105.87	103.50
Exp. Mean		95.62	108.64	102.13	99.37	96.90	107.21

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Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					Overall Mean (30)
		KARNATAKA		KARNATAKA (3)	PUDUCHERRY (1)	Z7 (13)	
		@SIRSI	MALAGI	Mean	KURUMBAPET	Mean	
4301	27438	107.90	108.00	108.86	85.00	110.18	114.42
4302	29539	74.70	64.70	79.77	77.00	93.00	95.95
4303	29495	90.40	89.90	102.97	85.00	106.69	111.02
4304	27 P 63 (HC)	84.60	76.60	92.38	92.00	102.16	105.51
4305	29526	87.90	79.80	93.76	95.00	102.39	105.63
4306	28730	84.20	81.00	91.38	88.00	101.11	104.27
4307	29494	92.00	88.10	91.04	91.00	98.81	101.51
4308	28757	93.10	87.70	96.97	93.00	103.64	106.45
4309	29502	97.80	97.00	102.73	88.00	109.39	113.54
4310	29535	77.90	67.40	82.07	85.00	94.55	99.10
4311	29023	85.80	77.10	93.56	82.00	107.09	109.71
4312	BPT 5204 (NC)	82.00	87.50	88.54	92.00	97.65	98.27
4313	29524	81.30	83.60	93.21	95.00	102.59	106.13
4314	29506	82.50	96.70	101.67	103.00	107.63	109.50
4315	29503	81.70	77.20	91.68	93.00	107.85	112.59
4316	29523	84.20	78.80	86.46	83.00	99.17	100.92
4317	29492	79.90	88.70	87.06	70.00	92.16	96.73
4318	29017	91.50	96.50	102.69	93.00	108.31	109.36
4319	29527	82.90	77.20	88.71	83.00	97.46	102.34
4320	29485	85.40	79.70	90.47	83.00	96.70	101.14
4321	29490	87.50	90.50	96.92	0.00	94.95	101.78
4322	29515	82.20	84.30	86.33	70.00	92.09	99.28
4323	29534	88.20	89.80	91.96	85.00	97.54	99.83
4324	29536	93.50	103.50	113.67	107.00	115.99	117.98
4325	29511	98.70	111.60	115.07	105.00	120.51	119.30
4326	29021	93.70	95.70	100.96	97.00	109.65	113.18
4327	WGL 14 (NC)	94.70	98.40	103.09	95.00	107.88	110.36
4328	29538	106.50	124.30	122.21	100.00	120.51	120.29
4329	28746	100.40	113.00	107.86	92.00	112.16	113.38
4330	Zonal Check (ZC)	95.80	96.90	98.80	83.00	102.55	104.78
4331	29514	141.60	140.80	145.07	130.00	140.63	134.41
4332	29489	108.50	110.20	107.14	98.00	111.95	114.72
4333	29508	115.70	131.20	125.42	95.00	119.21	119.83
4334	29018	100.20	92.60	103.64	88.00	108.15	113.70
4335	29537	91.80	87.90	92.21	98.00	100.91	102.37
4336	29487	80.60	89.20	88.50	82.00	100.51	102.04
4337	JKRH 3333 (HC)	97.70	94.20	93.40	100.00	107.24	113.63
4338	29543	88.80	92.40	96.83	92.00	107.40	110.05
4339	28754	110.20	112.20	114.11	102.00	118.82	121.90
4340	28187	85.40	95.20	92.53	83.00	98.51	100.51
4341	29519	84.50	96.80	99.41	95.00	103.43	105.07
4342	Local Check (LC)	129.00	101.00	103.46	83.00	102.92	105.08
Exp. Mean		92.93	93.69	99.16	88.95	105.52	108.28

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Table No. 3.5: Panicles/m² of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		ODISHA			ODISHA (3)	BIHAR		BIHAR (1)	JHARKHAND (1)
		ICAR-NRRI (Cuttack)	JEYPORE	CHIPLIMA	Mean	BIKRAMGANJ (Dhangain)	@PUSA	Mean	@RANCHI
4301	27438	325	488	229	347	290	222	290	178
4302	29539	341	349	239	310	375	254	375	181
4303	29495	285	276	216	259	334	256	334	172
4304	27 P 63 (HC)	288	322	296	302	396	229	396	174
4305	29526	311	308	219	279	426	238	426	142
4306	28730	317	259	231	269	329	245	329	154
4307	29494	323	343	201	289	320	251	320	213
4308	28757	317	261	213	264	322	258	322	147
4309	29502	251	336	225	271		249		171
4310	29535	277	325	251	284	354	263	354	136
4311	29023	266	288	264	273	419	281	419	229
4312	BPT 5204 (NC)	268	322	213	268	420	242	420	193
4313	29524	322	345	255	307	411	252	411	171
4314	29506	334	325	227	295	324	220	324	182
4315	29503	268	307	213	263	375	250	375	126
4316	29523	282	335	188	268	286	215	286	179
4317	29492	289	319	231	280	285	271	285	253
4318	29017	319	360	220	300	276	226	276	195
4319	29527	312	363	211	295	353	199	353	164
4320	29485	272	343	241	285	355	188	355	210
4321	29490	336	258	228	274	347	219	347	199
4322	29515	211	264	204	226	369	260	369	152
4323	29534	325	261	219	268	335	266	335	169
4324	29536	276	365	253	298	304	252	304	190
4325	29511	303	330	227	286	297	263	297	171
4326	29021	279	228	239	249	383	238	383	170
4327	WGL 14 (NC)	296	237	211	248	283	251	283	185
4328	29538	322	405	231	319	283	248	283	158
4329	28746	279	296	195	257	326	230	326	194
4330	Zonal Check (ZC)	375	235	268	293	366	228	366	158
4331	29514	338	307	180	275	384	229	384	174
4332	29489	283	277	199	253	369	240	369	210
4333	29508		375	212	294	298	264	298	231
4334	29018	294	338	216	282	274	265	274	189
4335	29537	303	338	233	291	327	252	327	174
4336	29487		323	243	283	319	247	319	152
4337	JKRH 3333 (HC)		296	192	244	290	254	290	118
4338	29543	289	306	184	260	394	272	394	161
4339	28754	296	346	229	290	346	240	346	173
4340	28187	244	272	233	250	340	226	340	196
4341	29519	277	272	216	255	324	249	324	183
4342	Local Check (LC)	288	363	227	293	316	236	316	202
	Exp. Mean	297	316	224	278	340	244	340	178

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Table No. 3.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE IV- NORTH EASTERN				
		UTTAR PRADESH		UTTAR PRADESH (2)	Z3 (6)	ASSAM (1)	TRIPURA		TRIPURA (1)	Z4 (2)
		MASODHA	VARANASI	Mean	Mean	TITABAR	ARUNDHUTINAGAR	@Lembucherra	Mean	Mean
4301	27438	271	190	231	299	208	350	288	350	279
4302	29539	247	201	224	292	238	322	300	322	280
4303	29495	235	196	216	257	258	280	325	280	269
4304	27 P 63 (HC)	290	201	245	299	257	257	450	257	257
4305	29526	266	161	214	282	235	290	250	290	262
4306	28730	249	177	213	260	202	434	363	434	318
4307	29494	263	181	222	272	227	275	375	275	251
4308	28757	249	197	223	260	198	349	325	349	273
4309	29502	235	197	216	249	222	349	263	349	285
4310	29535	236	175	205	269	203	315	338	315	259
4311	29023	229	253	241	287	258	306	500	306	282
4312	BPT 5204 (NC)	280	194	237	283	218	333	525	333	275
4313	29524	251	213	232	299	238	331	338	331	285
4314	29506	280	161	220	275	216	316	300	316	266
4315	29503	229	206	217	266	255	318	338	318	287
4316	29523	231	158	194	247	242	218	338	218	230
4317	29492	283	211	247	270	277	374	450	374	325
4318	29017	234	181	208	265	242	330	375	330	286
4319	29527	261	173	217	279	255	269	313	269	262
4320	29485	250	219	235	280	222	317	338	317	269
4321	29490	258	261	260	281	243	290	438	290	267
4322	29515	226	152	189	238	216	174	250	174	195
4323	29534	208	220	214	261	218	322	350	322	270
4324	29536	206	201	204	267	250	362	313	362	306
4325	29511	253	172	213	263	228	239	275	239	234
4326	29021	295	167	231	265	235	367	363	367	301
4327	WGL 14 (NC)	275	194	235	249	252	365	300	365	309
4328	29538	261	174	217	279	237	298	338	298	268
4329	28746	253	180	217	255	230	327	350	327	279
4330	Zonal Check (ZC)	284	244	264	295	293	320	438	320	307
4331	29514	280	203	241	282	235	311	313	311	273
4332	29489	249	178	214	259	202	240	313	240	221
4333	29508	253	203	228	268	252	300	413	300	276
4334	29018	274	209	242	268	257	301	375	301	279
4335	29537	286	184	235	278	245	313	400	313	279
4336	29487	244	202	223	266	228	277	313	277	253
4337	JKRH 3333 (HC)	253		253	258	214	293	300	293	254
4338	29543	249	155	202	263	205	330	288	330	267
4339	28754	279	187	233	280	192	312	425	312	252
4340	28187	228	196	212	252	230	307	313	307	269
4341	29519	250	215	233	259	227	314	338	314	270
4342	Local Check (LC)	263	171	217	271	230	313	438	313	271
	Exp. Mean	255	193	225	270	233	310	351	310	271

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Table No. 3.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL					ZONE VI - WESTERN	
		CHHATTISGARH (1)	MAHARASHTRA		MAHARASHTRA1 (2)	Z5 (3)	MAHARASHTRA 2	
		RAIPUR	SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON
4301	27438	198	263	164	214	208	220	169
4302	29539	220	223	176	200	207	218	213
4303	29495	164	304	212	258	227	215	178
4304	27 P 63 (HC)	169	204	150	177	174	228	210
4305	29526	124	209	144	177	159	214	164
4306	28730	198	316	126	221	213	213	215
4307	29494	190	201	199	200	197	227	217
4308	28757	198	183	160	172	180	221	140
4309	29502	173	246	183	214	200	222	150
4310	29535	186	257	202	229	215	214	160
4311	29023	154	299	187	243	213	216	197
4312	BPT 5204 (NC)	221	189	200	195	203	221	182
4313	29524	152	179	187	183	173	219	172
4314	29506	174	195	126	161	165	219	138
4315	29503	146	206	155	181	169	219	157
4316	29523	144	184	191	188	173	219	169
4317	29492	173	207	143	175	174	219	201
4318	29017	172	162	174	168	169	230	189
4319	29527	153	237	186	211	192	227	152
4320	29485	190	193	145	169	176	230	162
4321	29490	184	239	204	221	209	222	156
4322	29515	160	223	203	213	195	212	215
4323	29534	159	169	170	170	166	227	179
4324	29536	195	306	182	244	228	220	184
4325	29511	190	221	194	208	202	215	249
4326	29021	242	199	164	182	202	219	171
4327	WGL 14 (NC)	204	172	162	167	179	217	214
4328	29538	161	142	108	125	137	207	167
4329	28746	164	200	156	178	173	223	178
4330	Zonal Check (ZC)	214	157	137	147	170	230	202
4331	29514	180	291	138	214	203	225	198
4332	29489	260	355	210	282	275	220	181
4333	29508	200	212	204	208	205	226	175
4334	29018	169	313	186	250	223	212	189
4335	29537	177	255	187	221	206	232	191
4336	29487	177	330	184	257	230	225	148
4337	JKRH 3333 (HC)	137	346	194	270	226	217	151
4338	29543	173	239	223	231	212	217	208
4339	28754	161	201	125	163	163	217	151
4340	28187	196	304	179	242	227	222	177
4341	29519	167	305	187	246	220	215	162
4342	Local Check (LC)	203	227	191	209	207	207	168
Exp. Mean		180	235	174	204	196	220	180

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Table No. 3.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN								ZONE VII - SOUTHERN	
		MAHARASHTRA 2 (2)	MAHARASHTRA (4)	GUJARAT				GUJARAT (4)	Z6 (6)	ANDRAPRADESH	
		Mean	Mean	NAVASARI	NAWAGAM	DABHOI	VYARA	Mean	Mean	MARUTERU	@BAPATLA
4301	27438	195	204	161	269	238	254	230	219	334	245
4302	29539	215	208	195	283	236	268	246	236	323	269
4303	29495	197	227	159	277	226	230	223	214	282	205
4304	27 P 63 (HC)	219	198	179	265	215	264	231	227	297	191
4305	29526	189	183	177	265	191	242	219	209	312	155
4306	28730	214	218	228	299	236	230	248	237	293	176
4307	29494	222	211	157	283	231	275	237	232	337	207
4308	28757	180	176	182	274	305	264	256	231	312	179
4309	29502	186	200	181	268	253	246	237	220	326	261
4310	29535	187	208	165	277	230	260	233	218	308	253
4311	29023	206	225	239	284	214	274	253	237	304	196
4312	BPT 5204 (NC)	202	198	186	311	225	266	247	232	297	275
4313	29524	196	190	161	293	234	269	239	225	308	243
4314	29506	178	169	154	305	292	233	246	223	323	312
4315	29503	188	184	269	268	201	235	243	225	319	176
4316	29523	194	191	227	287	286	284	271	245	306	214
4317	29492	210	192	208	284	229	274	249	236	319	259
4318	29017	210	189	217	265	287	239	252	238	310	231
4319	29527	189	200	276	263	262	227	257	234	334	185
4320	29485	196	182	222	274	269	277	260	239	343	249
4321	29490	189	205	235	247	243	247	243	225	301	245
4322	29515	214	213	187	274	200	237	225	221	299	206
4323	29534	203	186	240	280	179	296	249	234	339	231
4324	29536	202	223	225	299	234	231	247	232	348	255
4325	29511	232	220	179	275	208	237	225	227	321	245
4326	29021	195	188	200	269	218	232	230	218	319	200
4327	WGL 14 (NC)	215	191	213	247	236	256	238	230	323	216
4328	29538	187	156	164	229	199	225	204	199	310	242
4329	28746	201	190	189	296	219	234	234	223	312	254
4330	Zonal Check (ZC)	216	182	198	283	231	256	242	233	310	258
4331	29514	211	213	202	314	216	267	250	237	315	211
4332	29489	201	242	241	247	227	259	244	229	304	229
4333	29508	200	204	223	299	197	293	253	235	297	220
4334	29018	201	225	177	259	205	316	239	226	308	240
4335	29537	211	216	174	311	244	233	241	231	299	207
4336	29487	186	222	170		205	245	207	199	321	205
4337	JKRH 3333 (HC)	184	227			221	261	241	212	297	
4338	29543	213	222	220	253	199	267	235	227	317	191
4339	28754	184	173	208	274	206	234	231	215	328	218
4340	28187	199	221	238	295	251	298	270	247	306	238
4341	29519	189	217	203	289	217	288	249	229	310	233
4342	Local Check (LC)	188	198	250	308	248	234	260	236	312	267
	Exp. Mean	200	202	202	278	230	256	241	227	314	227

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Table No. 3.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN						
		ANDRAPRADESH (1)	TELANGANA					TELANGANA (5)
		Mean	RAJENDRANAGAR	KAMPASAGAR	KUNARAM	WARANGAL	JAGITYAL	Mean
4301	27438	334	518	389	147	397	282	347
4302	29539	323	591	255		380	286	378
4303	29495	282	518	255	180	367	321	328
4304	27 P 63 (HC)	297	540	289	163	400	303	339
4305	29526	312	449	222	139	385	269	293
4306	28730	293	596	311	183	429	290	362
4307	29494	337	522	278	139	381	310	326
4308	28757	312	478	322	167	396	265	326
4309	29502	326	444	278	180	386	282	314
4310	29535	308	556	255	139	407	283	328
4311	29023	304	636	433	273	387	328	411
4312	BPT 5204 (NC)	297	622	300	172	397	309	360
4313	29524	308	533	411	233	406	306	378
4314	29506	323	462	289	167	391	249	311
4315	29503	319	578	344	191	410	301	365
4316	29523	306	504	233	139	408	283	313
4317	29492	319	658	300	101	406	278	348
4318	29017	310	518	189	121	398	298	305
4319	29527	334	496	322	209	394	294	343
4320	29485	343	491	244	167	420	306	326
4321	29490	301	593	333	150	411	276	353
4322	29515	299	571	244	180	397	264	331
4323	29534	339	524	333	165	414	305	348
4324	29536	348	667	255	189	392	327	366
4325	29511	321	442	322	189	393	303	330
4326	29021	319	478	200	194	427	303	320
4327	WGL 14 (NC)	323	562	344	163	399	263	346
4328	29538	310	398	333	145	436	280	318
4329	28746	312	549	377	200	388	277	358
4330	Zonal Check (ZC)	310	562	222	125	389	307	321
4331	29514	315	540	211	165	400	266	316
4332	29489	304	509	522	257	388	302	396
4333	29508	297	547	311	198	395	316	353
4334	29018	308	489	200	165	405	295	311
4335	29537	299	513	222	185	446	274	328
4336	29487	321	511	255	196	406	278	329
4337	JKRH 3333 (HC)	297		322			267	294
4338	29543	317	451	433	207	383	287	352
4339	28754	328	498	333	158	397	256	328
4340	28187	306	662	522	185	416	283	413
4341	29519	310	427	333	156	378	287	316
4342	Local Check (LC)	312	676	278	308	420	304	397
Exp. Mean		314	534	305	177	401	290	341

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Table No. 3.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		TAMIL NADU		TAMIL NADU (2)	KERALA (1)	KARNATAKA	
		ADUTHURAI	COIMBATORE	Mean	PATTAMBI	MANDYA	GANGAVATHI
4301	27438	335	317	326	420	302	476
4302	29539	256	433	345	472	329	485
4303	29495	272	350	311	505	256	397
4304	27 P 63 (HC)	175	292	233	484	280	400
4305	29526	332	342	337	526	253	352
4306	28730	363	333	348	568	300	375
4307	29494	381	350	366	453	282	369
4308	28757	374	317	346	436	291	345
4309	29502	243	317	280	479	271	360
4310	29535	255	325	290	484	296	366
4311	29023	324	425	375	505	273	375
4312	BPT 5204 (NC)	319	358	339	422	287	360
4313	29524	314	508	411	438	271	414
4314	29506	312	292	302	492	318	400
4315	29503	257	292	275	437	296	372
4316	29523	326	317	321	453	302	440
4317	29492	356	342	349	431	324	425
4318	29017	273	317	295	450	289	396
4319	29527	269	292	281	455	273	394
4320	29485	346	308	327	480	291	387
4321	29490	354	383	369	486	273	411
4322	29515	182	317	250	508	273	413
4323	29534	230	342	286	431	351	344
4324	29536	281	325	303	508	302	428
4325	29511	328	308	318	454	293	408
4326	29021	349	367	358	484	316	416
4327	WGL 14 (NC)	362	375	368	436	298	403
4328	29538	352	425	388	474	333	463
4329	28746	360	383	372	484	318	473
4330	Zonal Check (ZC)	375	350	362	443	349	427
4331	29514	291	375	333	461	327	375
4332	29489	368	367	368	447	313	354
4333	29508	334	458	396	484	291	417
4334	29018	375	292	333	478	322	387
4335	29537	353	258	306	537	280	415
4336	29487	323	375	349	430	356	408
4337	JKRH 3333 (HC)	350	358	354	505	318	
4338	29543	333	450	392	468	298	328
4339	28754	375	433	404	496	322	357
4340	28187	363	300	331	565	304	368
4341	29519	365	367	366		289	430
4342	Local Check (LC)	370	383	377		307	396
	Exp. Mean	320	353	337	474	300	398

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Table No. 3.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					Overall Mean (30)
		KARNATAKA		KARNATAKA (3)	PUDUCHERRY (1)	Z7 (13)	
		@SIRSI	MALAGI	Mean	KURUMBAPET	Mean	
4301	27438	243	469	416	435	371	304
4302	29539	271	429	414	470	392	312
4303	29495	170	356	336	325	337	281
4304	27 P 63 (HC)	261	403	361	433	343	288
4305	29526	207	271	292	347	323	271
4306	28730	228	363	346	461	374	304
4307	29494	195	310	320	317	341	285
4308	28757	164	356	331	341	339	281
4309	29502	231	446	359	374	337	280
4310	29535	249	317	326	467	343	285
4311	29023	253	446	364	483	399	318
4312	BPT 5204 (NC)	391	406	351	388	357	296
4313	29524	268	310	332	373	371	302
4314	29506	282	488	402	375	351	286
4315	29503	226	271	313	406	344	283
4316	29523	322	406	383	423	349	282
4317	29492	375	366	372	402	362	297
4318	29017	378	459	381	397	340	284
4319	29527	350	294	320	452	344	289
4320	29485	256	363	347	548	361	296
4321	29490	294	386	357	0	335	285
4322	29515	365	274	320	399	332	268
4323	29534	335	393	362	544	363	291
4324	29536	322	310	347	464	369	303
4325	29511	249	343	348	411	347	284
4326	29021	248	389	374	437	360	293
4327	WGL 14 (NC)	325	406	369	535	375	297
4328	29538	334	366	387	361	360	283
4329	28746	261	366	386	390	375	294
4330	Zonal Check (ZC)	405	366	381	420	357	298
4331	29514	340	459	387	418	354	296
4332	29489	360	366	345	413	378	304
4333	29508	362	439	382	470	381	306
4334	29018	348	485	398	460	358	295
4335	29537	386	564	420	376	363	298
4336	29487	322	485	416	465	370	297
4337	JKRH 3333 (HC)	355	363	340	386	352	283
4338	29543	342	413	346	450	371	298
4339	28754	395	406	362	386	365	290
4340	28187	338	413	361	440	394	311
4341	29519	334	380	366	350	339	283
4342	Local Check (LC)	312	396	366	557	392	307
Exp. Mean		301	388	362	413	359	293

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Table No. 3.6: Grain quality characteristics of entries in AVT 2 & AVT 1-MS Kharif, 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
4301	27438	77.4	69.1	67.6	6.37	1.91	3.33	LS	A	4.0	25.60	38
4302	29539	81.2	70.9	67.3	4.92	1.85	2.65	MS	A	4.0	25.78	46
4303	29495	82.2	74.5	73.8	6.20	2.08	2.98	LB	VOC	3.0	24.58	53
4304	27P63 (HC)	81.0	72.2	70.7	5.43	1.97	2.75	MS	VOC	3.5	23.40	22
4305	29526	80.9	72.6	71.3	5.26	2.34	2.24	SB	VOC	7.0	26.13	22
4306	28730	82.3	74.0	73.1	5.45	1.89	2.88	MS	A	4.0	23.34	38
4307	29494	80.9	69.5	65.1	6.19	2.03	3.04	LS	VOC	7.0	26.48	22
4308	28757	80.6	73.5	70.2	5.75	2.08	2.76	MS	A	4.0	25.78	50
4309	29502	81.2	73.8	72.8	5.51	1.96	2.81	MS	A	4.0	24.02	22
4310	29535	82.2	71.2	65.7	5.20	1.75	2.97	MS	A	4.0	25.05	22
4311	29023	82.0	74.9	74.0	5.40	1.97	2.74	MS	A	7.0	24.69	22
4312	BPT 5204 (NC)	79.7	73.2	72.0	5.43	1.84	2.95	MS	A	4.0	24.02	22
4313	29524	80.4	70.9	69.3	4.99	1.72	2.90	MS	A	4.0	26.07	22
4314	29506	81.1	73.7	71.4	5.85	2.08	2.81	MS	A	4.0	25.54	22
4315	29503	80.7	72.7	71.7	5.60	2.11	2.65	MS	A	4.0	26.95	52
4316	29523	80.2	72.7	71.9	5.46	2.09	2.61	MS	A	4.0	24.64	22
4317	29492	78.7	72.1	70.6	5.24	1.92	2.72	MS	A	7.0	23.32	22
4318	29017	81.2	72.2	69.8	5.41	1.98	2.73	MS	VOC	7.0	25.37	44
4319	29527	82.0	74.6	72.9	5.73	1.97	2.90	MS	VOC	3.0	20.41	55
4320	29485	80.7	73.3	72.1	5.14	1.75	2.93	MS	A	4.0	24.90	22
4321	29490	82.2	71.3	68.2	5.18	1.88	2.75	MS	A	4.0	26.40	39
4322	29515	80.0	70.8	67.9	5.30	1.91	2.77	MS	VOC	4.0	22.41	44
4323	29534	80.1	72.0	71.1	5.22	2.12	2.46	SB	A	4.0	26.57	42
4324	29536	78.8	70.2	69.2	5.53	2.06	2.68	MS	A	7.0	27.23	36
4325	29511	78.1	70.3	68.5	4.87	1.87	2.58	MS	A	4.0	23.87	25
4326	29021	81.7	73.6	72.2	5.39	1.99	2.70	MS	A	4.0	24.02	44
4327	WGL-14 (NC)	78.3	67.1	60.8	5.30	1.88	2.81	MS	A	4.0	23.17	30
4328	29538	81.0	68.5	64.9	5.76	2.50	2.30	SB	VOC	4.0	26.07	22
4329	28746	80.5	71.7	69.8	5.15	1.75	2.94	MS	VOC	4.0	23.02	22
4330	ADT 49 (ZC)	76.8	69.1	65.2	5.06	1.86	2.72	MS	VOC	4.0	23.17	22
4331	29514	78.5	65.6	59.5	5.64	1.99	2.83	MS	VOC	4.0	26.63	76
4332	29489	80.9	69.7	66.2	6.08	2.21	2.75	LB	VOC	4.0	27.72	56
4333	29508	79.0	69.2	67.4	6.06	2.16	2.80	LB	A	4.0	27.54	22
4334	29018	81.0	72.4	70.6	5.23	2.03	2.57	MS	VOC	3.5	22.79	46
4335	29537	81.3	69.2	61.8	4.89	1.81	2.70	MS	VOC	4.0	25.25	22
4336	29487	79.9	70.5	69.3	5.42	1.85	2.92	MS	A	4.0	26.84	25
4337	JKRH- 3333 (HC)	82.0	73.4	72.4	5.10	1.99	2.56	MS	A	4.0	25.96	22
4338	29543	82.4	74.6	73.3	6.27	1.89	3.31	LS	VOC	4.0	24.58	24
4339	28754	77.9	67.8	61.4	7.57	1.65	4.58	LS	A	4.0	24.58	55
4340	28187	80.4	71.8	69.7	5.65	1.89	2.98	MS	A	6.0	27.74	22
4341	29519	81.3	75.0	73.8	6.62	2.27	2.91	LB	VOC	4.0	21.70	56
4342	Local Check											

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length(mm); KB: Kernel Breadth(mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB: Long Bold; SB:Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

Table No.3.7: Composition of entries in Initial Variety Trial– Medium Slender Grain (IVT-MS), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT
1st Year of testing (New Nominations)				
4401	30057	CB 16566	CO 51 / JGL 384	MS
4402	30058	BRR 2140	IET 22238 / IET 21519	MS
4403	30059	AD 18560	ADT (R) 46 / AD 09391	MS
4404	30060	BPT 3114	BPT 2270 / NLR 145	SB
4405	30061	RP Bio 4918-B2-NPK 56-2	Swarna / O.nivara	MS
4406	30062	Daftari 1	Daftari 741 / MTU 1001	LB
4407	30063	OR 2762-21	Jyotimayee / 26 P 29	LS
4408	30064	JGL 27356	JGL 11470 / GP 275	SS
4409	30065	RP 6471-87-12-48	NLR 3444*2 / Improved Samba Mahsuri	MS
4410	30066	CSR 27 SM 132	CSR 27 / BPT 5204	MS
4411	30067	KNM 11596	KNM 1638 / Mahsuri	MS
4412	30068	P.3313	ASD 19 / CO 45	MS
4413	30069	CR 3856-44-22-2-1-11-4-5-1	IR 73963-86-1-5-2-2 / CR 2324-1	SB
4414	30070	NP 14-4	PRN 30 / PRN 17	MS
4415	30071	NVSR 3314	GAR 13 / Purna	MS
4416	30072	AGR 297	BPT 5204 mutant	MS
4417	30073	TTB 1040-218-2-2	Ranjit / Tetep	MS
4418	30074	WGL 1562	WGL 32100 / MTU 1936-12-1-2-1 // 80154 B / 80155 B	LB
4419	30075	RNR 31622	HHZ 5-SAL 10 DT2-DT-1 / RNR 15048	SS
4420	WGL 14 (NC)			
4421	30076	NVSR 710	JGL 11470 / 186	SB
4422	30077	CR 3516-11-2-3-1-1-2	Birupa / Pusa 44	SB
4423	30078	MTU 1382	MTU 1075 / MTU 1001	MS
4424	30079	ACK 12024	Mutant of White Ponni-WP 22-2	SB
4425	30080	KJT 1108-14-4-7-6-10-4-5	BPT 5204 / Mahusri	SB
4426	30081	RP 5976-243-15-8-81	Improved Samba Mahsuri / Wazuhophek	MS
4427	30082	UTR 181	MTU 1010 / NLR 34449	SS
4428	30083	BRR 2152	CR 2582-2 / Varshadhan / IR 82809-237	MS
4429	30084	RP 6528-RMS-1693-13-15-29	Improved Samba Mahsuri *2 // Habataki / ST 12	MS
4430	30085	RP 6112-MS-M-99-99-22-11-6-4-7	BPT 5204 Mutant	SS
4431	30086	AD 18034	ADT 37 / JGL 17004	MS
4432	30087	CSR 27 SM 66	CSR 27 / BPT 5204	MS
4433	30088	MSN 113	Meenakshi / CRMS 32 b (47-6)	MS
4434	30089	CR 2906-253-156-13	IR20 / Dandi	SB
4435	30090	RDR 1199	JGL 3844 / NLR 34449	SB
4436	BPT 5204 (NC)			
4437	30091	R-FS-2019-2	Chandrasasini / Dubraj	SS
4438	30092	RP 6112-MS-M-125(B)-3-4-2-33-4-3	BPT 5204 Mutant	SS
4439	30093	CB 17135	CB 06651 / JGL 17197	MS
4440	30094	BPT 2808	BPT 2231 / NLR 145	MS
4441	30095	MTU 1381	MTU 2077 / NLR 3042	SB
4442	30096	JGL 36175	JGL 11727 / Pusa 44	SS
4443	30097	NWGR 16050	NWGR-3119 / Mahisugandh (52-4-1-1-1-1-1)	MS
4444	30098	NVSR 2949	NVSR 2031 / GAR 13	MS
4445	30099	WGL 1522	TNAUCO 50 / JGL 17183	MS

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Entry No.	IET No.	Designation	Cross combination	GT
4446	30100	RP Bio 4918-B2-NPK 77-3	Swarna / O.nivara	MS
4447	30101	CB 16605	CO 51 / JGL 17211	SS
4448	30102	TTB 1048-60-9	IRGC 25239 / Ranjit	SB
4449	30103	CR 4348-185-1-3-1	CRMS 32B / CRMS 244B	SB
4450	Improved Samba Mahsuri-Eastern & Central, Ketekejoha-North Eastern, Karjat 6-Western, ADT 49- Southern---ZC			
4451	30104	CR 3856-44-22-2-1-11-4-5-5	IR 73963-86-1-5-2-2 / CR 2324-1	MS
4452	30105	RDR 1221	JGL 3844 / NLR 3449	MS
4453	30106	MTU 1358	MTU 1061/TKM 6	MS
4454	30107	RP 6528-RMS 1421-43-25-29	Improved Samba Mahsuri *2 // Habataki / ST 12	MS
4455	30108	NDR 9077	BKP 242 / NDR 30030 // Swarna	MS
4456	30109	KNM 11601	KNM 1638 / BPT 5204	MS
4457	30110	NVSR 827	GAR-13 / RP Bio-226	MS
4458	30111	MTU 1361	BPT 5204 / NLR 34449	MS
4459	30112	CR 4147-8-3-1-1	Naveen / CR 1014	SS
4460	30113	TRC PSM 182-B-B-3-1	Pyzum / BPT 5204	MS
4461	30114	RP 6112-SP-M-KS-64-5-4-5-3-8-6	BPT 5204 Mutant	MS
4462	30115	NWGR-16025	GR 12 / NWGR 5031 (29-1-1-1-1-1)	SS
4463	30116	RP6493-MAID-103-10-3-1-1-1	WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-2 /// WGL14 / RP 5925-24 // WGL14 / IR 81896-96-B-B-195	MS
4464	Local Check			

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Table No. 3.8: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN												ZONE IV- NORTH EASTERN		
		BIHAR			JHARKHAND			UTTAR PRADESH			Z3 (3)			TRIPURA		
		BIKRAMGANJ (Dhanganj)			RANCHI			MASODHA			Mean			ARUNDHUTINAGAR		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4401	30057	3244		96	5319		84	5785	10	105	4783		95	4165		81
4402	30058	3200		101	5519		82	1795		112	3505		98	3360		75
4403	30059	3936		109	6316		91	1862		102	4038		100	4320		64
4404	30060	3117		117	3457		93				3287		105	4350		63
4405	30061	4776	10	97	3125		100	1430		117	3110		104	4450		59
4406	30062	4777	9	93	7181	2	91	5851	5 *	102	5936	1 *	95	4800		92
4407	30063	3974		88	5253		84	2992		109	4073		93	4275		85
4408	30064	4089		90	3457		83	5585		102	4377		91	4380		81
4409	30065	5153	3 *	95	4987		89	2793		102	4311		95	4550		72
4410	30066	3439		103	4588		92				4014		97	4965	8	69
4411	30067	4881	7	90	5718		89	2061		102	4220		93	4450		73
4412	30068	3999		128	3258		80	4721		113	3993		107	4450		69
4413	30069	4556		112	3989		102	2693		117	3746		110	4550		81
4414	30070	5134	4 *	101	3258		99	4388		120	4260		106	4700		76
4415	30071	4723		92	6383	8	92	5851	5 *	113	5652	4 *	99	4500		82
4416	30072				5053		97				5053	10	97	4400		79
4417	30073				5918		94	4189		106	5054	9	100	4340		75
4418	30074	4828	8	92	3191		86	3059		116	3693		98	4800		84
4419	30075	4251		91	7580	1 *	89	4654		104	5495	6 *	94	4675		81
4420	WGL 14 (NC)	4072		98	3657		99				3865		98	4750		78
4421	30076	5878	1 *	97	5452		91	2660		99	4663		95	4600		86
4422	30077	4101		102	6449	6	98	4255		108	4935		102	5200	2	83
4423	30078				7114	3	91	2201		91	4658		91	4500		76
4424	30079	2944		92	4588		84	4654		90	4062		88	4700		82
4425	30080	3772		92	3989		90	4521		102	4094		95	4750		81
4426	30081				5319		88	4455		99	4887		93	5100	4	78
4427	30082				4255		91				4255		91	5040	6	77
4428	30083	2911		100	4987		100	3790		103	3896		101	4250		74
4429	30084	4342		104	2194		100	5851	5 *	102	4129		102	4900	10	81
4430	30085	4111		97	4388		101	2660		114	3720		104	4750		75
4431	30086	4142		90	4255		88	5319		106	4572		94	4800		82
4432	30087	4267		98	5253		88	4388		101	4636		95	4440		78
4433	30088	4208		94	6649	4	96	5851	5 *	97	5569	5 *	95	4400		84
4434	30089	3283		111	6383	8	109	4255		110	4640		110	4420		77
4435	30090	4321		97	4588		88	5386		105	4765		97	4450		80
4436	BPT 5204 (NC)	3995		103	4721		88	5253		107	4656		99	4550		78
4437	30091	2733		109	3191		91	1795		121	2573		107	4350		77
4438	30092	3886		111	2926		100				3406		105	4700		75
4439	30093	3956		111	3125		101	3191		97	3424		103	4480		80
4440	30094				4122		88	1795		85	2959		86	4650		78
4441	30095				2859		100	3324		113	3092		106	4200		84
4442	30096	5117	5 *	98	2527		101	3125		110	3590		103	3300		82
4443	30097	4092		92	3989		89	2926		99	3669		93	4400		81
4444	30098	4508		93	4122		90	5785	10	102	4805		95	4300		80
4445	30099	4314		93	4388		99				4351		96	4250		79
4446	30100				4654		94				4654		94	4450		78
4447	30101	3662		89	3856		88	5785	10	97	4434		91	4300		84
4448	30102				5718		91	5851	5 *	100	5785	2 *	95	4350		76
4449	30103	4006		91	6316		99	4588		96	4970		95	4000		82
4450	Zonal Check (ZC)	3783		104	6383	8	107	1895		118	4020		109	4550		78
4451	30104				5053		107	2128		102	3591		104	4950	9	75
4452	30105	4339		89	3258		87	2128		112	3242		96	4550		82
4453	30106							1729		116	1729		116	4600		78
4454	30107	5056	6	98	6582	5	100	4521		117	5386	7 *	105	5050	5	77
4455	30108	4417		97	3059		88	2261		118	3246		101	5010	7	86
4456	30109	4498		92	6316		90	6316	2 *	99	5710	3 *	93	4450		85
4457	30110	4106		93	3657		90	6649	1 *	104	4804		96	5150	3	82
4458	30111							5186		113	5186	8	113	4700		78
4459	30112	3001		89	4588		92	5851	5 *	102	4480		94	4550		80
4460	30113	4067		91	4521		90	5718		104	4769		95	3750		82
4461	30114	5156	2 *	97	4987		99	4987		107	5043		101	5250	1	84
4462	30115	3278		92	5452		88	3630		116	4120		98	4870		88
4463	30116	3511		93	5053		98	4987		93	4517		94	4615		88
4464	Local Check (LC)	3678		103	2660		100	4920		110	3753		104	4335		80
Exp. Mean		4107		97	4696		93	4041		105	4280		99	4534		79
F Value		3.68(p<0.0001)S			10.05(p<0.0001)S			55.24(p<0.0001)S			17.69(p<0.0001)S			1.94(p=0.0047)S		
CD		985			1158			569			545			732		
CV%		11.95			12.33			7.02			6.37			8.08		
D/S		24-07-2021			20-07-2021			18-07-2021						20-08-2021		
D/P		24-08-2021			10-08-2021			21-08-2021						17-09-2021		
Local Check Name		R. Seweta			SWARNA			Sambha Mahsuri-Sub 1						Tripura Chikon Dhan		

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 3.8 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN						ZONE V- CENTRAL								
		Z4 (1)			CHHATTISGARH			MAHARASHTRA I						Z5 (3)		
		Mean			RAIPUR			SAKOLI			SINDEWAHI			Mean		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4401	30057	4165		81	3073		92	4278		80	4098		95	3816		89
4402	30058	3360		75	4303		103	3525		98	3317		103	3715		101
4403	30059	4320		64	3930		98	5469	3	87	4020		99	4473		94
4404	30060	4350		63	3673		111	3008		102	5099	5	108	3927		107
4405	30061	4450		59	3885		101	3643		100				3764		100
4406	30062	4800		92				4674		85	4503		92	4589		88
4407	30063	4275		85				3327		78	4354		98	3841		88
4408	30064	4380		81	3758		94	5264	7	92	4190		93	4404		93
4409	30065	4550		72	4482		95	4311		94	4467		96	4420		95
4410	30066	4965	8	69	4633		99	3720		94	5398	2	101	4584		98
4411	30067	4450		73	3888		94	5502	2	86	3750		102	4380		94
4412	30068	4450		69	4209		102	5042	9	95	3714		103	4322		100
4413	30069	4550		81	4597		100	4102		92	4034		101	4244		97
4414	30070	4700		76	5170		98	4910		94	3473		106	4518		99
4415	30071	4500		82	5448	7	91	4889		87	3750		94	4696	8	90
4416	30072	4400		79	4370		107	4007		104	3580		109	3986		106
4417	30073	4340		75	3555		114	2969		104	4034		108	3519		109
4418	30074	4800		84	5506	4	81	4968	10	78	3139		96	4538		85
4419	30075	4675		81	4600		90	3404		83	4496		100	4167		91
4420	WGL 14 (NC)	4750		78	4758		100	3474		94	4510		101	4247		98
4421	30076	4600		86	5467	6	95	3799		95	5057	6	95	4774	6	95
4422	30077	5200	2	83	4842		94	3530		91	3956		95	4109		93
4423	30078	4500		76	4839		108	4002		103	5007	7	98	4616		103
4424	30079	4700		82	4545		87	5275	6	84	5121	4	94	4980	3 *	88
4425	30080	4750		81	4700		91	3508		87				4104		89
4426	30081	5100	4	78	3561		108	3089		104	4311		96	3654		102
4427	30082	5040	6	77	2715		120	2845		104	4510		110	3357		111
4428	30083	4250		74	3948		101	4601		94	3906		101	4152		99
4429	30084	4900	10	81	4688		89	3615		87	3239		94	3847		90
4430	30085	4750		75	5636	2	97	4166		90	3920		101	4574		96
4431	30086	4800		82	5394	8	90	3608		85	4063		95	4355		90
4432	30087	4440		78	5179		100	2884		101	3864		96	3976		99
4433	30088	4400		84	4306		90	3808		84	4616		97	4243		90
4434	30089	4420		77	4921		96	3942		102	2969		99	3944		99
4435	30090	4450		80	4921		104	4162		86	4780		98	4621		96
4436	BPT 5204 (NC)	4550		78	3312		88	3507		101	2727		109	3182		99
4437	30091	4350		77	3327		89	2999		101	3778		105	3368		98
4438	30092	4700		75	3312		102							3312		102
4439	30093	4480		80	4912		88	5824	1	94	4063		85	4933	4 *	89
4440	30094	4650		78	3082		118	3470		104	3054		112	3202		111
4441	30095	4200		84	4200		110	3603		104	3324		108	3709		107
4442	30096	3300		82	2979		100	4718		90	3544		107	3747		99
4443	30097	4400		81	5164		90	4759		85	5724	1	99	5216	1 *	91
4444	30098	4300		80	3858		85	3310		83	4886	9	101	4018		89
4445	30099	4250		79	4097		84				2827		97	3462		90
4446	30100	4450		78	4476		105	3616		103	2486		111	3526		106
4447	30101	4300		84	5533	3	82	4508		76	4517		87	4853	5 *	81
4448	30102	4350		76	3555		85	4779		104	4141		120	4158		103
4449	30103	4000		82	5330	10	98	4291		100	4347		104	4656	10	100
4450	Zonal Check (ZC)	4550		78	4094		101	3474		96	3374		107	3647		101
4451	30104	4950	9	75	4270		101	3982		99	3089		110	3780		103
4452	30105	4550		82	4448		83	3538		78	4787	10	98	4258		86
4453	30106	4600		78	4321		120	3359		103	4666		119	4115		114
4454	30107	5050	5	77	5270		100	5325	5	96	3196		91	4597		96
4455	30108	5010	7	86	4642		90	5412	4	87	5313	3	104	5122	2 *	93
4456	30109	4450		85	4079		91	5180	8	85	3729		95	4329		90
4457	30110	5150	3	82	5745	1 *	92	3992		84	4332		93	4690	9	90
4458	30111	4700		78	3788		112	3718		104	2685		110	3397		108
4459	30112	4550		80	4403		89	3308		83	4354		103	4022		91
4460	30113	3750		82	4367		90	4162		86	4148		95	4226		90
4461	30114	5250	1	84	4927		99	4286		93	3253		107	4155		100
4462	30115	4870		88	5352	9	88	3134		84	3991		100	4159		90
4463	30116	4615		88	5500	5	95	3832		86	4915	8	93	4749	7	91
4464	Local Check (LC)	4335		80	3682		100	4738		87	4105		103	4175		96
Exp. Mean		4534		79	4412		97	4067		92	4043		101	4160		96
F Value		1.94(p=0.0047)S			5.44(p=0.0017)S			6.76(p=0.0017)S			3.88(p=0.0017)S			6.54(p<0.0001)S		
CD		732			903			824			1035			533		
CV%		8.08			10.24			10.13			12.8			6.41		
D/S					20-07-2021			20-07-2021			20-07-2021					
D/P					08-08-2021			03-08-2021			12-08-2021					
Local Check Name					Karma Mahsuri			PDKV Kisan			PKV Ganesh					

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Table No. 3.8 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN									ZONE VII – SOUTHERN					
		MAHARASHTRA 2			GUJARAT			Z6 (2)			ANDHRA PRADESH					
		KARJAT			NAVASARI			Mean			MARUTERU			BAPATLA		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4401	30057	4677		93	4754		78	4716		78	5090		78	2938		83
4402	30058	3912		99	5911		89	4912		89	3735		100	4611		99
4403	30059	5272		91	4136		85	4704		85	6455		91	4273		96
4404	30060	3912		102	4820		103	4366		103	6165		118	5181	9	106
4405	30061	5102		96	5717		90	5410		90	9950	1	92	4322		100
4406	30062	5952	10	93	5610		88	5781		88	3740		86	4269		99
4407	30063	5187		93	4638		74	4913		74	4070		79	3653		82
4408	30064	4082		95	5552		81	4817		81	3105		86	2882		86
4409	30065	4252		93	5493		79	4873		79	6810		86	4155		100
4410	30066	7143	7 *	97	5998	8	85	6571	4 *	85	7170		100	4389		101
4411	30067	4082		93	4725		81	4404		81	3900		87	3398		99
4412	30068	5612		101	5348		89	5480		89	8325		99	4053		99
4413	30069	4082		102	5968	10	88	5025		88	2960		96	2694		99
4414	30070	3912		97	5840		87	4876		87	5835		94	3618		98
4415	30071	7313	6 *	93	5964		81	6639	2 *	81	4185		86	3970		103
4416	30072	5731		102	5242		97	5487		97	8845	7	110	5306	5	106
4417	30073	4082		105	6263	3	103	5173		103	8605	10	109	4896		106
4418	30074	5697		96	5887		75	5792	10	75	6690		81	2752		99
4419	30075	4422		94	5581		79	5002		79	6860		86	3359		98
4420	WGL 14 (NC)	4252		93	5854		89	5053		89	6745		92	4181		100
4421	30076	7738	4 *	96	6302	2	85	7020	1 *	85	2225		89	2926		99
4422	30077	5051		95	5942		78	5497		78	4710		88	4139		97
4423	30078	6718	9	105	6244	4	95	6481	6 *	95	9260	4	116	5269	7	105
4424	30079	3741		89	6169	5	78	4955		78	3135		84	2494		86
4425	30080	7143	7 *	92	5581		78	6362	7 *	78	4930		87	4676		97
4426	30081	5000		101	5285		93	5143		93	8090		101	4296		98
4427	30082	5442		100	3311		73	4377		73	4735		121	5352	3	106
4428	30083	4422		97	6138	6	89	5280		89	8735	8	95	5104		99
4429	30084	8163	1 *	91	4930		80	6547	5 *	80	4490		86	2970		94
4430	30085	3912		102	4156		89	4034		89	8725	9	93	4345		100
4431	30086	4932		93	4381		81	4657		81	6630		85	3551		93
4432	30087	4762		96	3671		89	4217		89	6980		99	4819		97
4433	30088	5119		94	4362		78	4741		78	6010		87	3497		84
4434	30089	3912		101	5606		89	4759		89	3925		101	3914		96
4435	30090	5272		95	5780		78	5526		78	4830		85	4734		100
4436	BPT 5204 (NC)	4932		100	5689		93	5311		93	9410	3	99	4831		106
4437	30091	3912		98	4899		90	4406		90	5285		95	3012		96
4438	30092	4252		95				4252			6130		97			
4439	30093	4252		105	4643		81	4448		81	5315		96	4046		98
4440	30094	5782		104	3620		94	4701		94	6145		121	5337	4	106
4441	30095	4422		101	5459		97	4941		97	9555	2	118	5141	10	105
4442	30096	4252		96	4676		81	4464		81	3940		89	5106		94
4443	30097	3912		95	5322		81	4617		81	3115		86	3287		96
4444	30098	5102		93	5308		80	5205		80	3995		85	4977		100
4445	30099	5102		96	4974		75	5038		75	7035		91			
4446	30100	5357		96	5986	9	74	5672		74	6725		101	5412	2	102
4447	30101	4065		96	3605		75	3835		75	5940		95	3694		100
4448	30102	4592		104	6008	7	72	5300		72	3875		114	5208	8	105
4449	30103	5068		96	5045		87	5057		87	4685		88	3810		100
4450	Zonal Check (ZC)	3571		91	3762		74	3667		74	8235		97	5294	6	100
4451	30104	4473		100	3431		96	3952		96	8165		99	3507		100
4452	30105	7653	5 *	93	3258		75	5456		75	4650		79	3181		93
4453	30106	3912		104	3532		74	3722		74	8430		118	5419	1	107
4454	30107	8078	3 *	98	4605		88	6342	8 *	88	8900	6	96	3516		98
4455	30108	3912		91	4670		76	4291		76	3350		85	4532		100
4456	30109	4082		91	4680		78	4381		78	3640		86	2609		94
4457	30110	3912		93	5658		81	4785		81	4110		86	4456		100
4458	30111	3912		104	5731		75	4822		75	8920	5	118	4556		105
4459	30112	5136		91	3304		76	4220		76	5895		85	3112		94
4460	30113	4082		91	4729		75	4406		75	3725		84	3613		88
4461	30114	5153		96	6570	1	84	5862	9	84	6990		96	4512		101
4462	30115	4252		91	3678		78	3965		78	4665		87	3576		89
4463	30116	8163	1 *	92	5041		79	6602	3 *	79	7055		85	4734		95
4464	Local Check (LC)	5782		93	4840		89	5311		89	4745		105	4728		108
Exp. Mean		5017			5077			5041			5926			4132		
F Value		9.14(p<0.0001)S			5.51(p<0.0001)S			10.72(p<0.0001)S			15.99(p<0.0001)S			6.88(p<0.0001)S		
CD		1129			1077			666			1417			904		
CV%		11.26			10.61			6.61			11.96			10.95		
D/S		27-07-2021			22-07-2021						17-07-2021			29-07-2021		
D/P		18-08-2021			07-08-2021						11-08-2021					
Local Check Name		Karjat-9			GNR-7						MTU 1224			BPT 2782		

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Table No. 3.8 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN														
		TELANGANA									TAMIL NADU					
		RAJENDRANAGAR			KAMPASAGAR			WARANGAL			ADUTHURAI			COIMBATORE		
GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP		
4401	30057	4134		94	6787		83	3452		83	5972		109	5264		90
4402	30058	4963		115	4893		102	3624		102	7396	9	100	2167		103
4403	30059	5006		104	5311		98	3669		97	6389		103	5137		106
4404	30060	3330		115	5631		103	6226		108	5417		99	6229	9	118
4405	30061	3592		109	5311		97	5382		96	5243		100	5281		103
4406	30062	4028		100	7352	8	95	4220		95	5660		91	4641		99
4407	30063	5080		96	7541	6	85	4697		88	4861		103	5135		88
4408	30064	4062		96	8852	1	88	3631		90	8681	1	105	5511		83
4409	30065	4182		98	5828		96	6573		92	4236		114	5174		94
4410	30066	5112		107	5656		96	5934		98	5903		105	5099		110
4411	30067	4459		106	8066	4	95	7170		93	8264	2	106	5103		102
4412	30068	5066		115	8213	3	105	6228		102	6146		89	5088		103
4413	30069	5051		111	6221		97	3494		100	5590		101	5488		105
4414	30070	4402		110	5115		96	6303		96	5938		105	6437	8	98
4415	30071	4405		102	6615		95	6621		93	5590		106	5372		93
4416	30072	4818		125	7525	7	111	7375		113	7847	5	105	5911		105
4417	30073	4302		125	4549		110	6587		113	5486		106	7213	1	116
4418	30074	5003		96	8066	4	89	8813	1	90	3576		112	5080		86
4419	30075	4827		102	5484		92	5282		92	4826		106	5439		99
4420	WGL 14 (NC)	4844		103	6025		97	6164		97	6007		106	5256		103
4421	30076	6581	1	109	5852		95	7876	6	95	6285		107	5478		98
4422	30077	4755		101	6566		95	6125		95	6076		104	4017		95
4423	30078	3463		111	6861		104	5061		105	8160	3	111	6062		109
4424	30079	3292		96	6221		89	5551		90	4583		109	4792		86
4425	30080	5130		96	6443		91	7649	8	91	4861		108	5168		90
4426	30081	3258		120	5287		107	4965		105	6597		106	5625		105
4427	30082	2555		126	5582		120	3740		120	7118		101	6736	5	118
4428	30083	5433	9	109	8262	2	101	7450	10	99	6944		102	5298		99
4429	30084	5055		96	6418		92	6592		92	3681		104	4944		94
4430	30085	4661		109	6762		100	5533		100	4722		106	4652		103
4431	30086	5579	6	98	6934	10	91	6715		92	3819		112	5040		90
4432	30087	4984		107	5877		104	4817		101	5556		110	6143		106
4433	30088	6228	2	100	5115		92	6085		92	6319		99	6063		99
4434	30089	5623	5	110	4943		107	5800		106	4618		95	6167		105
4435	30090	4033		100	6393		95	5709		90	5069		106	4417		94
4436	BPT 5204 (NC)	3465		115	5877		105	5034		103	5694		106	4880		109
4437	30091	4018		103	4377		102	3221		103	5486		105	5201		94
4438	30092							3770		111	6944		106	5083		96
4439	30093	4636		110	5459		102	6145		101	7743	6	104	5159		103
4440	30094	4305		110	4377		113	4621		117	5139		105	6721	6	117
4441	30095	4924		125	6615		108	8770	2	112	7674	8	104	5648		106
4442	30096	4377		100	5680		96	5749		94	5035		105	5604		98
4443	30097				5189		95	6515		91	4306		95	4401		91
4444	30098	4777		93	6959	9	90	7555	9	90	4167		101	5099		86
4445	30099	5864	3	99	5508		100				7743	6	101	5278		91
4446	30100	3310		125	5705		104	6367		106	6111		103	5266		108
4447	30101	3870		93	5877		84	5805		85	3889		107	5081		89
4448	30102	4425		125	5877		113	8118	3	114	6771		95	6852	3	115
4449	30103	5813	4	106	5828		96	7748	7	96	5174		106	5326		102
4450	Zonal Check (ZC)	3436		113	4721		95	5154		99	3715		106	5567		102
4451	30104	4806		109	4574		104	4504		103	4653		103	5281		110
4452	30105	4765		96	5484		91	7175		90	4757		102	5216		90
4453	30106	3358		127	5189		117	8016	5	117	7917	4	112	6905	2	119
4454	30107	5036		104	5311		94	6517		94	5382		105	5346		98
4455	30108	4847		98	5484		91	5599		91	5174		106	1492		94
4456	30109	5162		99	5139		88	7414		92	5174		104	5506		99
4457	30110	5549	7	100	5680		92	7285		92	4514		108	5188		94
4458	30111	3685		95	4402		95				7326	10	106	6205	10	104
4459	30112	4341		98	5680		103	5108		101	5556		104	5554		94
4460	30113	5106		96	5459		97	4587		101	3958		106	3254		94
4461	30114	4968		104	4377		94	6744		95	4653		106	5594		97
4462	30115	4338		104	4549		95	4398		91	5035		106	5617		103
4463	30116	5443	8	103	5951		96	8021	4	92	5451		104	6844	4	97
4464	Local Check (LC)	5411	10	111	4943		97	6604		102	6042		105	6605	7	105
Exp. Mean		4602		106	5918		98	5930		98	5697		104	5350		100
F Value		3.96(p<0.0001)S			5.52(p<0.0001)S			6.43(p<0.0001)S			10.82(p<0.0001)S			7.93(p<0.0001)S		
CD		1132			1287			1581			1076			949		
CV%		12.3			10.88			13.33			9.45			8.87		
D/S		14-07-2021			27-07-2021			21-07-2021			25-08-2021			03-09-2021		
D/P		13-08-2021			25-08-2021			18-08-2021			28-09-2021			08-10-2021		
Local Check Name		RNR 11718			RNR-15048			WGL 32100			CO 52			CO 52		

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Table No. 3.8 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN															Overall Mean(20)			
		KARNATAKA						PUDUCHERRY			Z7 (11)									
		MANDYA			MUGAD			GANGAVATHI			KURUMBAPET			Mean						
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	
4401	30057	3233		87	5004		75	5000		95	5208		93	4735		88	4574		89	
4402	30058	4167		96	3001		75	4423		105	6746		109	4521		100	4228		98	
4403	30059	5344		90	3184		84	4372		102	7292		107	5130		98	4785		95	
4404	30060	5378		106	4318		93	5006		98	5357		96	5294		105	4720		103	
4405	30061	3867		104	3739		75	3519		100	7093		105	5209		98	4707		97	
4406	30062	5889		93	6308	2	76	5769	7	99	6994		106	5352		94	5380	9	93	
4407	30063	4022		92	3230		77	4962		94	6200		97	4859		89	4603		89	
4408	30064	5511		90	3855		76	5077		93	4563		96	5066		90	4804		90	
4409	30065	6756		95	3978		81	4288		99	6151		97	5285		95	4931		93	
4410	30066	6756		100	3796		84	4141		109	7242		111	5563		102	5320		98	
4411	30067	4889		99	4818		83	4686		106	6746		93	5591		97	5028		94	
4412	30068	6000		97	5460		74	5878	4	106	6498		99	6087	7	99	5365		98	
4413	30069	5122		103	5351		74	4827		108	8036		102	4985		99	4670		99	
4414	30070	4489		94	4861		73	3955		106	7143		105	5281		98	4944		97	
4415	30071	4844		95	3876		78	3090		96	5704		97	4934		95	5155		93	
4416	30072	6567		105	4414		75	5622	8	116	8681	7	113	6628	3 *	107	5850	2 *	104	
4417	30073	6167		115	5948	5	83	4083		111	8532		110	6033	8	109	5354		106	
4418	30074	7500	4	87	5070		85	3423		92	6746		95	5702		92	5190		91	
4419	30075	4978		94	3710		93	3103		107	6151		107	4911		98	4884		94	
4420	WGL 14 (NC)	4656		98	5869	7	78	3936		106	6250		104	5448		98	5014		96	
4421	30076	7756	3	98	4594		87	3731		103	8631	9	106	5630		98	5444	8 *	96	
4422	30077	5800		93	4234		82	4840		98	8681	7	99	5449		95	5163		94	
4423	30078	6978	8	106	4844		87	7282	1	101	8730	5	109	6543	4 *	106	5926	1 *	101	
4424	30079	4278		88	5549		84	3417		100	6696		99	4546		92	4587		89	
4425	30080	7444	5	93	4039		90	4167		96	5754		96	5478		94	5170		92	
4426	30081	5267		105	3380		85	4994		110	6944		110	5337		105	4991		101	
4427	30082	5244		119	4342		89	3936		115	12153	1 *	118	5590		114	4978		107	
4428	30083	5756		96	5116		86	5538	9	107	7986		104	6511	5 *	99	5529	6 *	98	
4429	30084	6656		93	4518		83	3673		101	8730	5	107	5248		94	4982		93	
4430	30085	6333		97	3543		78	4276		108	7639		108	5563		100	4945		98	
4431	30086	4433		88	5251		77	3628		96	7639		102	5384		93	5006		91	
4432	30087	7267	6	101	4737		79	3660		114	7192		111	5639		102	5037		99	
4433	30088	5689		95	5284		75	3801		103	8185		105	5661		93	5280		92	
4434	30089	6733		98	4665		87	5859	5	111	8482		108	5521		102	5021		101	
4435	30090	5611		92	4587		77	6657	2	95	6994		98	5367		94	5135		93	
4436	BPT 5204 (NC)	5567		103	4165		81	5228		101	7143		110	5572		103	4999		100	
4437	30091	4822		99	4306		81	3513		111	6250		106	4499		99	4024		99	
4438	30092	5167		104	3132		90							5038		100	4482		98	
4439	30093	6222		100	5185		85	6186	3	111	10169	2 *	107	6024	9	101	5236		98	
4440	30094	5689		102	3058		90	5317		115	8284		113	5363		110	4661		105	
4441	30095	6778		96	6977	1	83	5526	10	114	9871	3 *	111	7044	1 *	107	5730	3 *	105	
4442	30096	5033		90	4745		82	5038		110	6994		104	5209		96	4577		96	
4443	30097	3367		103	4721		74	3878		101	5407		96	4419		92	4446		91	
4444	30098	5578		101	3887		72	4038		96	7440		103	5316		92	4983		91	
4445	30099	4678		102	4700		76							5829		94	5054		91	
4446	30100	4911		113	4688		83	4019		111	6845		113	5396		106	5021		101	
4447	30101	4867		92	4745		74	3673		101	7341		95	4980		92	4731		89	
4448	30102	6700		113	3028		80	3353		111	8135		113	5667		109	5333		102	
4449	30103	5711		116	5871	6	90	3269		108	7639		96	5534		100	5193		98	
4450	Zonal Check (ZC)	4544		105	5661	9	74	3526		108	6349		105	5109		100	4554		99	
4451	30104	6689		109	4923		76	4673		111	7093		108	5352		103	4750		101	
4452	30105	4833		91	3653		88	3372		98	6548		107	4876		93	4580		91	
4453	30106	7833	2	116	5610	10	79	5846	6	116	9127	4 *	118	6695	2 *	113	5543	5 *	109	
4454	30107	6156		103	4159		78	4109		107	7589		108	5638		99	5485	7 *	97	
4455	30108	6578		98	4259		80	3224		98	6696		98	4658		94	4497		94	
4456	30109	6178		103	3627		81	4167		99	5506		96	4920		94	4873		92	
4457	30110	6789	10	97	5384		71	3263		100	6944		97	5378		94	5118		92	
4458	30111	7211	7	104	5323		77	4994		114	6845		96	5947	10	101	5246		100	
4459	30112	6111		95	5218		87	4923		98	6200		103	5245		96	4810		93	
4460	30113	6167		97	6034	4	78	3628		101	5804		99	4667		94	4544		92	
4461	30114	6978	8	104	5702	8	78	4801		103	7639		113	5723		99	5376	10	98	
4462	30115	6622		94	4545		83	3141		106	7639		104	4920		96	4588		94	
4463	30116	5611		97	6123	3	87	4891		99	8581	10	108	6246	6 *	96	5716	4 *	94	
4464	Local Check (LC)	8578	1	98	4305		96	5109		107	6101		99	5743		103	5096		100	
Exp. Mean		5771		99	4628		81	4441		104	7257		104	5423		99	4999		96	
F Value		10.72(p<0.0001)S			3.46(p<0.0001)S			8.21(p<0.0001)S			3.79(p<0.0001)S			12.8(p<0.0001)S			12.7(p<0.0001)S			
CD		959			1357			931			1907			429			302			
CV%		8.32			14.68			10.49			13.14			3.96			3.03			
D/S		21-07-2021			26-08-2021			24-07-2021			27-09-2021									
D/P		13-08-2021			02-09-2021			27-08-2021			29-10-2021									
Local Check Name		Thanu			LC(SIRI-1253)			Gangavathi Sona			TKM 13									

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Table No. 3.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - MS (State Means), Kharif 2021

Entry No	IET No	BIHAR (1)			JHARKHAND (1)			UTTAR PRADESH (1)			TRIPURA (1)			CHHATTISGARH (1)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD	GY	R	DFD
4401	30057	3244		96	5319		84	5785	10	105	4165		81	3073		92
4402	30058	3200		101	5519		82	1795		112	3360		75	4303		103
4403	30059	3936		109	6316		91	1862		102	4320		64	3930		98
4404	30060	3117		117	3457		93				4350		63	3673		111
4405	30061	4776	10	97	3125		100	1430		117	4450		59	3885		101
4406	30062	4777	9	93	7181	2	91	5851	5 *	102	4800		92			
4407	30063	3974		88	5253		84	2992		109	4275		85			
4408	30064	4089		90	3457		83	5585		102	4380		81	3758		94
4409	30065	5153	3 *	95	4987		89	2793		102	4550		72	4482		95
4410	30066	3439		103	4588		92				4965	8	69	4633		99
4411	30067	4881	7	90	5718		89	2061		102	4450		73	3888		94
4412	30068	3999		128	3258		80	4721		113	4450		69	4209		102
4413	30069	4556		112	3989		102	2693		117	4550		81	4597		100
4414	30070	5134	4 *	101	3258		99	4388		120	4700		76	5170		98
4415	30071	4723		92	6383	8	92	5851	5 *	113	4500		82	5448	7	91
4416	30072				5053		97				4400		79	4370		107
4417	30073				5918		94	4189		106	4340		75	3555		114
4418	30074	4828	8	92	3191		86	3059		116	4800		84	5506	4	81
4419	30075	4251		91	7580	1 *	89	4654		104	4675		81	4600		90
4420	WGL 14 (NC)	4072		98	3657		99				4750		78	4758		100
4421	30076	5878	1 *	97	5452		91	2660		99	4600		86	5467	6	95
4422	30077	4101		102	6449	6	98	4255		108	5200	2	83	4842		94
4423	30078				7114	3	91	2201		91	4500		76	4839		108
4424	30079	2944		92	4588		84	4654		90	4700		82	4545		87
4425	30080	3772		92	3989		90	4521		102	4750		81	4700		91
4426	30081				5319		88	4455		99	5100	4	78	3561		108
4427	30082				4255		91				5040	6	77	2715		120
4428	30083	2911		100	4987		100	3790		103	4250		74	3948		101
4429	30084	4342		104	2194		100	5851	5 *	102	4900	10	81	4688		89
4430	30085	4111		97	4388		101	2660		114	4750		75	5636	2	97
4431	30086	4142		90	4255		88	5319		106	4800		82	5394	8	90
4432	30087	4267		98	5253		88	4388		101	4440		78	5179		100
4433	30088	4208		94	6649	4	96	5851	5 *	97	4400		84	4306		90
4434	30089	3283		111	6383	8	109	4255		110	4420		77	4921		96
4435	30090	4321		97	4588		88	5386		105	4450		80	4921		104
4436	BPT 5204 (NC)	3995		103	4721		88	5253		107	4550		78	3312		88
4437	30091	2733		109	3191		91	1795		121	4350		77	3327		89
4438	30092	3886		111	2926		100				4700		75	3312		102
4439	30093	3956		111	3125		101	3191		97	4480		80	4912		88
4440	30094				4122		88	1795		85	4650		78	3082		118
4441	30095				2859		100	3324		113	4200		84	4200		110
4442	30096	5117	5 *	98	2527		101	3125		110	3300		82	2979		100
4443	30097	4092		92	3989		89	2926		99	4400		81	5164		90
4444	30098	4508		93	4122		90	5785	10	102	4300		80	3858		85
4445	30099	4314		93	4388		99				4250		79	4097		84
4446	30100				4654		94				4450		78	4476		105
4447	30101	3662		89	3856		88	5785	10	97	4300		84	5533	3	82
4448	30102				5718		91	5851	5 *	100	4350		76	3555		85
4449	30103	4006		91	6316		99	4588		96	4000		82	5330	10	98
4450	Zonal Check (ZC)	3783		104	6383	8	107	1895		118	4550		78	4094		101
4451	30104				5053		107	2128		102	4950	9	75	4270		101
4452	30105	4339		89	3258		87	2128		112	4550		82	4448		83
4453	30106							1729		116	4600		78	4321		120
4454	30107	5056	6	98	6582	5	100	4521		117	5050	5	77	5270		100
4455	30108	4417		97	3059		88	2261		118	5010	7	86	4642		90
4456	30109	4498		92	6316		90	6316	2 *	99	4450		85	4079		91
4457	30110	4106		93	3657		90	6649	1 *	104	5150	3	82	5745	1 *	92
4458	30111							5186		113	4700		78	3788		112
4459	30112	3001		89	4588		92	5851	5 *	102	4550		80	4403		89
4460	30113	4067		91	4521		90	5718		104	3750		82	4367		90
4461	30114	5156	2 *	97	4987		99	4987		107	5250	1	84	4927		99
4462	30115	3278		92	5452		88	3630		116	4870		88	5352	9	88
4463	30116	3511		93	5053		98	4987		93	4615		88	5500	5	95
4464	Local Check (LC)	3678		103	2660		100	4920		110	4335		80	3682		100
Exp. Mean		4107		97	4696		93	4041		105	4534		79	4412		97
F Value		3.68(p<0.0001)S			10.05(p<0.0001)S			55.24(p<0.0001)S			1.94(p=0.0047)S			5.44(p=0.0017)S		
CD		985			1158			569			732			903		
CV%		11.95			12.33			7.02			8.08			10.24		

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Table No. 3.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - MS (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA 1 (2)			MAHARASHTRA 2(1)			MAHARASHTRA (3)			GUJARAT (1)			ANDHRA PRADESH (2)																	
		Mean			Mean			Mean			Mean			Mean																	
		GY	R	DDF	GY	R	DDF	GY	R	DDF	GY	R	DDF	GY	R	DDF															
4401	30057	4188		87	4677		93	4351		89	4754		78	4014		81															
4402	30058	3421		100	3912		99	3585		100	5911		89	4173		99															
4403	30059	4745	5	93	5272		91	4920		92	4136		85	5364		94															
4404	30060	4054		105	3912		102	4006		104	4820		103	5673		112															
4405	30061	3643		100	5102		96	4373		98	5717		90	7136	3	96															
4406	30062	4589	8	88	5952	10	93	5043	9	90	5610		88	4005		92															
4407	30063	3841		88	5187		93	4289		89	4638		74	3862		80															
4408	30064	4727	6	92	4082		95	4512		93	5552		81	2994		86															
4409	30065	4389		95	4252		93	4343		94	5493		79	5483		93															
4410	30066	4559	9	98	7143	7 *	97	5420	4	97	5998	8	85	5780		100															
4411	30067	4626	7	94	4082		93	4445		93	4725		81	3649		93															
4412	30068	4378		99	5612		101	4789		99	5348		89	6189		99															
4413	30069	4068		96	4082		102	4073		98	5968	10	88	2827		97															
4414	30070	4192		100	3912		97	4098		99	5840		87	4727		96															
4415	30071	4320		90	7313	6 *	93	5317	7	91	5964		81	4078		94															
4416	30072	3794		106	5731		102	4439		105	5242		97	7076	5	108															
4417	30073	3502		106	4082		105	3695		106	6263	3	103	6751	10	108															
4418	30074	4054		87	5697		96	4601		90	5887		75	4721		90															
4419	30075	3950		91	4422		94	4107		92	5581		79	5110		92															
4420	WGL 14 (NC)	3992		97	4252		93	4079		96	5854		89	5463		96															
4421	30076	4428		95	7738	4 *	96	5531	3*	95	6302	2	85	2576		94															
4422	30077	3743		93	5051		95	4179		93	5942		78	4425		92															
4423	30078	4505		100	6718	9	105	5242	8	102	6244	4	95	7265	2	111															
4424	30079	5198	3 *	89	3741		89	4712		89	6169	5	78	2815		85															
4425	30080	3508		87	7143	7 *	92	5326	6	89	5581		78	4803		92															
4426	30081	3700		100	5000		101	4133		100	5285		93	6193		99															
4427	30082	3678		107	5442		100	4266		105	3311		73	5044		114															
4428	30083	4254		98	4422		97	4310		97	6138	6	89	6920	8	97															
4429	30084	3427		90	8163	1 *	91	5006	10	90	4930		80	3730		90															
4430	30085	4043		95	3912		102	3999		97	4156		89	6535		96															
4431	30086	3836		90	4932		93	4201		91	4381		81	5091		89															
4432	30087	3374		98	4762		96	3837		97	3671		89	5900		98															
4433	30088	4212		90	5119		94	4514		91	4362		78	4754		85															
4434	30089	3456		100	3912		101	3608		100	5606		89	3920		98															
4435	30090	4471		92	5272		95	4738		93	5780		78	4782		92															
4436	BPT 5204 (NC)	3117		105	4932		100	3722		103	5689		93	7121	4	102															
4437	30091	3389		103	3912		98	3563		101	4899		90	4149		96															
4438	30092				4252		95	4252		95				6130		97															
4439	30093	4944	4	89	4252		105	4713		94	4643		81	4681		97															
4440	30094	3262		108	5782		104	4102		106	3620		94	5741		113															
4441	30095	3464		106	4422		101	3783		104	5459		97	7348	1	111															
4442	30096	4131		98	4252		96	4171		97	4676		81	4523		92															
4443	30097	5242	2 *	92	3912		95	4798		93	5322		81	3201		91															
4444	30098	4098		92	5102		93	4433		92	5308		80	4486		92															
4445	30099	2827		97	5102		96	3965		96	4974		75	7035	6	91															
4446	30100	3051		107	5357		96	3820		103	5986	9	74	6069		102															
4447	30101	4513	10	81	4065		96	4363		86	3605		75	4817		97															
4448	30102	4460		112	4592		104	4504		109	6008	7	72	4542		109															
4449	30103	4319		102	5068		96	4569		100	5045		87	4248		94															
4450	Zonal Check (ZC)	3424		101	3571		91	3473		98	3762		74	6765	9	99															
4451	30104	3536		104	4473		100	3848		103	3431		96	5836		100															
4452	30105	4163		88	7653	5 *	93	5326	5	90	3258		75	3916		86															
4453	30106	4013		111	3912		104	3979		108	3532		74	6925	7	113															
4454	30107	4261		93	8078	3 *	98	5533	2*	95	4605		88	6208		97															
4455	30108	5363	1 *	95	3912		91	4879		94	4670		76	3941		93															
4456	30109	4455		90	4082		91	4330		90	4680		78	3125		90															
4457	30110	4162		89	3912		93	4079		90	5658		81	4283		93															
4458	30111	3202		107	3912		104	3438		106	5731		75	6738		112															
4459	30112	3831		93	5136		91	4266		92	3304		76	4504		89															
4460	30113	4155		90	4082		91	4131		90	4729		75	3669		86															
4461	30114	3770		100	5153		96	4231		98	6570	1	84	5751		98															
4462	30115	3563		92	4252		91	3792		91	3678		78	4121		88															
4463	30116	4374		90	8163	1 *	92	5637	1*	90	5041		79	5895		90															
4464	Local Check (LC)	4422		95	5782		93	4875		94	4840		89	4737		106															
Exp. Mean		4037			96			5017			96			4385			96			5077			83			5067			96		
F Value		6.37(p<0.0001)S			9.14(p<0.0001)S			7.62(p<0.0001)S			5.51(p<0.0001)S			16.01(p<0.0001)S																	
CD		605			1129			554			1077			897																	
CV%		7.49			11.26			6.32			10.61			8.86																	

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Table No. 3.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - MS (State Means), Kharif 2021

Entry No	IET No	TELANGANA (3)			TAMIL NADU (2)			KARNATAKA (3)			PUDUCHERRY (1)		
		Mean			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4401	30057	4791		87	5618		99	4412		86	5208		93
4402	30058	4493		106	4782		101	3864		92	6746		109
4403	30059	4662		99	5763		104	4300		92	7292		107
4404	30060	5062		109	5823		108	4901		99	5357		96
4405	30061	4762		100	5262		101	3708		93	7093		105
4406	30062	5200		97	5151		95	5989	5	89	6994		106
4407	30063	5773		90	4998		96	4071		87	6200		97
4408	30064	5515		91	7096	3 *	94	4814		86	4563		96
4409	30065	5528		95	4705		104	5007		92	6151		97
4410	30066	5567		100	5501		107	4898		97	7242		111
4411	30067	6565	6 *	98	6684	8	104	4798		96	6746		93
4412	30068	6502	7 *	107	5617		96	5779	9	92	6498		99
4413	30069	4922		103	5539		103	5100		95	8036		102
4414	30070	5273		100	6188		101	4435		91	7143		105
4415	30071	5880		97	5481		99	3937		89	5704		97
4416	30072	6573	5 *	116	6879	5	105	5534		99	8681	7	113
4417	30073	5146		116	6350		111	5399		103	8532		110
4418	30074	7294	1 *	92	4328		99	5331		88	6746		95
4419	30075	5198		95	5133		102	3930		98	6151		107
4420	WGL 14 (NC)	5678		99	5632		104	4820		94	6250		104
4421	30076	6770	3 *	99	5882		102	5360		96	8631	9	106
4422	30077	5815		97	5047		99	4958		91	8681	7	99
4423	30078	5128		107	7111	2 *	110	6368	3	98	8730	5	109
4424	30079	5021		92	4688		97	4415		91	6696		99
4425	30080	6407		92	5015		99	5217		93	5754		96
4426	30081	4503		111	6111		106	4547		100	6944		110
4427	30082	3959		122	6927	4	110	4507		108	12153	1 *	118
4428	30083	7048	2	103	6121		100	5470		96	7986		104
4429	30084	6022		93	4313		99	4949		92	8730	5	107
4430	30085	5652		103	4687		104	4717		94	7639		108
4431	30086	6409		93	4430		101	4437		87	7639		102
4432	30087	5226		104	5850		108	5221		98	7192		111
4433	30088	5809		94	6191		99	4925		91	8185		105
4434	30089	5455		107	5393		100	5752	10	98	8482		108
4435	30090	5378		95	4743		100	5618		88	6994		98
4436	BPT 5204 (NC)	4792		108	5287		107	4987		95	7143		110
4437	30091	3872		103	5344		99	4214		97	6250		106
4438	30092	3770		111	6014		101	4150		97			
4439	30093	5413		104	6451		103	5864	6	98	10169	2 *	107
4440	30094	4434		113	5930		111	4688		102	8284		113
4441	30095	6770	3 *	115	6661	9	105	6427	2	98	9871	3 *	111
4442	30096	5269		96	5320		101	4939		94	6994		104
4443	30097	5852		93	4354		93	3989		92	5407		96
4444	30098	6430	10	91	4633		93	4501		89	7440		103
4445	30099	5686		99	6511	10	96	4689		89			
4446	30100	5127		112	5689		105	4539		102	6845		113
4447	30101	5184		87	4485		98	4428		89	7341		95
4448	30102	6140		117	6812	6	105	4360		101	8135		113
4449	30103	6463	9	99	5250		104	4950		104	7639		96
4450	Zonal Check (ZC)	4437		102	4641		104	4577		96	6349		105
4451	30104	4628		105	4967		106	5428		99	7093		108
4452	30105	5808		92	4987		96	3953		92	6548		107
4453	30106	5521		120	7411	1 *	115	6430	1	104	9127	4 *	118
4454	30107	5621		97	5364		101	4808		96	7589		108
4455	30108	5310		93	3333		100	4687		92	6696		98
4456	30109	5905		93	5340		101	4657		94	5506		96
4457	30110	6171		94	4851		101	5145		89	6944		97
4458	30111	4044		95	6766	7	105	5843	7	98	6845		96
4459	30112	5043		100	5555		99	5417		93	6200		103
4460	30113	5051		98	3606		100	5276		92	5804		99
4461	30114	5363		97	5124		101	5827	8	95	7639		113
4462	30115	4428		97	5326		104	4769		94	7639		104
4463	30116	6472	8	97	6148		100	5542		94	8581	10	108
4464	Local Check (LC)	5653		103	6324		105	5997	4	100	6101		99
Exp. Mean		5463		101	5524		102	4946		95	7257		104
F Value		7.39(p<0.0001)S			11.37(p<0.0001)S			9.38(p<0.0001)S			3.79(p<0.0001)S		
CD		815			716			601			1907		
CV%		7.46			6.49			6.08			13.14		

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Table No. 3.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - MS (Data Not Considered), Kharif 2021

Entry No	IET No	ODISHA						ASSAM			TRIPURA		
		@JEYPORE			@CHIPLIMA			@TITABAR			@LEMBUCHERRA		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4401	30057	2158		108	1993		115	5425	9	92	2240		58
4402	30058	1036		99	3684		114	3465		110	4928		76
4403	30059	2252		105	1737		113	4305		102	3624		78
4404	30060	1496		97	1395			4340		116	4873		88
4405	30061	3051	4	103	1618			5425	9	99	2843		77
4406	30062	2218		105	2388		114	3780		98	4616		76
4407	30063	2115		103	4092		102	4025		88	2765		59
4408	30064	1199		100	4849	8	101	3255		97	2877		62
4409	30065	2637		102	3118		108	5320		96	2910		67
4410	30066	2885	9	103	1454			5075		102	4471		71
4411	30067	1368		99	789		115	5285		100	5441		74
4412	30068	1989		107	5007	7	114	4445		113	8061	1	74
4413	30069	1803		104	1941			4830		111	4661		68
4414	30070	2030		100	5303	3	115	4270		101	3925		75
4415	30071	1246		103	2776		106	5530	7	97	3668		67
4416	30072	1603		103	1783		101				6612	5	85
4417	30073	1699		100	1776			3080		114	6344	9	87
4418	30074	1143		103	4553		100	5635	4	92	2932		61
4419	30075	2788		103	2461			4445		89	3601		63
4420	WGL 14 (NC)	1568		105	4013		112	3850		102	4939		70
4421	30076	1966		103	3382			5880	1	100	6779	3	78
4422	30077	1806		104	3145		105	4585		101	3646		69
4423	30078	1348		99	3586		115				6467	7	81
4424	30079	1667		102	5704	1	101	4515		104	1951		57
4425	30080	2346		105	3875		104	5250		92	6121	10	78
4426	30081	1333		101	2697			3430		120	5352		82
4427	30082	2365		106	1493						1539		95
4428	30083	1432		108	625		115	3080		112	5497		74
4429	30084	2457		104	3033		115	5215		91	5486		77
4430	30085	1378		106	2908			3780		109	4404		71
4431	30086	1235		104	4711		114	5250		92	4248		63
4432	30087	3162	2	95	612			3885		107	4014		71
4433	30088	2081		102	743			4585		95	4014		64
4434	30089	2979	7	103	5592	2	112	4865		98	1762		76
4435	30090	2017		102	3947		107	5075		97	2732		72
4436	BPT 5204 (NC)	2143		102	1796			1960		113	6790	2	75
4437	30091	1553		99	3704		114	3745		103	3746		69
4438	30092	3068	3	103	4842	9	107				1349		71
4439	30093	2620		103	855		114	4620		108	4906		76
4440	30094	3019	5	101	559			4830		118	5809		84
4441	30095	1650		103	4158		115				6389	8	85
4442	30096	2551		100	4211		113	4970		106	5765		71
4443	30097	1250		105	3408		102	5040		96	3055		59
4444	30098	2709		104	3224		100	5005		92	1438		59
4445	30099	2803		100	5046	6	102	2905		107	1483		70
4446	30100	2376		102	3158		115	5075		111	6556	6	83
4447	30101	2844	10	103	3092		104	5040		87	2654		62
4448	30102	2350		105	1684			5180		102	5876		84
4449	30103	2135		106	2421			4200		115	5564		76
4450	Zonal Check (ZC)	1158		103	888			4200		99	3211		70
4451	30104	1761		105	2921		113	4480		110	3557		73
4452	30105	1368		99	2237		112	5600	6	91	3252		65
4453	30106	2989	6	100	1204						5006		94
4454	30107	1410		102	4842	9	113	4375		102	4505		78
4455	30108	1306		102	2632		112				3189		69
4456	30109	2526		100	3586		108	5530	7	98	4895		64
4457	30110	2301		103	3191		107	5005		97	3847		60
4458	30111	3297	1	103	3349		115	3010		100	6746	4	84
4459	30112	1043		106	4303		101	5845	2	92	2330		59
4460	30113	1333		106	5171	4	114	5075		97	3390		68
4461	30114	1410		104	4434			5775	3	101	4806		71
4462	30115	2808		105	1796		114	3185		89	2921		59
4463	30116	2808		102	928			5635	4	96	3791		73
4464	Local Check (LC)	2953	8	101	5053	5	101	4550		101	5940		75
Exp. Mean		2053		102	2992		109	4562		101	4267		72
F Value		5.00(p<0.0001)S			24.34(p<0.0001)S			36.96(p<0.0001)S			2.11(p<0.0017)S		
CD		819			824			404			3082		
CV%		19.96			13.78			4.42			36.14		
D/S		26-07-2021			16-08-2021			28-07-2021			01-08-2021		
D/P		25-08-2021			18-09-2021			20-08-2021			21-08-2021		
Local Check Name		Manaswini			Pratikshya			Numoli			Tripura Chikan dhan		

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Table No. 3.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - MS (Data Not Considered), Kharif 2021

Entry No	IET No	GUJARAT						KERALA			KARNATAKA		
		@NAWAGAM			@VYARA			@PATTAMBI			@SIRSI		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4401	30057	3535		84	3413		74	4186		106	3833	9	95
4402	30058	4531	8	106	3523		93	4333		95	2833		103
4403	30059	4350		97	3589		90	4138		99	2533		95
4404	30060	3495		111	4021		106	4605		99	2867		112
4405	30061	3787		98	3136		93	4200		104	2633		109
4406	30062	4438	9	88	4091		91	4729		96	3083		95
4407	30063	2273		85	3509		75	3652		117	2600		88
4408	30064	3630		84	3224		90	4429		114	2300		95
4409	30065	3715		90	4461	8	89	4167		100	2867		100
4410	30066	4035		104	3169		92	4195		115	2933		103
4411	30067	4265		97	2809		91	4110		100	2800		103
4412	30068	4927	5	110	5207	1	95	4633		107	3267		102
4413	30069	5839	1	97	3997		89	4324		99	3533		103
4414	30070	5295	3	98	4313		92	4838	9	116	4100	3	109
4415	30071	4548	7	96	4823	4	88	4310		98	3133		100
4416	30072	3764		112	4184		101	4248		98	3367		112
4417	30073	2573		114	4005		90	4910	7	105	3083		119
4418	30074	3522		88	3344		81	4019		101	3267		89
4419	30075	2101		90	2916		90	4786	10	117	2700		98
4420	WGL 14 (NC)	3576		96	3243		92	4143		97	3367		102
4421	30076	5384	2	94	4732	6	83	5354	1	97	5500	1	102
4422	30077	5015	4	99	5060	2	103	4190		102	3867	7	95
4423	30078	3524		112	3180		101	4271		99	3867	7	109
4424	30079	3018		93	2741		74	4310		100	3933	4	95
4425	30080	3864		92	4236		90	5133	2	99	3883	6	95
4426	30081	4274		109	2312		87	4143		101	2600		109
4427	30082	2877		113	2035		90	4084		101	3100		127
4428	30083	4896	6	109	4359	10	90	4171		99	3367		102
4429	30084	3643		95	3580		88	4924	6	101	2767		95
4430	30085	4130		106	3823		90	4229		105	2733		102
4431	30086	3286		109	3247		80	4205		100	2633		95
4432	30087	3542		105	4211		95	4419		96	2300		102
4433	30088	3061		112	4757	5	89	4947	5	96	3133		100
4434	30089	3341		101	4529	7	88	4405		99	2033		102
4435	30090	3265		110	3064		84	4960	4	103	2867		95
4436	BPT 5204 (NC)	2606		95	3116		82	4686		112	2500		95
4437	30091	2610		95	3789		107	4354		103	2267		109
4438	30092	4012		101				4870	8	102	2300		105
4439	30093	3124		97	4324		98	5065	3	105	2567		114
4440	30094	3173		112	1920		108	4416		97	3933	4	112
4441	30095	3831		111	4160		93	4111		104	3400		102
4442	30096	3408		101	3455		94	4088		122	3667	10	98
4443	30097	3182		87	3519		74	4192		97	1367		89
4444	30098	3858		93	3117		88	4218		104	2600		98
4445	30099	2999		94				4393		99	2900		109
4446	30100	3268		111	3881		89	4589		105	2133		95
4447	30101	2821		90	2181		82	4510		103	3200		119
4448	30102	2833		109	2764		81	4349		102	3667	10	109
4449	30103	2348		99	4836	3	93	4227		99	2867		105
4450	Zonal Check (ZC)	3101		86	4172		93	4457		103	3233		109
4451	30104	3952		105	2819		79	4406		100	3383		89
4452	30105	2960		91	3688		86	4145		103	3467		127
4453	30106	3587		112	2435		89	4063		103	2733		109
4454	30107	3647		107	3351		90	4454		102	3083		102
4455	30108	3137		93	3839		92	3945		104	2667		98
4456	30109	3133		97	2552		84	4407		100	2817		100
4457	30110	2853		95	4207		91	4007		103	3167		109
4458	30111	3643		113	2824		92	4475		103	3167		95
4459	30112	3742		98	4400	9	88	4660		100	3567		102
4460	30113	2242		99	3984		78	4078		102	3467		105
4461	30114	4114		97	4080		79	4170		102	4200	2	100
4462	30115	2526		96	4081		96	4034		103	3200		100
4463	30116	3047		98	3683		91	4117		103	3400		112
4464	Local Check (LC)	4394	10	103	2715		89	4552		100	1167		98
Exp. Mean		3585		100	3625		89	4387		102	3059		103
F Value		4.10(p<0.0001)S			7.51(p<0.0001)S			0.95(p=0.5800)NS			45.43(p<0.0001)S		
CD		1102			788			949			379		
CV%		15.37			10.88			10.82			6.2		
D/S		23-07-2021			28-07-2021			16-07-2021			15-07-2021		
D/P		26-08-2021			13-08-2021			10-08-2021			07-08-2021		
Local Check Name		GAR 13			GAR-13			RED MASHURI			SIRI 1253		

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Table No. 3.9: Plant Height (cm) & Panicles/m² of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							
		BIHAR		JHARKHAND		UTTAR PRADESH		Z3 (3)	
		BIKRAMGANJ (Dhangain)		RANCHI		MASODHA		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	82	282	89	158	88	265	86	235
4402	30058	82	364	85	235	124	221	97	273
4403	30059	76	280	89	244	100	149	88	224
4404	30060	110	259	73	159			92	209
4405	30061	92	290	69	268	110	171	90	243
4406	30062	111	338	78	268	90	218	93	275
4407	30063	83	362	95	318	121	169	100	283
4408	30064	102	311	93	151	94	223	96	228
4409	30065	72	321	79	265	100	171	84	252
4410	30066	85	304	89	142			87	223
4411	30067	89	319	75	260	90	180	84	253
4412	30068	82	336	80	193	98	216	87	248
4413	30069	100	282	98	128	111	226	103	212
4414	30070	94	350	72	201	97	221	88	257
4415	30071	87	287	59	178	105	260	84	241
4416	30072	62		80	239			71	239
4417	30073	83		76	310	110	216	89	263
4418	30074	102	228	80	159	108	195	97	194
4419	30075	106	281	64	165	111	221	94	222
4420	WGL 14 (NC)	106	282	79	143			93	212
4421	30076	112	311	97	178	100	203	103	230
4422	30077	120	273	76	253	136	253	111	259
4423	30078	92		89	195	89	206	90	200
4424	30079	80	280	90	124	100	204	90	203
4425	30080	82	319	51	246	118	239	84	268
4426	30081	81		80	214	99	243	87	228
4427	30082	72		76	198			74	198
4428	30083	74	307	73	203	86	188	77	233
4429	30084	104	359	88	177	110	206	101	247
4430	30085	90	238	82	167	92	171	88	192
4431	30086	100	271	70	191	107	239	92	233
4432	30087	102	237	92	226	87	215	94	226
4433	30088	119	342	79	199	133	250	110	263
4434	30089	113	260	86	200	106	216	102	225
4435	30090	103	246	81	175	100	255	95	225
4436	BPT 5204 (NC)	76	356	80	182	115	237	90	258
4437	30091	82	345	78	198	87	169	82	237
4438	30092	93	317	98	153			95	235
4439	30093	100	278	77	192	100	216	92	228
4440	30094	70		76	208	82	159	76	183
4441	30095	81		75	177	87	206	81	191
4442	30096	98	392	95	206	100	190	98	262
4443	30097	95	273	73	184	112	182	93	213
4444	30098	111	230	83	174	106	245	100	216
4445	30099	110	258	69	174			89	216
4446	30100	68		91	173			79	173
4447	30101	117	255	81	196	110	254	103	235
4448	30102	92		80	203	88	267	87	235
4449	30103	86	327	90	145	102	216	93	229
4450	Zonal Check (ZC)	80	390	87	86	93	160	87	212
4451	30104	71		78	95	102	184	84	140
4452	30105	92	289	83	244	98	209	91	247
4453	30106	71				80	170	75	170
4454	30107	93	325	67	132	98	198	86	218
4455	30108	102	271	71	170	90	185	88	209
4456	30109	100	270	88	209	96	254	95	244
4457	30110	91	230	81	173	112	271	95	224
4458	30111	81				93	229	87	229
4459	30112	100	259	85	218	109	260	98	245
4460	30113	91	355	78	143	94	215	88	237
4461	30114	101	270	86	179	110	220	99	223
4462	30115	103	335	93	268	90	218	95	273
4463	30116	92	378	79	244	89	216	87	279
4464	Local Check (LC)	82	271	68	179	78	250	76	233
Exp. Mean		92	300	81	194	101	214	90	230

PH: Plant Height(cm) NP: No. of Panicles/sqm

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL								ZONE VI – WESTERN	
		CHHATTISGARH		MAHARASHTRA 1				Z5 (3)		MAHARASHTRA 2	
		RAIPUR		SAKOLI		SINDEWAHI		Mean		KARJAT	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	108	119	95	293	100	227	101	213	106	195
4402	30058	126	175	124	166	108	229	119	190	134	217
4403	30059	102	175	105	354	110	220	106	249	126	194
4404	30060	108	191	94	200	108	218	103	203	127	190
4405	30061	101	210	92	247			96	228	100	213
4406	30062			104	297	103	239	104	268	120	210
4407	30063			83	205	104	132	94	169	95	193
4408	30064	100	163	102	398	116	269	106	277	105	201
4409	30065	99	153	96	251	101	247	99	217	106	198
4410	30066	102	171	85	255	89	254	92	226	102	198
4411	30067	109	198	105	330	92	206	102	244	108	201
4412	30068	117	205	108	227	103	214	109	215	116	200
4413	30069	120	208	115	198	94	189	110	198	120	191
4414	30070	99	176	95	409	100	224	98	270	98	191
4415	30071	107	202	97	383	111	250	105	278	114	203
4416	30072	100	203	75	259	102	178	92	213	105	187
4417	30073	101	173	73	130	90	193	88	165	110	199
4418	30074	224	190	108	241	97	243	143	224	120	195
4419	30075	101	172	95	214	95	161	97	182	98	201
4420	WGL 14 (NC)	205	208	93	198	95	202	131	203	124	187
4421	30076	107	192	83	186	87	188	92	189	119	205
4422	30077	104	209	114	177	101	201	106	196	113	204
4423	30078	100	201	98	277	107	241	102	240	114	201
4424	30079	88	192	83	220	79	220	83	211	102	200
4425	30080	84	204	94	142			89	173	100	190
4426	30081	101	125	93	153	125	223	106	167	105	200
4427	30082	91	156	65	196	98	210	85	187	108	198
4428	30083	208	147	92	207	112	245	137	200	106	184
4429	30084	108	188	85	218	91	251	95	219	107	203
4430	30085	117	190	104	280	99	231	107	234	102	196
4431	30086	119	177	97	197	111	215	109	196	109	195
4432	30087	103	182	84	144	100	224	96	183	101	188
4433	30088	122	183	104	183	100	218	109	195	93	215
4434	30089	128	175	96	180	102	215	109	190	116	191
4435	30090	112	181	83	277	109	246	101	235	120	207
4436	BPT 5204 (NC)	93	125	73	183	96	304	87	204	100	194
4437	30091	94	154	92	236	82	233	89	208	100	198
4438	30092	106	162					106	162	105	187
4439	30093	122	175	108	289	86	179	105	214	103	196
4440	30094	91	193	65	181	93	182	83	185	107	205
4441	30095	109	193	74	219	93	170	92	194	114	210
4442	30096	97	159	85	303	111	189	98	217	101	199
4443	30097	100	208	94	257	104	176	99	214	104	193
4444	30098	98	165	71	182	99	211	89	186	112	198
4445	30099	116	158			108	224	112	191	108	187
4446	30100	89	227	56	162	105	189	83	193	105	195
4447	30101	110	182	104	275	111	249	108	235	114	182
4448	30102	100	144	61	223	106	226	89	198	114	175
4449	30103	93	215	83	200	78	212	85	209	108	175
4450	Zonal Check (ZC)	87	214	54	180	89	216	77	203	91	194
4451	30104	118	175	97	170	102	269	106	204	130	194
4452	30105	105	149	103	214	101	197	103	187	120	197
4453	30106	102	201	82	149	106	222	97	191	120	197
4454	30107	99	189	93	343	76	193	89	241	99	184
4455	30108	98	194	94	234	96	235	96	221	105	203
4456	30109	94	245	86	229	98	205	93	226	98	203
4457	30110	113	188	85	174	104	196	101	186	101	178
4458	30111	102	206	83	143	76	286	87	212	106	208
4459	30112	110	205	86	374	93	198	96	259	104	200
4460	30113	102	200	83	295	110	224	98	240	105	198
4461	30114	102	181	86	248	100	290	96	239	109	201
4462	30115	109	193	94	153	102	218	102	188	101	174
4463	30116	109	169	83	185	82	218	91	190	101	179
4464	Local Check (LC)	101	237	84	185	99	202	95	208	116	189
Exp. Mean		109	184	90	230	99	218	100	210	109	196

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN				ZONE VII – SOUTHERN					
		GUJARAT		Z6 (2)		ANDHRA PRADESH				TELANGANA	
		NAVASARI		Mean		MARUTERU		BAPATLA		RAJENDRANAGAR	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	119	195	112	195	118	314	69	203	85	440
4402	30058	133	200	134	208	145	320	147	181	97	450
4403	30059	121	207	124	200	145	337	139	265	102	497
4404	30060	112	196	120	193	133	317	127	256	101	450
4405	30061	97	203	99	208	120	323	107	283	84	473
4406	30062	132	240	126	225	138	307	109	276	93	447
4407	30063	99	230	97	211	113	323	84	207	92	420
4408	30064	110	215	108	208	123	307	90	246	90	407
4409	30065	93	247	99	222	112	290	92	245	80	367
4410	30066	110	266	106	232	117	297	82	165	89	483
4411	30067	122	244	115	222	115	307	95	225	91	433
4412	30068	125	191	121	195	136	294	126	245	99	367
4413	30069	131	202	126	196	146	327	141	224	101	427
4414	30070	96	221	97	206	116	320	100	169	95	460
4415	30071	104	212	109	207	115	297	83	257	92	480
4416	30072	101	193	103	190	126	320	111	262	91	517
4417	30073	113	220	111	209	150	307	143	315	98	440
4418	30074	118	1181	119	688	124	314	89	163	99	363
4419	30075	107	219	102	210	134	323	73	208	92	370
4420	WGL 14 (NC)	137	260	130	224	128	310	119	180	99	437
4421	30076	131	219	125	212	134	320	122	171	102	463
4422	30077	144	231	128	217	134	333	145	223	103	433
4423	30078	114	217	114	209	125	323	120	232	99	523
4424	30079	111	215	106	207	112	297	85	197	85	463
4425	30080	106	250	103	220	113	327	76	215	85	580
4426	30081	110	200	108	200	116	300	115	275	101	390
4427	30082	101	204	104	201	127	294	119	305	92	403
4428	30083	112	164	109	174	147	314	112	270	95	487
4429	30084	103	184	105	193	79	330	75	183	96	383
4430	30085	102	163	102	179	137	340	80	234	99	427
4431	30086	110	178	109	186	130	317	87	258	105	610
4432	30087	91	212	96	200	127	314	111	266	87	523
4433	30088	122	217	107	216	130	307	113	164	100	483
4434	30089	132	196	124	193	155	327	143	259	108	433
4435	30090	106	199	113	203	127	307	80	172	94	427
4436	BPT 5204 (NC)	94	205	97	199	117	323	100	265	87	550
4437	30091	120	252	110	225	128	356	103	190	92	443
4438	30092			105	187	127	304				
4439	30093	143	184	123	190	158	327	137	236	102	420
4440	30094	105	234	106	220	128	310	115	260	90	363
4441	30095	123	248	119	229	144	314	141	246	91	440
4442	30096	107	218	104	208	132	327	119	179	81	450
4443	30097	121	228	113	210	108	281	92	184		
4444	30098	119	223	116	210	105	327	84	191	92	450
4445	30099	126	230	117	208	140	304			101	360
4446	30100	105	234	105	214	118	323	111	201	91	493
4447	30101	125	222	120	202	106	287	85	232	101	463
4448	30102	107	223	111	199	154	323	135	287	98	473
4449	30103	106	206	107	190	119	327	99	223	91	460
4450	Zonal Check (ZC)	93	258	92	226	133	337	113	228	90	597
4451	30104	154	210	142	202	130	323	142	172	102	450
4452	30105	131	212	126	204	137	307	89	175	95	457
4453	30106	104	215	112	206	146	353	124	291	100	423
4454	30107	105	193	102	188	119	314	101	273	98	407
4455	30108	113	222	109	212	118	343	84	202	89	473
4456	30109	109	234	103	218	121	320	109	201	84	510
4457	30110	133	181	117	179	111	320	84	203	96	403
4458	30111	111	215	108	211	147	310	123	205	93	413
4459	30112	118	214	111	207	121	314	87	190	84	483
4460	30113	111	221	108	209	115	320	84	236	85	480
4461	30114	111	231	110	216	118	323	93	175	97	423
4462	30115	111	221	106	197	126	337	89	249	100	413
4463	30116	114	221	108	200	129	300	112	199	94	457
4464	Local Check (LC)	122	204	119	196	120	323	103	260	85	443
Exp. Mean		114	231	111	213	127	317	106	225	94	451

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									
		TELANGANA				TAMIL NADU				KARNATAKA	
		KAMPASAGAR		WARANGAL		ADUTHURAI		COIMBATORE		MANDYA	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	99	433	105	384	85	288	78	344	98	357
4402	30058	146	222	154	414	88	323	124	280	125	263
4403	30059	134	361	113	383	93	246	105	300	112	283
4404	30060	125	362	140	388	124	260	120	355	106	297
4405	30061	100	244	89	383	93	218	77	343	85	340
4406	30062	118	322	120	381	105	205	96	325	110	270
4407	30063	105	361	95	381	95	193	84	330	84	230
4408	30064	98	427	103	371	102	396	81	333	98	263
4409	30065	97	461	106	389	90	197	77	330	84	273
4410	30066	105	366	109	394	86	218	76	373	94	320
4411	30067	119	400	106	399	97	338	89	315	87	293
4412	30068	123	416	124	370	104	316	99	283	102	283
4413	30069	131	366	128	386	94	203	108	310	118	283
4414	30070	106	416	98	388	86	329	83	288	81	280
4415	30071	113	466	104	391	96	250	85	323	99	273
4416	30072	108	394	98	388	103	414	105	340	103	293
4417	30073	119	411	119	376	112	346	105	330	111	287
4418	30074	107	327	113	380	105	185	81	275	97	247
4419	30075	99	316	108	398	83	243	87	323	84	293
4420	WGL 14 (NC)	113	377	108	396	94	307	84	343	100	287
4421	30076	119	294	112	413	92	364	93	275	101	317
4422	30077	129	333	120	406	100	307	111	288	110	270
4423	30078	116	427	111	400	96	314	89	283	96	280
4424	30079	98	444	98	403	104	273	75	338	80	337
4425	30080	99	450	95	381	85	207	90	355	91	337
4426	30081	119	461	102	403	105	427	95	348	98	347
4427	30082	113	394	611	384	112	401	90	363	101	290
4428	30083	124	438	116	391	95	434	84	344	98	310
4429	30084	114	400	105	388	116	342	91	303	100	307
4430	30085	123	279	121	411	95	331	92	288	103	307
4431	30086	115	355	107	393	93	213	82	293	95	247
4432	30087	98	372	97	394	95	332	85	310	87	260
4433	30088	130	433	124	386	105	239	111	278	109	287
4434	30089	134	450	127	386	99	189	119	375	109	317
4435	30090	99	272	118	399	91	268	82	278	92	260
4436	BPT 5204 (NC)	91	511	96	401	96	329	66	443	81	293
4437	30091	111	511	106	408	93	346	84	343	88	307
4438	30092			115	340	86	296	98	335	122	297
4439	30093	151	309	128	384	91	328	111	273	113	267
4440	30094	103	372	111	409	105	298	87	330	94	300
4441	30095	117	405	118	398	82	413	101	318	82	267
4442	30096	114	472	98	396	96	332	89	363	89	240
4443	30097	112	294	101	403	115	310	87	278	82	233
4444	30098	108	411	103	393	95	215	80	288	101	273
4445	30099	125	516			102	327	98	293	95	227
4446	30100	113	377	89	403	101	342	77	375	74	333
4447	30101	123	377	109	391	94	292	89	298	85	267
4448	30102	122	311	124	401	102	400	106	365	104	260
4449	30103	107	272	99	403	97	307	76	275	78	273
4450	Zonal Check (ZC)	105	350	104	406	95	170	99	313	85	300
4451	30104	130	455	134	417	104	222	109	285	101	253
4452	30105	117	377	107	398	96	191	90	385	84	273
4453	30106	118	377	118	398	114	391	89	320	95	267
4454	30107	110	372	108	409	92	262	86	298	84	230
4455	30108	98	416	108	416	88	230	81	338	91	220
4456	30109	98	361	95	386	105	313	85	413	84	260
4457	30110	112	361	109	398	103	223	99	320	95	290
4458	30111	113	433			113	406	93	295	108	317
4459	30112	107	383	108	404	87	320	91	338	96	267
4460	30113	99	389	99	393	93	205	84	285	78	287
4461	30114	105	266	108	393	119	224	86	295	85	240
4462	30115	111	350	98	394	100	228	92	300	92	303
4463	30116	114	488	106	396	102	283	92	373	92	323
4464	Local Check (LC)	104	494	103	398	112	339	105	365	122	320
Exp. Mean		113	385	118	394	98	291	92	323	96	284

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT - MS, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN								Overall Mean(20)	
		KARNATAKA				PUDUCHERRY		Z7 (11)			
		MUGAD		GANGAVATHI		KURUMBAPET		Mean		PH	NP
		PH	NP	PH	NP	PH	NP	PH	NP		
4401	30057	72	328	83	312	82	535	88	358	92	298
4402	30058	99	317	138	354	115	370	125	318	120	279
4403	30059	106	385	106	375	115	670	115	373	109	310
4404	30060	105	381	113	384	60	460	114	355	109	295
4405	30061	79	370	80	360	75	380	90	338	91	294
4406	30062	81	315	112	384	97	610	107	349	105	307
4407	30063	62	264	87	362	78	338	89	310	91	282
4408	30064	67	317	90	400	63	385	91	350	96	299
4409	30065	58	281	90	341	75	480	87	332	90	289
4410	30066	67	298	99	360	75	445	91	338	92	294
4411	30067	75	271	100	397	94	515	97	354	97	304
4412	30068	80	297	116	358	101	410	110	331	107	284
4413	30069	97	281	121	340	100	485	117	330	113	277
4414	30070	69	339	86	328	75	565	90	353	91	307
4415	30071	79	272	83	325	70	445	93	343	94	299
4416	30072	84	326	82	330	90	355	100	358	95	301
4417	30073	79	345	111	345	120	360	115	351	105	291
4418	30074	71	282	92	305	90	375	97	292	106	308
4419	30075	71	302	90	354	80	405	91	321	93	274
4420	WGL 14 (NC)	76	316	94	379	85	390	100	338	107	286
4421	30076	76	334	101	365	85	390	103	337	104	284
4422	30077	79	294	110	329	87	295	111	319	112	277
4423	30078	78	302	114	350	95	330	104	342	102	295
4424	30079	69	321	69	326	73	570	86	361	88	299
4425	30080	75	339	82	360	75	765	88	392	89	327
4426	30081	80	298	107	391	100	575	104	383	101	308
4427	30082	68	347	100	378	100	370	149	357	122	298
4428	30083	68	322	100	362	87	373	102	368	104	298
4429	30084	76	269	90	318	75	405	92	330	95	283
4430	30085	85	289	104	345	90	405	103	332	100	278
4431	30086	83	424	94	353	80	520	97	362	99	295
4432	30087	77	363	89	398	85	443	94	361	94	293
4433	30088	82	310	104	359	90	435	109	334	108	281
4434	30089	88	326	141	379	105	385	121	348	115	282
4435	30090	64	228	94	400	85	560	93	324	96	279
4436	BPT 5204 (NC)	57	343	76	384	75	460	86	391	87	316
4437	30091	81	345	94	370	85	590	97	382	94	311
4438	30092	86	160					105	288	103	252
4439	30093	101	303	122	327	125	765	121	358	114	294
4440	30094	79	300	94	335	93	405	100	335	93	276
4441	30095	78	341	105	339	105	300	106	344	100	283
4442	30096	76	315	92	437	83	375	97	353	97	303
4443	30097	76	277	94	337	85	410	95	301	96	262
4444	30098	69	301	66	358	88	565	90	343	94	286
4445	30099	82	235					106	323	105	269
4446	30100	64	1696	84	327	83	565	91	494	89	387
4447	30101	78	295	83	373	80	575	94	350	99	300
4448	30102	85	293	108	335	115	300	114	341	104	287
4449	30103	69	321	80	351	80	475	91	335	92	281
4450	Zonal Check (ZC)	81	352	92	360	90	340	99	341	92	284
4451	30104	89	303	113	345	120	375	116	327	111	269
4452	30105	78	334	88	372	70	450	96	338	99	283
4453	30106	74	325	100	400	85	445	106	363	101	299
4454	30107	64	276	85	366	105	430	96	330	93	280
4455	30108	61	308	84	339	73	650	88	358	91	293
4456	30109	59	262	88	403	73	605	91	367	92	309
4457	30110	78	306	84	375	80	650	95	350	98	285
4458	30111	70	336	98	369	82	450	104	353	99	297
4459	30112	70	298	101	325	93	600	95	356	97	301
4460	30113	75	335	94	325	77	420	89	334	92	290
4461	30114	68	299	86	339	88	545	96	320	97	280
4462	30115	81	326	92	351	95	460	98	337	98	291
4463	30116	64	349	93	373	83	525	98	370	96	313
4464	Local Check (LC)	68	352	90	369	67	470	98	376	95	308
Exp. Mean		76	333	96	358	88	468	100	347	99	293

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – MS (State Means), Kharif 2021

Entry No	IET No	BIHAR (1)		JHARKHAND (1)		UTTAR PRADESH (1)		TRIPURA (1)		CHHATTISGARH (1)		MAHARASHTRA 1 (2)		MAHARASHTRA 2(1)	
		Mean		Mean		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	82	282	89	158	88	265	85	285	108	119	98	260	106	195
4402	30058	82	364	85	235	124	221	99	280	126	175	116	197	134	217
4403	30059	76	280	89	244	100	149	90	274	102	175	108	287	126	194
4404	30060	110	259	73	159			90	277	108	191	101	209	127	190
4405	30061	92	290	69	268	110	171	75	275	101	210	92	247	100	213
4406	30062	111	338	78	268	90	218	83	178			104	268	120	210
4407	30063	83	362	95	318	121	169	78	333			94	169	95	193
4408	30064	102	311	93	151	94	223	86	203	100	163	109	333	105	201
4409	30065	72	321	79	265	100	171	90	280	99	153	99	249	106	198
4410	30066	85	304	89	142			85	272	102	171	87	254	102	198
4411	30067	89	319	75	260	90	180	85	262	109	198	99	268	108	201
4412	30068	82	336	80	193	98	216	101	269	117	205	106	220	116	200
4413	30069	100	282	98	128	111	226	92	280	120	208	105	194	120	191
4414	30070	94	350	72	201	97	221	80	277	99	176	98	316	98	191
4415	30071	87	287	59	178	105	260	85	225	107	202	104	316	114	203
4416	30072	62		80	239			85	229	100	203	89	218	105	187
4417	30073	83		76	310	110	216	90	233	101	173	82	162	110	199
4418	30074	102	228	80	159	108	195	98	313	224	190	103	242	120	195
4419	30075	106	281	64	165	111	221	85	314	101	172	95	188	98	201
4420	WGL 14 (NC)	106	282	79	143			95	237	205	208	94	200	124	187
4421	30076	112	311	97	178	100	203	103	301	107	192	85	187	119	205
4422	30077	120	273	76	253	136	253	100	239	104	209	108	189	113	204
4423	30078	92		89	195	89	206	91	300	100	201	103	259	114	201
4424	30079	80	280	90	124	100	204	80	364	88	192	81	220	102	200
4425	30080	82	319	51	246	118	239	82	301	84	204	94	142	100	190
4426	30081	81		80	214	99	243	85	283	101	125	109	188	105	200
4427	30082	72		76	198			80	275	91	156	82	203	108	198
4428	30083	74	307	73	203	86	188	90	276	208	147	102	226	106	184
4429	30084	104	359	88	177	110	206	90	250	108	188	88	235	107	203
4430	30085	90	238	82	167	92	171	85	270	117	190	102	256	102	196
4431	30086	100	271	70	191	107	239	85	261	119	177	104	206	109	195
4432	30087	102	237	92	226	87	215	85	267	103	182	92	184	101	188
4433	30088	119	342	79	199	133	250	90	144	122	183	102	201	93	215
4434	30089	113	260	86	200	106	216	90	180	128	175	99	197	116	191
4435	30090	103	246	81	175	100	255	92	220	112	181	96	262	120	207
4436	BPT 5204 (NC)	76	356	80	182	115	237	80	234	93	125	85	243	100	194
4437	30091	82	345	78	198	87	169	79	239	94	154	87	234	100	198
4438	30092	93	317	98	153			97	225	106	162			105	187
4439	30093	100	278	77	192	100	216	112	226	122	175	97	234	103	196
4440	30094	70		76	208	82	159	81	207	91	193	79	181	107	205
4441	30095	81		75	177	87	206	75	170	109	193	84	194	114	210
4442	30096	98	392	95	206	100	190	80	313	97	159	98	246	101	199
4443	30097	95	273	73	184	112	182	75	271	100	208	99	217	104	193
4444	30098	111	230	83	174	106	245	81	313	98	165	85	197	112	198
4445	30099	110	258	69	174			88	279	116	158	108	224	108	187
4446	30100	68		91	173			79	355	89	227	81	176	105	195
4447	30101	117	255	81	196	110	254	82	347	110	182	108	262	114	182
4448	30102	92		80	203	88	267	80	238	100	144	84	224	114	175
4449	30103	86	327	90	145	102	216	88	231	93	215	81	206	108	175
4450	Zonal Check (ZC)	80	390	87	86	93	160	85	233	87	214	72	198	91	194
4451	30104	71		78	95	102	184	105	225	118	175	100	219	130	194
4452	30105	92	289	83	244	98	209	90	227	105	149	102	206	120	197
4453	30106	71				80	170	95	238	102	201	94	185	120	197
4454	30107	93	325	67	132	98	198	80	219	99	189	85	268	99	184
4455	30108	102	271	71	170	90	185	74	205	98	194	95	235	105	203
4456	30109	100	270	88	209	96	254	76	297	94	245	92	217	98	203
4457	30110	91	230	81	173	112	271	87	260	113	188	95	185	101	178
4458	30111	81				93	229	83	237	102	206	80	215	106	208
4459	30112	100	259	85	218	109	260	87	173	110	205	90	286	104	200
4460	30113	91	355	78	143	94	215	85	282	102	200	97	260	105	198
4461	30114	101	270	86	179	110	220	87	265	102	181	93	269	109	201
4462	30115	103	335	93	268	90	218	81	323	109	193	98	185	101	174
4463	30116	92	378	79	244	89	216	80	386	109	169	83	201	101	179
4464	Local Check (LC)	82	271	68	179	78	250	79	307	101	237	92	193	116	189
Exp. Mean		92	300	81	194	101	214	87	262	109	184	95	224	109	196

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – MS (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA (3)		GUJARAT (1)		ANDHRA PRADESH (2)		TELANGANA (3)		TAMIL NADU (2)		KARNATAKA (3)		PUDUCHERRY (1)	
		Mean		Mean		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	100	238	119	195	93	258	96	419	81	316	84	332	82	535
4402	30058	122	204	133	200	146	250	133	362	106	301	120	311	115	370
4403	30059	114	256	121	207	142	301	116	413	99	273	108	348	115	670
4404	30060	110	203	112	196	130	286	122	400	122	308	108	354	60	460
4405	30061	96	230	97	203	113	303	91	367	85	280	81	356	75	380
4406	30062	109	248	132	240	123	291	110	383	100	265	101	323	97	610
4407	30063	94	177	99	230	98	265	97	387	89	262	78	285	78	338
4408	30064	108	289	110	215	107	276	97	402	91	364	85	326	63	385
4409	30065	101	232	93	247	102	267	94	406	83	263	77	298	75	480
4410	30066	92	235	110	266	99	231	101	415	81	295	87	326	75	445
4411	30067	102	245	122	244	105	266	105	411	93	327	87	320	94	515
4412	30068	109	213	125	191	131	269	116	384	101	299	99	313	101	410
4413	30069	110	193	131	202	144	275	120	393	101	257	112	301	100	485
4414	30070	98	275	96	221	108	245	100	421	84	308	79	315	75	565
4415	30071	107	278	104	212	99	277	103	446	90	286	87	290	70	445
4416	30072	94	208	101	193	118	291	99	433	104	377	89	316	90	355
4417	30073	91	174	113	220	146	311	112	409	108	338	100	325	120	360
4418	30074	108	226	118	1181	106	238	106	357	93	230	86	278	90	375
4419	30075	96	192	107	219	104	265	100	361	85	283	81	316	80	405
4420	WGL 14 (NC)	104	196	137	260	124	245	107	403	89	325	90	327	85	390
4421	30076	96	193	131	219	128	246	111	390	93	319	93	339	85	390
4422	30077	109	194	144	231	139	278	117	391	105	297	100	297	87	295
4423	30078	106	240	114	217	123	277	109	450	92	298	96	311	95	330
4424	30079	88	213	111	215	98	247	94	437	90	305	73	328	73	570
4425	30080	97	166	106	250	95	271	93	470	87	281	83	345	75	765
4426	30081	108	192	110	200	116	288	107	418	100	387	95	345	100	575
4427	30082	90	201	101	204	123	299	272	394	101	382	90	338	100	370
4428	30083	103	212	112	164	130	292	112	439	90	389	89	331	87	373
4429	30084	94	224	103	184	77	256	105	390	103	322	89	298	75	405
4430	30085	102	236	102	163	109	287	114	372	94	309	97	313	90	405
4431	30086	106	202	110	178	108	287	109	453	87	253	91	341	80	520
4432	30087	95	185	91	212	119	290	94	430	90	321	84	340	85	443
4433	30088	99	205	122	217	122	235	118	434	108	258	98	318	90	435
4434	30089	105	195	132	196	149	293	123	423	109	282	113	340	105	385
4435	30090	104	243	106	199	103	239	103	366	86	273	83	296	85	560
4436	BPT 5204 (NC)	90	227	94	205	108	294	91	487	81	386	71	340	75	460
4437	30091	91	222	120	252	116	273	103	454	89	344	87	340	85	590
4438	30092	105	187			127	304	115	340	92	316	104	228		
4439	30093	99	221	143	184	147	281	127	371	101	300	112	299	125	765
4440	30094	88	189	105	234	121	285	101	381	96	314	89	311	93	405
4441	30095	94	200	123	248	143	280	108	414	91	365	88	316	105	300
4442	30096	99	230	107	218	126	253	98	439	92	347	86	330	83	375
4443	30097	101	209	121	228	100	232	106	348	101	294	84	282	85	410
4444	30098	94	197	119	223	95	259	101	418	87	251	79	311	88	565
4445	30099	108	205	126	230	140	304	113	438	100	310	88	231		
4446	30100	89	182	105	234	114	262	98	424	89	359	74	785	83	565
4447	30101	110	235	125	222	96	259	111	411	92	295	82	311	80	575
4448	30102	94	208	107	223	144	305	115	395	104	382	99	296	115	300
4449	30103	90	196	106	206	109	275	99	378	86	291	76	315	80	475
4450	Zonal Check (ZC)	78	197	93	258	123	282	100	451	97	241	86	337	90	340
4451	30104	110	211	154	210	136	247	122	441	106	253	101	300	120	375
4452	30105	108	203	131	212	113	241	106	411	93	288	83	326	70	450
4453	30106	103	189	104	215	135	322	112	399	101	355	89	330	85	445
4454	30107	89	240	105	193	110	293	106	396	89	280	77	290	105	430
4455	30108	98	224	113	222	101	273	98	435	84	284	78	289	73	650
4456	30109	94	212	109	234	115	260	92	419	95	363	77	308	73	605
4457	30110	97	183	133	181	98	261	106	387	101	271	86	323	80	650
4458	30111	88	212	111	215	135	257	103	423	103	350	92	340	82	450
4459	30112	94	257	118	214	104	252	100	423	89	329	89	296	93	600
4460	30113	99	239	111	221	99	278	94	420	88	245	82	315	77	420
4461	30114	98	246	111	231	105	249	103	361	102	259	80	293	88	545
4462	30115	99	181	111	221	107	293	103	386	96	264	88	327	95	460
4463	30116	89	194	114	221	120	250	105	447	97	328	83	348	83	525
4464	Local Check (LC)	100	192	122	204	111	292	97	445	108	352	93	347	67	470
Exp. Mean		99	214	114	231	117	272	108	409	95	307	89	324	88	468

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-MS (Data Not Considered), Kharif 2021

Entry No	IET No	ODISHA				ASSAM		TRIPURA	
		@JEYPORE		@CHIPLIMA		@TITABAR		@LEMBUCHERRA	
		PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	84	230	75	233	102	280	93	338
4402	30058	77	234	118	313	108	215	127	288
4403	30059	91	222	77	209	119	195	112	288
4404	30060	81	228	96	248	116	230	110	363
4405	30061	75	216	70	251	90	224	89	375
4406	30062	79	234	86	241	110	248	114	325
4407	30063	75	239	81	297	94	270	89	325
4408	30064	89	205	76	343	91	345	104	375
4409	30065	79	211	75	259	91	248	88	300
4410	30066	85	261	70	301	96	210	94	400
4411	30067	92	228	69	204	98	258	103	300
4412	30068	77	239	89	256	100	270	111	300
4413	30069	87	244	88	217	100	290	114	250
4414	30070	80	317	80	242	91	266	83	288
4415	30071	84	256	75	252	97	240	111	263
4416	30072	77	228	81	246			92	375
4417	30073	75	269	89	266	91	263	108	225
4418	30074	77	235	86	247	102	265	103	313
4419	30075	94	233	79	234	98	273	100	475
4420	WGL 14 (NC)	78	241	73	124	101	250	96	275
4421	30076	87	261	87	308	103	280	97	363
4422	30077	91	288	85	198	111	245	118	288
4423	30078	89	211	82	323			105	188
4424	30079	81	249	69	231	107	248	89	350
4425	30080	85	238	66	312	97	323	101	388
4426	30081	82	349	89	212	90	223	98	413
4427	30082	74	240	83	236			97	350
4428	30083	78	256	89	204	93	233	99	338
4429	30084	86	239	82	178	101	248	96	388
4430	30085	74	278	88	267	89	210	100	275
4431	30086	79	284	84	254	104	278	109	463
4432	30087	84	222	81	243	86	255	90	438
4433	30088	113	342	80	233	104	230	112	350
4434	30089	72	222	91	262	88	323	117	375
4435	30090	82	194	87	272	112	178	95	250
4436	BPT 5204 (NC)	74	219	78	325	69	265	77	375
4437	30091	85	211	68	233	81	323	96	338
4438	30092	77	272	68	145			102	350
4439	30093	81	224	108	201	114	273	119	375
4440	30094	77	276	89	166	91	223	100	300
4441	30095	101	270	89	233			110	325
4442	30096	80	254	81	251	82	283	93	338
4443	30097	86	227	77	191	98	245	98	338
4444	30098	73	161	80	222	96	373	95	250
4445	30099	107	178	82	243	91	258	100	263
4446	30100	93	267	76	192	81	323	91	338
4447	30101	94	271	89	266	100	235	103	250
4448	30102	77	217	87	248	85	290	106	363
4449	30103	76	228	75	297	100	235	89	238
4450	Zonal Check (ZC)	81	172	15	222	88	238	94	425
4451	30104	78	181	70	231	80	288	114	225
4452	30105	81	183	83	250	106	273	99	350
4453	30106	82	204	88	205			92	300
4454	30107	78	215	75	189	89	215	92	275
4455	30108	88	216	64	247			92	263
4456	30109	84	250	72	169	89	260	93	388
4457	30110	78	218	79	324	96	258	99	300
4458	30111	76	172	88	254	81	295	104	375
4459	30112	84	477	82	259	95	293	93	313
4460	30113	79	155	70	214	91	228	91	250
4461	30114	79	183	78	178	90	270	94	225
4462	30115	81	186	77	217	99	253	99	388
4463	30116	74	333	79	245	102	315	96	375
4464	Local Check (LC)	77	178	88	238	93	218	96	363
Exp. Mean		82	238	80	240	96	260	100	327

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Table No. 3.9 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-MS (Data Not Considered), Kharif 2021

Entry No	IET No	GUJARAT				KERALA		KARNATAKA	
		@NAWAGAM		@VYARA		@PATTAMBI		@SIRSI	
		PH	NP	PH	NP	PH	NP	PH	NP
4401	30057	78	284	96	227	101	348	83	309
4402	30058	108	304	113	216	108	428	108	296
4403	30059	97	304	93	214	98	322	99	408
4404	30060	100	259	111	277	102	365	97	342
4405	30061	73	302	82	243	93	374	75	401
4406	30062	94	282	102	199	99	377	94	269
4407	30063	77	291	90	265	92	448	83	306
4408	30064	80	290	97	258	85	371	84	345
4409	30065	86	266	84	266	85	371	75	289
4410	30066	77	302	92	237	93	285	86	358
4411	30067	90	269	94	245	94	332	81	375
4412	30068	90	249	109	273	100	427	97	355
4413	30069	92	232	105	189	95	348	108	378
4414	30070	72	263	83	265	94	417	82	365
4415	30071	86	269	102	230	105	456	85	363
4416	30072	85	284	89	227	99	337	85	406
4417	30073	94	293	105	236	98	496	94	357
4418	30074	91	266	104	217	93	440	93	309
4419	30075	86	294	84	272	96	393	86	388
4420	WGL 14 (NC)	83	248	94	319	100	393	93	343
4421	30076	89	254	103	243	98	344	93	352
4422	30077	93	280	91	293	107	440	90	362
4423	30078	84	293	84	249	87	376	100	325
4424	30079	78	269	81	291	89	456	83	395
4425	30080	82	296	90	385	86	409	83	352
4426	30081	93	272	90	268	88	550	96	329
4427	30082	80	290	88	308	101	396	92	370
4428	30083	81	274	96	235	94	356	87	347
4429	30084	80	290	96	273	92	361	89	325
4430	30085	82	265	95	223	90	399	94	299
4431	30086	84	286	98	248	98	321	90	324
4432	30087	74	284	81	221	99	364	88	365
4433	30088	93	264	119	266	98	371	99	287
4434	30089	85	281	93	277	107	432	100	297
4435	30090	80	268	93	224	95	387	98	373
4436	BPT 5204 (NC)	68	277	78	206	94	448	88	276
4437	30091	82	271	85	216	99	408	89	325
4438	30092	76	244			98	393	106	386
4439	30093	98	293	110	207	92	326	84	309
4440	30094	82	284	82	210	112	336	102	315
4441	30095	93	263	86	350	91	338	90	325
4442	30096	73	273	89	329	89	388	94	239
4443	30097	81	246	86	195	101	428	89	352
4444	30098	84	256	90	298	100	377	98	309
4445	30099	92	248			98	499	82	452
4446	30100	70	284	87	272	100	400	101	350
4447	30101	93	276	96	259	100	329	96	367
4448	30102	92	245	86	238	94	370	85	381
4449	30103	83	235	87	227	99	386	90	342
4450	Zonal Check (ZC)	73	217	73	287	105	390	108	296
4451	30104	93	256	112	210	99	437	97	348
4452	30105	94	272	106	258	95	356	99	426
4453	30106	80	262	100	269	99	356	91	299
4454	30107	74	283	83	277	112	331	90	388
4455	30108	70	287	89	228	96	359	85	447
4456	30109	69	293	73	304	103	427	91	408
4457	30110	82	266	100	228	103	352	93	441
4458	30111	99	278	89	224	102	419	97	317
4459	30112	78	293	89	270	108	464	86	371
4460	30113	71	266	80	270	104	345	87	404
4461	30114	76	268	93	273	91	469	100	340
4462	30115	78	292	100	242	107	482	88	467
4463	30116	79	527	96	307	95	438	75	434
4464	Local Check (LC)	93	309	90	277	96	399	108	560
Exp. Mean		84	278	93	255	97	393	92	355

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Table No. 3.10: Grain quality characteristics of entries in IVT-MS, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk
4401	30057	80.2	73.3	71.0	5.12	1.84	2.78	MS	A
4402	30058	82.0	72.7	70.1	5.34	2.04	2.61	MS	VOC
4403	30059	79.2	68.8	51.9	4.91	1.79	2.74	MS	VOC
4404	30060	80.3	68.4	25.4	5.51	2.35	2.34	SB	VOC
4405	30061	80.1	71.2	43.9	5.12	1.81	2.82	MS	VOC
4406	30062	80.8	73.5	68.9	6.54	2.22	2.94	LB	OC
4407	30063	75.1	61.4	36.7	6.35	1.69	3.80	LS	A
4408	30064	79.9	67.8	59.0	4.69	1.49	3.14	SS	VOC
4409	30065	80.4	71.9	53.2	5.09	1.70	2.99	MS	A
4410	30066	80.0	72.0	57.0	5.26	1.97	2.67	MS	VOC
4411	30067	82.3	70.4	59.8	4.64	1.65	2.81	MS	VOC
4412	30068	82.3	74.1	66.2	5.75	1.93	2.97	MS	A
4413	30069	81.1	70.6	56.2	5.32	2.20	2.41	SB	VOC
4414	30070	81.4	71.6	51.8	4.99	1.82	2.74	MS	VOC
4415	30071	80.4	67.6	42.9	5.04	1.89	2.66	MS	A
4416	30072	80.0	71.8	68.7	5.32	2.01	2.64	MS	VOC
4417	30073	79.7	76.6	71.7	5.18	2.04	2.53	MS	A
4418	30074	80.7	72.7	50.8	6.19	2.20	2.81	LB	VOC
4419	30075	83.9	73.6	64.7	5.20	1.70	3.05	SS	A
4420	VGL-14 (NC)	80.7	70.5	55.7	5.21	1.84	2.83	MS	VOC
4421	30076	79.6	70.4	43.0	5.03	2.25	2.23	SB	VOC
4422	30077	80.5	70.3	47.2	4.94	2.08	2.37	SB	VOC
4423	30078	79.7	71.8	61.4	5.49	2.11	2.60	MS	VOC
4424	30079	79.3	63.9	37.3	4.78	1.92	2.48	SB	VOC
4425	30080	80.7	72.8	47.6	5.38	2.17	2.47	SB	OC
4426	30081	80.6	70.1	60.9	5.52	1.94	2.83	MS	VOC
4427	30082	82.5	73.6	71.0	5.58	1.72	3.24	SS	A
4428	30083	81.9	71.1	60.0	5.53	2.04	2.71	MS	VOC
4429	30084	83.6	73.5	44.5	5.54	2.01	2.75	MS	VOC
4430	30085	81.0	70.1	59.8	5.23	1.70	3.07	SS	A
4431	30086	81.4	69.7	31.1	4.82	1.72	2.80	MS	VOC
4432	30087	79.8	71.3	60.8	5.21	1.88	2.77	MS	A
4433	30088	79.3	71.1	63.5	5.37	1.80	2.98	MS	VOC
4434	30089	80.6	72.5	60.6	5.33	2.20	2.42	SB	VOC
4435	30090	80.3	71.1	43.6	5.03	2.04	2.46	SB	VOC
4436	BPT 5204 (NC)	78.8	70.7	57.2	5.13	1.81	2.83	MS	VOC
4437	30091	79.2	67.1	45.7	4.94	1.47	3.36	SS	A
4438	30092	82.3	73.8	45.6	5.89	1.85	3.18	SS	A
4439	30093	80.6	68.9	51.8	5.49	1.88	2.92	MS	VOC
4440	30094	82.5	74.6	70.8	4.93	1.85	2.66	MS	VOC
4441	30095	76.4	67.0	63.9	5.04	2.05	2.45	SB	VOC
4442	30096	81.3	70.8	57.8	5.49	1.70	3.22	SS	VOC
4443	30097	82.3	72.5	59.6	5.49	1.87	2.93	MS	A
4444	30098	81.6	73.7	43.6	5.26	1.85	2.84	MS	VOC
4445	30099	81.7	71.3	49.2	5.40	1.84	2.93	MS	A
4446	30100	80.2	71.3	66.2	5.33	2.09	2.55	MS	VOC
4447	30101	81.6	72.5	63.9	5.26	1.68	3.13	SS	A
4448	30102	79.7	73.1	70.3	5.31	2.23	2.38	SB	A
4449	30103	78.9	68.2	46.8	4.91	2.08	2.36	SB	VOC
4450	ADT 49 (ZC)	76.9	70.4	63.7	4.93	1.93	2.55	MS	VOC
4451	30104	81.1	70.2	62.4	5.21	1.99	2.61	MS	A
4452	30105								
4453	30106	81.6	72.4	70.3	5.35	2.09	2.55	MS	A
4454	30107	79.8	68.2	46.2	4.77	1.81	2.63	MS	VOC
4455	30108	80.6	73.5	59.0	5.20	1.88	2.76	MS	VOC
4456	30109	81.3	72.4	56.3	4.91	1.88	2.61	MS	A
4457	30110	80.5	70.9	54.8	5.12	1.91	2.68	MS	VOC
4458	30111	79.7	70.2	65.8	4.60	1.68	2.73	MS	A
4459	30112	78.4	68.4	58.9	5.23	1.70	3.07	SS	VOC
4460	30113	81.5	73.4	60.6	5.16	1.85	2.78	MS	VOC
4461	30114	80.7	69.5	51.4	4.95	1.80	2.75	MS	VOC
4462	30115	79.6	68.0	56.8	5.20	1.72	3.02	SS	VOC
4463	30116	80.0	72.0	57.1	5.97	2.14	2.78	MS	VOC
4464	Local Check								

HULL: Hulling (%); **MILL:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length(mm); **KB:** Kernel Breadth(mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content (%); **GC:** Gel Consistency; **LB:** Long Bold; **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

ADVANCE VARIETY TRIAL 2 & 1 – BIOFORTIFICATION (AVT 2 & AVT 1-BIOFORT)

Locations: 38

Test Entries: 07

Checks: BPT 5204 (Yield), IR 64 (Yield), DRR Dhan 45 (Yield & Micronutrient) Chittimuthyalu (Micronutrient). Table:4.1

AVT-Biofort trial was conducted with 7 test entries along with two yield checks (BPT 5204 and IR 64), Chittimuthyalu as micronutrient check and DRR Dhan 45 as both yield and micronutrient check. The biofortification trial was sent to 38 locations across six zones (II, III, IV, V, VI and VII) and data was received from 34 locations. Data was not received from Jabalpur, Bapatla, Rudrur and Mugad. Data from Karnal (high CV), Cuttack (Low Experimental Mean Yield; LEMY), Jeypore (LEMY), Sabour (LEMY), Chinsurah (LEMY & high CV), Hathwara (LEMY & low CV), Masodha (LEMY), Mandya (LEMY) and Sirsi (LEMY) was not considered for analysis. Overall, experimental yield ranged from 1578 kg/ha (Sirsi) to 8851 kg/ha (Maruteru). The mean yield of test entries had a range of 4636 kg/ha (IET 28692) to 5548kg/ha (IET 2870) whereas, days to 50%flowering (DFF) had a range of 88 (IET 28704) to 102 (IET 28714). Lowest number of panicles were observed in IET 28692 (274) while, IET 28704 had 310. Plant height varied from 93.57 cm (IET 28714) to 148 cm (IET 27984). The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 4.2, 4.3, 4.4, 4.5 and 4.6.

The content of micronutrients (Iron and Zinc) in polished rice samples of the test entries was estimated by X-ray fluorescence spectrophotometer (XRF) at IIRR, Hyderabad while protein content was analysed at NRRI, Cuttack utilizing the seed samples received from test locations. The data on Iron, Zinc and proteins were furnished in tables 4.7, 4.8 and 4.9. As the XRF values of Zn analysed at IIRR are 4 ppm lesser than ICP values of zinc, 4 ppm is added uniformly to the Zn content for each of the test entries. Based on the criteria set during 48th ARGM, the entries possessing 24 ppm Zinc; 10 ppm protein and 10 ppm iron in polished rice; and yield more than the best yielding check are eligible for promotion to the next tier of testing. The yield performance of entries with 100 DFF are compared with IR 64 while entries with 100 DFF are compared with BPT 5204/DRR Dhan 45 for identification of best entries. The superior entries on overall mean and zonal basis are discussed below.

AVT-2 (Entries which are in 3rd Year of testing):

Only one entry is in third year of testing

IET 28714 (Jaya / IR 71829-3R-82-1-1) was tested for three years (2019, 2020 and 2021) and its performance is presented in table. It has consistently performed in Zone VI in all the three years of testing, but it performed only in Maharashtra, while in 2021 (i.e. AVT 2) it has also shown yield superiority in Zone III and Zone VII. In 2021 Kharif (in Zone VI), IET 28714 exhibited yield advantage with desirable quality parameters: HRR – 62.7%, AC – 23.4%, and GC – 22.0. IET 28714 had Zn content of 18.98 ppm, Fe content of 1.43 ppm and 8.54% protein content in AVT 2.

Though exhibits yield advantage, *owing to its performance in a single state (i.e. Maharashtra) and inconsistency in Zinc content coupled with low Fe and protein content it is discontinued.*

Performance of IET 28714 in kharif of IVT (2019), AVT (2020) and AVT-2(2021)

IET No.	Year	Zone	Yield (kg/ha)	Yield adv. over BVC/HC (%)	States	Yield (Kg/ha)	Yield adv. over BVC/HC (%)	Remarks
28714	2019	ZVI	4680	26.0	MH	4350	55.0	Though it performed on yield basis in Maharashtra during 2019, 2020 and 2021, the Fe levels were <10.0 ppm and the zinc levels were inconsistent during the testing period. Hence not found promising and discontinued.
	2020	ZVI	4730	5.1	MH	4833	10.8	
	2021	ZIII	6511	30.01	BI UP	6607 6415	11.0 58.7	
		ZVI	5080	6.83	MH	5238	15.4	
		ZVII	5995	5.64	AP TS KE	11567 6557 4965	13.3 8.6 7.9	

AVT-1 (Entries which are in 2nd year of testing):

A total of six entries are in second year of testing and their performance is discussed below.

Overall Performance

IET 28701 with 100 DFF showed yield advantage 7.79% over IR 64. But, none of the entries exhibited yield advantage over the BVC with >100 DFF. IET 28701 low AC (17.01) and soft GC (73). Further, the Fe content was 2.10 ppm, Zn content was 21.02 ppm and protein content of 7.49%, *hence based on grain quality and nutritional composition IET 28701 is dropped.*

Zone II – Northern

In Zone II, the trial was conducted in Punjab (Ludhiana), Haryana (Karnal) and Rajasthan (Kota). Two entries, IET 28694 and IET 27984 showed a yield advantage over IR 64, both these entries had (100 DAF). *IET 28694* is repeat entry with 5.84% yield superiority over IR 64 and grain quality: HRR – 71.5%, AC – 21.58 and GC – 55, further, it had 21.75 ppm Zn, 7.7% protein content and 2.03 ppm Fe, *hence despite yield advantage, IET 28694 is dropped.* IET 27984 had a yield advantage of 14.35% and had 16.6 AC and medium GC (50). IET 27984 had a grain protein content of 11.16% (single location i.e.,

Ludhiana) and Zn content of 22.5 ppm. Despite having yield advantage and high grain protein content ***IET 27984 is not promoted owing to low AC and high GC.***

Zone III – Eastern

In Zone III, the trial was conducted at different locations across Odisha, Bihar, Uttar Pradesh and West Bengal. Two entries (IET 28714, and IET 28703) with flowering duration less than 100 days showed yield superiority of 30.01% and 8.25% respectively over IR 64. IET 28714 was in the 3rd year of testing while IET 28703 was a repeat entry. Though IET 28714 and IET 28703 showed yield advantage, they have Zn content of 20.22 ppm and 22.62 ppm respectively. Further, the protein content was 7.06% and 7.84% respectively; while their Fe content was 1.55 ppm and 1.94 ppm respectively. ***Therefore, despite showing yield advantage, both IET 28714 and 28703 are dropped based on grain nutrient content.***

Zone IV – North Eastern

The trial was conducted at Titabar, Assam. Since the trial was conducted in a single location, the entries with a yield advantage of 15.0% over the BVC will only be considered for promotion. Based on yield, two entries (IET 28694, and 28703) with flowering duration 100 days and yield superiority of 24.27%, and 20.61% respectively over IR 64 are promoted. Both IET 28694 and IET 28703 are repeat entries. The grain quality of these two entries meets the acceptable limits. But, IET 28694 had 24.40 ppm Zn, and 2.40 ppm Fe, while IET 28703 had 21.60 ppm Zn, and 2.60 ppm Fe. ***Hence, IET 28694 based on yield and Zn content is promoted.***

Zone V – Central

The trial was conducted at 5 locations across Madhya Pradesh (Waraseoni and Jabalpur), Maharashtra (Sakoli and Sindewahi) and Chhattisgarh (Raipur). Based on yield advantage, none of the entries exhibited yield superiority over IR 64 or other BVC, ***hence none are promoted.***

Zone VI – Western

The trial was conducted at five locations across Maharashtra (Karjat, Shirgaon and Vadagaon) and Gujarat (Navsari, and Nawagam). Based on yield, two entries (IET 28701, and 28714) with flowering duration 100 days had yield superiority of 7.84% and 6.83% respectively over IR 64. None of the entries with DFF 100 showed yield superiority over the BVC. IET 28701 showed yield superiority over IR 64 with low AC (17.04) and soft GC (73). Further, IET 28701 had 21.28 ppm Zn, 7.74% protein and 2.20 ppm Fe. ***Hence, owing to no advantage of nutritional composition, IET 28701 is dropped.*** IET 28714 exhibited yield advantage with desirable quality parameters: HRR – 62.7%, AC – 23.4%, and GC – 22.0. IET 28714 had Zn content of 18.98 ppm, Fe content of 1.43 ppm and 8.54% protein content. ***Hence, IET 28714 is not found promising owing to low Fe, Zn and protein content.***

Zone VII - Southern

The trial was conducted at 16 locations across Andhra Pradesh, Telangana, Karnataka, Kerala and Tamil Nadu. Data was not received from Bapatla, Rudrur and Mugad. Only IET

28701 with 100 days flowering duration had yield superiority over IR 64; it had a yield superiority of 12.65%. None of the entries with 100 DFF had yield advantage over the BVC. IET 28701 showed yield superiority of 7.79% over IR 64 with AC of 17.04 and soft GC (73). Further, IET 28701 had Zn content of 20.35 ppm, Fe content of 2.07 ppm and 7.38% protein content. **Hence, based on the Zn, Fe and protein content, IET 28701 is dropped.** IET 28714 showed a yield advantage of 5.64% over the BVC, the Zn content was 19.92 ppm, protein content of 9.30% and Fe – 1.40 ppm, **hence IET 28714 is not found promising.**

Performance of entries during Kharif 2021 in different zones

S. No	Yield (kg/ha) / Yield Adv. Over IR 64(100 DAF)	Yield (kg/ha) / Yield Adv. Over BVC(>100 DAF)	Grain Quality	Remarks
Zone II - Northern				
1	IET 28694 [R] (5673; 5.84%)	-	HRR-71.5;AC-21.58;GC-55	Dropped due to low Zn, Fe & protein content
2	IET 27984 (6129; 14.35%)	-	HRR – 65.2;AC – 16.6;GC-50	Dropped due to low AC and high GC.
Zone III – Eastern				
1	IET 28714 [3 rd Yr] (6511; 30.01%)	-	HRR – 62.7;AC – 23.4;GC- 22	Not found promising
2	IET 28703 [R] (5421; 8.25%)	-	HRR–68.5;AC-21.61;GC- 56	Dropped due to low Zn, Fe & protein content
Zone IV – North Eastern				
1	IET 28694 [R] (4788; 24.27%)	-	HRR-71.5;AC-21.58;GC-55	Promoted based on high Zn content (24.4 ppm)
2	IET 28703 [R] (4647; 20.61%)	-	HRR – 68.5;AC-21.61;GC- 56	Dropped due to low Zn, Fe & protein content
Zone V – Central				
None of the Entries Promoted				
Zone VI – Western				
1	IET 28701 [R] (5128; 7.84%)	-	HRR – 66.8; AC – 17.04;GC- 73	Dropped due to low Zn, Fe & protein content
2	IET 28714 [3 rd Yr] (5080; 6.83%)	-	HRR – 62.7;AC – 23.4;GC- 22	Dropped due to low Zn, Fe & protein content
Zone VII - Southern				
1	IET 28701 [R] (6296; 12.65%)	-	HRR – 66.8; AC – 17.04;GC- 73	Dropped due to low Zn, Fe & protein content
		IET 28714 [3 rd Yr] (5995; 5.64%)	HRR – 62.7;AC – 23.4;GC- 22	Not found Promising
Overall				
1	IET 28701 [R] (5548; 7.79%)	-	HRR – 66.8; AC – 17.04;GC- 73	Dropped due to grain quality and low Zn, Fe and protein content.

Entries promoted to AVT 2 Biofort:

- **Zone IV – IET 28694**
- **Zone II, III, V, VI & VIII – None.**

INITIAL VARIETY TRIAL – BIOFORTIFICATION (IVT-BIOFORT)

Locations: 38

Test Entries: 51

**Checks: BPT 5204 (Yield), IR 64 (Yield), DRR Dhan 45
(Yield & Micronutrient) Chittimuthyalu
(Micronutrient)**

Table: 4.11

IVT-Biofort trial was conducted with 51 entries along with two yield checks (BPT 5204 and IR 64), Chittimuthyalu as micronutrient check and DRR Dhan 45 as both yield and micronutrient check. The biofortification trial was sent to 38 locations across six zones (II, III, IV, V, VI and VII) and data was received from 34 locations. Data from ten locations Ludhiana, NRRI-Cuttack, Jeypore, Waraseoni, Shirgaon, Nawagam, Brahmavar, Sirsi, Titabar and Rudrur were not considered for analysis due to low/high CV and (or) low experimental yield. Further, four locations (Chinsurah, Hathwara, Jagtial and Jabalpur) did not sent the trial data. The experimental mean yield ranged from 4086 kg/ha (Sindhewahi) to 7896 kg/ha (Maruteru). The overall mean yield of entries had a range of 3434 kg/ha (IET 29458) to 5783 g/ha (IET 30127) whereas, plant height had a wide range of 87.9 cm (IET 30159) to 146.19 cm (IET 30139). Highest number of panicles were observed in IET 29460 (329) while, IET 30142 had only 274. IET 30146 and IET 30159 flowered in 85 days and BPT 5204 flowered at 107 days. The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 4.12, 4.13 and 4.14.

The content of micronutrients (Iron and Zinc) in polished rice samples of the test entries was estimated by X-ray fluorescence spectrophotometer (XRF) at ICAR-IIRR, Hyderabad while protein content was analysed at NRRI, Cuttack utilizing the seed samples received from test locations. The data on Iron, Zinc and proteins were furnished in tables 4.15 and 4.16. The entries possessing 24 ppm Zinc; 10 ppm protein and 10 ppm iron in polished rice; and yield on par or significant superiority over best yielding check based on CD are eligible for promotion to the next tier of testing. The yield performance of entries with 100 days flowering duration are compared with IR 64 whereas entries with 100 days are compared with BPT 5204/DRR Dhan 45 for identification of best entries. The superior entries on overall mean and zonal basis are discussed below.

Performance of entries during Kharif 2021

Performance of entries based on overall mean

Four entries (IET's 29484, 29482, 30146 and 30159) had the required Zinc content (24 ppm) but none of these entries exhibited significant yield superiority over best check. Two entries exhibited (>10%) grain protein content viz., IET 29458 (10.03%) and IET 30130 (10.07%) but did not show on par or significant yield superiority over best check. On overall mean basis, none of the entries had the required Fe content (10 ppm), hence none of them were promoted.

Performance of entries based on zonal mean

In zonal performance, ten entries recorded required zinc content (24 ppm), four entries in zone II (IET's 29482, 30118, 30146 and 30159), nine entries in zone III (IET's 29484, 30156, 29482, 29469, 30118, 30146, 30148, 30159 and 30160), two entries in zone V

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(IET 29484 and IET 29482), five entries in zone VI (IET's 29482, 30141, 30148, 30159 and 30160) and two entries in zone VII (IET 29484 and IET 29482), all these ten entries did not exhibit significant yield superiority over best check in any zone, hence none of the entry is promoted to AVT1-Biofort. In Zone II, only one entry IET 29469 exhibited significant yield superiority over best check but had lower zinc (22.53 ppm) and iron content (2.10 ppm) in the zone, hence it is not promoted to AVT 1-Biofort.

Entries with Zinc and Iron content in IVT Biofort, Kharif 2021

IET No.	Overall	Zone II	Zone III	Zone V	Zone VI	Zone VII
29484 (R)	26.37	-	30.68	27.65	-	26.31
30156	-	-	25.08	-	-	-
29482 (R)	31.63	32.03	36.84	34.10	28.22	29.32
29469 (R)	-	-	24.39	-	-	-
30118	-	24.98	24.41	-	-	-
30141	-	-	-	-	24.52	-
30146	24.00	27.63	26.80	-	-	-
30148	-	-	25.38	-	24.65	-
30159	24.40	25.83	29.98	-	24.28	-
30160	-	-	24.50	-	24.07	-
Iron Content	1.30-2.84	1.15-3.5	1.25-3.55	0.90-3.05	1.02-3.83	1.38-2.93

Ten entries had required Zinc content (24 ppm) but none of the entries exhibit yield advantage over best varietal check. Whereas, none of the entries had required iron content (10 ppm). Hence, those entries with higher zinc content can be utilized as donors and or can be registered with NBPGR, New Delhi as genetic stocks.

None of the entry in this trial promoted to AVT 1-Biofort.

Table No.4.1: Composition of entries in Advance Variety Trial 2 & 1- Biofortification (AVT2 & AVT 1-BIOFORT), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT
2ndYear of testing:				
4501	28701 (R)	GNV 1905	Selection from IR 95097:3-B-16-11-4-GBS	LS
3rdYear of testing:				
4502	28714	NVSR 6158	Jaya / IR 71829-3R-82-1-1	LB
4503	BPT 5204 (Yield Check)			
2ndYear of testing:				
4504	28694 (R)	GNV 1906	Selection from IR 99290-11-2-2	LB
4505	28692	BPT 2848 (RP 5727)	RP Bio 226*1 / IRGC 48493	MS
4506	28703 (R)	RP 6362-IR15M1298 (GID:4289666)	IR 91145-AC 26 / IRRI 123 // OM 4498 /// IR 58 /4/ IR 69428-6-1-1-3-3 / IR 69807-13-2-1 // IR 58	LS
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)			
4508	28704 (R)	R-RHZ-MI-93	MTU 1010 / IR 94033	LS
4509	IR 64 (Yield Check)			
4510	Chittimutyalu (Micro-nutrient Check)			
4511	27984	HURS 17-6-IR 82475-110-2-2-1-2	IR 68144-2B-2-2-3-1-120 / IR64	LS

(R): Repeat

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Table No. 4.2: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE-II (NORTHERN)								ZONE III-EASTERN					
		PUNJAB (1)		HARYANA (0)		RAJASTAN (1)		Z2 (2)		ODISHA (0)					
		LUDHIANA		@Karnal (ICAR-CSSRI)		KOTA		Mean		@ICAR-NRRI (Cuttack)		@JEYPORE			
4501	28701 (R)	4105	6	5617	2	5715	8	4910	8	2905		5705	1*		
4502	28714 ^			3256	8	5346	10	5346	5	3347	7	3518	4		
4503	BPT 5204 (Yield Check)	3942	7	2992	10	5456	9	4699	10	3437	5	3091	7		
4504	28694 (R)	4854	2	7%	3439	7	6492	3	5673	2	6%	3113	9	3747	3*
4505	28692	3337	9	2281		6137	6	4737	9	3587	4	2340	8		
4506	28703 (R)	4452	5	3117	9	6424	4	5438	3	4143	1	2265	9		
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	3805	8	4261	5	6738	2	5272	6	3605	3	3254	5		
4508	28704 (R)	4655	3	3784	6	5865	7	5260	7	3250	8	2118	10		
4509	IR 64 (Yield Check)	4554	4	5199	3	6165	5	5360	4	3764	2	1700			
4510	Chittimutyalu (Micro-nutrient Check)			6974	1*	4610		4610		3357	6	3162	6		
4511	27984	5439	1*	19%	4363	4	6819	1	6129	1*	14%	3091	10	4254	2*
Exp. Mean		4349		4117		5979		5221		3418		3196			
CD		739		1458		850		657		681		369			
CV%		9.82		20.79		8.34		7.39		11.69		6.77			
D/S		30-06-2021				27-06-2021				16-07-2021		02-07-2021			
D/P		02-08-2021				23-07-2021				17-08-2021		31-07-2021			
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check				% superior over best check					

Table No. 4.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE III-EASTERN												
		BIHAR				BIHAR (1)		WEST BENGAL (0)			UTTAR PRADESH			
		BIKRAMGANJ (Dhangain)		@SABOUR		Mean		@CHINSURAH	@HATHWARA	@MASODHA				
4501	28701 (R)	5794	4	3947	4	5794	4	30093	5	3443	3	3444	8	
4502	28714 ^	6607	1*	4295	3	6607	1*	11%	40509	2	3094	4	3600	7
4503	BPT 5204 (Yield Check)	4789	9	4604	1	4789	9	38194	3	3617	2	3909	4	
4504	28694 (R)	5357	7	3649	6	5357	7	53241	1	2987	6	3756	5	
4505	28692	4200	10	3158	10	4200	10	38194	3	2879	7	2756	10	
4506	28703 (R)	5890	3	3828	5	5890	3	24306	8	2995	5	5056	1	
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	5653	6	4408	2	5653	6	28935	6	2361	10	4556	2	
4508	28704 (R)	4803	8	3534	7	4803	8	18519	10	2491	9	3689	6	
4509	IR 64 (Yield Check)	5974	2	3260	9	5974	2	18519	10	1855		4267	3	
4510	Chittimutyalu (Micro-nutrient Check)	3259		2893		3259		19676	9	2782	8	2222		
4511	27984	5726	5	3501	8	5726	5	27778	7	3656	1	2822	9	
Exp. Mean		5277		3734		5277		30724		2924		3643		
CD		487		632		487		30403		123		746		
CV%		5.41		9.94		5.41		58.1		2.47		12.02		
D/S		25-06-2021		24-06-2021				07-07-2021		25-06-2021		23-06-2021		
D/P		28-07-2021		18-07-2021				07-08-2021		25-07-2021		20-07-2021		
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check				% superior over best check				

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Table No. 4.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE III-EASTERN						ZONE IV- NORTH EASTERN			ZONE-V - CENTRAL		
		UTTAR PRADESH		UTTAR PRADESH (1)		Z3 (2)		ASSAM (1)		Z4 (1)	MADHYA PRADESH (1)		
		VARANASI		Mean		Mean		TITABAR		Mean	WARASEONI		
4501	28701 (R)	4694	5	4694	5	5244	5	4732	3	4732	3	4732	6
4502	28714 ^	6415	2	6415	2	6511	1 * 12%	4497	5	4497	5	4124	8
4503	BPT 5204 (Yield Check)	6861	1	6861	1	5825	2	5383	1	5383	1	4740	5
4504	28694 (R)	4252	7	4252	7	4805	8	4788	2	4788	2	4573	7
4505	28692	4418	6	4418	6	4309	10	4363	6	4363	6	3989	9
4506	28703 (R)	4952	4	4952	4	5421	3	4647	4	4647	4	3989	9
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	5024	3	5024	3	5339	4	4080	8	4080	8	5223	1
4508	28704 (R)	4160	9	4160	9	4482	9	2947		2947		4762	4
4509	IR 64 (Yield Check)	4041	10	4041	10	5008	6	3853	9	3853	9	4774	3
4510	Chittimutyalu (Micro-nutrient Check)	1177		1177		2218		4193	7	4193	7	2649	
4511	27984	4194	8	4194	8	4960	7	3627	10	3627	10	4863	2
Exp. Mean		4562		4562		4920		4283		4283		4402	
CD		446		446		292		485		485		816	
CV%		5.74		5.74		3.48		6.65		6.65		10.89	
D/S		22-06-2021						03-07-2021				25-06-2021	
D/P		12-07-2021						04-08-2021				13-07-2021	
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check					

Table No. 4.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE-V - CENTRAL							ZONE VI - WESTERN						
		CHHATTISGARH		MAHARASHTRA 1			MAHARASHTRA 1(2)		Z5 (4)		MAHARASHTRA 2				
		RAIPUR		SAKOLI	SINDEWAHI		Mean		Mean		KARJAT	SHIRGAON			
4501	28701 (R)	5366	2	4092	6	4563	3	4328	5	4688	3	5112	6	5539	1
4502	28714 ^	5761	1 10%	3369	10	3491	10	3430	10	4186	9	6004	1	5208	3
4503	BPT 5204 (Yield Check)	5253	3	3723	9	4260	6	3992	7	4494	6	5449	2	5079	4
4504	28694 (R)	4620	6	4460	4	4059	7	4260	6	4428	7	5275	5	2738	10
4505	28692	4465	10	3888	7	3928	8	3908	8	4068	10	4792	9	5056	5
4506	28703 (R)	4834	5	4488	3	4697	2	4593	2	4502	5	5051	7	4052	8
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	5052	4	4310	5	4461	5	4386	4	4762	1	5387	4	4327	7
4508	28704 (R)	4574	9	4596	2	4476	4	4536	3	4602	4	4994	8	4557	6
4509	IR 64 (Yield Check)	4598	7	4624	1	4831	1	4728	1	4707	2	4770	10	3990	9
4510	Chittimutyalu (Micro-nutrient Check)	3862		3279		3173		3226		3241		2076		2486	
4511	27984	4575	8	3846	8	3788	9	3817	9	4268	8	5443	3	5398	2
Exp. Mean		4815		4061		4157		4109		4359		4941		4403	
CD		655		813		838		646		406		843		864	
CV%		7.99		11.75		11.84		9.23		5.46		10.02		11.53	
D/S		24-06-2021		23-06-2021		22-06-2021						22-06-2021		21-06-2021	
D/P		15-07-2021		28-07-2021		21-07-2021						15-07-2021		12-07-2021	
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check							

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Table No. 4.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VI - WESTERN															
		MAHARASHTRA 2		MAHARASHTRA 2 (3)		MAHARASHTRA (5)		GUJARAT		GUJARAT (2)		Z6 (5)					
		VADAGAON		Mean		Mean		NAVASARI	NAWAGAM	Mean		Mean					
4501	28701 (R)	6105	1	5585	1	8%	5082	1	4.8%	5114	4	3771	10	4443	6	5128	1
4502	28714 ^	4502	7	5238	2		4515	8		5521	1	4165	3	4843	2	5080	2
4503	BPT 5204 (Yield Check)	4402	8	4977	5		4583	7		5045	5	4066	5	4556	4	4808	5
4504	28694 (R)	3661		3891	10		4039	10		3849	10	3827	8	3838	10	3870	10
4505	28692	4149	9	4666	7		4363	9		3716		3844	6	3780		4311	9
4506	28703 (R)	4686	5	4596	8		4595	6		4293	8	3803	9	4048	9	4377	8
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	5758	2	5157	3		4849	2		5187	3	4106	4	4647	3	4953	3
4508	28704 (R)	5091	3	4881	6		4743	3		4801	6	3660		4231	7	4621	7
4509	IR 64 (Yield Check)	4854	4	4538	9		4614	4		5514	2	4647	2	5081	1	4755	6
4510	Chitimityahu (Micro-nutrient Check)	3815	10	2792			2966			4554	7	3842	7	4198	8	3355	
4511	27984	4531	6	5124	4		4601	5		4032	9	4934	1	4483	5	4868	4
Exp. Mean		4687		4677			4450			4693		4060		4514		4603	
CD		698		463			390			721		724		528		382	
CV%		8.74		5.82			5.15			9.02		8		6.87		4.88	
D/S		23-06-2021								22-06-2021		29-06-2021					
D/P		22-07-2021								13-07-2021		05-08-2021					
				^ 3rd year of testing.			*Superior to best check			#Superior over hybrid check		% superior over best check					

Table No. 4.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII- SOUTHERN													
		ANDHRA PRADESH (1)		TELANGANA				TELANGANA (3)		TAMIL NADU					
		MARUTERU		RAJENDRANAGAR		WARANGAL		JAGTIAL		Mean		ADUTHURAI			
4501	28701 (R)	10076	5	6600	1	6737	2	6084	5	6474	2 *	7%	6046	5	
4502	28714 ^	11567	1	13%	6119	2	6912	1	6640	1	6557	1 *	9%	6472	3
4503	BPT 5204 (Yield Check)	10211	3	5612	5	6419	4	6080	6	6037	4		5958	7	
4504	28694 (R)	10091	4	5792	4	5748	10	5324	9	5621	7		6042	6	
4505	28692	6568		4107		6054	9	5143	10	5101			7764	1	
4506	28703 (R)	8532	7	5491	7	6462	3	6550	3	6168	3		5639	8	
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	6994	9	5875	3	5313		5532	7	5573	9		4639		
4508	28704 (R)	8641	6	5228	9	6151	7	5375	8	5585	8		4861	10	
4509	IR 64 (Yield Check)	7483	8	5327	8	6124	8	6638	2	6030	5		7111	2	
4510	Chitimityahu (Micro-nutrient Check)	6979	10	4950	10	6347	5	4749		5349	10		4958	9	
4511	27984	10216	2	5510	6	6301	6	6151	4	5987	6		6472	3	
Exp. Mean		8851		5510		6233		5842		5862			5997		
CD		1682		896		720		616		419			917		
CV%		11.16		9.55		6.78		6.19		4.2			8.98		
D/S		09-07-2021		23-06-2021		24-06-2021		02-07-2021					08-09-2021		
D/P		05-08-2021		26-07-2021		28-07-2021		28-07-2021					08-10-2021		
				^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check					

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Table No. 4.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII- SOUTHERN													
		TAMIL NADU		TAMIL NADU (2)		KERALA				KERALA (2)		KARNATAKA			
		COIMBATORE		Mean		MONCOMPU		PATTAMBI		Mean		@MANDYA		BRAHMAWAR	
4501	28701 (R)	6273	1	6160	4	5213	2	4740	5	4977	2	4966	1*	5178	4
4502	28714 ^	5631	5	6052	5	5517	1	4413	8	4965	3	3405	5	2488	10
4503	BPT 5204 (Yield Check)	6059	3	6009	6	3762	9	5438	3	4600	6	1964	10	2542	9
4504	28694 (R)	5096	8	5569	7	3938	8	4381	9	4160	9	4013	4	2392	
4505	28692	4675	10	6220	2	3567	10	4302	10	3935	10	2907	8	5405	3
4506	28703 (R)	4314		4977	10	4545	5	4187		4366	8	3376	6	4144	7
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	6106	2	5373	8	5111	3	5448	2	5280	1	4401	2	4552	6
4508	28704 (R)	5510	6	5186	9	3452		4416	7	3934		3209	7	5833	1*
4509	IR 64 (Yield Check)	5298	7	6205	3	4676	4	5244	4	4960	4	2802	9	4579	5
4510	Chittimutyahu (Micro-nutrient Check)	4785	9	4872		4043	7	5810	1	4927	5	1269		5597	2*
4511	27984	6019	4	6246	1	4331	6	4692	6	4512	7	4301	3	4042	8
Exp. Mean		5433		5715		4378		4825		4601		3329		4250	
CD		733		640		484		989		530		395		979	
CV%		7.92		6.57		6.49		12.03		6.76		6.98		13.52	
D/S		30-07-2021				09-07-2021		19-07-2021				02-07-2021		28-06-2021	
D/P		24-08-2021				04-08-2021		13-08-2021				26-07-2021		27-07-2021	
		^ 3rd year of testing *Superior to best check #Superior over hybrid check % superior over best check													

Table No. 4.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII- SOUTHERN											Overall Mean (25)			
		KARNATAKA				KARNATAKA (3)			Z7 (11)							
		GANGAVATHI		@SIRSI		MALAGI		Mean			Mean					
4501	28701 (R)	7096	1*	1515	7	5213	1	5829	1*	27%	6296	1*	11%	5548	1*	6%
4502	28714 ^	5301	9	1653	4	4880	2	4223	10		5995	2*	6%	5456	2*	
4503	BPT 5204 (Yield Check)	5583	5	1321	10	4760	3	4295	9		5675	4		5235	4	
4504	28694 (R)	5494	7	1255		3940	6	3942			5294	10		4842	9	
4505	28692	4750		1459	8	3280	10	4478	7		5056			4636	10	
4506	28703 (R)	5974	4	1622	5	3220		4446	8		5369	7		5013	7	
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	5532	6	1571	6	3633	8	4572	5		5340	8		5114	6	
4508	28704 (R)	5237	10	1372	9	4400	4	5157	3	13%	5373	6		4922	8	
4509	IR 64 (Yield Check)	5449	8	1745	3	3553	9	4527	6		5589	5		5147	5	
4510	Chittimutyahu (Micro-nutrient Check)	6500	3	1939	1	3993	5	5363	2*	17%	5337	9		4237		
4511	27984	6679	2	1903	2	3920	7	4880	4	7%	5848	3		5262	3	
Exp. Mean		5781		1578		4072		4560			5553			5041		
CD		1299		375		739		614			257			177		
CV%		10.01		10.65		10.65		7.91			2.72			2.06		
D/S		19-07-2021		22-06-2021		26-06-2021										
D/P		16-08-2021		13-07-2021		19-07-2021										
		^ 3rd year of testing *Superior to best check #Superior over hybrid check % superior over best check														

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Table No. 4.3: Days to 50%flowering of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE II - NORTHERN				ZONE III-EASTERN	
		PUNJAB (1)	HARYANA (0)	RAJASTAN (1)	Z2 (2)	ODISHA (0)	
		LUDHIANA	@Karnal (ICAR-CSSRI)	KOTA	Mean	@ICAR-NRRI (Cuttack)	@JEYPORE
4501	28701 (R)	96	104	105	100	106	106
4502	28714	.	109	109	109	106	110
4503	BPT 5204 (Yield Check)	105	116	108	106	100	110
4504	28694 (R)	96	106	104	100	94	94
4505	28692	98	102	101	100	92	97
4506	28703 (R)	97	96	101	99	96	107
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	92	100	102	97	93	96
4508	28704 (R)	89	128	103	96	92	90
4509	IR 64 (Yield Check)	92	102	100	96	98	91
4510	Chittimutyalu (Micro-nutrient Check)	.	124	106	106	94	111
4511	27984	93	104	104	99	104	98
Exp. Mean		95	108	104	101	98	101

Table No. 4.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE III-EASTERN					
		BIHAR		BIHAR (1)	WEST BENGAL (0)		UTTAR PRADESH
		BIKRAMGANJ (Dhangain)	@SABOUR	Mean	@CHINSURAH	@HATWARA	@MASODHA
4501	28701 (R)	97	105	97	95	100	109
4502	28714	96	115	96	107	104	104
4503	BPT 5204 (Yield Check)	112	114	112	103	105	108
4504	28694 (R)	98	98	98	94	100	106
4505	28692	101	95	101	92	98	106
4506	28703 (R)	105	97	105	91	96	103
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	99	96	99	88	92	107
4508	28704 (R)	94	90	94	85	91	90
4509	IR 64 (Yield Check)	99	88	99	86	94	108
4510	Chittimutyalu (Micro-nutrient Check)	109	90	109	99	100	95
4511	27984	94	99	94	91	101	113
Exp. Mean		100	99	100	94	98	104

Table No. 4.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE III-EASTERN			ZONE IV- NORTH EASTERN (1)	ZONE-V - CENTRAL	
		UTTAR PRADESH	UTTAR PRADESH (1)	Z3 (2)	ASSAM (1)	MADHYA PRADESH (1)	CHINSURAH (1)
		VARANASI	Mean	Mean	TITABAR	WARANASI	RAIPUR
4501	28701 (R)	91	91	94	106	96	91
4502	28714	97	97	96	112	89	99
4503	BPT 5204 (Yield Check)	103	103	108	108	103	99
4504	28694 (R)	84	84	91	95	93	90
4505	28692	85	85	93	95	88	92
4506	28703 (R)	81	81	93	94	86	90
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	83	83	91	98	88	85
4508	28704 (R)	79	79	86	91	81	84
4509	IR 64 (Yield Check)	81	81	90	94	85	85
4510	Chittimutyalu (Micro-nutrient Check)	114	114	112	96	86	126
4511	27984	89	89	92	102	90	90
Exp. Mean		90	90	95	99	90	94

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Table No. 4.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE-V - CENTRAL				ZONE VI - WESTERN			
		MAHARASHTRA 1		MAHARASHTRA 1(2)	Z5 (4)	MAHARASHTRA 2			MAHARASHTRA 2 (3)
		SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON	VADAGAON	Mean
4501	28701 (R)	97	109	103	98	95	89	94	93
4502	28714	111	114	113	103	99	97	102	99
4503	BPT 5204 (Yield Check)	113	114	113	107	99	101	105	102
4504	28694 (R)	95	105	100	96	87	86	88	87
4505	28692	92	103	97	94	88	90	89	89
4506	28703 (R)	96	97	97	92	87	90	94	90
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	91	98	94	90	82	86	86	85
4508	28704 (R)	90	98	94	88	84	85	84	84
4509	IR 64 (Yield Check)	87	99	93	89	85	79	83	82
4510	Chitimityalu (Micro-nutrient Check)	98	116	107	107	99	113	107	106
4511	27984	91	104	98	94	93	86	88	89
Exp. Mean		96	105	101	96	91	91	93	92

Table No. 4.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VI - WESTERN				ZONE VII - SOUTHERN				
		MAHARASHTRA (5)		GUJARAT		GUJARAT (2)	Z6 (5)	ANDHRA PRADESH (1)	TELANGANA	
		Mean	NAVASARI	NAWAGAM	Mean	Mean	Mean	MARUTERU	RAJENDRANAGAR	WARANGAL
4501	28701 (R)	97	87	100	94	93	90	108	98	
4502	28714	105	94	101	97	99	101	111	105	
4503	BPT 5204 (Yield Check)	106	91	104	97	100	101	110	102	
4504	28694 (R)	92	82	94	88	87	89	99	91	
4505	28692	92	83	94	88	89	86	99	92	
4506	28703 (R)	93	85	98	92	91	90	100	91	
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	89	78	93	86	85	81	101	90	
4508	28704 (R)	88	77	97	87	85	81	98	85	
4509	IR 64 (Yield Check)	87	90	94	92	86	82	98	87	
4510	Chitimityalu (Micro-nutrient Check)	107	86	100	93	101	95	104	96	
4511	27984	93	85	94	90	89	88	102	96	
Exp. Mean		95	86	97	91	91	89	103	94	

Table No. 4.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII - SOUTHERN							
		TELANGANA	TELANGANA (3)	TAMIL NADU		TAMIL NADU (2)	KERALA		KERALA (2)
		JAGITYAL	Mean	ADUTHURAI	COIMBATORE	Mean	MONCOMPU	PATTAMBI	Mean
4501	28701 (R)	98	101	88	93	91	91	94	93
4502	28714	103	106	102	102	102	104	95	100
4503	BPT 5204 (Yield Check)	102	104	102	101	101	104	95	100
4504	28694 (R)	89	93	93	92	92	89	95	92
4505	28692	89	93	100	90	95	89	96	92
4506	28703 (R)	95	95	96	89	93	93	95	94
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	89	93	105	88	96	88	95	92
4508	28704 (R)	87	90	95	83	89	82	95	89
4509	IR 64 (Yield Check)	88	91	101	84	92	81	95	88
4510	Chitimityalu (Micro-nutrient Check)	95	99	97	83	90	98	96	97
4511	27984	88	95	106	91	99	90	95	93
Exp. Mean		93	97	99	91	95	92	95	93

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Table No. 4.3 Contd.: Days to 50%flowering of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII - SOUTHERN							Overall Mean (25)
		KARNATAKA					KARNATAKA (3)	Z7 (11)	
		@MANDYA	BRAHMAWAR	GANGAVATHI	@SIRSI	MALAGI	Mean	Mean	
4501	28701 (R)	99	106	98	100	100	101	97	97
4502	28714	105	97	106	109	108	104	103	102
4503	BPT 5204 (Yield Check)	103	97	106	104	104	102	102	103
4504	28694 (R)	95	95	97	97	88	93	92	93
4505	28692	94	93	98	101	96	95	93	93
4506	28703 (R)	96	113	97	106	95	102	96	94
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	93	103	93	99	94	97	93	92
4508	28704 (R)	92	67	90	103	98	85	87	88
4509	IR 64 (Yield Check)	94	67	88	105	88	81	87	88
4510	Chittimtyalu (Micro-nutrient Check)	94	111	98	109	100	103	98	101
4511	27984	91	67	97	101	93	85	92	93
Exp. Mean		96	92	97	103	97	95	95	95

Table No. 4.4: Plant Height (cm) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE II - NORTHERN				ZONE III-EASTERN	
		PUNJAB (1)	HARYANA (0)	RAJASTAN (1)	Z2 (2)	ODISHA (0)	
		LUDHIANA	@Karnal (ICAR-CSSRI)	KOTA	Mean	@ICAR-NRRI (Cuttack)	@JEYPORE
4501	28701 (R)	122.00	125.00	108.33	115.17	123.89	112.22
4502	28714		79.00	82.67	82.67	101.44	89.00
4503	BPT 5204 (Yield Check)	107.33	88.50	90.33	98.83	107.78	95.22
4504	28694 (R)	129.00	114.50	114.00	121.50	100.67	114.11
4505	28692	132.67	121.00	118.33	125.50	115.78	115.67
4506	28703 (R)	109.33	90.50	104.33	106.83	109.22	104.44
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	121.00	110.00	110.67	115.83	110.11	107.85
4508	28704 (R)	112.67	99.00	114.00	113.33	97.78	99.69
4509	IR 64 (Yield Check)	115.33	102.00	108.33	111.83	98.78	97.78
4510	Chittimtyalu (Micro-nutrient Check)		82.00	114.33	114.33	112.22	109.06
4511	27984	113.33	92.00	106.00	109.67	95.56	94.00
Exp. Mean		118.07	100.32	106.48	110.50	106.66	103.55

Table No. 4.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE III-EASTERN						
		BIHAR		BIHAR (1)	WEST BENGAL (0)		UTTAR PRADESH	
		BIKRAMGANJ (Dhangain)	@SABOUR	Mean	@CHINSURAH	@HATWARA	@MASODHA	VARANASI
4501	28701 (R)	120.50	123.00	120.50	103.00	126.00	131.00	141.00
4502	28714	103.16	99.33	103.16	91.00	89.00	108.00	90.80
4503	BPT 5204 (Yield Check)	121.00	103.00	121.00	95.67	106.00	107.00	116.90
4504	28694 (R)	119.83	115.00	119.83	97.67	123.00	131.00	116.30
4505	28692	110.33	138.00	110.33	104.33	136.00	115.00	120.70
4506	28703 (R)	123.83	107.00	123.83	101.33	120.00	120.00	110.50
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	115.83	113.67	115.83	103.33	132.00	117.00	117.80
4508	28704 (R)	109.50	97.33	109.50	97.33	104.00	115.00	97.20
4509	IR 64 (Yield Check)	120.50	115.33	120.50	96.67	107.00	126.00	101.40
4510	Chittimtyalu (Micro-nutrient Check)	97.33	111.33	97.33	103.67	131.00	117.00	115.10
4511	27984	113.66	98.67	113.66	94.00	108.00	106.00	96.00
Exp. Mean		114.13	111.06	114.13	98.91	116.55	117.55	111.25

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Table No. 4.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE III-EASTERN		ZONE IV- NORTH EASTERN		ZONE-V – CENTRAL	
		UTTAR PRADESH (1)	Z3 (2)	ASSAM (1)	Z4 (1)	MADHYA PRADESH (1)	CHINSURAH (1)
		Mean	Mean	TITABAR	Mean	WARANASI	RAIPUR
4501	28701 (R)	141.00	130.75	124.00	124.00	136.00	129.83
4502	28714	90.80	96.98	98.60	98.60	111.20	97.23
4503	BPT 5204 (Yield Check)	116.90	118.95	108.33	108.33	107.20	104.18
4504	28694 (R)	116.30	118.07	123.07	123.07	139.20	122.27
4505	28692	120.70	115.52	128.40	128.40	144.20	133.12
4506	28703 (R)	110.50	117.17	115.87	115.87	115.20	111.85
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	117.80	116.82	127.13	127.13	138.00	131.83
4508	28704 (R)	97.20	103.35	103.47	103.47	128.40	116.61
4509	IR 64 (Yield Check)	101.40	110.95	111.00	111.00	133.60	121.57
4510	Chittimutyahu (Micro-nutrient Check)	115.10	106.22	117.87	117.87	116.00	130.35
4511	27984	96.00	104.83	104.40	104.40	1287.60	108.29
Exp. Mean		111.25	112.69	114.74	114.74	232.42	118.83

Table No. 4.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE-V – CENTRAL				ZONE VI – WESTERN				
		MAHARASHTRA 1		MAHARASHTRA 1(2)	Z5 (4)	MAHARASHTRA 2			MAHARASHTRA 2 (3)	MAHARASHTRA (5)
		SAKOLI	SINDEWAHI	Mean	Mean	KARJAT	SHIRGAON	VADAGAON	Mean	Mean
4501	28701 (R)	119.00	119.00	119.00	125.96	147.00	127.07	86.22	120.10	119.66
4502	28714	73.00	84.00	78.50	91.36	111.00	90.40	57.82	86.41	83.24
4503	BPT 5204 (Yield Check)	85.00	103.00	94.00	99.85	129.00	96.27	68.63	97.97	96.38
4504	28694 (R)	107.00	114.00	110.50	120.62	134.00	114.87	85.83	111.57	111.14
4505	28692	122.00	129.00	125.50	132.08	137.00	118.53	92.36	115.96	119.78
4506	28703 (R)	108.00	113.00	110.50	112.01	124.00	103.00	82.67	103.22	106.13
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	124.00	104.00	114.00	124.46	130.00	118.00	97.57	115.19	114.71
4508	28704 (R)	94.00	103.00	98.50	110.50	122.00	105.53	75.91	101.15	100.09
4509	IR 64 (Yield Check)	105.00	118.00	111.50	119.54	129.00	102.80	84.50	105.43	107.86
4510	Chittimutyahu (Micro-nutrient Check)	94.00	106.00	100.00	111.59	136.00	111.33	84.58	110.64	106.38
4511	27984	85.00	93.00	89.00	393.47	120.00	100.00	69.89	96.63	93.58
Exp. Mean		101.45	107.82	104.64	140.13	129.00	107.98	80.54	105.84	105.36

Table No. 4.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VI – WESTERN				ZONE VII- SOUTHERN			
		GUJARAT		GUJARAT (2)	Z6 (5)	ANDHRA PRADESH (1)		TELANGANA	
		NAVASARI	NAWAGAM	Mean	Mean	MARUTERU	RAJENDRANAGAR	WARANGAL	
4501	28701 (R)	143.40	101.00	122.20	120.94	151.93	116.60	150.93	
4502	28714	102.30	101.00	101.65	92.50	110.13	87.07	105.67	
4503	BPT 5204 (Yield Check)	106.00	103.00	104.50	100.58	123.13	86.20	109.53	
4504	28694 (R)	132.10	94.00	113.05	112.16	134.80	91.80	143.00	
4505	28692	140.10	93.00	116.55	116.20	148.47	103.60	157.00	
4506	28703 (R)	124.00	99.00	111.50	106.53	120.40	96.47	139.00	
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	137.90	92.00	114.95	115.09	125.73	101.87	144.27	
4508	28704 (R)	114.80	96.00	105.40	102.85	120.40	90.87	123.53	
4509	IR 64 (Yield Check)	128.30	94.00	111.15	107.72	125.20	95.33	130.27	
4510	Chittimutyahu (Micro-nutrient Check)	118.70	100.00	109.35	110.12	125.73	94.27	135.13	
4511	27984	103.20	93.00	98.10	97.22	115.40	92.73	125.67	
Exp. Mean		122.80	96.91	109.85	107.45	127.39	96.07	133.09	

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Table No. 4.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII- SOUTHERN						
		TELANGANA	TELANGANA (3)	TAMIL NADU		TAMIL NADU (2)	KERALA	
		JAGITYAL	Mean	ADUTHURAI	COIMBATORE	Mean	MONCOMPU	PATTAMBI
4501	28701 (R)	127.60	131.71	106.00	132.67	119.33	110.47	97.00
4502	28714	91.10	94.61	75.00	103.67	89.33	111.63	88.26
4503	BPT 5204 (Yield Check)	99.30	98.34	82.50	108.00	95.25	109.67	90.50
4504	28694 (R)	131.50	122.10	93.00	115.67	104.33	125.47	79.10
4505	28692	119.50	126.70	118.00	136.00	127.00	139.07	94.66
4506	28703 (R)	106.80	114.09	107.00	114.33	110.67	116.20	94.20
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	131.70	125.94	108.50	117.33	112.92	133.70	85.66
4508	28704 (R)	106.60	107.00	78.00	104.33	91.17	110.63	97.00
4509	IR 64 (Yield Check)	116.80	114.13	80.50	107.33	93.92	112.83	86.86
4510	Chittimutyalu (Micro-nutrient Check)	98.20	109.20	82.00	115.33	98.67	114.67	87.86
4511	27984	102.70	107.03	95.80	105.33	100.57	107.50	91.26
Exp. Mean		111.98	113.72	93.30	114.55	103.92	117.44	90.21

Table No. 4.4 Contd.: Plant Height (cm) of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII- SOUTHERN							Overall Mean (25)	
		KERALA (2)	KARNATAKA				KARNATAKA (3)	Z7 (11)		
		Mean	@MANDYA	BRAHMAWAR	GANGAVATHI	@SIRSI	MALAGI	Mean		Mean
4501	28701 (R)	103.73	126.67	80.67	127.50	81.10	108.70	105.62	119.10	121.38
4502	28714	99.95	88.60	84.67	89.00	70.70	96.20	89.96	94.76	93.57
4503	BPT 5204 (Yield Check)	100.08	92.80	96.67	86.50	80.70	100.50	94.56	99.32	101.55
4504	28694 (R)	102.28	113.93	84.33	111.50	81.30	114.00	103.28	111.29	114.79
4505	28692	116.86	119.87	104.67	129.00	99.30	102.20	111.96	122.92	122.88
4506	28703 (R)	105.20	108.53	78.00	92.50	93.50	109.50	93.33	106.76	108.76
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	109.68	130.33	97.67	108.00	96.00	71.00	92.22	111.40	115.65
4508	28704 (R)	103.82	104.87	84.00	103.50	87.20	70.40	85.97	99.02	103.29
4509	IR 64 (Yield Check)	99.85	104.13	77.67	100.50	94.60	87.70	88.62	101.91	107.77
4510	Chittimutyalu (Micro-nutrient Check)	101.26	104.27	88.00	99.50	90.20	97.90	95.13	103.51	107.51
4511	27984	99.38	103.00	97.33	99.50	90.30	73.30	90.04	100.59	148.00
Exp. Mean		103.83	108.82	88.52	104.27	87.72	93.76	95.52	106.42	113.19

Table No. 4.5: Panicles/m2 of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE II				ZONE III-EASTERN	
		PUNJAB (1)	HARYANA (0)	RAJASTAN (1)	Z2 (2)	ODISHA (0)	
		LUDHIANA	@Karnal (ICAR-CSSRI)	KOTA	Mean	@ICAR-NRRI (Cuttack)	@JEYPORE
4501	28701 (R)	260	420	246	253	301	451
4502	28714	.	570	219	219	277	448
4503	BPT 5204 (Yield Check)	306	484	227	266	315	343
4504	28694 (R)	255	475	263	259	325	286
4505	28692	216	525	246	231	297	263
4506	28703 (R)	235	629	279	257	270	311
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	240	373	276	258	292	447
4508	28704 (R)	312	507	246	279	293	426
4509	IR 64 (Yield Check)	295	602	265	280	320	536
4510	Chittimutyalu (Micro-nutrient Check)	.	411	177	177	307	463
4511	27984	293	553	299	296	308	338
Exp. Mean		268	504	249	252	301	392

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Table No. 4.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE III-EASTERN							Z3 (2)
		BIHAR		BIHAR (1)	WEST BENGAL (0)	UTTAR PRADESH		UTTAR PRADESH (1)	
		BIKRAMGANJ (Dhangain)	@SABOUR	Mean	@CHINSURAH	@MASODHA	VARANASI	Mean	
4501	28701 (R)	255	275	255	217	286	239	239	247
4502	28714	285	268	285	220	252	271	271	278
4503	BPT 5204 (Yield Check)	308	309	308	217	234	233	233	271
4504	28694 (R)	288	296	288	211	260	238	238	263
4505	28692	245	160	245	208	234	168	168	206
4506	28703 (R)	303	302	303	199	312	231	231	267
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	269	253	269	217	324	263	263	266
4508	28704 (R)	304	248	304	217	264	241	241	273
4509	IR 64 (Yield Check)	285	260	285	195	268	216	216	251
4510	Chitimityahu (Micro-nutrient Check)	265	279	265	202	204	235	235	250
4511	27984	256	266	256	214	218	273	273	265
Exp. Mean		279	265	279	211	260	237	237	258

Table No. 4.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE IV- NORTH EASTERN		ZONE-V - CENTRAL					
		ASSAM (1)	Z4 (1)	MADHYA PRADESH (1)	CHINSURAH (1)	MAHARASHTRA 1		MAHARASHTRA 1(2)	Z5 (4)
		TITABAR	Mean	WARANASI	RAIPUR	SAKOLI	SINDEWAHI	Mean	Mean
4501	28701 (R)	198	198	297	159	243	187	215	221
4502	28714	208	208	344	239	226	193	210	251
4503	BPT 5204 (Yield Check)	178	178	309	213	226	261	243	252
4504	28694 (R)	252	252	299	199	188	208	198	223
4505	28692	213	213	274	196	237	168	202	219
4506	28703 (R)	236	236	277	171	231	191	211	218
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	227	227	269	153	197	270	234	222
4508	28704 (R)	255	255	282	201	239	244	241	241
4509	IR 64 (Yield Check)	247	247	287	209	242	273	258	253
4510	Chitimityahu (Micro-nutrient Check)	200	200	336	206	266	254	260	266
4511	27984	258	258	259	195	260	306	283	255
Exp. Mean		225	225	294	195	232	232	232	238

Table No. 4.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VI - WESTERN								
		MAHARASHTRA 2			MAHARASHTRA 2 (3)	MAHARASHTRA (5)	GUJARAT		GUJARAT (2)	Z6 (5)
		KARJAT	SHIRGAON	VADAGAON	Mean	Mean	NAVASARI	NAWAGAM	Mean	Mean
4501	28701 (R)	227	130	315	224	220	211	310	261	239
4502	28714	230	125	289	215	213	252	304	278	240
4503	BPT 5204 (Yield Check)	205	195	289	230	235	260	327	293	255
4504	28694 (R)	229	128	184	180	187	190	298	244	206
4505	28692	215	167	163	182	190	181	234	207	192
4506	28703 (R)	218	172	203	197	203	211	298	254	220
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	205	137	298	213	221	170	300	235	222
4508	28704 (R)	235	136	266	212	224	175	339	257	230
4509	IR 64 (Yield Check)	238	135	278	217	233	235	286	260	234
4510	Chitimityahu (Micro-nutrient Check)	222	143	222	195	221	170	295	233	210
4511	27984	230	155	262	216	243	210	257	233	223
Exp. Mean		223	148	252	207	217	206	295	251	225

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Table No. 4.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII - SOUTHERN						
		ANDHRA PRADESH (1)	TELANGANA			TELANGANA (3)	TAMIL NADU	
		MARUTERU	RAJENDRANAGAR	WARANGAL	JAGITYAL	Mean	ADUTHURAI	COIMBATORE
4501	28701 (R)	284	533	364	290	396	292	492
4502	28714	290	560	363	301	408	336	467
4503	BPT 5204 (Yield Check)	297	553	340	287	394	232	517
4504	28694 (R)	290	487	326	303	372	282	450
4505	28692	277	389	327	287	334	336	467
4506	28703 (R)	284	536	344	283	388	323	475
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	286	420	332	296	349	242	458
4508	28704 (R)	321	524	341	321	395	289	483
4509	IR 64 (Yield Check)	315	551	331	334	405	218	417
4510	Chittimutyalu (Micro-nutrient Check)	306	602	336	291	410	260	483
4511	27984	286	622	345	291	419	265	475
Exp. Mean		294	525	341	299	388	279	471

Table No. 4.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII - SOUTHERN					
		TAMIL NADU (2)	KERALA		KERALA (2)	KARNATAKA	
		Mean	MONCOMPU	PATTAMBI	Mean	@MANDYA	BRAHMAWAR
4501	28701 (R)	392	336	440	388	300	352
4502	28714	401	318	427	372	289	218
4503	BPT 5204 (Yield Check)	374	280	417	349	300	264
4504	28694 (R)	366	278	460	369	273	280
4505	28692	401	273	414	344	287	395
4506	28703 (R)	399	320	487	403	307	312
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	350	267	461	364	304	380
4508	28704 (R)	386	287	408	347	324	363
4509	IR 64 (Yield Check)	318	320	414	367	293	336
4510	Chittimutyalu (Micro-nutrient Check)	372	302	510	406	298	388
4511	27984	370	284	439	362	296	303
Exp. Mean		375	297	443	370	297	326

Table No. 4.5 Contd.: Panicles/m² of entries in AVT 2 & AVT 1-Biofort, Kharif 2021

Entry no	IET No	ZONE VII - SOUTHERN					Overall Mean (25)
		KARNATAKA			KARNATAKA (3)	Z7 (11)	
		GANGAVATHI	@SIRSI	MALAGI	Mean	Mean	
4501	28701 (R)	377	324	348	359	373	295
4502	28714	475	337	337	343	372	303
4503	BPT 5204 (Yield Check)	412	294	341	339	358	299
4504	28694 (R)	432	317	365	359	359	287
4505	28692	424	277	348	389	358	274
4506	28703 (R)	304	301	420	345	372	294
4507	DRR Dhan 45 (Yield & Micro-nutrient Check)	326	258	389	365	351	285
4508	28704 (R)	387	320	550	433	389	310
4509	IR 64 (Yield Check)	409	314	493	412	376	305
4510	Chittimutyalu (Micro-nutrient Check)	378	281	561	442	402	309
4511	27984	387	354	398	363	372	304
Exp. Mean		392	307	414	377	371	297

Table No. 4.6: Grain quality characteristics of entries in AVT 2 & AVT 1-Biofort, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
4501	28701	75.0	69.5	66.8	6.71	2.01	3.33	LS	A	3.0	17.04	73
4502	28714	79.3	67.1	62.7	6.34	2.24	2.83	LB	VOC	4.0	23.40	22
4503	BPT 5204	79.0	72.1	67.6	5.23	1.91	2.73	MS	VOC	4.0	24.49	22
4504	28694	80.8	73.8	71.5	6.52	2.22	2.93	LB	VOC	4.0	21.58	55
4505	28692	79.0	68.2	66.3	5.29	1.89	2.79	MS	VOC	4.0	23.73	25
4506	28703	78.1	70.5	68.5	6.83	2.07	3.29	LS	VOC	4.0	21.61	56
4507	DRR Dhan 45	78.4	69.8	56.9	6.53	2.15	3.03	LS	VOC	4.0	22.41	62
4508	28704	80.2	74.4	72.4	6.68	2.09	3.19	LS	VOC	4.0	23.29	49
4509	IR-64	81.7	69.7	63.3	6.40	2.09	3.06	LS	VOC	4.0	24.52	54
4510	Chittimuthyalu	77.1	71.1	69.8	3.91	2.06	1.89	SB	VOC	4.0	22.49	22
4511	27984	76.9	68.7	65.2	6.51	2.11	3.08	LS	VOC	7.0	16.60	50

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length(mm); KB: Kernel Breadth(mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB: Long Bold; SB:Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

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Table No. 4.7: Iron content in ppm for polished rice samples of entries in AVT 2 & AVT 1-Biofort analyzed at IIRR, Hyderabad Kharif 2021

Entry No.	IET No.	II		Zone II MEAN	III					Zone III MEAN	IV	Zone IV MEAN	V			Zone V MEAN
		KTA	LDN		VRN	CTK	JYP	CHN	MSD		TTB		RPR	SKL	SND	
4501	28701 (R)	2.40	2.25	2.33	2.15	1.6	1.70	1.90	1.90	1.85	2.40	2.40	2.00	2.45	2.35	2.27
4502	28714	1.15		1.15	1.95	1.7	1.60	0.90	1.60	1.55	2.20	2.20	1.25	0.95	0.65	0.95
4503	BPT 5204	2.05	2.65	2.35	2.10	1.6	2.10	1.80	3.30	2.18	2.70	2.70	1.45	2.50	1.30	1.75
4504	28694 (R)	1.65	2.40	2.03	2.60	2.5	1.60	1.50	1.90	2.02	2.40	2.40	2.50	3.30	2.05	2.62
4505	28692	1.90	1.60	1.75	2.45	1.4	2.10	1.30	2.30	1.91	1.80	1.80	1.90	1.80	1.75	1.82
4506	28703 (R)	2.00	2.85	2.43	2.95	1.9	2.45	1.20	1.20	1.94	2.60	2.60	3.25	2.55	2.35	2.72
4507	DRR Dhan 45	1.60	1.85	1.73	2.35	1.8	2.25	2.60	2.80	2.36	2.30	2.30	1.80	1.45	1.15	1.47
4508	28704 (R)	1.85	2.40	2.13	2.65	1.6	2.15	1.60	2.20	2.04	2.50	2.50	1.95	2.35	2.05	2.12
4509	IR 64	1.45	1.50	1.48	1.85	1.4	1.80	2.20	2.00	1.85	2.50	2.50	1.60	1.25	1.20	1.35
4510	Chittimutyalu	1.95		1.95	1.75	1.8	3.10	1.80	1.60	2.01	3.90	3.90	2.80	2.30	2.05	2.38
4511	27984	1.20	2.00	1.60	1.95	1.3	2.35	2.30			2.10	2.10	2.45	1.95	1.55	1.98
Mean		1.75	2.17	1.90	2.25	1.69	2.11	1.74	2.08	1.97	2.49	2.49	2.09	2.08	1.68	1.95

Table No. 4.7 Contd.: Iron content in ppm for polished rice samples of entries in AVT 2 & AVT 1-Biofort analyzed at IIRR, Hyderabad Kharif 2021

Entry No.	IET No.	VI			Zone VI MEAN	VII													Zone VII MEAN	Over all MEAN
		KJT	VDN	NVS		MTU	RNR	WGL	JGL	ADT	CBT	PTB	MNC	MND	GNV	BRM	SRS	MLG		
4501	28701 (R)	2.70	1.75	2.20	2.22	1.50	1.05	1.60	1.50	1.40	2.1	2.60	3.20	1.40	1.20	2.25	2.1	5.00	2.07	2.10
4502	28714	2.10	1.20	1.00	1.43	1.90	1.45	1.55	0.90	1.40	1.25	1.50	1.60	1.00	0.70	2.00	0.9	2.10	1.40	1.40
4503	BPT 5204	2.80	1.95	1.60	2.12	1.70	1.50	1.45	1.30	2.20	2.5	2.10	2.50	1.75	1.55	1.95	1	2.80	1.87	2.01
4504	28694 (R)	3.10	2.10	1.85	2.35	2.00	1.10	2.20	1.25	1.40	1.85	2.50	3.75	1.90	1.10	1.50	1.1	2.85	1.88	2.07
4505	28692	2.80	1.20	1.85	1.95	1.55	1.05	1.65	1.25	1.80	1.3	3.00	2.90	1.00	1.00	2.00	1.1	2.75	1.72	1.80
4506	28703 (R)	4.30	2.30	3.25	3.28	2.40	1.80	2.40	1.10	2.10	2.05	2.30	3.20	2.00	1.25	1.30	1	2.75	1.97	2.25
4507	DRR Dhan 45	2.00	1.75	1.80	1.85	1.55	1.15	2.10	1.40	1.60	2.1	2.60	3.15	1.85	1.35	1.65	1.3	2.15	1.84	1.91
4508	28704 (R)	2.40	1.50	1.75	1.88	2.10	1.40	1.55	1.45	1.20	1.85	1.70	2.50	1.60	0.75	2.30	1.4	6.05	1.99	2.03
4509	IR 64	1.70	1.45	1.25	1.47	1.35	1.50	1.55	0.95	1.60	1	2.70	2.70	1.80	0.90	1.70	1.3	1.65	1.59	1.62
4510	Chittimutyalu	2.90	2.75	2.25	2.63	2.50	2.40	2.95	1.85	2.10	1.6	2.20	3.10	2.40	1.75	1.60	1.3	2.20	2.15	2.27
4511	27984	2.40	1.75	2.05	2.07	1.55	1.50	2.25	1.35	1.70	1.25	2.10	2.90	2.00	1.60	1.90	1.3	2.70	1.85	1.90
Mean		2.65	1.79	1.90	2.11	1.83	1.45	1.93	1.30	1.68	1.71	2.30	2.86	1.70	1.20	1.83	1.25	3.00	1.85	1.94

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Table No. 4.8: Zinc content in ppm for polished rice samples of entries in AVT 2 & AVT 1-Biofort analyzed at IIRR, Hyderabad Kharif 2021

Entry No.	IET No.	II		Zone II Mean	III					Zone III Mean	IV		V			Zone V Mean
		KTA	LDN		VRN	CTK	JYP	CHN	MSD		TTB	Mean	RPR	SKL	SND	
4501	28701 (R)	17.75	24.60	21.18	24.95	18.80	16.05	25.10	26.40	22.26	22.50	22.50	20.55	21.40	20.90	20.95
4502	28714	14.85		14.85	20.00	21.00	15.00	19.20	25.90	20.22	18.80	18.80	16.45	18.80	16.40	17.22
4503	BPT 5204	15.30	22.60	18.95	18.15	17.10	15.60	20.40	22.50	18.75	20.10	20.10	15.80	19.00	17.30	17.37
4504	28694 (R)	18.50	25.00	21.75	27.35	19.10	15.10	26.70	26.00	22.85	24.40	24.40	23.35	22.60	24.75	23.57
4505	28692	13.60	20.40	17.00	18.65	19.80	13.75	17.50	23.40	18.62	19.30	19.30	15.40	15.05	13.45	14.63
4506	28703 (R)	18.25	26.75	22.50	26.70	17.20	17.70	25.50	26.00	22.62	21.60	21.60	23.90	22.50	21.40	22.60
4507	DRR Dhan 45	16.20	20.90	18.55	24.45	20.40	13.95	22.80	25.00	21.32	25.10	25.10	20.15	20.00	19.00	19.72
4508	28704 (R)	18.40	22.55	20.48	25.20	18.80	15.80	24.70	26.20	22.14	25.50	25.50	22.10	20.45	19.65	20.73
4509	IR 64	17.60	21.90	19.75	21.90	16.00	14.45	24.70	32.20	21.85	25.40	25.40	20.05	18.00	17.60	18.55
4510	Chittimutyalu	19.10		19.10	20.15	16.80	16.65	20.60	19.80	18.80	18.80	18.80	21.00	18.30	18.20	19.17
4511	27984	18.20	26.80	22.50	29.10	17.90	18.85	28.40		23.56	26.40	26.40	24.70	24.05	21.40	23.38
Mean		17.07	23.50	19.69	23.33	18.45	15.72	23.24	25.34	21.18	22.54	22.54	20.31	20.01	19.10	19.81

Table No. 4.8 Contd.: Zinc content in ppm for polished rice samples of entries in AVT 2 & AVT 1-Biofort analyzed at IIRR, Hyderabad Kharif 2021

Entry No.	IET No.	VI			Zone VI Mean	VII														Zone VII Mean	Over all Mean
		KJT	VDN	NVS		MTU	RNR	WGL	JGL	ADT	CBT	PTB	MNC	MND	GNV	BRM	SRS	MLG			
4501	28701 (R)	21.50	16.75	25.60	21.28	21.10	13.05	16.20	16.80	21.20	19.30	24.20	23.75	16.80	19.10	29.40	22.70	21.00	20.35	21.02	
4502	28714	20.90	16.70	19.35	18.98	19.75	11.20	14.85	14.40	16.40	18.15	20.70	22.75	19.45	17.85	37.85	24.20	21.45	19.92	19.32	
4503	BPT 5204	18.70	15.45	20.70	18.28	19.75	11.40	13.25	15.35	17.90	29.75	30.50	24.20	16.30	16.55	30.15	20.70	19.45	20.40	19.41	
4504	28694 (R)	23.00	20.10	27.15	23.42	22.95	12.40	14.95	20.60	19.30	24.10	20.90	28.55	15.45	18.80	31.50	26.60	27.60	21.82	22.47	
4505	28692	16.20	13.05	16.65	15.30	17.30	9.55	12.85	14.65	17.40	13.40	21.80	23.75	11.85	14.15	26.70	19.40	19.15	17.07	16.97	
4506	28703 (R)	24.70	18.65	22.25	21.87	24.00	13.50	16.10	16.30	20.00	27.75	23.80	28.30	17.50	17.85	29.90	24.90	24.35	21.87	22.12	
4507	DRR Dhan 45	21.20	16.05	22.80	20.02	19.65	10.45	13.10	18.95	18.30	20.10	21.10	26.20	14.55	16.95	33.05	24.00	21.45	19.83	20.22	
4508	28704 (R)	18.50	16.70	24.55	19.92	22.35	11.30	12.80	20.00	21.40	19.90	24.50	27.30	15.75	16.05	35.40	26.10	25.40	21.40	21.38	
4509	IR 64	17.60	12.20	20.60	16.80	20.75	10.00	11.45	16.45	18.50	18.25	21.80	24.35	13.10	14.95	31.95	20.70	20.75	18.69	19.38	
4510	Chittimutyalu	22.60	19.30	24.80	22.23	22.70	12.25	17.05	18.75	18.40	22.75	24.70	27.05	17.15	17.70	31.90	22.40	21.45	21.10	20.40	
4511	27984	20.60	21.75	28.00	23.45	23.40	11.10	15.15	20.75	20.80	26.25	25.90	28.10	18.20	20.15	36.75	28.80	26.65	23.23	23.39	
	Mean	20.50	16.97	22.95	20.14	21.25	11.47	14.34	17.55	19.05	21.79	23.63	25.85	16.01	17.28	32.23	23.68	22.61	20.52	20.55	

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Table No. 4.9: Grain Protein content (%) of milled rice in AVT 2 & AVT 1-Biofort, kharif 2021 at ICAR-NRRI, Cuttack.

Entry No.	IET No.	II	Zone II	III	III	III	III	III	Zone III	V	V	VI	VI	VI	VI	Zone VI	VII	VII	VII	VII	VII	VII	VII	VII	VII	VII	VII	Zone VII	Over
		LDN	Mean	CTK	JYP	BKG	SBR	MSD	Mean	SKL @	SND @	KJT	NVS	NWG	WRS @	Mean	MTU	BPT	RNR	WGL	JGL	ADT	CBT	MND	GNV	BRM	MLG	Mean	all Mean
4501	28701 (R)	9.16	9.16	7.54	6.17	7.52	7.68	7.33	7.25	4.35	4.66	6.84	7.16	9.23	5.53	7.74	8.06	8.14	6.06	8.24	7.02	8.02	7.44	7.05	5.26	9.36	6.52	7.38	7.49
4502	28714			4.31	7.36	7.16	7.83	8.63	7.06	6.15	5.54	8.30	6.62	10.71	5.76	8.54	9.96	11.07	7.97	10.38	8.26	9.59	8.38	8.40	10.38	9.46	8.44	9.30	8.59
4503	BPT 5204	10.23	10.23	10.43	6.69	9.32	6.53	8.62	8.32	6.60	2.94	7.05	6.99	7.52	5.11	7.19	7.91	8.35	6.22	8.20	5.45	10.05	9.98	8.51	5.82	9.71	7.63	7.99	8.06
4504	28694 (R)	7.70	7.70	12.25	6.99	6.43	6.68	7.97	8.06	4.37	5.42	7.46	7.57	8.24	4.73	7.76	7.23	9.23	6.49	10.25	6.62	8.86	9.84	7.52	5.42	7.84	6.58	7.81	7.86
4505	28692	12.35	12.35	4.07	12.49	9.27	7.25	9.48	8.51	6.17	7.02	7.98	8.80	10.03		8.94	7.29	10.73	7.70	10.95	8.06	10.88	11.59	9.37	6.08	11.70	10.13	9.50	9.31
4506	28703 (R)	8.29	8.29	11.40	5.99	7.72	6.35	7.72	7.84	4.06	5.76	5.96	8.53	8.63	5.81	7.71	6.51	9.83	5.95	8.67	5.63	7.61	8.48	7.35	5.48	10.22	7.47	7.56	7.69
4507	DRR Dhan 45	7.82	7.82	8.52	6.57	7.43	6.40	7.44	7.27	3.85	4.47	6.69	7.20	8.05	4.80	7.31	7.95	9.60	5.57	10.17	6.43	8.16	6.89	7.26	4.51	9.95	6.68	7.56	7.46
4508	28704 (R)	6.74	6.74	9.62	6.85	6.53	7.05	8.12	7.63	3.61	5.09	6.66	6.33	8.30	5.13	7.10	7.36	9.76	5.62	7.93	7.13	8.50	7.42	6.69	4.86	9.10	7.94	7.48	7.42
4509	IR 64	7.31	7.31	9.90	6.84	9.33	6.61	7.06	7.95	2.77	3.94	5.35	5.62	7.80	4.82	6.26	7.95	9.41	5.40	10.04	5.59	8.97	6.54	7.20	4.61	8.88	6.52	7.37	7.35
4510	Chittimutyalu			11.64	7.68	6.53		6.82	8.17	4.79	4.18	5.00	8.60	8.92	4.51	7.51	9.38	10.21	7.16	9.10	6.07	9.13	7.98	8.47	6.92	8.78	7.64	8.26	8.11
4511	27984	11.16	11.16	9.74	7.61	6.44	8.49		8.07	6.06	5.99	7.70	8.87	10.22	7.90	8.93	9.82	11.32	6.89	12.49	6.78	9.85	10.67	8.44	7.08	8.95	7.04	9.03	8.92
	Mean	8.97	8.97	9.04	7.39	7.61	7.08	7.92	7.81	4.80	5.00	6.82	7.48	8.88	5.41	7.72	8.13	9.79	6.46	9.67	6.64	9.06	8.66	7.84	6.04	9.45	7.51	8.11	8.02

Procedure: 15g milled sample of rice was used in proximate estimation of grain protein content in calibrated NIR Spectroscopy at ICAR-NRRI, Cuttack

Table No. 4.10: The soil characteristics details of AICRIP centres that conducted AVT 2, AVT 1 and IVT-Biofortification trials during kharif 2021

Centre Name	Soil Sample details	pH (1:2.5 soi:water)	E.C (dS/m)	Iron (ppm)	Zinc (ppm)
Pattambi	Before harvest	5.19	0.13	198.92	3.28
Pattambi	After harvest	5.18	0.10	232.84	3.25
Titabar	Before IVT biofortification	4.65	0.09	124.71	2.69
Titabar	After AVT biofortification	4.59	0.10	119.38	2.70
Mandya	Before planting IVT biofortification-R1	7.91	0.38	57.74	3.57
Mandya	Before planting AVT biofortification-R1	8.03	0.36	98.31	7.12
Mandya	Before planting AVT biofortification-R2	8.03	0.43	83.83	8.57
Rajendranagar	After harvest	7.84	1.37	56.18	2.43
Nawagam	Before Planting IVT	8.22	0.74	74.15	6.73
Nawagam	Before Planting AVT	7.49	1.09	65.89	9.55
Nawagam	After harvest-IVT TP R2	8.60	0.52	46.78	5.18
Nawagam	After harvest-IVT TP R1	8.74	0.49	42.53	5.13
Nawagam	After harvest-AVT TP R1	8.49	0.49	69.17	5.15
Nawagam	After harvest-AVT TP R2	8.39	0.48	65.92	6.81
Jeypore	Before Planting AVT	5.83	0.25	232.84	1.62
Jeypore	After harvest AVT	5.67	0.27	232.84	1.80
Sakoli	Before planting	7.50	0.27	25.74	1.16
Sakoli	Before planting	7.60	0.26	35.56	1.18
Sakoli	After harvest	7.56	0.16	45.76	0.29
Sakoli	After harvest	7.74	0.12	58.64	0.39
Varanasi	Before harvest IVT	7.37	0.24	103.51	4.05
Varanasi	Before harvest AVT	8.43	0.12	33.87	0.47
Varanasi	Before planting IVT Bioforti	7.56	0.30	25.35	1.28
Varanasi	Before harvest	7.58	0.23	232.84	0.94
Varanasi	After planting IVT Bioforti	7.66	0.75	31.57	0.87
Varanasi	After harvest AVT Bioforti	7.71	0.27	21.33	0.85
Varanasi	After harvest AVT Bioforti	7.73	0.21	232.84	7.25
Varanasi	After harvest IVT Bioforti	7.74	0.23	232.84	4.16
Varanasi	After harvest IVT Bioforti	7.72	0.28	232.84	5.34
Moncompu	Before planting	4.72	0.22	21.53	1.29
Moncompu	Before planting -13 AVT	4.42	0.28	78.05	4.31
Moncompu	Before planting -C1	4.74	0.24	232.84	1.48
Moncompu	After harvest IVT	4.41	0.26	18.33	2.20
Raipur	After harvest	8.09	0.24	16.39	0.18
Raipur	After harvest IVT -R1	8.24	0.24	15.08	0.11
Raipur	After harvest IVT -R2	8.27	0.23	14.02	0.01
Chinsurah	Before planting	8.35	0.20	14.39	0.15
Chinsurah	After harvest	8.25	0.17	41.36	3.14
Rudrur	Before planting - IVT	8.18	0.34	73.84	1.39
Rudrur	After harvest - IVT	8.01	0.47	54.99	1.13
Navsari		7.59	0.23	61.91	1.18
Karjat	Before planting - IVT	7.24	0.13	72.35	0.88
Karjat	Before planting - AVT	7.04	0.11	68.80	0.95
Karjat	After harvest - IVT	7.09	0.12	65.21	1.10
Karjat	After harvest - AVT	7.13	0.12	38.95	2.27
Malagi	Before planting - IVT	6.08	0.12	50.46	1.59
Malagi	Normal soil	5.65	0.06	101.14	3.13
Malagi	After harvest - IVT	5.70	0.07	133.27	1.16
Malagi	After harvest - AVT	5.50	0.07	100.64	1.22
Aduthurai	Before planting - AVT	8.08	0.25	118.17	2.52
Aduthurai	Before planting - IVT	7.97	0.27	105.46	2.51
Aduthurai	After harvest - IVT	8.03	0.23	111.61	3.08

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Centre Name	Soil Sample details	pH (1:2.5 soi:water)	E.C (dS/m)	Iron (ppm)	Zinc (ppm)
Aduthurai	After harvest - AVT	7.90	0.24	20.28	8.55
Coimbatore	Before harvest	7.96	0.38	26.11	10.45
Coimbatore	After harvest	7.50	0.14	41.28	3.84
Coimbatore	Before harvest	8.28	0.34	37.06	3.04
Coimbatore	After harvest	8.19	0.35	70.05	4.92
Ludhiana	Before harvest soil sample -1	7.50	0.14	80.06	0.73
Ludhiana	Before harvest soil sample -1	7.29	0.14	147.51	1.55
Ludhiana	Before harvest soil sample -2	7.30	0.17	186.05	2.32
Sirsi	Before harvest AVT-Biofortification - R1	5.98	0.06	73.04	1.01
Sirsi	Before harvest IVT-Biofortification - R1	5.74	0.09	67.06	5.95
Sirsi	Before harvest IVT-Biofortification - R2	5.44	0.07	59.87	6.63
Sirsi	Before harvest AVT-Biofortification - R2	6.14	0.13	70.76	7.57
Cuttack	AVT-Biofortification - R1	6.21	0.26	32.84	2.53
Cuttack	AVT-Biofortification - R2	6.26	0.28	17.72	8.84
Cuttack	AVT-Biofortification - R3	6.25	0.30	32.78	11.05

- Fe- all soils are in high range
- Zn-Except the values marked in red, which are in low range, all others are in high range

Table No. 4.11: Composition of entries in Initial Variety Trial – Biofortification (IVT-Biofort), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT
1stYear of testing:				
4601	29460 (R)	NVSR 522	NVSR-303 / IRRI-AMT-301	SB
4602	29482 (R)	RP 6211-PR / RIL-Q181	PR116 / Ranbir Basmati	MB
4603	29469 (R)	CSR HZR 17 -42	Fedearroz 50 / IR07F287 // IR 45427-2B-2-2B-1-1 / NSIC RC 158 /// Sanhuangzhan No 2 / IR 4630-22-2-5-1-3 // IRRI 123 / IR 77298-14-1-2-10 / 4 / Fedearroz 50 / IR 4630-22-2-5-1-3 // IRRI 123 / Sanhuangzhan No 2 /// IR 77298-14-1-2-10 / NSIC RC 158 // IR 45427-2B-2-2B-1-1 / IR07F287 / 5 / FED	LS
4604	30117	BPT 3141	RP Bio 226 / IRGC 30983	MS
4605	30118	HURS 21-7-IR 105696-1-2-3-1-1-1-B	IR 102831 / SARO 5	LS
4606	30119	NVSR 526	NVSR 303 / IET 22121	MS
4607	30120	BMR-Kajejaya	Variant selection from Kajejaya landrace	SB
4608	30121	NDR 9930111	IR 70803-2-NDR-3-4-15 (CN 843-7-1 / KDML105 // IR 49830-7-1-2-3)	SB
4609	30122	BRR-0185-2-IR 108194-9-1-1-2	IR 106292 / IR 106295	LS
4610	30123	CR 4366-1-IR 128773-4-3-1-2	IR 69428-6-1-1-3-3 / Rajendra Mahsuri	LS
4611	30124	RP 6195-MC/RIL-A147	MTU 1010 / Chittimuthyalu	SB
4612	BPT 5204 (Yield Check)			
4613	29458 (R)	JDP 2520-2-4-1	Selection from K 1528-1-1-2	SS
4614	30125	HURS21-6-IR 08195-3-1-1-2	IR 106293 / IR 106294	LS
4615	29484 (R)	RP 6204-MB/RIL-J159	MTU 1010 / BR 2655	SS
4616	30126	RP 6112-MS-M-140-99-22-6-9-11-3	BPT 5204 Mutant	LS
4617	30127	MTU 1380	MTU 1010 / FL 478 // * 2 MTU 1010	LB

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Entry No.	IET No.	Designation	Cross combination	GT
4618	30128	RP5507-JBB-B-687-3-1-1-1-1	Swarna / IRGC 63248 // Swarna Sub 1	LB
4619	30129	R-RHZ-IA-99	IBD / Abhaya	SB
4620	30130	CR 4351-14398-68-1	Chakhaoaubi / Swarna sub-1	LS
4621	30131	RP 5507-JBB-B-680-1-1-1-1	Swarna / IRGC 63248 // Swarna Sub 1	LB
4622	30132	CSR HZR 23-1	IR 68144-2B-2-2-3-1-166 / Joryeongbyeoo // BR 802-118-4-2 (BRRI Dhan 29) /// Basmati 370 (ACC 6426) / 4 / IR 72967-12-2-3 / 5 / IR05A193 / IR 75862-206-2-8-3-B // II 69428-6-1-1-3-3 /// IR 05A199 / Joryeongbyeoo // IR 69428-6-1-1-3-3 / 4 / IR 00A117 / 6 /IR 07F289 / 29 IR 69428-6-1-1-3-3 // IR 09	LS
4623	30133	NVSR 3136	Jaya / Lal Kada	LB
4624	30134	CR 4103-5-B-1-1	CR Dhan 311 / Kalinga III // Satabdi	SB
4625	IR 64 (Yield Check)			
4626	29465 (R)	CSR HZR 17-8	Fedearroz 50 / IR 77298-14-1-2-10 // IRR123 / IR07F287 /// Sanhuangzhan No 2 / NSIC RC 158 // IR 45427-2B-2-2B-1-1 / IR 4630-22-2-5-1-3 / 4 / IRR1 123 / Sanhuangzhan No 2 // IR 77298-14-1-2-10 / IR07F287 /// NDIC RC 158 / IR 4630-22-2-5-1-3 // Fedearroz 50 / IR 45427-2B-2-2B-1-1 / 5 / FED	MS
4627	30135	BPT 3140	MTU 7029 / IRGC 18195 / MTU 1081	MS
4628	30136	HURS-21-3-IR128773-4-4-2-3-B	IR 69428-6-1-1-3-3 / Rajendra Mahsuri	LB
4629	30137	NVSR 527	NVSR 303 / GNR-2	LB
4630	30138	BRR-0184-1-IR 108194-9-1-2-1	IR 106292 / IR 106295	LS
4631	30139	ORR 1809	Sahabhadridhan / Subhadra	LS
4632	30140	RP 5507-680-4-2-2-1-1	Swarna / IRGC 63248 // Swarna Sub1	LB
4633	30141	NVSR 3148	IR 28 / Lal Kada	SB
4634	30142	CR 2829-PLN-39	ARC 10075 / Naveen	MS
4635	30143	RP5401-JBB-B-622-3-1-1-1-1	Swarna / IRGC 63248 // DSB 3	MS
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)			
4637	30144	BPT 3143	RP Bio 226*1 / IRGC 48493	MS
4638	30145	NVSR 784	NVSR 303-14 / NAUR-1	LB
4639	30146	CR 4365-1-IR 128768-7-2-2-5	IR 68144-2B-2-2-3-1-166 / SambhaMahsuri	MS
4640	30147	RP 5507-JBB-B-683-1-1-1-1	Swarna / IRGC 63248 // Swarna Sub 1	LS
4641	30148	RP 6204-MB/RIL-J65	MTU 1010 / BR 2655	SS
4642	30149	CRAC 3994-2-5-1	Doubled haploid of CRHR 32	LS
4643	30150	RP 6112-SP-M-MS-70-52-2-6-9-8-6-11	BPT 5204 Mutant	MS
4644	30151	RP 6197-RJ/RIL-C50	RP Bio-226 / Jalpriya	LS
4645	30152	RP 6515-IR 128773-4-3-1-3	IR 69428-6-1-1-3-3 / Rajendra Mahsuri 1	LS
4646	30153	RP5507-JBB-B-680-2-1-1-1-1	Swarna / IRGC 63248 // Swarna Sub 1	LS
4647	30154	OR (CZ)-112	HH-25-DT-20 / Chakhao	LB
4648	30155	CR 4341-18266-1-4-2	CR Dhan 801 / CR Dhan 310	MS
4649	30156	RP 6196-PC/RIL-B162	PR 116 / Chittimuthyalu	SB
4650	30157	RP5507-JBB-B-687-2-1-1-1-1	Swarna / IRGC 63248 // Swarna Sub 1	LB
4651	30158	RP 6253-MV/RIL-MV 208	MTU 1010 / Varadhan	SB
4652	30159	RP6514-IR128768-7-2-2-4	IR 68144-2B-2-2-3-1-166 / Samba Mahsuri	SS
4653	30160	RP 4993-BC/RIL-Z102	BPT 5204 / Chittimuthyalu	MS
4654	Chittimuthyalu (Micro-nutrient Check)			
4655	30161	BRR 2182	IR 68144-2B-2-2-3-1-166 / IR 08N121// IR 69428-6-1-1-3-3/Chierang	MS

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Table No. 4.12: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - Biofort, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN									ZONE III-EASTERN		
		HARYANA			RAJASTHAN			Z2 (2)			BIHAR		
		Karnal (ICAR-CSSRI)			KOTA			Mean			BIKRAMGANJ (Dhanganj)		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4601	29460 (R)	4170		110	5818		106	4994		108	5210		102
4602	29482 (R)	4360		103	5452		105	4906		104	3061		89
4603	29469 (R)				7181	1 *	104	7181	1 *	104	3923		82
4604	30117	3090		75	4721		105	3906		90	5544	10	103
4605	30118	3600		75	5552		94	4576		85	3581		80
4606	30119	2790		102	6416	8	95	4603		98	4134		97
4607	30120	3680		108	6350	10	98	5015		103	4152		108
4608	30121	3650		113	4820		105	4235		109	5851	6	103
4609	30122	5610		113	6782	3	96	6196	9	104	4773		87
4610	30123	6420	3	98	6981	2	94	6701	3 *	96	4813		92
4611	30124	5760		97	6682	5	96	6221	8	96	5193		93
4612	BPT 5204 (Yield Check)	3940		120	4056		104	3998		112	4621		104
4613	29458 (R)	3160		89	4255		94	3708		91	3260		92
4614	30125	4900		84	5685		95	5293		89	4523		83
4615	29484 (R)	3530		120	5585		105	4558		113	4175		102
4616	30126	2850		103	5053		103	3952		103	5191		94
4617	30127	6780	2	93	6782	3	102	6781	2 *	97	4932		79
4618	30128	4660		100	5419		97	5040		98	3588		90
4619	30129	3760		103	5984		98	4872		101	6444	3 *	83
4620	30130	2510		99	4089		104	3300		102	3488		91
4621	30131												
4622	30132	6130	9	108	5851		104	5991		106	5490		101
4623	30133	3660		101	5818		96	4739		98	5537		92
4624	30134	3170		105	4388		108	3779		107	5053		94
4625	IR 64 (Yield Check)	5590		100	6051		100	5821		100	5046		87
4626	29465 (R)	6180	8	93	5386		94	5783		94	5155		83
4627	30135	3500		95	5253		98	4377		97	4811		92
4628	30136	6290	6	97	6316		94	6303	6	95	6490	2 *	92
4629	30137	5910	10	100	6077		93	5994		96	5047		92
4630	30138	6340	5	91	6449	7	100	6395	4	95	4870		85
4631	30139	3000		124	4488		103	3744		114	4705		109
4632	30140	5220		100	6084		94	5652		97	4846		93
4633	30141	2620		91	5585		95	4103		93	3500		82
4634	30142	2940		99	4588		104	3764		102	6111	5 *	90
4635	30143	5110		100	4122		105	4616		102	4868		102
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	4010		100	6184		97	5097		98	5155		120
4637	30144	3230		108	4056		106	3643		107	4512		100
4638	30145	3210		103	6237		103	4724		103	5548	9	102
4639	30146	3270		77	4342		93	3806		85	3191		80
4640	30147	5030		104	5918		96	5474		100	4929		92
4641	30148	4460		96	5851		98	5156		97	4083		92
4642	30149	3590		102	5452		95	4521		98	5469		92
4643	30150	4640		120	5120		104	4880		112	6539	1 *	102
4644	30151	4460		105	5918		105	5189		105	6228	4 *	89
4645	30152	6350	4	98	6316		96	6333	5	97	5549	8	87
4646	30153												
4647	30154	5150		101	6516	6	100	5833		100	4519		93
4648	30155	3830		96	5386		92	4608		94	3828		81
4649	30156	2940		118	4721		108	3831		113	3714		109
4650	30157	6900	1 *	97	5253		97	6077	10	97	5789	7	92
4651	30158	3410		71	5718		97	4564		84	3488		81
4652	30159	4380		74	4255		101	4318		87	3654		79
4653	30160	4460		96	5120		103	4790		99	3389		92
4654	Chittimutyalu (Micro-nutrient Check)	2520		123	4122		107	3321		115	3352		101
4655	30161	6210	7	92	6383	9	102	6297	7	97	5168		86
Exp. Mean		4364.04		100	5528.03		100	4972.61		100	4718.68		92
F Value		8.89(p<0.0001)S			7.56(p<0.0001)S			11.46(p<0.0001)S			10.74(p<0.0001)S		
CD		1209.48			886.9			824.93			803.84		
CV%		13.8			8			8.27			8.49		
D/S		30-06-2021			05-07-2021						03-07-2021		
D/P		02-08-2021			02-08-2021						01-08-2021		
Local Check Name											R. Kasturi		
For promotion of entries													
* For varietal entries:													
# For hybrid entries:													
In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.													

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Table No. 4.12 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - Biofort, Kharif 2021

Entry No	IET No	ZONE III-EASTERN												ZONE-V - CENTRAL		
		BIHAR			UTTAR PRADESH						Z3 (4)			CHHATTISGARH		
		SAROUR			MASODHA			VARANASI			Mean			RAIPUR		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4601	29460 (R)	5081		102	4987		102	4635		99	4978		101	5342		96
4602	29482 (R)	3811		92	2926		96	3302		89	3275		91	4388		85
4603	29469 (R)	5313		87	2560		106	5917	5	86	4428		90	4574		79
4604	30117	4578		103	2360		114	4000		98	4121		104	5240		95
4605	30118	6490	7	82	3059		102	4354		77	4371		85	4188		78
4606	30119	5065		100	2061		85	4281		95	3885		94	4382		91
4607	30120	4985		102	5785	10	101	5083		99	5001		102	5424	8	92
4608	30121	5319		105	6051	3	111	5021		101	5561	5	105	5741	3	93
4609	30122	4982		89	4521		96	4823		84	4775		89	3862		81
4610	30123	4887		90	4854		98	5510	10	89	5016		92	4992		84
4611	30124	4569		96	5319		118	4521		99	4901		101	5257		86
4612	BPT 5204 (Yield Check)	6357	9	115	5984	4	104	4021		97	5246	10	105	5471	6	104
4613	29458 (R)	4510		93	1735		102	917		98	2606		96	3850		86
4614	30125	6968	2	82	3324		93	5250		82	5016		85	4707		80
4615	29484 (R)	3924		104	4754		104	4021		102	4219		103	4592		96
4616	30126	6538	6	105	2660		109	4052		92	4610		100	5386		86
4617	30127	6775	5	86	3191		85	5302		84	5050		83	5037		81
4618	30128	4455		94	2926		121	5740	7	91	4177		99	4983		84
4619	30129	6784	4	81	3125		97	6229	3	82	5646	4	86	4191		79
4620	30130	3926		95	2128		120	4979		90	3630		99	4662		82
4621	30131															
4622	30132	5600		106	5585		93	5323		98	5500	6	99	4531		84
4623	30133	4002		95	5918	5	99	4344		92	4950		94	4666		87
4624	30134	5472		103	3657		112	4010		90	4548		99	5483	5	86
4625	IR 64 (Yield Check)	4271		91	4255		110	4896		91	4617		95	5142		83
4626	29465 (R)	5313		88	4987		106	4042		83	4874		90	3289		79
4627	30135	4229		95	5386		102				4809		96	4604		88
4628	30136	3995		91	5718		108	4000		95	5051		96	4755		82
4629	30137	4755		93	2926		107	4906		90	4409		95	4290		83
4630	30138	4988		84	4189		109	5458		83	4876		90	4634		74
4631	30139	4225		85	3125		108	5479		98	4384		100	3432		108
4632	30140	4675		92	5785	10	103	4750		90	5014		94	5388	10	85
4633	30141	6817	3	85	3338		105	4115		83	4443		88	4233		80
4634	30142	4706		93	4987		101	5313		100	5279	9	96	5398	9	86
4635	30143	5676		101	2660		116	4073		100	4319		104	5041		88
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	4881		92	4521		108	5823	6	92	5095		103	4705		85
4637	30144	4430		105	4388		109	4542		101	4468		103	5023		97
4638	30145	6343	10	103	5785	10	106	7063	1 *	100	6185	1 *	102	5146		97
4639	30146	4385		82	6184	2	105	4031		79	4448		86	3838		76
4640	30147	3415		94	5020		90	4208		89	4393		91	4863		91
4641	30148	4602		91	5851	7	104	4000		88	4634		93	4332		83
4642	30149	5093		95	3324		103	5729	8	91	4904		95	5839	2	86
4643	30150	7632	1 *	107	3723		118	6792	2	106	6172	2 *	108	4971		99
4644	30151	4688		104	5785	10	114	5260		97	5490	7	101	4944		90
4645	30152	6411	8	94	3657		88	5615	9	90	5308	8	89	5003		86
4646	30153															
4647	30154	5165		104	3590		103	5229		94	4626		98	5584	4	91
4648	30155	5526		86	2660		109	4917		81	4233		89	5842	1	79
4649	30156	3276		92	2327		108	4000		100	3329		102	3880		96
4650	30157	4820		94	6316	1	104	6052	4	91	5744	3 *	95	4894		86
4651	30158	5225		108	2327		103	4094		81	3784		93	3633		74
4652	30159	4077		108	5851	7	90	4042		80	4406		89	3733		76
4653	30160	4567		91	2194		108	4010		94	3540		96	4832		83
4654	Chittimutyalu (Micro-nutrient Check)	3734		102	3191		95	813		108	2773		101	4633		90
4655	30161	3327		117	5851	7	107	4927		83	4818		98	5461	7	83
Exp. Mean		5012.07		95	4139.03		104	4688.7		91	4640.19		96	4760.64		86
F Value		8.51(n<0.0001)S			37.19(n<0.0001)S			6.79(n<0.0001)S			19.66(n<0.0001)S			2.61(n=0.0004)S		
CD		974.38			638.68			1199			467.95			1100.11		
CV%		9.69			7.69			12.74			5.03			11.52		
D/S		02-07-2021			08-07-2021			01-07-2021						30-06-2021		
D/P		29-07-2021			31-07-2021			30-07-2021						15-07-2021		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - Biofort, Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL									ZONE VI - WESTERN					
		MAHARASHTRA 1						Z5(3)			MAHARASHTRA					
		SAKOLI			SINDHEWAHI			Mean			KARJAT			VADAGAON		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
4601	29460 (R)	3188		106	3892		111	4141		104	5781	6	97	4183		103
4602	29482 (R)	3581		89	4020		102	3996		92	4948		92	4335		90
4603	29469 (R)	4461		84	4261		96	4432		86	4271		86	4998		88
4604	30117	3448		98	3516		91	4068		95	5240		95	5026	9	97
4605	30118	4574		80	3714		111	4159		89	4167		80	5564	1	83
4606	30119	3270		101	3551		104	3734		98	3698		90	3838		98
4607	30120	4386		101	3849		114	4553		102	5521	10	93	4846		101
4608	30121	4729		99	5199	2	108	5223	2	100	6354	3	95	5150	5	101
4609	30122	4235		86	4205		98	4101		88	5417		84	5026	9	88
4610	30123	4218		89	4034		98	4415		90	4115		92	4598		88
4611	30124	3557		87	4347		105	4387		92	4688		93	5178	4	95
4612	BPT 5204 (Yield Check)	3351		107	3331		111	4051		107	5208		104	3673		108
4613	29458 (R)	3524		85	2720		100	3365		90	3573		92	3769		88
4614	30125	3418		83	3494		88	3873		84	5625	9	84	5039	7	88
4615	29484 (R)	3852		94	3359		109	3934		100	3906		106	3686		100
4616	30126	4652		91	4631		99	4890	7	92	5000		92	4805		95
4617	30127	5235	4 *	85	4886	6	90	5053	5	85	6354	3	86	5026	9	88
4618	30128	5235	4 *	89	4339		104	4852	8	92	5115		90	4266		87
4619	30129	6105	2 *	81	4957	5	91	5084	4	83	6354	3	81	3686		80
4620	30130	4626		87	4695	9	93	4661		87	4167		90	4280		86
4621	30131										4927		96			
4622	30132	3965		95	4197		110	4231		96	5250		93	4584		100
4623	30133	3600		93	4020		100	4095		93	4271		89	4170		91
4624	30134	3644		94	3892		102	4340		94	4167		93	4335		103
4625	IR 64 (Yield Check)	4226		86	4567		95	4645		88	5417		90	4101		91
4626	29465 (R)	5112	6 *	84	4723	8	91	4375		85	5010		87	4611		89
4627	30135	3757		91	4219		114	4193		98	5469		93	3838		95
4628	30136	5270	3 *	89	5099	3	93	5041	6	88	5365		91	4321		91
4629	30137	4994	7 *	88	5234	1	99	4839	9	90	4271		90	4446		95
4630	30138	4209		81	4460		86	4434		80	4167		84	4197		89
4631	30139	3432		109	4382		114	3749		110	3354		108	4915		100
4632	30140	4878	8	88	5036	4	96	5101	3	89	4896		87	4460		99
4633	30141	3191		85	3260		97	3561		87	4063		86	4101		88
4634	30142	3674		92	3991		111	4354		96	5000		94	4998		98
4635	30143	3958		100	4183		107	4394		98	5677	8	97	3535		104
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	3591		89	4567		101	4288		91	5104		92	4750		95
4637	30144	3304		99	3587		105	3971		100	5354		96	4142		98
4638	30145	3153		95	4233		115	4177		102	5208		101	5136	6	106
4639	30146	3378		83	3920		95	3712		84				3562		110
4640	30147	4731	10	89	3949		100	4514		93	4635		93	4101		103
4641	30148	4470		85	3643		97	4148		88	4479		89	3590		92
4642	30149	3730		91				4785	10	88	7083	1 *	90	4308		91
4643	30150	4304		106	4226		114	4500		106	5698	7	106	4639		104
4644	30151	3400		95	3565		108	3970		98	3813		94	5288	3	99
4645	30152	4108		88	4233		90	4448		88	5260		91	4183		93
4646	30153										4896		106			
4647	30154	3636		98	3565		106	4262		98	5260		99	4294		95
4648	30155	4091		83	3991		92	4641		84	4323		84	4722		86
4649	30156	3644		101	3587		120	3704		105	4167		101	3645		98
4650	30157	4234		90	4744	7	100	4624		92	4844		94	4805		89
4651	30158	3678		78	3551		93	3621		81	3021		86	4625		85
4652	30159	3591		80	3317		97	3547		84	2500		83	3645		81
4653	30160	4852	9	85	3516		102	4400		90	4896		90	3907		86
4654	Chittimutyalu (Micro-nutrient Check)	3314		107	3374		120	3774		106	2708		101	3700		95
4655	30161	6113	1 *	83	4666	10	90	5413	1 *	85	6042	5	90	5385	2	85
Exp. Mean		4092.01		91	4086.54		101	4317.45		93	4816.55		92	4415.28		94
F Value		8.74(p<0.0001)S			1.65(p=0.0385)S			4.27(p<0.0001)S			7.04(p<0.0001)S			2.84(p<0.0001)S		
CD		691.41			1252.41			638.28			973.53			911.15		
CV%		8.42			15.27			7.37			10.08			10.28		
D/S		28-06-2021			01-07-2021						28-06-2021			29-06-2021		
D/P		28-07-2021			27-07-2021						25-07-2021			28-07-2021		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - Biofort, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN						ZONE VII – SOUTHERN								
		GUJARAT			Z6 (3)			ANDHRA PRADESH						TELANGANA		
		NAVASARI			Mean			MARUTERU			BAPATLA			RAJENDRANAGAR		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4601	29460 (R)	3977		97	4647		99	9627		86	4962	8	100	7348	1	104
4602	29482 (R)	4851		83	4711		88	4374		81	3488		91	5623		98
4603	29469 (R)	4735		80	4668		84	7726		83	4211		92	6055		98
4604	30117	3977		85	4748		92	7121		87	4493		93	5265		103
4605	30118	4955	8	73	4895		78	4535		77	4216		92	4299		95
4606	30119	5005	7	83	4180		90	6289		87	3400		88	2076		98
4607	30120	4198		96	4855		96	10936	3 *	91	5336	3	96	4148		104
4608	30121	4038		99	5181	6	98	9805		96	4447		97	5869		104
4609	30122	5299	4	74	5247	4 *	82	8141		81	5364	1	86	5580		98
4610	30123	4078		83	4264		88	9091		83	3219		94	6657	7	98
4611	30124	3853		85	4573		91	9990		86	4494		92	6966	5	98
4612	BPT 5204 (Yield Check)	3753		105	4211		105	8539		109	5200	4	91	5267		111
4613	29458 (R)	4192		80	3845		86	5870		80	3278		88	2350		98
4614	30125	5992	2 *	74	5552	1 *	82	5918		77	3367		94	7251	3	98
4615	29484 (R)	3616		103	3736		103	6848		98	3491		97	3367		109
4616	30126	5008	6	87	4938	9	91	10005		90	4956	9	91	6348	10	104
4617	30127	4636		79	5339	3 *	84	5842		78	4421		97	7310	2	98
4618	30128	4268		87	4550		88	10352	8	81	4876		97	3793		102
4619	30129	6380	1 *	75	5473	2 *	78	8057		77	3562		89	4765		86
4620	30130	4000		93	4149		89	9919		83	4036		92	3301		104
4621	30131				4927	10	96									
4622	30132	4418		95	4751		96	8364		90	4257		95	6480	9	106
4623	30133	4063		87	4168		89	6822		82	4843		86	3077		98
4624	30134	3724		86	4075		94	7334		87	4947	10	94	5897		104
4625	IR 64 (Yield Check)	4478		79	4665		86	7092		81	4446		96	6495	8	98
4626	29465 (R)	3991		83	4537		86	5618		80	4444		92	5086		98
4627	30135	4884	9	87	4730		91	6445		83	5152	5	91	5566		104
4628	30136	4223		89	4636		90	5246		85	4044		98	6015		102
4629	30137	3484		83	4067		89	8616		84	3980		96	4569		98
4630	30138	4136		72	4167		81	9678		80	3906		88	4793		98
4631	30139	3609		105	3959		104	8702		103	4750		91	2519		109
4632	30140	3514		88	4290		91	7274		85	5071	7	93	5234		102
4633	30141	4369		77	4178		83	3696		77	3143		86	5033		95
4634	30142	3555		82	4518		91	8427		85	4184		92	5943		104
4635	30143	3896		98	4369		99	10269	9	93	4516		96	5594		104
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	4157		89	4670		92	9391		83	3263		84	5763		101
4637	30144	3672		94	4389		96	5772		88	5084	6	95	5251		102
4638	30145	5044	5	91	5129	8	99	10962	2 *	93	4012		84	5956		107
4639	30146	4856	10	73	4209		91	5471		75	4197		88	2810		87
4640	30147	4233		83	4323		93	3710		83	4672		95	6271		105
4641	30148	5447	3	81	4505		87	5471		82	4777		94	5971		98
4642	30149	4068		87	5153	7	89	10127	10	85	3989		90	6310		98
4643	30150	3575		99	4637		103	10704	4	97	5362	2	95	5819		105
4644	30151	4130		95	4410		96	11020	1 *	90	4541		93	7190	4	103
4645	30152	4343		83	4595		89	9678		82	4519		88	6791	6	101
4646	30153				4896		106									
4647	30154	3605		95	4386		96	10691	5	92	4042		88	4497		104
4648	30155	4577		78	4541		82	9517		78	4391		96	3045		98
4649	30156	3643		101	3818		100	8099		92	4860		96	3385		109
4650	30157	3618		78	4422		87	5045		81	4301		97	5447		98
4651	30158	4732		73	4126		81	10410	7	77	3474		89	2122		103
4652	30159	4109		72	3418		79	2627		73	3749		92	2322		103
4653	30160	4173		85	4325		87	9845		83	4653		95	2412		104
4654	Chittimutyalu (Micro-nutrient Check)	4516		94	3641		97	10564	6	94	3324		91	3993		104
4655	30161	4284		86	5237	5 *	87	6820		80	4380		96	4357		98
Exp. Mean		4300.69		86	4520.58		91	7896.06		85	4303.61		92	5012.32		101
F Value		3.35(p<0.0001)S			6.38(p<0.0001)S			17.87(p<0.0001)S			2.17(p=0.0030)S			8.58(p<0.0001)S		
CD		981.19			517.4			1481.36			1187.19			1449.82		
CV%		11.37			5.71			9.35			13.75			14.41		
D/S		02-07-2021						09-07-2021			18-08-2021			30-06-2021		
D/P		22-07-2021						05-08-2021			15-09-2021			29-07-2021		
Local Check Name														RNR 31668		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - Biofort, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN											
		TELANGANA			TAMIL NADU			KERALA			KARNATAKA		
		WARANGAL			COIMBATORE			MONCOMPU			MANDYA		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4601	29460 (R)	4107		104	6031	10	99	5628	9	86	4030		100
4602	29482 (R)	6001	6	93	4107		86	4048		90	3719		105
4603	29469 (R)	6028	5	101	6497	6	93	4836		85	4459		105
4604	30117	5842	9	102	5259		96	4074		98	4896		113
4605	30118	4920		77	4264		84	4925		80	3563		96
4606	30119	4386		92	3528		90	4265		83	3652		103
4607	30120	3743		101	4667		95	5342		98	3504		118
4608	30121	3586		111	6714	3	96	6747	2	110	3689		114
4609	30122	5056		92	4943		86	4687		84	3481		103
4610	30123	6083	4	94	5518		91	5568		83	3941		107
4611	30124	5534		102	4107		89	5056		84	4200		106
4612	BPT 5204 (Yield Check)	4091		117	5785		105	6634	3	106	4696		112
4613	29458 (R)	3355		92	5507		79	2425		100	2193		93
4614	30125	4832		89	4609		89	5574		102	5037		102
4615	29484 (R)	3882		115	5126		94	2854		85	3141		108
4616	30126	4756		105	3991		92	4687		80	5244	8	106
4617	30127	7836	1 *	92	5527		93	4783		100	5933	2	100
4618	30128	4251		99	5314		94	4675		86	5007		109
4619	30129	6957	2	84	3807		79	3914		83	1963		96
4620	30130	3734		100	5445		88	3243		85	3037		105
4621	30131												
4622	30132	4681		104	6624	4	95	6759	1	96	4474		103
4623	30133	3743		94	4676		84	4586		90	3444		107
4624	30134	5782	10	108	6057	9	96	6128	5	94	5304	6	108
4625	IR 64 (Yield Check)	5338		99	5526		88	4354		92	4933		106
4626	29465 (R)	4466		94	6324	7	86	5247		84	4304		102
4627	30135	6895	3	96	6243	8	95	5861	7	86	4222		104
4628	30136	5292		101	4206		89	5272		85	3222		97
4629	30137	3830		95	4872		86	4967		86	4867		101
4630	30138	5410		92	3813		85	5266		91	3933		105
4631	30139	5762		107	3845		85	4408		97	5207	9	108
4632	30140	5206		100	6818	2	95	4074		86	5089	10	105
4633	30141	3589		87	2256		76	3345		78	3533		107
4634	30142	5732		100	6552	5	92				5259	7	110
4635	30143	3588		107	4811		105	6098	6	95	4644		111
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	5935	8	96	4903		88	5253		86	5830	3	103
4637	30144	5175		104	4100		93	5306		102	4674		106
4638	30145	3740		106				5033		90	4504		114
4639	30146	4232		76	2418		86	2967		76	3311		97
4640	30147	4042		99	5247		94	3717		97	5956	1	113
4641	30148	5343		94	5431		91	4306		89	3511		107
4642	30149	3677		100	4842		93	5582	10	83	4096		116
4643	30150	5424		111	6873	1 *	95	6134	4	90	5689	4	121
4644	30151	4542		104	5913		97	5396		94	4030		116
4645	30152	6001	6	93	4625		90	4979		86	4970		106
4646	30153												
4647	30154	4899		102	5838		95	5300		98	2911		111
4648	30155	4101		93	4073		86	4360		84	2378		104
4649	30156	4247		109	3706		90	4158		110	4133		115
4650	30157	3594		93	5247		92	5711	8	97	5556	5	113
4651	30158	4474		84	3857		84	3896		84	2793		92
4652	30159	3289		74	3649		84	2597		79	2356		91
4653	30160	3838		92	3648		86	2707		84	2570		90
4654	Chittimutvalu (Micro-nutrient Check)	3732		102	2657		83	3336		85	4333		105
4655	30161	5268		93	4317		85	3872		85	3459		101
Exp. Mean		4789.58		97	4898.25		90	4710.39		90	4129.84		105
F Value		6.42(p<0.0001)S			9.34(p<0.0001)S			4.81(p<0.0001)S			19.53(p<0.0001)S		
CD		1197.87			1044.76			1386.5			641.25		
CV%		12.46			10.62			14.66			7.74		
D/S		02-07-2021			23-08-2021			19-07-2021			02-07-2021		
D/P		03-08-2021			20-09-2021			13-08-2021			27-07-2021		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - Biofort, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									Overall Mean(21)		
		KARNATAKA						77 (9)					
		MUGAD			GANGAVATHI			Mean					
		GY	R	DEF	GY	R	DEF	GY	R	DEF	GY	R	DEF
4601	29460 (R)	5895		108	6077		104	5967	7	99	5237	10	101
4602	29482 (R)	4747		114	6071		90	4686		94	4343		93
4603	29469 (R)	4316		106	6109		92	5582		95	5122		91
4604	30117	6207	6	120	6628		97	5532		101	4787		98
4605	30118	4653		103	5276		84	4517		87	4498		86
4606	30119	5260		102	5365		98	4247		93	4129		94
4607	30120	5619		104	6500		99	5533		100	5145		101
4608	30121	5210		106	5814		98	5765		104	5419	6 *	103
4609	30122	4787		126	6846		89	5432		94	5163		91
4610	30123	5259		118	8154	4 *	93	5943	8	96	5380	9 *	93
4611	30124	6885	2 *	123	8609	1 *	96	6205	2 *	97	5465	4 *	96
4612	BPT 5204 (Yield Check)	5170		115	6596		110	5775		108	5035		107
4613	29458 (R)	4234		105				3652		92	3434		91
4614	30125	5679		123	7846	5	89	5568		96	5192		89
4615	29484 (R)	3135		116	5673		101	4169		102	4120		103
4616	30126	5931	10	113	6897		99	5868	10	98	5173		97
4617	30127	6402	5	111	8449	2 *	90	6278	1 *	95	5783	1 *	90
4618	30128	6560	4 *	126	6141		97	5663		99	5046		96
4619	30129	5360		105	5750		79	4904		86	5149		86
4620	30130	3257		99				4497		94	4176		94
4621	30131	3076		85	3603		89	3340		87	3869		90
4622	30132	7541	1 *	113	6410		100	6177	4	100	5548	3 *	99
4623	30133	5183		108	4859		88	4581		93	4538		93
4624	30134	5421		108	5846		97	5857		99	4939		98
4625	IR 64 (Yield Check)	4366		114	7071	9	100	5513		97	5127		94
4626	29465 (R)	4816		121	7657	6	89	5329		94	5036		91
4627	30135	5267		113	6551		97	5800		96	5108		96
4628	30136	5227		109	7199	7	99	5080		96	5122		94
4629	30137	4256		105	5327		87	5032		93	4839		93
4630	30138	3171		109	6506		88	5164		93	4980		89
4631	30139	3374		101	6724		99	5032		100	4449		103
4632	30140	4516		105	5327		98	5401		96	5150		94
4633	30141	3085		95	6359		79	3782		87	3963		87
4634	30142	6020	9	111	6147		98	6033	6	99	5176		97
4635	30143	4885		109	4712		99	5457		102	4853		102
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	5401		109	4096		94	5537		94	5109		95
4637	30144	6097	7	112	5462		97	5213		100	4627		101
4638	30145	5638		110	5962		107	5726		101	5396	7 *	101
4639	30146	3086		93	3090		82	3509		84	3827		85
4640	30147	4760		112	6660		96	5004		99	4765		96
4641	30148	3644		115	5827		89	4920		95	4719		93
4642	30149	5131		97	6051		90	5534		94	5175		93
4643	30150	3141		95	5801		98	6105	5	101	5562	2 *	104
4644	30151	6034	8	121	7179	8	97	6205	2 *	102	5396	7 *	100
4645	30152	5490		108	6038		96	5899	9	94	5434	5 *	92
4646	30153	4033		113				4033		113	4465		109
4647	30154	4682		110	8314	3 *	97	5686		100	5109		99
4648	30155	4809		105	4327		88	4556		92	4509		89
4649	30156	5088		114	5923		110	4844		105	4150		104
4650	30157	5366		108	6974	10	97	5249		97	5215		94
4651	30158	4717		99	4051		83	4422		88	4157		87
4652	30159	2839		97	3423		78	2983		86	3524		85
4653	30160	3210		107	3564		83	4050		91	4113		92
4654	Chittimutyalu (Micro-nutrient Check)	5209		109	5288		97	4715		97	3924		101
4655	30161	6856	3 *	104	5801		83	5014		91	5188		92
Exp. Mean		4909.11		109	6017.94		94	5137		96	4815		95
F Value		9.19(n<0.0001)S			17.32(n<0.0001)S			28.62(n<0.0001)S			46.39(n<0.0001)S		
CD		1032.92			860.64			418.47			230.75		
CV%		10.49			7.12			4.06			2.39		
D/S		09-07-2021			19-07-2021								
D/P					15-08-2021								
Local Check Name		Kagisali											

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Table No. 4.12 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – Biofort (State Means), Kharif 2021

Entry No	IET No	HARYANA (1)			RAJASTHAN (1)			BIHAR (2)			UTTAR PRADESH (2)			CHHATTISGARH (1)		
		MEAN			MEAN			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4601	29460 (R)	4170		110	5818		106	5146		102	4811		100	5342		96
4602	29482 (R)	4360		103	5452		105	3436		90	3114		92	4388		85
4603	29469 (R)				7181	1 *	104	4618		85	4239		96	4574		79
4604	30117	3090		75	4721		105	5061		103	3180		106	5240		95
4605	30118	3600		75	5552		94	5036		81	3707		89	4188		78
4606	30119	2790		102	6416	8	95	4600		98	3171		90	4382		91
4607	30120	3680		108	6350	10	98	4569		105	5434	6	100	5424	8	92
4608	30121	3650		113	4820		105	5585	8	104	5536	3	106	5741	3	93
4609	30122	5610		113	6782	3	96	4878		88	4672		90	3862		81
4610	30123	6420	3	98	6981	2	94	4850		91	5182		93	4992		84
4611	30124	5760		97	6682	5	96	4881		94	4920		108	5257		86
4612	BPT 5204 (Yield Check)	3940		120	4056		104	5489	10	109	5003		100	5471	6	104
4613	29458 (R)	3160		89	4255		94	3885		92	1326		100	3850		86
4614	30125	4900		84	5685		95	5746	7	82	4287		87	4707		80
4615	29484 (R)	3530		120	5585		105	4050		103	4388		103	4592		96
4616	30126	2850		103	5053		103	5865	5	99	3356		100	5386		86
4617	30127	6780	2	93	6782	3	102	5854	6	82	4247		84	5037		81
4618	30128	4660		100	5419		97	4022		92	4333		106	4983		84
4619	30129	3760		103	5984		98	6614	2 *	82	4677		89	4191		79
4620	30130	2510		99	4089		104	3707		93	3554		105	4662		82
4621	30131															
4622	30132	6130	9	108	5851		104	5545	9	103	5454	5	95	4531		84
4623	30133	3660		101	5818		96	4770		93	5131		95	4666		87
4624	30134	3170		105	4388		108	5263		98	3834		101	5483	5	86
4625	IR 64 (Yield Check)	5590		100	6051		100	4659		89	4576		100	5142		83
4626	29465 (R)	6180	8	93	5386		94	5234		86	4515		94	3289		79
4627	30135	3500		95	5253		98	4520		93	5386	8	102	4604		88
4628	30136	6290	6	97	6316		94	5243		91	4859		101	4755		82
4629	30137	5910	10	100	6077		93	4901		92	3916		98	4290		83
4630	30138	6340	5	91	6449	7	100	4929		84	4824		96	4634		74
4631	30139	3000		124	4488		103	4465		97	4302		103	3432		108
4632	30140	5220		100	6084		94	4761		92	5268	9	96	5388	10	85
4633	30141	2620		91	5585		95	5159		83	3727		94	4233		80
4634	30142	2940		99	4588		104	5409		92	5150		100	5398	9	86
4635	30143	5110		100	4122		105	5272		101	3367		108	5041		88
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	4010		100	6184		97	5018		106	5172		100	4705		85
4637	30144	3230		108	4056		106	4471		102	4465		105	5023		97
4638	30145	3210		103	6237		103	5946	4	102	6424	1 *	103	5146		97
4639	30146	3270		77	4342		93	3788		81	5108		92	3838		76
4640	30147	5030		104	5918		96	4172		93	4614		89	4863		91
4641	30148	4460		96	5851		98	4343		91	4926		96	4332		83
4642	30149	3590		102	5452		95	5281		93	4527		97	5839	2	86
4643	30150	4640		120	5120		104	7086	1 *	104	5258	10	112	4971		99
4644	30151	4460		105	5918		105	5458		97	5523	4	105	4944		90
4645	30152	6350	4	98	6316		96	5980	3	90	4636		89	5003		86
4646	30153															
4647	30154	5150		101	6516	6	100	4842		98	4410		98	5584	4	91
4648	30155	3830		96	5386		92	4677		84	3789		95	5842	1	79
4649	30156	2940		118	4721		108	3495		100	3164		104	3880		96
4650	30157	6900	1 *	97	5253		97	5305		93	6184	2 *	97	4894		86
4651	30158	3410		71	5718		97	4357		94	3211		92	3633		74
4652	30159	4380		74	4255		101	3866		93	4947		85	3733		76
4653	30160	4460		96	5120		103	3978		91	3102		101	4832		83
4654	Chitimatvahu (Micro-nutrient Check)	2520		123	4122		107	3543		101	2002		102	4633		90
4655	30161	6210	7	92	6383	9	102	4248		101	5389	7	95	5461	7	83
Exp. Mean		4364.04		100	5528.03		100	4865.38		94	4420.44		98	4760.64		86
F Value		8.89(p<0.0001)S			7.56(p<0.0001)S			10.68(p<0.0001)S			22.53(p<0.0001)S			2.61(p=0.0004)S		
CD		1209.48			886.9			668.12			578.77			1100.11		
CV%		13.8			8			6.84			6.52			11.52		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – Biofort (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA (1)			MAHARASHTRA2 (2)			MAHARASHTRA (4)			GUJARAT (1)			ANDHRA PRADESH (2)		
		Mean			Mean			Mean			Mean			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4601	29460 (R)	3540		109	4982		100	4261		104	3977		97	7295	9	93
4602	29482 (R)	3801		95	4642		91	4221		93	4851		83	3931		86
4603	29469 (R)	4361		90	4635		87	4498		88	4735		80	5969		87
4604	30117	3482		95	5133	10	96	4308		95	3977		85	5807		90
4605	30118	4144		95	4866		81	4505		88	4955	8	73	4376		84
4606	30119	3411		102	3768		94	3589		98	5005	7	83	4845		88
4607	30120	4118		107	5184	7	97	4651		102	4198		96	8136	1 *	94
4608	30121	4964	6	103	5752	1 *	98	5358		100	4038		99	7126		97
4609	30122	4220		92	5222	6	86	4721		89	5299	4	74	6753		83
4610	30123	4126		93	4357		90	4241		91	4078		83	6155		89
4611	30124	3952		96	4933		94	4443		95	3853		85	7242		89
4612	BPT 5204 (Yield Check)	3341		109	4441		106	3891		107	3753		105	6870		100
4613	29458 (R)	3122		92	3671		90	3397		91	4192		80	4574		84
4614	30125	3456		85	5332	5	86	4394		85	5992	2 *	74	4643		85
4615	29484 (R)	3606		102	3796		103	3701		102	3616		103	5170		98
4616	30126	4642		95	4903		93	4772		94	5008	6	87	7481	6	91
4617	30127	5061	5	88	5690	4 *	87	5375		87	4636		79	5132		88
4618	30128	4787	9	96	4691		88	4739		92	4268		87	7614	4	89
4619	30129	5531	1 *	86	5020		80	5276		83	6380	1 *	75	5810		83
4620	30130	4661	10	90	4224		88	4442		89	4000		93	6978		87
4621	30131				4927		96	4927		96						
4622	30132	4081		102	4917		96	4499		99	4418		95	6311		92
4623	30133	3810		96	4221		90	4015		93	4063		87	5833		84
4624	30134	3768		98	4251		98	4010		98	3724		86	6141		90
4625	IR 64 (Yield Check)	4397		91	4759		90	4578		90	4478		79	5769		88
4626	29465 (R)	4918	8	87	4811		88	4864		87	3991		83	5031		86
4627	30135	3988		102	4654		94	4321		98	4884	9	87	5799		87
4628	30136	5185	3 *	91	4843		91	5014		91	4223		89	4645		91
4629	30137	5114	4	93	4359		92	4736		93	3484		83	6298		90
4630	30138	4335		83	4182		86	4258		85	4136		72	6792		84
4631	30139	3907		111	4135		104	4021		108	3609		105	6726		97
4632	30140	4957	7	92	4678		93	4818		92	3514		88	6173		89
4633	30141	3226		91	4082		87	3654		89	4369		77	3420		81
4634	30142	3833		101	4999		96	4416		98	3555		82	6306		88
4635	30143	4071		103	4606		100	4338		102	3896		98	7393	7	94
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	4079		95	4927		93	4503		94	4157		89	6327		83
4637	30144	3446		102	4748		97	4097		99	3672		94	5428		92
4638	30145	3693		105	5172	8	103	4433		104	5044	5	91	7487	5	88
4639	30146	3649		89	3562		110	3620		96	4856	10	73	4834		82
4640	30147	4340		94	4368		98	4354		96	4233		83	4191		89
4641	30148	4057		91	4035		90	4046		90	5447	3	81	5124		88
4642	30149	3730		91	5696	3 *	90	5040		90	4068		87	7058		87
4643	30150	4265		110	5169	9	105	4717		107	3575		99	8033	2 *	96
4644	30151	3483		102	4551		96	4017		99	4130		95	7781	3	92
4645	30152	4171		89	4722		92	4446		90	4343		83	7099		85
4646	30153				4896		106	4896		106						
4647	30154	3601		102	4777		97	4189		99	3605		95	7367	8	90
4648	30155	4041		87	4523		85	4282		86	4577		78	6954		87
4649	30156	3616		110	3906		99	3761		105	3643		101	6480		94
4650	30157	4489		95	4825		91	4657		93	3618		78	4673		89
4651	30158	3615		85	3823		85	3719		85	4732		73	6942		83
4652	30159	3454		89	3073		82	3263		85	4109		72	3188		83
4653	30160	4184		93	4402		88	4293		90	4173		85	7249	10	89
4654	Chitimatvahu (Micro-nutrient Check)	3344		113	3204		98	3274		106	4516		94	6944		93
4655	30161	5390	2 *	86	5714	2 *	87	5552		87	4284		86	5600		88
Exp. Mean		4085.91		96	4613.53		93	4371		94	4300.69		86	6099.83		89
F Value		4.97(n<0.0001)S			6.61(n<0.0001)S			9.50(n<0.0001)S			3.35(n<0.0001)S			13.19(n<0.0001)S		
CD		744.25			646.04			470.81			981.19			936.56		
CV%		9.08			6.98			5.37			11.37			7.65		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – Biofort (State Means), Kharif 2021

Entry No	IET No	TELANGANA (2)			TAMIL NADU (1)			KERALA (1)			KARNATAKA (3)		
		Mean			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4601	29460 (R)	5728		104	6031	10	99	5628	9	86	5334		104
4602	29482 (R)	5812		96	4107		86	4048		90	4846		103
4603	29469 (R)	6042	6	99	6497	6	93	4836		85	4961		101
4604	30117	5554		103	5259		96	4074		98	5910	7	110
4605	30118	4610		86	4264		84	4925		80	4497		94
4606	30119	3231		95	3528		90	4265		83	4759		101
4607	30120	3946		102	4667		95	5342		98	5208		107
4608	30121	4728		108	6714	3	96	6747	2	110	4904		106
4609	30122	5318		95	4943		86	4687		84	5038		106
4610	30123	6370	3	96	5518		91	5568		83	5785		106
4611	30124	6250	4	100	4107		89	5056		84	6565	2 *	108
4612	BPT 5204 (Yield Check)	4679		114	5785		105	6634	3	106	5487		112
4613	29458 (R)	2853		95	5507		79	2425		100	3214		99
4614	30125	6042	6	94	4609		89	5574		102	6187	3 *	104
4615	29484 (R)	3625		112	5126		94	2854		85	3983		108
4616	30126	5552		104	3991		92	4687		80	6024	5 *	106
4617	30127	7573	1 *	95	5527		93	4783		100	6928	1 *	100
4618	30128	4022		101	5314		94	4675		86	5903	8	110
4619	30129	5861	10	85	3807		79	3914		83	4358		93
4620	30130	3518		102	5445		88	3243		85	3147		102
4621	30131										3340		87
4622	30132	5581		105	6624	4	95	6759	1	96	6142	4 *	105
4623	30133	3410		96	4676		84	4586		90	4495		101
4624	30134	5840		106	6057	9	96	6128	5	94	5524		104
4625	IR 64 (Yield Check)	5917	8	99	5526		88	4354		92	5457		107
4626	29465 (R)	4776		96	6324	7	86	5247		84	5592		104
4627	30135	6231	5	100	6243	8	95	5861	7	86	5347		104
4628	30136	5654		101	4206		89	5272		85	5216		102
4629	30137	4200		96	4872		86	4967		86	4817		98
4630	30138	5102		95	3813		85	5266		91	4537		101
4631	30139	4141		108	3845		85	4408		97	5102		102
4632	30140	5220		101	6818	2	95	4074		86	4977		103
4633	30141	4311		91	2256		76	3345		78	4326		94
4634	30142	5838		102	6552	5	92				5809	9	106
4635	30143	4591		106	4811		105	6098	6	95	4747		106
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	5849		99	4903		88	5253		86	5109		102
4637	30144	5213		103	4100		93	5306		102	5411		105
4638	30145	4848		107				5033		90	5368		110
4639	30146	3521		82	2418		86	2967		76	3162		91
4640	30147	5157		102	5247		94	3717		97	5792	10	107
4641	30148	5657		96	5431		91	4306		89	4327		104
4642	30149	4994		99	4842		93	5582	10	83	5093		101
4643	30150	5622		108	6873	1 *	95	6134	4	90	4877		105
4644	30151	5866	9	104	5913		97	5396		94	5748		111
4645	30152	6396	2	97	4625		90	4979		86	5499		103
4646	30153										4033		113
4647	30154	4698		103	5838		95	5300		98	5302		106
4648	30155	3573		95	4073		86	4360		84	3838		99
4649	30156	3816		109	3706		90	4158		110	5048		113
4650	30157	4521		96	5247		92	5711	8	97	5965	6	106
4651	30158	3298		94	3857		84	3896		84	3854		91
4652	30159	2806		88	3649		84	2597		79	2873		89
4653	30160	3125		98	3648		86	2707		84	3115		93
4654	Chittimutyalu (Micro-nutrient Check)	3863		103	2657		83	3336		85	4943		104
4655	30161	4813		96	4317		85	3872		85	5372		96
Exp. Mean		4900.95		99	4898.25		90	4710.39		90	4967.16		103
F Value		15.43(n<0.0001)S			9.34(n<0.0001)S			4.81(n<0.0001)S			27.82(n<0.0001)S		
CD		781.44			1044.76			1386.5			486.74		
CV%		7.95			10.62			14.66			4.89		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - Biofort (Data Not Considered), Kharif 2021

Entry No	IET No	PUNJAB			ODISHA						ASSAM		
		@LUDHIANA			@ICAR-NRRI (Cuttack)			@JEYPORE			@TITABAR		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4601	29460 (R)	2641		115	3808		100	2376		106	5530	8	105
4602	29482 (R)	2944		89	3033		91	1312		99	2695		85
4603	29469 (R)	3434		87	2889		86	3140		102	3710		91
4604	30117	2222		111	4229	8	99	1817		109	5530	8	105
4605	30118	4069		82	3966		89	1306		96	4130		81
4606	30119	2641		112	4109		95	1147		101	3010		91
4607	30120	1883		113	4476	2	100	1277		103	2975		105
4608	30121				3753		104	2360		104	5005		107
4609	30122	3723		93	2948		92	1158		98	3710		85
4610	30123	3903		93	3811		90	1345		104	5495	10	94
4611	30124	4105		97	3683		99	3323		108	5355		98
4612	BPT 5204 (Yield Check)				4231	7	97	1538		111	5075		114
4613	29458 (R)	1948		99	3194		86	1205		89	2205		96
4614	30125	3961		86	4747	1	84	1750		91	4200		85
4615	29484 (R)				4195	9	107	1144		113	3570		107
4616	30126	2691		95	3081		101	2619		102	4900		103
4617	30127	5065	4	88	2838		86	3631	5	101	5145		91
4618	30128	4560	8	92	2909		86	3031		105	3920		102
4619	30129	3420		86	2492		91	1105		93	5390		87
4620	30130	2749		95	3687		84	1949		91	3990		104
4621	30131				3997		99	4314	3	99	5845	2	105
4622	30132	2316		114	2969		102	2487		103	5565	6	105
4623	30133	3016		112	3775		90	1428		102	4725		98
4624	30134	859		98	3087		98	4565	1	104	5705	5	103
4625	IR 64 (Yield Check)	2605		92	4300	6	95	3388	10	99	4830		98
4626	29465 (R)	2655		87	3626		91	2346		96	2275		97
4627	30135	3218		96	4334	5	98	2473		103	5145		98
4628	30136	5007	5	94	3600		103	2005		101	4550		99
4629	30137	4935	6	91	3528		97	1894		101	5005		93
4630	30138	4856	7	84	3270		95	2732		97	3850		83
4631	30139				3474		98	1313		99	5460		114
4632	30140	5418	1	93	4450	3	93	2436		105	4900		98
4633	30141	3189		88	3778		82	1577		95	1750		85
4634	30142	3492		94	2954		100	3071		101	3290		102
4635	30143	3377		96	4089		91	1259		107	3990		99
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	4242	10	93	4113	10	97	3449	8	101	4970		95
4637	30144	1905		97	4105		99	2878		105	5915	1	104
4638	30145	2359		114	3633		88	1812		102	4515		104
4639	30146	1645		75	3955		86	1297		96	805		79
4640	30147	4329	9	95	2740		96	2237		107	5495	10	97
4641	30148	3629		92	4373	4	99	2891		104	4865		88
4642	30149	3413		91	3370		90	3481	7	99	2800		102
4643	30150				3671		107	3240		103	3815		107
4644	30151	4228		100	2747		101	3336		104	5810	3	104
4645	30152	5238	2	96	2712		91	4535	2	97	5740	4	94
4646	30153							1949		98	3885		
4647	30154	4091		112	3621		89	3423	9	103	3850		103
4648	30155	3009		87	3836		87	3564	6	95	5355		90
4649	30156				4062		103	1549		116	3535		109
4650	30157	5231	3	95	3592		82	4090	4	99	5565	6	97
4651	30158	2576		78	3664		81	1006		98	1295		81
4652	30159	2244		75	2268		84	1072		92	910		78
4653	30160	2583		94	3720		101	1140		100	2905		98
4654	Chitimityalu (Micro-nutrient Check)				3398		99	1745		104	3780		104
4655	30161				3366		90	2313		99	5390		95
Expn. Mean		3369.41		95	3597.44		94	2305.92		101	4247.73		97
F Value		7.74(p<0.0001)S			2.93(p<0.0001)S			17.33(p<0.0001)S			90.17(p<0.0001)S		
CD		1109.05			933.8			675.19			389.37		
CV%		16.33			12.94			14.6			4.57		
D/S		02-07-2021			16-07-2021			24-07-2021			09-07-2021		
D/P		31-07-2021			23-08-2021			24-08-2021			08-08-2021		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - Biofort (Data Not Considered), Kharif 2021

Entry No	IET No	MADHYA PRADESH			MAHARASHTRA2			GUJARAT			TELANGANA		
		@Waraseoni			@SHIRGAON			@NAWAGAM			@RUDRUR		
		GY	R	DDF	GY	R	DDF	GY	R	DDF	GY	R	DDF
4601	29460 (R)	4259		101	2762		96	3363	6	95	4085		94
4602	29482 (R)	3397		95	3321		89	1815		88	6780	1	90
4603	29469 (R)	3425		82	2798		87	3442	5	91	4125		88
4604	30117	2615		94	3452		96	2629		98	4235		96
4605	30118	3684		74	2464		81	2421		96	4195		80
4606	30119	3563		95	2333		94	2019		93	3880		89
4607	30120	4845	6	99	4857	8	95	2302		94	3460		98
4608	30121	2511		111	3988		106	2004		102	4635		105
4609	30122	3379		84	3012		92	2540		93	4265		84
4610	30123	5454	1	89	4750	10	93	2728		92	5295	6	86
4611	30124	4816	7	85	5208	4	93	2827		92	4335		97
4612	BPT 5204 (Yield Check)	4086		111	3060		108	2282		112	4025		111
4613	29458 (R)	2764		88	2774		91	2560		85	3805		85
4614	30125	2506		81	2940		82	3224	7	84	4110		84
4615	29484 (R)	4368		89	2655		100	2986	10	97	4385		90
4616	30126	4333		89	3190		95	2500		109	4580		100
4617	30127	5092	3	83	4976	7	86	3131	8	92	4805	9	85
4618	30128	4362		87	2417		91	2515		100	5850	4	84
4619	30129	4971	5	82	2429		82	2183		89	5610	5	81
4620	30130	4034		83	2524		95	2282		91	4695	10	91
4621	30131				3798		99	2068		99			
4622	30132	4023		100	3012		96	2500		99	3860		103
4623	30133	3328		96	2893		91	3542	1	95	3800		85
4624	30134	4000		92	3238		96	2292		96	4950	8	104
4625	IR 64 (Yield Check)	3862		83	4345		93	2143		90	4515		87
4626	29465 (R)	4741	9	82	4393		92	2010		87	3830		89
4627	30135	4661	10	88	4857	8	98	2669		93	4035		99
4628	30136	3690		97	3452		98	2798		98	6475	2	85
4629	30137	5190	2	87	2333		92	2728		93	5120	7	84
4630	30138	4322		85	3738		87	1935		87	4285		83
4631	30139	2575		118	3952		111	3502	2	102	4350		97
4632	30140	3759		92	3607		95	2406		98	6005	3	87
4633	30141	2517		83	2274		85	2599		86	3600		88
4634	30142	4586		89	5988	1	93	2976		100	4135		101
4635	30143	3132		95	2726		99	2530		104	3910		103
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	3506		92	4405		101	1925		93	4365		102
4637	30144	3667		96	2488		98	2530		97	3625		90
4638	30145	4443		98	3274		101	1895		101	3905		112
4639	30146	3925		77	2631		79	2242		102	4205		80
4640	30147	2718		91	2988		97	2083		95	3825		94
4641	30148	3075		87	3488		92	3462	4	91	3955		86
4642	30149	4356		90	3929		95	2024		90	3520		82
4643	30150	2925		105	2988		104	3467	3	101	3835		96
4644	30151	4184		96	5650	2	100	2853		98	3625		92
4645	30152	5023	4	92	5012	5	96	2579		91	4055		90
4646	30153				4048		99	2441		93			
4647	30154	2948		80	4524		97	2540		94	4180		95
4648	30155	2816		104	2488		85	2272		86	3600		86
4649	30156	4787	8	94	3571		104	2312		99	3575		93
4650	30157				5536	3	93	2649		87	4170		88
4651	30158	2356		75	2345		81	2282		84	3615		88
4652	30159	2546		83	3167		80	2242		83	4215		78
4653	30160	3069		80	2226		92	2679		101	3815		85
4654	Chitimityalu (Micro-nutrient Check)	3736		100	2464		94	3056	9	112	3570		97
4655	30161	4615		81	5012	5	92	2778		88	4215		85
Exp. Mean		3798.96		90	3504.57		94	2559.24		95	4299.91		91
F Value		3.84(p<0.0001)S			9.24(p<0.0001)S			3.46(p<0.0001)S			96.07(p<0.0001)S		
CD		1218.84			931.62			689.94			210.54		
CV%		15.98			13.26			13.45			2.44		
D/S		01-07-2021			29-06-2021			03-07-2021			27-06-2021		
D/P		16-07-2021			26-07-2021			09-08-2021			22-07-2021		

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Table No. 4.12 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - Biofort (Data Not Considered), Kharif 2021

Entry No	IET No	TAMILNADU			KERALA			KARNATAKA								
		@ADUTHURAI			@PATTAMBI			@BRAHMAWAR			@SIRSI			@MALAG		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4601	29460 (R)	5536		89	5105		97	4956	4	97	2567		99	3675		101
4602	29482 (R)	4762		101	4467		98	4419		90	1767		93	4475	10	95
4603	29469 (R)	5952		99	5710	5	96	2936		90	3067		88	3835		95
4604	30117	3958		94	5319		97	4230		81	2133		98	3475		101
4605	30118	6250		106	5524	9	96	3914		76	2617		84	4155		86
4606	30119	6667	7	94	5748	4	96	4261		87	1367		93	3675		98
4607	30120	5655		87	5829	3	97	5082	1	95	2817		99	3635		113
4608	30121	6071		104	5014		97	4924	7	86	2233		98	3475		104
4609	30122	5238		95	5076		97	4261		87	2100		86	3555		95
4610	30123	5595		107	4386		97	4578		88	2417		93	3715		105
4611	30124	7440	1	98	4314		98	4956	4	91	2567		98	3555		103
4612	BPT 5204 (Yield Check)	6548	9	95	4790		96	4861	10	102	1917		112	4075		124
4613	29458 (R)	5060		96	4890		95	2588		90	1300		88	4475	10	95
4614	30125	4464		89	4181		98	4198		83	1700		93	3615		96
4615	29484 (R)	3869		92	4933		96	3409		87	1100		98	3635		105
4616	30126	6071		96	4748		96	3662		84	2383		93	3555		103
4617	30127	5804		89	4467		95	4912	8	87	3017		88	3755		94
4618	30128	6071		96	4324		96	2980		94	3417		100	3615		101
4619	30129	4464		97	4657		98	3188		78	1233		84	3955		86
4620	30130	5536		94	5057		96	4451		86	2617		86	4275		95
4621	30131	5357		99	4900		97				4000	6	98	4475	10	95
4622	30132	5952		91	5352		98	4987	2	107	1700		93	4435		103
4623	30133	4762		100	4967		95	4451		95	2450		98	4195		96
4624	30134	6250		106	5081		97	4104		90	2367		88	4297		98
4625	IR 64 (Yield Check)	6131		98	4219		97	4419		90	1933		86	4371		95
4626	29465 (R)	4762		102	5019		98	4937	6	90	2233		98	3873		86
4627	30135	6845	5	99	5667	6	98	4545		95	2267		88	3593		98
4628	30136	5536		100	5286		96	4293		90	1967		86	4021		86
4629	30137	6726	6	102	4862		96	2652		88	2533		88	3931		85
4630	30138	5595		100	5381		96	3756		88	2133		100	3603		96
4631	30139	5714		99	4814		96	3251		94	2600		98	4295		99
4632	30140	6071		102	4881		96	3693		104	1967		84	3583		99
4633	30141	5357		107	5295		95	2412		94	3500		98	3547		79
4634	30142	5179		93	4571		97	4861	10	90	2667		102	4027		98
4635	30143	5833		99	6076	1	95	3283		94	4267	3	93	3887		105
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	6250		101	5371		96	4987	2	85	3900	7	98	3637		98
4637	30144	5804		100	5652	7	97	3093		96	4117	4	102	4195		111
4638	30145	6071		101	5967	2	97	3346		88	2433		84	4215		112
4639	30146	5357		96	5129		98	3977		104	3633		98	3979		80
4640	30147	6071		98	4557		96	2588		84	2133		88	4755	6	111
4641	30148	5595		95	5352		95	3472		88	3867	8	89	4335		105
4642	30149	4762		90	5286		97	4419		90	3067		102	3505		105
4643	30150	6964	3	87	4843		97	4514		90	4033	5	98	3515		111
4644	30151	7173	2	95	5629	8	97	4798		104	3233		98	5009	1	98
4645	30152	5952		100	5462		96	4242		90	4367	2	98	4861	3	98
4646	30153	5060		101	5338		96				3333		86	4995	2	112
4647	30154	6667	7	95	5519	10	95	4735		103	2033		102	4337		105
4648	30155	5952		106	4714		96	4893	9	102	3667	10	98	4453		85
4649	30156	5536		98	5224		95	3567		104	3233		86	4795	4	105
4650	30157	6935	4	104	4257		97	3441		98	1833		84	4795	4	113
4651	30158	5804		104	4752		97	3725		85	1300		84	4683	8	85
4652	30159	6369	10	98	5229		95	2746		85	2233		98	4423		79
4653	30160	5357		88	4190		94	3030		88	3800	9	84	4755	6	86
4654	Chitimatvalu (Micro-nutrient Check)	6369	10	92	4581		95	2967		88	3333		109	3511		98
4655	30161	4137		87	5105		95	2967		87	4917	1	109	3531		94
Exn. Mean		5732.14		97	5037.58		96	3960.73		91	2679.7		94	4047.22		98
F Value		1.27(n=0.1916)NS			0.45(n=0.9981)NS			5.74(n<0.0001)S			52.50(n<0.0001)S			1.34(n=0.1426)NS		
CD		1986.77			1999.63			936.73			382.82			1127.91		
CV%		17.29			19.8			11.79			7.13			13.9		
D/S		08-09-2021			16-07-2021			28-06-2021			15-07-2021			26-06-2021		
D/P		14-10-2021			10-08-2021			22-07-2021			05-08-2021			19-07-2021		
Local Check Name								MO-21								

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Table No. 4.13: Plant Height (cm) & Panicles/m² of entries in IVT -Biofort, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN						ZONE III-EASTERN			
		HARYANA		RAJASTHAN		Z2 (2)		BIHAR			
		Karnal (ICAR-CSSRI)		KOTA		Mean		BIKRAMGANJ (Dhanganj)		SABOUR	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	103	569	112	238	107	404	119	341	127	390
4602	29482 (R)	124	602	116	213	120	407	110	253	123	297
4603	29469 (R)			122	310	122	310	86	252	119	389
4604	30117	113	300	113	160	113	230	109	273	122	270
4605	30118	82	329	91	214	87	271	110	290	110	353
4606	30119	98	300	103	244	100	272	98	341	117	315
4607	30120	95	267	114	263	104	265	107	258	126	195
4608	30121	97	355	117	173	107	264	123	275	138	232
4609	30122	102	268	116	251	109	259	98	252	115	280
4610	30123	120	312	118	282	119	297	108	279	114	306
4611	30124	119	223	119	255	119	239	119	290	123	194
4612	BPT 5204 (Yield Check)	70	356	106	155	88	256	91	322	107	358
4613	29458 (R)	94	258	117	145	105	201	89	304	118	463
4614	30125	97	332	106	242	102	287	97	342	102	305
4615	29484 (R)	87	269	113	231	100	250	116	255	125	233
4616	30126	94	390	120	214	107	302	106	302	122	323
4617	30127	110	275	118	284	114	279	94	308	128	405
4618	30128	85	605	116	238	100	421	87	270	105	357
4619	30129	104	274	112	283	108	278	109	230	109	368
4620	30130	119	287	118	176	118	231	116	244	133	245
4621	30131										
4622	30132	102	521	107	220	104	370	113	338	121	354
4623	30133	94	412	118	258	106	335	118	320	101	254
4624	30134	124	241	119	154	121	197	122	216	133	263
4625	IR 64 (Yield Check)	101	417	113	257	107	337	115	250	122	293
4626	29465 (R)	109	514	113	234	111	374	108	247	124	385
4627	30135	124	224	118	211	121	217	118	293	137	284
4628	30136	103	439	119	260	111	349	98	304	113	250
4629	30137	121	465	119	242	120	353	106	351	139	297
4630	30138	99	565	107	276	103	421	108	346	108	323
4631	30139	118	224	132	151	125	187	154	254	170	183
4632	30140	78	499	117	231	97	365	96	404	108	346
4633	30141	87	262	102	210	95	236	120	289	100	360
4634	30142	116	254	118	159	117	207	115	290	131	223
4635	30143	107	622	107	149	107	386	102	293	122	353
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	99	429	117	277	108	353	100	242	125	275
4637	30144	99	509	99	157	99	333	111	308	123	240
4638	30145	78	369	111	238	94	303	125	282	134	284
4639	30146	82	304	100	157	91	230	103	381	94	443
4640	30147	95	510	107	247	101	378	98	346	112	388
4641	30148	100	420	116	228	108	324	110	319	113	304
4642	30149	99	317	120	251	109	284	107	248	130	260
4643	30150	84	416	109	217	97	317	112	233	123	284
4644	30151	122	334	116	267	119	301	117	248	144	212
4645	30152	113	509	119	271	116	390	97	309	120	355
4646	30153										
4647	30154	112	409	120	283	116	346	118	317	138	249
4648	30155	97	456	122	238	109	347	96	345	124	337
4649	30156	69	314	118	218	93	266	117	223	120	297
4650	30157	96	543	119	243	107	393	114	317	117	325
4651	30158	82	257	101	258	91	257	110	278	103	283
4652	30159	79	605	92	160	85	383	94	281	98	415
4653	30160	141	483	122	233	132	358	142	248	148	337
4654	Chittimutyalu (Micro-nutrient Check)	85	429	107	150	96	290	107	268	130	336
4655	30161	95	494	118	256	107	375	111	252	100	286
Exp. Mean		100	391	113	225	107	307	109	289	121	308

PH: Plant Height (cm) NP: No. of Panicles/sqm

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT -Biofort, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE-V – CENTRAL			
		UTTAR PRADESH				Z3 (4)		CHHATTISGARH		MAHARASHTRA 1	
		MASODHA		VARANASI		Mean		RAIPUR		SAKOLI	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	116	233	97	318	115	320	117	221	82	204
4602	29482 (R)	111	238	102	193	111	245	114	185	100	258
4603	29469 (R)	118	248	98	212	105	275	116	157	97	321
4604	30117	120	235	100	200	113	244	116	186	96	216
4605	30118	91	198	101	229	103	267	98	111	102	290
4606	30119	120	221	100	268	108	286	115	150	70	206
4607	30120	110	323	86	204	107	245	119	134	107	240
4608	30121	127	321	120	239	127	267	129	173	93	253
4609	30122	116	239	96	234	106	251	93	147	99	279
4610	30123	120	236	101	238	110	264	112	167	104	234
4611	30124	115	267	102	232	115	246	126	156	104	213
4612	BPT 5204 (Yield Check)	85	304	89	272	93	314	99	243	71	203
4613	29458 (R)	100	184	86	275	98	306	122	177	97	247
4614	30125	110	248	100	266	102	290	94	185	84	211
4615	29484 (R)	104	232	104	209	112	232	120	164	93	297
4616	30126	112	220	107	274	112	280	113	153	93	288
4617	30127	110	216	98	235	108	291	116	198	103	290
4618	30128	110	238	86	290	97	289	108	191	96	295
4619	30129	110	220	106	255	109	268	102	145	106	348
4620	30130	130	207	101	243	120	235	128	129	109	305
4621	30131										
4622	30132	118	226	114	273	116	298	115	183	111	227
4623	30133	101	218	92	207	103	250	101	153	83	243
4624	30134	135	249	122	260	128	247	135	174	98	174
4625	IR 64 (Yield Check)	130	223	107	228	119	248	120	172	115	243
4626	29465 (R)	107	224	109	258	112	278	115	178	115	307
4627	30135	138	238	.	.	131	272	128	160	115	210
4628	30136	110	319	100	240	105	278	112	178	105	283
4629	30137	123	215	111	329	120	298	116	189	97	312
4630	30138	106	219	108	246	107	283	106	216	115	254
4631	30139	156	207	144	222	156	216	168	184	146	177
4632	30140	110	307	96	253	102	327	113	169	114	196
4633	30141	90	220	92	244	101	278	95	156	73	293
4634	30142	88	218	132	239	117	242	126	185	126	195
4635	30143	112	223	108	257	111	281	118	139	94	204
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	118	233	117	254	115	251	120	178	104	187
4637	30144	120	253	106	203	115	251	115	140	98	217
4638	30145	122	310	117	232	124	277	121	204	91	179
4639	30146	99	317	86	291	95	358	94	211	83	215
4640	30147	111	284	94	277	104	323	110	218	97	245
4641	30148	107	226	100	246	107	274	109	189	98	343
4642	30149	120	248	102	213	115	242	121	182	82	191
4643	30150	108	260	110	188	113	241	114	174	85	203
4644	30151	142	309	108	234	128	251	130	169	103	259
4645	30152	108	207	104	232	107	276	109	154	96	163
4646	30153										
4647	30154	121	218	121	218	124	251	120	205	104	190
4648	30155	120	214	107	229	112	281	124	167	98	227
4649	30156	107	233	100	199	111	238	121	168	100	245
4650	30157	111	307	100	297	110	311	112	194	95	272
4651	30158	128	202	98	237	110	250	95	154	84	267
4652	30159	86	308	87	209	91	303	95	132	93	240
4653	30160	148	236	124	246	140	267	136	140	125	312
4654	Chitimatyalu (Micro-nutrient Check)	92	239	102	236	108	270	117	178	102	189
4655	30161	102	225	96	231	102	248	105	159	107	250
Exp. Mean		114	244	104	242	112	271	115	172	99	243

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT -Biofort, Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL				ZONE VI – WESTERN					
		MAHARASHTRA 1		Z5(3)		MAHARASHTRA				GUJARAT	
		SINDHEWAHI		Mean		KARJAT		VADAGAON		NAVASARI	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	86	265	95	149	120	231	76	308	132	199
4602	29482 (R)	102	198	105	135	122	216	76	287	136	309
4603	29469 (R)	91	240	101	144	138	233	81	321	126	266
4604	30117	81	195	98	125	106	219	82	229	148	243
4605	30118	103	240	101	148	95	216	72	353	98	201
4606	30119	100	213	95	136	122	200	69	232	121	277
4607	30120	89	219	105	138	127	232	73	230	136	261
4608	30121	123	207	115	148	134	231	86	318	161	248
4609	30122	99	221	97	139	105	230	70	327	122	226
4610	30123	100	232	105	146	129	203	80	135	133	318
4611	30124	123	174	118	138	138	206	89	308	158	303
4612	BPT 5204 (Yield Check)	96	208	89	131	105	225	52	210	113	298
4613	29458 (R)	103	267	107	159	117	209	61	265	117	258
4614	30125	76	200	85	120	94	200	64	285	121	299
4615	29484 (R)	109	207	107	141	119	206	78	263	120	290
4616	30126	96	209	101	135	120	228	72	278	136	288
4617	30127	106	256	108	157	125	220	76	306	150	286
4618	30128	110	208	105	141	106	210	60	280	125	305
4619	30129	86	188	98	124	121	188	67	201	144	268
4620	30130	120	261	119	167	138	234	95	227	152	202
4621	30131					145	221				
4622	30132	88	239	105	144	123	231	69	196	146	313
4623	30133	103	182	96	127	108	224	61	277	140	247
4624	30134	143	251	125	173	142	216	92	294	159	264
4625	IR 64 (Yield Check)	83	232	106	140	132	231	76	277	157	269
4626	29465 (R)	114	261	115	163	124	235	78	232	140	312
4627	30135	95	157	113	122	139	225	91	220	167	309
4628	30136	117	197	111	142	117	215	85	248	140	282
4629	30137	114	162	109	128	134	209	81	167	144	237
4630	30138	100	271	107	159	107	200	78	230	134	266
4631	30139	181	161	165	169	164	224	111	292	183	184
4632	30140	102	244	110	152	112	228	69	270	132	241
4633	30141	70	274	79	141	117	203	65	217	135	246
4634	30142	106	257	119	161	154	222	90	261	158	229
4635	30143	102	216	105	141	124	227	68	233	130	215
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	96	199	107	134	137	199	81	269	145	265
4637	30144	112	204	108	141	116	230	69	229	139	262
4638	30145	109	160	107	125	138	219	65	264	136	199
4639	30146	98	296	92	162			61	304	101	247
4640	30147	114	285	107	169	118	219	65	266	134	234
4641	30148	93	200	100	131	104	220	65	226	123	266
4642	30149			101	101	134	228	76	144	136	237
4643	30150	78	199	92	123	116	211	66	208	135	239
4644	30151	103	207	112	141	147	225	96	282	172	249
4645	30152	111	286	105	167	117	220	79	222	136	317
4646	30153					186	193				
4647	30154	92	167	105	121	142	205	86	299	150	276
4648	30155	109	256	110	158	128	226	80	329	138	267
4649	30156	96	284	106	162	140	234	71	298	133	224
4650	30157	122	259	110	164	116	212	70	320	130	316
4651	30158	77	225	85	129	109	205	67	277	127	227
4652	30159	84	225	91	133	86	200	64	270	108	245
4653	30160	122	217	128	156	149	210	87	235	158	262
4654	Chittimutyalu (Micro-nutrient Check)	98	186	106	130	117	224	67	270	152	235
4655	30161	68	190	93	117	111	219	75	331	139	303
Exp. Mean		102	222	105	143	125	218	75	261	138	261

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT -Biofort, Kharif 2021

Entry No	IET No	ZONE VI – WESTERN		ZONE VII – SOUTHERN					
		Z6 (3)		ANDHRA PRADESH				TELANGANA	
		Mean		MARUTERU		BAPATLA		RAJENDRANAGAR	
		PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	109	246	138	297	97	285	103	460
4602	29482 (R)	111	270	135	281	75	193	105	377
4603	29469 (R)	115	273	134	294	106	243	103	440
4604	30117	112	230	127	274	98	225	103	403
4605	30118	88	256	106	290	96	230	88	480
4606	30119	104	236	117	307	87	232	104	410
4607	30120	112	241	125	304	95	256	103	440
4608	30121	127	266	148	287	106	231	107	463
4609	30122	99	261	114	330	93	225	97	463
4610	30123	114	219	121	314	84	249	103	403
4611	30124	128	273	143	337	118	217	117	387
4612	BPT 5204 (Yield Check)	90	245	111	343	130	270	97	443
4613	29458 (R)	98	244	108	289	60	233	88	440
4614	30125	93	261	105	284	86	253	94	373
4615	29484 (R)	106	253	135	343	92	219	99	430
4616	30126	109	264	133	380	99	228	100	447
4617	30127	117	271	128	360	104	263	104	417
4618	30128	97	265	102	353	98	250	97	497
4619	30129	110	219	110	330	79	205	99	423
4620	30130	128	221	144	323	122	217	113	453
4621	30131	145	221						
4622	30132	113	247	126	320	81	223	103	383
4623	30133	103	249	109	320	80	193	93	430
4624	30134	131	258	147	314	122	261	110	413
4625	IR 64 (Yield Check)	121	259	131	320	88	166	108	460
4626	29465 (R)	114	259	134	317	109	212	103	440
4627	30135	132	251	143	294	127	250	116	370
4628	30136	114	248	134	333	103	180	102	433
4629	30137	120	204	136	294	93	196	106	463
4630	30138	107	232	123	304	98	207	103	450
4631	30139	153	233	181	317	133	231	133	463
4632	30140	104	246	124	297	94	239	102	433
4633	30141	105	222	90	337	61	159	89	443
4634	30142	134	237	138	300	119	214	117	403
4635	30143	107	225	127	284	103	216	106	497
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	121	244	133	294	82	177	104	453
4637	30144	108	241	130	307	96	246	103	407
4638	30145	113	227	135	297	65	182	102	527
4639	30146	81	275	101	330	87	251	85	507
4640	30147	106	240	114	314	94	213	98	527
4641	30148	97	237	123	314	94	238	100	447
4642	30149	115	203	129	317	94	164	105	380
4643	30150	106	219	134	297	106	221	100	447
4644	30151	138	252	157	267	131	207	123	403
4645	30152	111	253	127	287	104	196	103	573
4646	30153	186	193						
4647	30154	126	260	131	281	98	184	112	367
4648	30155	115	274	134	290	101	222	104	457
4649	30156	115	252	123	314	91	229	102	460
4650	30157	105	282	120	310	96	175	104	493
4651	30158	101	236	90	307	78	155	101	460
4652	30159	86	238	87	281	84	205	88	493
4653	30160	131	236	152	290	106	235	125	517
4654	Chittimutyalu (Micro-nutrient Check)	112	243	123	300	94	194	105	467
4655	30161	108	284	117	267	85	205	97	447
Exp. Mean		114	245	126	308	97	218	103	445

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT -Biofort, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN							
		TELANGANA		TAMIL NADU		KERALA		KARNATAKA	
		WARANGAL		COIMBATORE		MONCOMPU		MANDYA	
		PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	122	393	109	455	108	417	92	317
4602	29482 (R)	114	391	105	415	110	383	95	303
4603	29469 (R)	125	358	99	435	119	360	89	327
4604	30117	123	419	103	423	110	327	91	287
4605	30118	117	417	93	443	105	363	69	310
4606	30119	106	398	89	400	101	390	84	290
4607	30120	113	391	104	398	114	373	81	287
4608	30121	126	413	117	408	123	387	79	300
4609	30122	109	396	94	425	113	407	73	277
4610	30123	117	398	100	413	123	333	96	270
4611	30124	135	404	104	438	122	463	93	293
4612	BPT 5204 (Yield Check)	95	386	95	475	104	390	77	317
4613	29458 (R)	115	350	82	433	89	427	73	423
4614	30125	106	368	107	428	103	323	83	317
4615	29484 (R)	110	380	98	385	112	397	95	297
4616	30126	117	424	100	413	113	293	89	307
4617	30127	114	422	103	408	117	430	98	330
4618	30128	114	380	103	460	109	380	95	310
4619	30129	117	380	102	388	122	410	76	313
4620	30130	153	355	118	413	137	407	110	283
4621	30131								
4622	30132	117	436	101	413	129	360	80	303
4623	30133	97	426	87	413	105	343	78	327
4624	30134	121	414	120	418	125	317	109	297
4625	IR 64 (Yield Check)	114	380	102	383	111	397	107	293
4626	29465 (R)	122	386	101	418	131	470	102	327
4627	30135	127	408	110	381	154	377	120	283
4628	30136	118	389	98	398	114	310	102	290
4629	30137	123	393	114	408	110	363	99	347
4630	30138	115	393	96	405	119	367	96	297
4631	30139	166	386	132	433	162	320	97	363
4632	30140	112	401	97	458	108	360	111	327
4633	30141	93	340	95	465	85	330	91	263
4634	30142	147	386	137	450			109	290
4635	30143	110	394	104	390	120	350	96	300
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	125	383	107	413	119	370	102	300
4637	30144	125	422	103	418	133	397	91	280
4638	30145	111	426			136	360	103	270
4639	30146	94	389	83	413	89	390	79	347
4640	30147	116	391	101	463	111	350	95	337
4641	30148	114	376	104	450	105	333	89	290
4642	30149	122	380	115	390	126	317	95	297
4643	30150	109	396	101	413	109	323	103	290
4644	30151	138	421	118	428	125	323	103	300
4645	30152	114	373	90	385	112	350	94	287
4646	30153								
4647	30154	124	371	104	438	127	367	90	313
4648	30155	134	371	104	430	121	383	100	280
4649	30156	106	396	97	423	132	390	91	303
4650	30157	112	396	92	363	121	383	95	280
4651	30158	98	409	86	420	96	393	84	320
4652	30159	94	403	89	428	94	380	77	340
4653	30160	162	384	129	398	129	387	108	307
4654	Chittimutyalu (Micro-nutrient Check)	119	419	84	400	112	303	101	340
4655	30161	114	380	97	403	113	277	79	263
Exp. Mean		118	393	102	418	116	367	93	306

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT -Biofort, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						Overall Mean(21)	
		KARNATAKA				Z7 (9)			
		MUGAD		GANGAVATHI		Mean		PH	NP
		PH	NP	PH	NP	PH	NP		
4601	29460 (R)	75	366	112	401	106	377	107	329
4602	29482 (R)	62	295	110	356	101	333	107	297
4603	29469 (R)	64	253	117	415	106	347	107	304
4604	30117	69	288	101	378	103	336	106	274
4605	30118	90	279	106	400	97	357	96	297
4606	30119	79	247	103	461	97	348	100	290
4607	30120	79	234	103	369	102	339	105	280
4608	30121	96	328	105	363	112	353	117	295
4609	30122	77	346	103	357	97	358	100	294
4610	30123	77	329	110	372	103	342	108	287
4611	30124	82	330	169	494	120	374	120	294
4612	BPT 5204 (Yield Check)	77	351	94	373	98	372	93	310
4613	29458 (R)	82	391			87	373	96	302
4614	30125	68	310	101	351	95	334	95	291
4615	29484 (R)	81	396	111	443	104	365	106	292
4616	30126	82	319	113	466	105	364	107	307
4617	30127	77	331	125	349	108	368	110	314
4618	30128	70	323	105	390	99	371	99	325
4619	30129	86	261	103	318	99	336	103	285
4620	30130	88	332			123	348	122	277
4621	30131	77	290	133	400	105	345	118	304
4622	30132	75	283	103	378	102	344	107	306
4623	30133	93	297	100	389	94	348	98	292
4624	30134	72	331	136	419	118	354	123	283
4625	IR 64 (Yield Check)	89	336	121	416	108	350	111	297
4626	29465 (R)	97	268	114	455	113	366	113	318
4627	30135	67	358	137	341	122	340	123	279
4628	30136	80	344	120	402	108	342	109	300
4629	30137	78	320	122	357	109	349	113	301
4630	30138	79	222	114	424	105	341	106	308
4631	30139	90	309	152	308	138	348	146	266
4632	30140	76	272	109	409	104	355	104	313
4633	30141	71	266	101	445	86	339	91	287
4634	30142	91	310	127	405	123	345	122	274
4635	30143	79	265	105	427	105	347	107	298
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	69	293	108	364	106	338	110	288
4637	30144	91	340	105	398	108	357	109	294
4638	30145	83	298	110	340	106	337	109	282
4639	30146	85	260	80	313	87	355	89	318
4640	30147	68	276	102	385	100	361	103	322
4641	30148	75	208	105	466	101	347	102	300
4642	30149	78	266	113	353	108	318	110	269
4643	30150	74	272	106	354	105	335	104	278
4644	30151	74	261	137	408	123	335	124	286
4645	30152	86	361	116	435	105	361	107	309
4646	30153	64	375			64	375	125	284
4647	30154	96	201	120	354	111	319	116	281
4648	30155	84	283	132	439	113	351	112	307
4649	30156	83	312	117	435	104	362	106	295
4650	30157	83	313	106	462	103	353	106	323
4651	30158	69	259	97	413	89	348	94	286
4652	30159	83	310	86	363	87	356	88	309
4653	30160	89	250	130	445	125	357	130	303
4654	Chittimutyalu (Micro-nutrient Check)	73	334	107	371	102	347	104	289
4655	30161	72	328	106	371	98	326	100	292
Exp. Mean		79	301	113	394	104	350	108	296

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – Biofort (State Means), Kharif 2021

Entry No	IET No	HARYANA (1)		RAJASTHAN (1)		BIHAR (2)		UTTAR PRADESH (2)		CHHATTISGARH (1)	
		MEAN		MEAN		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	103	569	112	238	123	365	107	275	117	221
4602	29482 (R)	124	602	116	213	116	275	107	215	114	185
4603	29469 (R)			122	310	103	320	108	230	116	157
4604	30117	113	300	113	160	115	271	110	217	116	186
4605	30118	82	329	91	214	110	321	96	214	98	111
4606	30119	98	300	103	244	107	328	110	244	115	150
4607	30120	95	267	114	263	116	227	98	263	119	134
4608	30121	97	355	117	173	130	253	124	280	129	173
4609	30122	102	268	116	251	106	266	106	236	93	147
4610	30123	120	312	118	282	111	292	110	237	112	167
4611	30124	119	223	119	255	121	242	109	249	126	156
4612	BPT 5204 (Yield Check)	70	356	106	155	99	340	87	288	99	243
4613	29458 (R)	94	258	117	145	103	384	93	229	122	177
4614	30125	97	332	106	242	99	323	105	257	94	185
4615	29484 (R)	87	269	113	231	120	244	104	221	120	164
4616	30126	94	390	120	214	114	312	109	247	113	153
4617	30127	110	275	118	284	111	356	104	225	116	198
4618	30128	85	605	116	238	96	313	98	264	108	191
4619	30129	104	274	112	283	109	299	108	237	102	145
4620	30130	119	287	118	176	125	244	116	225	128	129
4621	30131										
4622	30132	102	521	107	220	117	346	116	249	115	183
4623	30133	94	412	118	258	109	287	97	212	101	153
4624	30134	124	241	119	154	127	239	128	254	135	174
4625	IR 64 (Yield Check)	101	417	113	257	119	271	119	226	120	172
4626	29465 (R)	109	514	113	234	116	316	108	241	115	178
4627	30135	124	224	118	211	128	288	138	238	128	160
4628	30136	103	439	119	260	105	277	105	279	112	178
4629	30137	121	465	119	242	122	324	117	272	116	189
4630	30138	99	565	107	276	108	334	107	233	106	216
4631	30139	118	224	132	151	162	218	150	214	168	184
4632	30140	78	499	117	231	102	375	103	280	113	169
4633	30141	87	262	102	210	110	324	91	232	95	156
4634	30142	116	254	118	159	123	256	110	229	126	185
4635	30143	107	622	107	149	112	323	110	240	118	139
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	99	429	117	277	112	258	118	243	120	178
4637	30144	99	509	99	157	117	274	113	228	115	140
4638	30145	78	369	111	238	129	283	119	271	121	204
4639	30146	82	304	100	157	98	412	93	304	94	211
4640	30147	95	510	107	247	105	367	103	280	110	218
4641	30148	100	420	116	228	112	312	103	236	109	189
4642	30149	99	317	120	251	119	254	111	230	121	182
4643	30150	84	416	109	217	117	259	109	224	114	174
4644	30151	122	334	116	267	130	230	125	271	130	169
4645	30152	113	509	119	271	109	332	106	219	109	154
4646	30153										
4647	30154	112	409	120	283	128	283	121	218	120	205
4648	30155	97	456	122	238	110	341	114	221	124	167
4649	30156	69	314	118	218	119	260	103	216	121	168
4650	30157	96	543	119	243	115	321	106	302	112	194
4651	30158	82	257	101	258	106	280	113	220	95	154
4652	30159	79	605	92	160	96	348	86	258	95	132
4653	30160	141	483	122	233	145	292	136	241	136	140
4654	Chittimutyalu (Micro-nutrient Check)	85	429	107	150	118	302	97	237	117	178
4655	30161	95	494	118	256	106	269	99	228	105	159
	Exp. Mean	100	391	113	225	115	299	109	243	115	172

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – Biofort (State Means), Kharif 2021

Entry No	IET No	MAHARASHTRA 1(2)		MAHARASHTRA2 (2)		MAHARASHTRA (4)		GUJARAT (1)	
		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	84	234	98	270	91	252	132	199
4602	29482 (R)	101	228	99	251	100	240	136	309
4603	29469 (R)	94	280	109	277	102	278	126	266
4604	30117	89	206	94	224	91	215	148	243
4605	30118	103	265	83	284	93	275	98	201
4606	30119	85	209	96	216	90	213	121	277
4607	30120	98	230	100	231	99	230	136	261
4608	30121	108	230	110	274	109	252	161	248
4609	30122	99	250	88	278	93	264	122	226
4610	30123	102	233	105	169	103	201	133	318
4611	30124	114	193	114	257	114	225	158	303
4612	BPT 5204 (Yield Check)	84	206	78	218	81	212	113	298
4613	29458 (R)	100	257	89	237	94	247	117	258
4614	30125	80	205	79	243	79	224	121	299
4615	29484 (R)	101	252	99	234	100	243	120	290
4616	30126	95	248	96	253	95	251	136	288
4617	30127	105	273	101	263	103	268	150	286
4618	30128	103	251	83	245	93	248	125	305
4619	30129	96	268	94	195	95	231	144	268
4620	30130	115	283	117	230	116	256	152	202
4621	30131			145	221	145	221		
4622	30132	100	233	96	214	98	223	146	313
4623	30133	93	212	84	250	89	231	140	247
4624	30134	121	213	117	255	119	234	159	264
4625	IR 64 (Yield Check)	99	237	104	254	101	245	157	269
4626	29465 (R)	115	284	101	233	108	259	140	312
4627	30135	105	183	115	222	110	203	167	309
4628	30136	111	240	101	231	106	235	140	282
4629	30137	106	237	107	188	106	212	144	237
4630	30138	108	262	93	215	100	238	134	266
4631	30139	164	169	137	258	150	213	183	184
4632	30140	108	220	90	249	99	234	132	241
4633	30141	72	283	91	210	81	246	135	246
4634	30142	116	226	122	241	119	233	158	229
4635	30143	98	210	96	230	97	220	130	215
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	100	193	109	234	105	213	145	265
4637	30144	105	210	93	230	99	220	139	262
4638	30145	100	169	102	241	101	205	136	199
4639	30146	91	255	61	304	81	271	101	247
4640	30147	106	265	92	243	99	254	134	234
4641	30148	96	271	85	223	90	247	123	266
4642	30149	82	191	105	186	97	187	136	237
4643	30150	82	201	91	210	86	205	135	239
4644	30151	103	233	121	253	112	243	172	249
4645	30152	104	225	98	221	101	223	136	317
4646	30153			186	193	186	193		
4647	30154	98	178	114	252	106	215	150	276
4648	30155	104	241	104	278	104	260	138	267
4649	30156	98	264	105	266	102	265	133	224
4650	30157	109	265	93	266	101	266	130	316
4651	30158	81	246	88	241	84	243	127	227
4652	30159	89	232	75	235	82	234	108	245
4653	30160	124	265	118	222	121	243	158	262
4654	Chittimutyalu (Micro-nutrient Check)	100	187	92	247	96	217	152	235
4655	30161	88	220	93	275	90	247	139	303
Exp. Mean		100	232	101	239	102	235	138	261

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – Biofort (State Means), Kharif 2021

Entry No	IET No	ANDHRA PRADESH (2)		TELANGANA (2)		TAMIL NADU (1)		KERALA (1)		KARNATAKA (3)	
		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	118	291	112	426	109	455	108	417	93	361
4602	29482 (R)	105	237	109	384	105	415	110	383	89	318
4603	29469 (R)	120	268	114	399	99	435	119	360	90	332
4604	30117	113	249	113	411	103	423	110	327	87	317
4605	30118	101	260	103	449	93	443	105	363	88	330
4606	30119	102	269	105	404	89	400	101	390	89	332
4607	30120	110	280	108	416	104	398	114	373	88	296
4608	30121	127	259	116	438	117	408	123	387	93	330
4609	30122	103	278	103	430	94	425	113	407	85	326
4610	30123	103	281	110	400	100	413	123	333	94	324
4611	30124	131	277	126	395	104	438	122	463	115	372
4612	BPT 5204 (Yield Check)	120	306	96	415	95	475	104	390	82	347
4613	29458 (R)	84	261	101	395	82	433	89	427	77	407
4614	30125	95	268	100	371	107	428	103	323	84	326
4615	29484 (R)	113	281	105	405	98	385	112	397	96	378
4616	30126	116	304	109	435	100	413	113	293	95	364
4617	30127	116	311	109	420	103	408	117	430	100	337
4618	30128	100	302	106	438	103	460	109	380	90	341
4619	30129	94	268	108	401	102	388	122	410	88	297
4620	30130	133	270	133	404	118	413	137	407	99	307
4621	30131									105	345
4622	30132	104	271	110	409	101	413	129	360	86	321
4623	30133	94	257	95	428	87	413	105	343	90	337
4624	30134	134	287	116	414	120	418	125	317	106	349
4625	IR 64 (Yield Check)	110	243	111	420	102	383	111	397	106	348
4626	29465 (R)	122	264	113	413	101	418	131	470	104	350
4627	30135	135	272	121	389	110	381	154	377	108	327
4628	30136	118	256	110	411	98	398	114	310	101	345
4629	30137	114	245	114	428	114	408	110	363	99	341
4630	30138	111	255	109	421	96	405	119	367	96	314
4631	30139	157	274	149	425	132	433	162	320	113	327
4632	30140	109	268	107	417	97	458	108	360	99	336
4633	30141	76	248	91	392	95	465	85	330	87	325
4634	30142	128	257	132	395	137	450			109	335
4635	30143	115	250	108	446	104	390	120	350	93	330
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	108	235	115	418	107	413	119	370	93	319
4637	30144	113	276	114	415	103	418	133	397	95	339
4638	30145	100	239	107	476			136	360	99	302
4639	30146	94	291	89	448	83	413	89	390	81	306
4640	30147	104	263	107	459	101	463	111	350	88	332
4641	30148	108	276	107	411	104	450	105	333	90	321
4642	30149	111	240	113	380	115	390	126	317	95	305
4643	30150	120	259	105	421	101	413	109	323	94	305
4644	30151	144	237	130	412	118	428	125	323	104	323
4645	30152	115	241	108	473	90	385	112	350	99	361
4646	30153									64	375
4647	30154	114	232	118	369	104	438	127	367	102	289
4648	30155	118	256	119	414	104	430	121	383	105	334
4649	30156	107	271	104	428	97	423	132	390	97	350
4650	30157	108	243	108	445	92	363	121	383	94	351
4651	30158	84	231	99	435	86	420	96	393	83	331
4652	30159	85	243	91	448	89	428	94	380	82	337
4653	30160	129	263	143	451	129	398	129	387	109	334
4654	Chittimutyalu (Micro-nutrient Check)	109	247	112	443	84	400	112	303	93	348
4655	30161	101	236	106	413	97	403	113	277	86	320
	Exp. Mean	111	263	111	419	102	418	116	367	94	334

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-Biofort (Data Not Considered), Kharif 2021

Entry No	IET No	PUNJAB		ODISHA				ASSAM	
		@LUDHIANA		@ICAR-NRRI (Cuttack)	@JEYPORE		@TITABAR		
		PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	111	281	109	271	86	294	113	298
4602	29482 (R)	116	248	112	313	73	344	111	245
4603	29469 (R)	107	266	105	299	92	339	112	208
4604	30117	99	205	106	306	99	312	108	204
4605	30118	94	251	95	262	83	372	101	308
4606	30119	97	307	107	290	72	371	99	213
4607	30120	101	234	102	288	89	360	99	278
4608	30121			110	320	100	333	115	268
4609	30122	106	255	91	304	90	326	101	355
4610	30123	109	224	110	307	98	419	107	308
4611	30124	138	182	108	309	107	327	118	270
4612	BPT 5204 (Yield Check)			96	318	99	275	95	310
4613	29458 (R)	89	352	91	303	65	238	95	305
4614	30125	101	252	91	313	75	265	96	298
4615	29484 (R)			102	329	83	278	120	268
4616	30126	100	287	101	282	97	306	106	283
4617	30127	114	241	103	263	95	271	115	285
4618	30128	102	271	105	298	97	435	106	370
4619	30129	105	231	98	309	76	414	114	275
4620	30130	116	244	115	329	116	415	124	283
4621	30131			110	309	94	307	119	298
4622	30132	110	211	95	288	91	298	115	290
4623	30133	97	251	99	286	66	261	95	325
4624	30134	125	231	99	302	117	348	122	233
4625	IR 64 (Yield Check)	111	274	101	305	80	250	113	268
4626	29465 (R)	113	267	110	292	104	274	104	308
4627	30135	129	164	115	259	112	240	121	278
4628	30136	115	218	106	284	103	237	107	315
4629	30137	127	267	101	288	107	374	112	353
4630	30138	118	221	109	289	87	261	107	230
4631	30139			112	303	102	236	154	275
4632	30140	107	284	91	307	85	365	101	328
4633	30141	95	267	107	299	70	300	82	273
4634	30142	130	188	102	278	117	287	116	220
4635	30143	118	228	100	300	94	287	108	320
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	116	224	103	302	102	319	116	258
4637	30144	108	198	112	297	99	228	117	280
4638	30145	111	162	100	304	95	222	121	235
4639	30146	88	241	72	296	66	226	86	313
4640	30147	100	323	97	305	89	216	103	335
4641	30148	105	238	108	307	88	281	102	338
4642	30149	113	275	96	298	90	251	103	255
4643	30150			97	301	92	347	98	258
4644	30151	129	234	88	301	110	283	116	335
4645	30152	114	221	92	268	101	371	105	360
4646	30153					81		114	170
4647	30154	110	182	105	294	96	255	100	235
4648	30155	114	221	90	305	103	289	110	330
4649	30156			88	314	81	416	99	235
4650	30157	111	318	97	293	90	383	101	303
4651	30158	96	264	88	281	66	339	76	363
4652	30159	95	347	67	176	63	338	81	300
4653	30160	155	237	84	315	104	340	137	290
4654	Chittimutyalu (Micro-nutrient Check)			104	292	61	249	110	250
4655	30161			94	316	88	273	99	303
Exp. Mean		110	246	100	295	91	308	108	285

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-Biofort (Data Not Considered), Kharif 2021

Entry No	IET No	MADHYA PRADESH		MAHARASHTRA2		GUJARAT		TELANGANA	
		@Waraseoni		@SHIRGAON		@NAWAGAM		@RUDRUR	
		PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	122	440	96	114	104	243	78	219
4602	29482 (R)	114	269	85	138	106	227	103	273
4603	29469 (R)	120	418	96	136	119	275	102	217
4604	30117	113	315	106	130	109	227	91	240
4605	30118	114	365	93	126	117	234	92	223
4606	30119	104	349	95	115	112	234	85	205
4607	30120	111	282	98	153	106	218	100	182
4608	30121	116	319	106	145	111	205	93	225
4609	30122	112	321	93	119	100	221	92	209
4610	30123	117	332	95	135	110	262	90	232
4611	30124	125	317	105	136	123	227	69	209
4612	BPT 5204 (Yield Check)	96	424	81	119	90	246	103	223
4613	29458 (R)	116	400	100	151	98	218	80	212
4614	30125	106	434	84	133	99	230	79	231
4615	29484 (R)	120	382	99	127	112	234	93	248
4616	30126	109	351	90	117	99	214	93	256
4617	30127	144	331	106	139	113	237	97	260
4618	30128	121	425	90	149	104	278	91	270
4619	30129	122	330	102	117	110	218	87	250
4620	30130	122	257	105	142	129	227	89	249
4621	30131			95	129	117	226		
4622	30132	121	336	94	154	107	240	81	211
4623	30133	112	355	85	143	107	230	84	200
4624	30134	156	347	121	148	114	208	97	259
4625	IR 64 (Yield Check)	123	282	105	162	100	211	97	252
4626	29465 (R)	126	335	116	132	119	240	90	213
4627	30135	135	329	109	144	108	224	93	243
4628	30136	104	347	105	116	100	218	98	281
4629	30137	126	412	106	147	113	237	109	260
4630	30138	109	391	105	143	103	250	88	213
4631	30139	187	354	136	145	134	256	90	221
4632	30140	107	335	90	120	95	214	93	259
4633	30141	102	353	80	129	90	211	88	195
4634	30142	128	330	123	148	125	262	100	203
4635	30143	135	275	100	133	106	218	83	202
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	121	358	104	127	106	195	88	215
4637	30144	133	388	110	167	106	224	69	221
4638	30145	127	264	117	115	111	202	81	210
4639	30146	106	411	81	115	83	237	68	224
4640	30147	124	337	97	118	85	234	91	221
4641	30148	113	255	92	155	103	205	88	238
4642	30149	122	263	102	126	113	202	95	207
4643	30150	107	274	98	116	106	224	80	217
4644	30151	134	415	130	129	123	234	85	230
4645	30152	112	362	99	123	102	227	92	222
4646	30153			99	131	110	229		
4647	30154	133	320	107	140	128	214	94	259
4648	30155	122	363	107	134	105	205	96	220
4649	30156	117	463	120	136	104	224	74	211
4650	30157			99	153	99	211	69	261
4651	30158	98	361	84	151	85	230	98	227
4652	30159	101	374	86	159	70	195	67	272
4653	30160	155	286	109	121	139	253	72	235
4654	Chittimutyalu (Micro-nutrient Check)	115	421	109	132	102	259	72	231
4655	30161	115	319	102	164	100	224	84	258
	Exp. Mean	120	347	101	135	107	228	88	230

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Table No. 4.13 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT-Biofort (Data Not Considered), Kharif 2021

Entry No	IET No	TAMILNADU		KERALA		KARNATAKA					
		@ADUTHURAI		@PATTAMBI		@BRAHMAWAR		@SIRSI		@MALAG	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4601	29460 (R)	84	178	86	443	72	365	85	394	58	142
4602	29482 (R)	96	253	97	378	91	360	98	292	85	142
4603	29469 (R)	85	193	96	370	82	323	103	393	73	208
4604	30117	86	210	92	345	86	337	90	326	77	234
4605	30118	90	233	97	297	80	381	83	276	61	205
4606	30119	88	288	89	483	84	347	72	369	76	215
4607	30120	93	248	96	371	82	387	93	291	79	231
4608	30121	108	210	85	339	105	393	89	317	89	191
4609	30122	91	270	92	378	72	390	80	318	72	188
4610	30123	84	305	88	343	90	343	88	226	76	195
4611	30124	109	337	92	442	101	370	96	293	80	172
4612	BPT 5204 (Yield Check)	82	205	101	366	66	391	66	353	54	109
4613	29458 (R)	102	263	88	364	82	210	72	411	71	119
4614	30125	92	203	103	455	78	318	77	346	59	152
4615	29484 (R)	84	178	80	401	94	330	83	259	69	139
4616	30126	91	298	88	438	84	346	82	238	79	142
4617	30127	104	220	80	443	86	396	92	285	90	188
4618	30128	82	248	82	476	75	319	86	287	74	185
4619	30129	93	186	88	401	94	338	94	318	72	145
4620	30130	113	270	95	426	101	339	110	350	100	234
4621	30131	84	210	98	401			92	351	42	83
4622	30132	94	290	84	463	95	369	73	321	78	188
4623	30133	86	160	92	480	79	354	99	357	58	152
4624	30134	103	265	93	392	83	328	86	243	107	191
4625	IR 64 (Yield Check)	96	254	96	396	104	370	84	253	89	195
4626	29465 (R)	85	170	93	422	95	348	93	291	77	145
4627	30135	104	326	84	333	102	388	89	261	94	208
4628	30136	83	191	88	396	100	332	88	271	86	205
4629	30137	88	235	98	336	88	250	74	320	90	215
4630	30138	91	201	103	318	80	356	110	336	73	191
4631	30139	110	193	84	456	93	330	78	241	120	185
4632	30140	80	235	92	400	112	336	73	342	79	201
4633	30141	84	154	93	411	81	222	100	321	71	168
4634	30142	105	178	93	412	73	386	85	391	107	234
4635	30143	93	190	96	462	101	312	98	233	98	228
4636	DRR Dhan 45 (Yield & Micro-nutrient Check)	95	225	93	418	88	393	85	352	88	175
4637	30144	102	199	84	393	105	327	86	276	84	208
4638	30145	94	255	93	464	90	349	77	436	64	139
4639	30146	87	261	96	378	99	393	87	337	56	188
4640	30147	91	298	93	414	83	237	81	392	72	175
4641	30148	83	204	84	477	89	323	93	266	74	149
4642	30149	92	185	88	451	82	360	87	246	52	168
4643	30150	85	221	98	330	99	355	106	342	74	195
4644	30151	114	343	103	430	92	386	87	283	94	248
4645	30152	88	195	84	411	119	353	104	299	94	211
4646	30153	96	209	92	412			90	369	100	172
4647	30154	106	233	93	462	95	367	93	405	89	178
4648	30155	96	200	94	418	104	334	85	405	75	191
4649	30156	117	253	92	393	98	330	82	349	75	155
4650	30157	92	262	101	464	100	389	79	363	73	198
4651	30158	72	200	98	378	94	371	107	343	67	158
4652	30159	82	255	95	414	76	320	89	253	98	188
4653	30160	96	202	100	477	76	287	87	348	83	201
4654	Chittimutyalu (Micro-nutrient Check)	83	303	94	451	112	230	90	269	65	142
4655	30161	91	204	95	416	100	273	90	318	70	191
	Exp. Mean	93	232	92	409	90	340	88	318	78	181

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Table No. 4.14: Grain quality characteristics of entries in IVT-Biofort, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	GT	Grain Chalk	ASV	AC	GC
4601	29460 (R)	80.7	71.1	66.3	5.20	2.32	2.24	SB	VOC	7.0	26.32	22
4602	29482 (R)											
4603	29469 (R)	80.6	68.6	65.7	6.60	1.90	3.47	LS	VOC	4.0	26.54	61
4604	30117	80.9	70.1	59.5	5.18	1.88	2.75	MS	VOC	5.0	24.43	22
4605	30118	79.9	70.7	69.6	6.49	2.09	3.10	LS	VOC	4.0	21.97	22
4606	30119	80.8	70.8	68.1	5.26	1.82	2.89	MS	VOC	5.0	25.05	22
4607	30120	80.6	68.0	32.4	5.43	2.56	2.12	SB	OC	7.0	24.66	22
4608	30121	76.0	66.8	64.4	5.53	2.53	2.18	SB	OC	5.0	23.76	22
4609	30122	80.6	74.4	72.4	6.39	2.11	3.02	LS	VOC	5.0	23.93	22
4610	30123	79.2	72.5	71.7	6.63	2.04	3.25	LS	VOC	4.0	22.99	22
4611	30124	79.0	71.5	70.8	5.91	2.38	2.48	SB	VOC	4.0	21.26	22
4612	BPT 5204 (YC)	79.8	72.5	68.3	5.06	1.83	2.76	MS	A	4.0	23.99	22
4613	29458 (R)	78.9	69.7	67.7	5.31	1.50	3.54	SS	A	7.0	26.95	22
4614	30125	79.3	68.8	66.1	6.51	2.03	3.20	LS	A	7.0	15.16	61
4615	29484 (R)	79.6	71.1	69.2	5.80	1.71	3.39	SS	A	7.0	24.43	70
4616	30126	79.7	68.0	58.7	7.33	2.00	3.66	LS	VOC	7.0	25.10	43
4617	30127	79.7	61.4	47.1	6.36	2.24	2.83	LB	OC	4.0	23.90	70
4618	30128	80.7	64.3	50.4	6.14	2.08	2.95	LB	VOC	4.0	25.84	78
4619	30129	80.0	69.8	67.1	5.35	2.45	2.18	SB	VOC	4.0	23.73	45
4620	30130	78.1	62.4	59.7	5.54	2.01	3.25	LS	VOC	7.0	20.70	22
4621	30131	79.8	67.0	43.4	6.24	2.22	2.81	LB	VOC	5.0	24.17	65
4622	30132	78.4	66.6	54.0	6.67	1.95	3.42	LS	A	4.0	23.87	69
4623	30133	81.4	67.9	33.5	6.27	2.35	2.66	LB	OC	4.0	26.10	60
4624	30134	79.5	72.9	70.6	5.55	2.24	2.47	SB	VOC	5.0	21.41	22
4625	IR-64 (YC)	79.5	67.5	52.5	6.38	2.10	3.03	LS	VOC	4.0	25.46	48
4626	29465 (R)											
4627	30135	79.9	69.4	63.9	5.30	2.08	2.54	MS	OC	5.0	22.00	22
4628	30136	78.9	71.0	64.4	6.21	2.21	2.80	LB	VOC	4.0	23.90	22
4629	30137	77.5	71.5	70.8	6.26	2.22	2.81	LB	VOC	7.0	23.37	22
4630	30138	80.0	72.0	62.9	6.82	1.99	3.42	LS	VOC	4.0	22.79	50
4631	30139											
4632	30140	80.9	69.3	61.0	6.39	2.25	2.84	LB	VOC	4.0	20.82	32
4633	30141	79.0	63.5	23.2	5.38	2.31	2.32	SB	VOC	4.0	26.51	22
4634	30142	79.2	72.1	70.4	5.56	1.96	2.83	MS	VOC	5.0	23.99	22
4635	30143	76.1	68.2	50.7	5.76	2.07	2.78	MS	VOC	7.0	24.99	22
4636	DRR Dhan-45	78.4	69.4	56.6	6.98	2.02	3.45	LS	VOC	4.0	23.96	44
4637	30144	76.4	66.5	59.0	5.41	1.83	2.95	MS	VOC	4.5	25.46	22
4638	30145	80.6	69.1	66.4	6.07	2.26	2.68	LB	VOC	4.0	25.72	46
4639	30146	78.5	70.5	66.0	5.75	2.20	2.61	MS	VOC	5.0	20.76	22
4640	30147	81.1	71.8	60.9	6.53	2.15	3.03	LS	VOC	4.0	23.34	33
4641	30148	80.2	69.4	58.7	5.91	1.92	3.07	SS	A	4.0	24.40	22
4642	30149	78.9	70.4	67.9	6.63	2.14	3.09	LS	VOC	4.0	25.66	33
4643	30150	81.4	73.6	72.3	5.51	2.13	2.58	MS	VOC	4.0	21.79	22
4644	30151											
4645	30152	79.6	71.6	67.2	6.69	2.00	3.34	LS	VOC	4.0	22.93	51
4646	30153	80.4	70.9	44.2	6.67	2.19	3.04	LS	VOC	5.0	25.40	52
4647	30154	79.7	69.7	54.5	6.27	2.45	2.55	LB	VOC	7.0	24.87	22
4648	30155	80.7	72.9	71.1	5.70	2.17	2.62	MS	VOC	4.0	24.02	22
4649	30156	78.6	70.5	69.2	3.73	1.97	1.89	SB	A	7.0	21.73	22
4650	30157	80.3	72.1	54.0	6.75	2.27	2.97	LB	A	5.0	24.69	43
4651	30158	79.7	71.4	67.5	5.14	2.40	2.14	SB	A	7.0	25.40	22
4652	30159	79.1	73.1	72.0	5.39	1.77	3.04	SS	A	4.0	21.82	22
4653	30160	78.5	69.2	68.0	5.47	2.01	2.72	MS	A	4.0	25.54	22
4654	Chitti Muthyalu	78.8	70.5	58.1	4.90	2.27	2.15	SB	A	5.0	22.82	22
4655	30161	82.1	73.8	60.8	5.62	1.89	2.97	MS	VOC	4.0	23.96	43

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

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Table No. 4.15: Iron content in ppm for polished rice samples of entries in IVT-Biofortification analyzed at IRR, Hyderabad Kharif 2021

Entry No	IET No.	II	II	Zone II	III	III	III	III	Zone III	IV	Zone IV
		KTA	LDN	Mean	CTK	JYP	VRN	MSD	Mean	TTB	Mean
4601	29460 (R)	1.7	2.75	2.23	2.7	1.55	1.95	1.50	1.93	2.80	2.80
4602	29482 (R)	2.05	2.7	2.38	2	2.35	2.4	3.40	2.54	3.00	3.00
4603	29469 (R)	1.6	2.6	2.10	1.9	1.45	2.5	2.40	2.06	2.80	2.80
4604	30117	1.95	2.25	2.10	1.7	2	2.5	1.80	2.00	1.50	1.50
4605	30118	1.9	2.35	2.13	2.3	1.5	2.45	2.00	2.06	1.70	1.70
4606	30119	1.7	2.1	1.90	1.8	2.2	1.95	2.70	2.16	2.30	2.30
4607	30120	1	1.3	1.15	1.5	1.3	1.05	1.00	1.21	1.80	1.80
4608	30121	1.65		1.65	1.5	1.8	1.95	1.60	1.71	2.00	2.00
4609	30122	1.3	2.1	1.70	1.4	1.75	1.7	2.30	1.79	2.40	2.40
4610	30123	1.5	2.2	1.85	1.3	1.4	3.25	1.60	1.89	1.80	1.80
4611	30124	1.95	2.5	2.23	1.8	1.65	2.25	2.30	2.00	1.90	1.90
4612	BPT 5204	2.4		2.40	2.3	1.9	3.2	2.50	2.48	3.70	3.70
4613	29458 (R)	2.45	2.4	2.43	2.1	2.7	2.35	2.30	2.36	4.90	4.90
4614	30125	2.05	2.8	2.43		1.8	1.9	2.40	2.03	2.20	2.20
4615	29484 (R)	2.25		2.25		2.4	2.45	1.40	2.08	2.90	2.90
4616	30126	1.8	2.6	2.20		1.4	1.8	2.20	1.80	1.80	1.80
4617	30127	1.6	1.55	1.58	1.3	1.2	1.8	1.70	1.50	1.70	1.70
4618	30128	1.25	1.85	1.55	1.3	1.45	2.2	2.20	1.79	2.10	2.10
4619	30129	1.75	1.6	1.68	1.4	1.95	1.5	1.30	1.54	1.80	1.80
4620	30130	2.25	1.95	2.10	1.1	1.6	2.2	1.60	1.63	1.90	1.90
4621	30131				1.8	2.35			2.08	1.60	1.60
4622	30132	2.35	2.2	2.28	1.6	1.85	3.35	2.10	2.23	2.40	2.40
4623	30133	1.15	1.85	1.50	1.4	1.3	1.4	1.10	1.30	1.80	1.80
4624	30134	1.15	2.4	1.78	1.6	1.55	2	2.30	1.86	2.30	2.30
4625	IR 64	1.9	2.4	2.15	1.5	1.5	2	1.10	1.53	1.70	1.70
4626	29465 (R)	2.2	2.1	2.15	1.9	2.15	2.2	2.10	2.09	2.20	2.20
4627	30135	2.6	2.45	2.53		2.1		2.60	2.35	2.20	2.20
4628	30136	2.2	2	2.10	2.1	1.7	2.15	2.40	2.09	2.40	2.40
4629	30137	1.65	2.3	1.98	1.7	2.35	1.45	2.70	2.05	1.80	1.80
4630	30138	1.55	2.1	1.83	1.2	1.85	1.8	2.30	1.79	2.40	2.40
4631	30139	1.7		1.70	1	1.7	1.45	1.20	1.34	1.60	1.60
4632	30140	1.25	1.6	1.43	1	1.1	1.95	1.80	1.46	1.60	1.60
4633	30141	2.2	1.9	2.05	1.7	2.15	1.2	2.50	1.89	2.30	2.30
4634	30142	1.7	2.1	1.90	1.6	1.4	1.85	1.80	1.66	4.10	4.10
4635	30143	1.45	2.2	1.83		2.05	1.5	1.80	1.78	2.00	2.00
4636	DRR Dhan 45	2.05	1.8	1.93	1.7	1.9	2.35	2.50	2.11	3.00	3.00
4637	30144	1.7	2.4	2.05	1.8	1.95	1.95	2.50	2.05	2.30	2.30
4638	30145	1.2	1.1	1.15	1.3	1.1	1.25	2.00	1.41	2.00	2.00
4639	30146	2.7	3.9	3.30	2	2.85	2.95	3.40	2.80	3.40	3.40
4640	30147	1.3	1.95	1.63	1	0.95	2	2.40	1.59	2.20	2.20
4641	30148	2.1	2.5	2.30	1.5	1.95	1.85	8.90	3.55	1.90	1.90
4642	30149	1.7	2.35	2.03	2.6	1.5	2.8	4.10	2.75	2.50	2.50
4643	30150	2.15		2.15		1.8	2.75	2.20	2.25	2.70	2.70
4644	30151	2.15	2.45	2.30	2	2.4	2.15	4.30	2.71	2.00	2.00
4645	30152	1.6	1.85	1.73	1.8	1.25	2.85	2.80	2.18	2.20	2.20
4646	30153					1.5			1.50	1.90	1.90
4647	30154	2.2	2.55	2.38	2	2.1	1.7		1.93	2.10	2.10
4648	30155	1.65	1.85	1.75		1.5	1.75	2.00	1.75	2.20	2.20
4649	30156	2.05		2.05	2.5	3.45	3.25	3.10	3.08	3.80	3.80
4650	30157	2.55	2.1	2.33	1.8	1.75	1.8	1.40	1.69	2.10	2.10
4651	30158	1.8	1.95	1.88		2.2	1.65	1.40	1.75	2.30	2.30
4652	30159	3.25	3.75	3.50		2.7	3.3	3.40	3.13	2.90	2.90
4653	30160	2.25	3.1	2.68	2.4	2.9	2.65	2.70	2.66	2.10	2.10
4654	Chittimutyalu	2.85		2.85		2.15	2.1	2.90	2.38	2.50	2.50
4655	30161	2.45		2.45	1.8	1.35	2.4	2.10	1.91	1.30	1.30
Mean		1.90	2.24	2.07	1.72	1.85	2.14	2.35	2.02	2.31	2.31

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Table No. 4.15 contd.: Iron content in ppm for polished rice samples of entries in IVT-Biofortification analyzed at IIRR, Hyderabad Kharif 2021

Entry No	IET No.	V	V	V	Zone V	VI	VI	VI	Zone VI	VII	VII	VII
		RPR	SND	SKL	Mean	KJT	VDN	NVS	Mean	MTU	RNR	WGL
4601	29460 (R)	1.75	1.4	1.8	1.65	2.50	1.8	2.8	2.37	2.25	1.95	1.9
4602	29482 (R)	2.25	2.85	2	2.37	2.60	2.25	3	2.62	2.65	1.75	1.9
4603	29469 (R)	1.85	1.25	2.6	1.90	4.20	1.8	2.55	2.85	2.45	1.5	2.05
4604	30117	1.9	2.65	1.65	2.07	2.00	1.85	2.35	2.07	2.3	1.5	1.5
4605	30118	2.5	1.75	2	2.08	3.60	1.85	2.5	2.65	2.5	1.9	1.25
4606	30119	1.55	2.05	1.95	1.85	3.70	1.8	2.4	2.63	1.7	1.65	2
4607	30120	1	1.2	1.35	1.18	1.50	1.3	2.1	1.63	1.05	1.5	1.65
4608	30121	1.8	1.9	1.2	1.63	1.90	1.6	2.15	1.88	1.55	1.7	2.1
4609	30122	1.6	2.15	2.05	1.93	2.50	1.4	3	2.30	2.15	1.55	1.85
4610	30123	2	2.3	1.15	1.82	2.60	1.95	2.4	2.32	1.75	1.1	1.15
4611	30124	2.65	3.7	1.75	2.70	3.10	1.85	2.85	2.60	1.7	1.75	2.3
4612	BPT 5204	2.25	2.15	2.15	2.18	1.80	2.35	3.6	2.58	1.85	2.45	2.05
4613	29458 (R)	2.15	2.25	2.25	2.22	3.20	1.35	3.4	2.65	2.25	2.25	
4614	30125	2.85	3	3.3	3.05	4.70	2.05	2.75	3.17	2.3	1.85	2.1
4615	29484 (R)	3.15	2.55	2.6	2.77	2.60	2.45	2.15	2.40	2.5	2.45	2.05
4616	30126	1.9	1.25	1.5	1.55	1.90	1.55	1.85	1.77	1.45	1.1	1.5
4617	30127	1.75	1.75	1.25	1.58	2.00	1.35	2.3	1.88	1.35	1.1	0.9
4618	30128	2.35	1.15	1.85	1.78	2.30	1.05	1.8	1.72	1.75	1	0.95
4619	30129	1.6	1.1	1.5	1.40	3.20	2.5	1.85	2.52	1.4	1.4	1.6
4620	30130	2.2	2.05	2	2.08	2.20	2.1	2.6	2.30	2.3	1.35	1.15
4621	30131					3.70		1.2	2.45			
4622	30132	2.3	1.25	1.65	1.73	3.00	1.7	2.25	2.32	1.9	1.75	1.6
4623	30133	1.25	0.7	0.75	0.90	0.90	0.95	1.2	1.02	1.1	0.75	1.55
4624	30134	1.5	1.5	2.05	1.68	2.00	1.85	1.9	1.92	1.25	1.35	1.5
4625	IR 64	1.85	1.55	1.65	1.68	2.10	1.7	2	1.93	1.85	1.3	1.8
4626	29465 (R)	2.4	2.9	2.05	2.45	2.80	2.4	2.6	2.60	2.15	1.95	1.25
4627	30135	2.2	1.7	1.25	1.72	1.90	1.75	2	1.88	1.7	2.3	2
4628	30136	2.15	1.75	2.45	2.12	2.30	2.2	2.5	2.33	1.8	1.4	1.8
4629	30137	2.7	1.75	1.5	1.98	2.50	1.7	2.45	2.22	1.3	1.45	1.4
4630	30138	1.9	1.6	1.8	1.77	2.90	1.9	2.95	2.58	1.75	1.4	1.6
4631	30139	1.7	1.4	1.2	1.43	2.60	1.2	1.85	1.88	1.35	1.8	1.75
4632	30140	2	1.45	1.5	1.65	2.70	0.75	1.35	1.60	1.7	1	1.25
4633	30141	1.9	1.7	2.05	1.88	4.00	1.85	1.7	2.52	1.55	1.5	1.95
4634	30142	1.7	1.65	1.55	1.63	2.20	1.85	1.55	1.87	1.65	1.45	2.1
4635	30143	2.6	2.1	2.1	2.27	2.80	1.7	3.65	2.72	1.65	1.7	1.85
4636	DRR Dhan 45	2.05	1.95	1.9	1.97	2.60	2	2.2	2.27	1.75	1.6	1.75
4637	30144	1.7	1.55	1.15	1.47	1.80	2	2.7	2.17	1.65	1.8	2.05
4638	30145	1	1.6	0.8	1.13	1.30	1.5	1.3	1.37	1.45	1.2	1.9
4639	30146	2.75	2.6	1.95	2.43		2.2	4.8	3.50	3.7	2.05	2.25
4640	30147	1.75	1.35	1.8	1.63	2.00	1.2	2.35	1.85	1.65	1	1.7
4641	30148	2.4	1.8	1.9	2.03	3.20	2.1	2.1	2.47	2.25	1.65	2.25
4642	30149	1.75		1.55	1.65	2.90	1.3	2.3	2.17	1.85	1.5	1.75
4643	30150	1.8	1.25	1.75	1.60	1.90	2.75	2.4	2.35	1.6	1.7	2.15
4644	30151	2.4	2.45	2.35	2.40	2.30	2.5	2.4	2.40	2	2.25	2.6
4645	30152	1.95	1.35	1.9	1.73	2.30	1.8	2.25	2.12	1.8	1.25	1.5
4646	30153					1.20		0.95	1.08			
4647	30154	1.6	2.6	1.4	1.87	2.90	2.15	1.6	2.22	1.35	1.9	1.85
4648	30155	1.2	1.25	1.35	1.27	3.00	1.7	1.45	2.05	0.9	1.65	1.4
4649	30156	3.15	2.4	2.15	2.57	4.20	3.6	1.6	3.13	3.75	2.8	3.35
4650	30157	2.5	1.25	1.25	1.67	2.80	2.1	3.75	2.88	1.9	1.95	1.95
4651	30158	2.2	1.5	1.6	1.77	3.10	1.55	3.7	2.78	1.25	2	2.65
4652	30159	3.1	2.2	2	2.43	3.60	2.5	5.4	3.83	3	2.5	3.15
4653	30160	2.8	1.7	2.15	2.22	2.70	2.05	4.55	3.10	2.65	2.3	2
4654	Chittimutyalu	3.15	2.15	1.9	2.40	2.50	2.35	3.35	2.73	2.35	2.3	2.85
4655	30161	1.8	2.2	2	2.00	2.90	1.05	2.35	2.10	1.4	1.2	1.65
Mean		2.08	1.86	1.78	1.90	2.62	1.85	2.46	2.31	1.89	1.67	1.85

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Table No. 4.15 contd.: Iron content in ppm for polished rice samples of entries in IVT-Biofortification analyzed at IIRR, Hyderabad Kharif 2021

Entry No	IET NO.	VII	VII	VII	VII	VII	VII	VII	VII	VII	VII	Zone VII Mean	Overall Mean
		RDR	ADT	CBT	PTB	MNC	MND	GNV	BRM	SRS	MLG		
4601	29460 (R)	1.8	1.70	1.9	2.00	2.45	1.75	1.8	1.7	1.7	5.7	2.20	2.14
4602	29482 (R)	1.2	2.30	1.55	1.90	4	1.6	2.2	2.7	1.9	2.8	2.19	2.36
4603	29469 (R)	2	1.50	1.2	2.70	2.6	1.55	1.95	2.5	1.9	2.5	2.03	2.15
4604	30117	1.8	2.20	1.6	1.60	2.4	1.4	1.65	2.15	1.6	3.45	1.93	1.97
4605	30118	1.45	2.10	1.7	1.90	2.25	1.7	1.55	2.6	1.3	2.6	1.91	2.05
4606	30119	1.6	2.00	1.6	2.30	2.65	1.35	1.65	2.55	1.6	3.25	1.99	2.08
4607	30120	1.4	1.50	1.3	1.60	1.4	1.05	1.05	1.55	1.1	3.9	1.54	1.44
4608	30121	1.35	2.00	1.2	3.50	1.65	1.2	1.35	1.85	1.2	3.25	1.84	1.80
4609	30122	1.6	2.80	1.45	4.00	2.1	1.35	1.35	1.95	1.3	4	2.11	2.04
4610	30123	2.45	2.20	1.4	2.00	2.35	1.1	1.55	2.55	1.2	3.35	1.86	1.91
4611	30124	2.1	1.50	1.9	5.10	3.25	1.4	1.5	2.05	0.6	2.6	2.13	2.23
4612	BPT 5204	2.7	1.70	1.55	3.40	2.15	2.25	1.3	1.95	2.1	5.05	2.35	2.43
4613	29458 (R)	1.5	2.60	1.75	3.10	2	1.95		2.15	1.6	9.5	2.79	2.69
4614	30125		3.70	1.45	2.00	3.5	1.4	1.85	2.6	1.3	3.85	2.33	2.49
4615	29484 (R)	1.55	2.10	1.5	2.50	3.8	2.85	1.75	3.45	2.7	3.85	2.54	2.50
4616	30126	2.1	0.70	1.55	1.60	1.6	1.35	0.95	2.05	2.3	2.75	1.62	1.70
4617	30127	1.65	1.30	0.8	1.50	2.3	1.1	0.7	1.6	1.1	3.3	1.44	1.54
4618	30128	2.3	1.30	1.05	1.40	2.45	0.85	1	1.9	1.5	2.9	1.57	1.66
4619	30129	1.2	1.50	1.1	2.10	1.35	1.75	1.3	2.1	2.5	1.9	1.63	1.70
4620	30130	1.7	1.20	1.3	1.50	2.65	1.6	1.2	1.15	1.2	3.3	1.66	1.82
4621	30131	1.85	1.40		3.10		1.5	1.35			3.65	2.14	2.14
4622	30132	1.9	2.20	1.35	2.30	1.9	1	1.3	2.45	1.2	2.4	1.79	1.97
4623	30133	1.8	1.70	0.8	1.60	1.3	0.9	0.8	1.75	1.6	2.35	1.38	1.30
4624	30134	1.45	3.20	1.5	1.50	1.9	1.25	1.35	1.6	1.3	1.75	1.61	1.73
4625	IR 64	2.2	2.00	1.5	3.20	1.9	1.75	0.95	1.25	1.7	1.9	1.79	1.78
4626	29465 (R)	1.8	2.70	1.2	1.90	3.1	2.1	2.4	2.75	1.6	2.5	2.11	2.21
4627	30135	2.35	1.80	1.8	2.60	2.25	1.35	1.85	1.65	1.4	3.75	2.06	2.06
4628	30136	2	2.10	1.45	2.40	1.85	1.65	1.65	1.85	1.4	2.2	1.81	1.99
4629	30137	1	1.20	0.85	1.90	2.05	1.6	1.3	2.1	1.7	2.5	1.57	1.80
4630	30138	3.1	0.90	0.95	2.30	2.2	0.75	1.35	2.75	1.7	3.2	1.84	1.93
4631	30139	2.25	1.00	0.95	2.50	1.6	1.05	1.15	2.2	1.1		1.56	1.55
4632	30140	2.6	2.50	1.2	2.00	1.8	1.6	1.1	2.2	0.8		1.65	1.59
4633	30141	1.7	2.10	1.6	1.80	3	1.7	1.75	2.65	1.6		1.91	2.00
4634	30142	2.9	1.20	1.65	2.30		1.7	0.75	1.3	1.6		1.69	1.82
4635	30143	1.8	1.40	1.65	2.20	2.25	1.15	0.85	1.85	1.3		1.64	1.90
4636	DRR Dhan 45	2.3	1.90	1.15	2.00	2.15	1.05	1.75	2.65	1.7		1.81	1.99
4637	30144	3.3	1.50	1.3	1.50	1.9	1	1.25	2.6	1.7		1.80	1.88
4638	30145	2.45	1.20		1.00	1	1.8	0.85	1.75	1		1.42	1.38
4639	30146	2	1.50	1.65	4.60	3.25	1	2.35	1.45	2.2		2.33	2.65
4640	30147	1.95	2.40	0.9	1.90	3	1.5	1	1.9	1.1		1.67	1.69
4641	30148	1.45	1.90	1.35	2.30	1.75	1.1	1.65	1.7	1.5		1.74	2.20
4642	30149	1.7	1.20	1.45	2.20	1.75	1.75	1.45	1.4	0.9		1.58	1.93
4643	30150	1.1	2.20	1.3	2.40	2.25	2.05	1.45	1.8	1.5		1.79	1.95
4644	30151	2.5	1.90	1.3	2.90	1.85	1.05	2.15	1.4	1.6		1.96	2.21
4645	30152	1.95	1.30	0.95	2.90	2.85	1.35	1.25	1.95	1.2		1.69	1.85
4646	30153		2.20		5.40		1.2					2.93	2.05
4647	30154	2	1.80	1.3	2.20	1.75	3.05	1.8	1.95	1.3		1.85	1.96
4648	30155	1.65	1.90	1.7	2.10	2.05	1.65	1.4	1.75	0.8		1.58	1.66
4649	30156		2.40	2.15	3.10	2.85	1.8	2.9	1.8	2.4		2.66	2.81
4650	30157	1.75	1.40	1.1	2.40	1.75	2.45	1.5	2.65	1.3		1.84	1.97
4651	30158	2.9	1.50	0.75	3.40	1.8	2.3	1.65	2.15	1.8		2.01	2.05
4652	30159	2.3	2.90	1.05	3.10	3.3	2.05	1.75	3.05	1.9		2.50	2.84
4653	30160	1.8	1.80	1.55	2.10	2.75	1.25	1.9	2.3	1.4		1.98	2.31
4654	Chittimutyalu	1.85	1.90	1.75	2.20	2.35		1.85	1.95	1.8		2.10	2.32
4655	30161	2.3	1.50	0.95	2.20	2.1		1.1	2.25	1.1		1.61	1.80
Mean		1.95	1.85	1.36	2.42	2.28	1.53	1.48	2.07	1.51	3.33	1.91	2.00

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Table No.4.16: Zinc content in ppm for polished rice samples of entries in IVT-Biofortification analyzed at IIRR, Hyderabad Kharif 2021

Entry No	IET No.	II		Zone II Mean	III				Zone III Mean	IV	
		KTA	LDN		CTK	JYP	VRN	MSD		TTB	Zone IV Mean
4601	29460 (R)	16.45	21.9	19.18	15.3	20.6	17.35	19.3	18.14	18.8	18.8
4602	29482 (R)	28.15	35.9	32.03	32.1	35.65	38	41.6	36.84	42.8	42.8
4603	29469 (R)	19.80	25.25	22.53	23.8	21.45	26.8	25.5	24.39	23.8	23.8
4604	30117	14.70	20	17.35	17.7	17.6	18.65	22.3	19.06	21.3	21.3
4605	30118	21.75	28.2	24.98	22.4	19.35	27	28.9	24.41	22.6	22.6
4606	30119	15.15	18.6	16.88	19.4	17.45	21.2	18.6	19.16	23.4	23.4
4607	30120	13.80	23.65	18.73	18.3	16.8	18.75	23.5	19.34	18.3	18.3
4608	30121	16.00		16.00	13.6	17.8	18	20.5	17.48	18.3	18.3
4609	30122	13.65	19.85	16.75	19.1	18.05	21.25	20.5	19.73	19.5	19.5
4610	30123	13.10	18.9	16.00	16.2	18.2	19.3	18.8	18.13	16.3	16.3
4611	30124	14.35	18.85	16.60	14.3	19.55	20	28.2	20.51	18.1	18.1
4612	BPT 5204	18.50		18.50	22.7	18.8	19.85	19.7	20.26	19.5	19.5
4613	29458 (R)	19.35	21.3	20.33	23.6	20.15	25.65	26.1	23.88	22.7	22.7
4614	30125	15.05	19.7	17.38		18.05	18.25	22.9	19.73	19.3	19.3
4615	29484 (R)	22.45		22.45		32.45	26.1	33.5	30.68	24.7	24.7
4616	30126	14.90	20.9	17.90		17.95	19.75	23.8	20.50	20.3	20.3
4617	30127	12.75	17.7	15.23	15.8	16	22.2	22.1	19.03	17.1	17.1
4618	30128	14.85	20.2	17.53	18.1	16.1	24.3	21.7	20.05	27.3	27.3
4619	30129	18.70	20.9	19.80	19.8	20.75	24.6	29.3	23.61	25.9	25.9
4620	30130	14.45	21.4	17.93	17.7	18.3	22.1	23.9	20.50	20.6	20.6
4621	30131				20.7	18.8			19.75	22.7	22.7
4622	30132	15.90	24.25	20.08	20.4	21.55	24.6	27.1	23.41	19.6	19.6
4623	30133	13.85	21.45	17.65	18.1	18.4	23.55	23.5	20.89	19.4	19.4
4624	30134	13.00	22.3	17.65	16.9	16.6	19.4	21.2	18.53	16.3	16.3
4625	IR 64	15.30	24.1	19.70	19.3	21	21.35	18	19.91	20.2	20.2
4626	29465 (R)	18.60	23.85	21.23	21.5	17.4	22.6	18.1	19.90	29.8	29.8
4627	30135	13.50	20.2	16.85		18.65		23.8	21.23	19.7	19.7
4628	30136	12.80	17.9	15.35	19.6	14.4	19.7	22.8	19.13	20.9	20.9
4629	30137	17.25	24.4	20.83	20	22.85	21.35	24.1	22.08	23.4	23.4
4630	30138	15.05	22	18.53	20.2	19.4	21.95	18	19.89	23.9	23.9
4631	30139	15.95		15.95	19.8	14.95	21.25	20.6	19.15	17.4	17.4
4632	30140	14.30	19.3	16.80	17.2	15.75	25.65	16.6	18.80	21.3	21.3
4633	30141	17.50	20.45	18.98	19.2	19.6	21.1	28.6	22.13	24.2	24.2
4634	30142	16.30	21.45	18.88	19	19.9	20	29.4	22.08	19.7	19.7
4635	30143	15.25	21.5	18.38		17.6	18.95	21.1	19.22	17.6	17.6
4636	DRR Dhan 45	15.70	20.8	18.25	20.1	17.6	22.05	26.9	21.66	21.4	21.4
4637	30144	14.45	22.35	18.40	19.3	18.2	19.95	21.9	19.84	19.8	19.8
4638	30145	12.60	17.45	15.03	15.3	14.85	14.9	23.5	17.14	16.5	16.5
4639	30146	21.40	33.85	27.63	23.8	22.4	30.9	30.1	26.80	38.1	38.1
4640	30147	13.70	22.25	17.98	19.2	15.45	23.2	22.1	19.99	20.4	20.4
4641	30148	18.60	25.85	22.23	18.2	25.6	29.5	28.2	25.38	24.6	24.6
4642	30149	15.70	21.45	18.58	23.2	17.2	25.5	24.9	22.70	23	23
4643	30150	15.30		15.30		17.65	17.95	24.3	19.97	15.9	15.9
4644	30151	14.95	19.65	17.30	21.8	18.25	19.45	24.4	20.98	16.5	16.5
4645	30152	14.10	16.2	15.15	18	16.85	21.25	26.3	20.60	18.9	18.9
4646	30153					19.05			19.05	17.2	17.2
4647	30154	13.70	20.4	17.05	20.6	20.5	20.8		20.63	18.4	18.4
4648	30155	10.65	14.9	12.78		13.8	17.45	20.6	17.28	19.1	19.1
4649	30156	19.35		19.35	23.4	25.9	23.9	27.1	25.08	27	27
4650	30157	17.85	21.05	19.45	17.5	18.05	21	21.1	19.41	20	20
4651	30158	16.50	24.2	20.35		21.6	25.75	23.4	23.58	26.1	26.1
4652	30159	19.00	32.65	25.83		25.35	30	34.6	29.98	36.9	36.9
4653	30160	18.15	17.8	17.98	21.1	23.8	24.1	29	24.50	20.2	20.2
4654	Chittimutyalu	21.00		21.00		22.35	22.95	30.1	25.13	20.5	20.5
4655	30161	11.85		11.85	17.6	14.55	18.3	18.5	17.24	16.4	16.4
Mean		16.17	21.94	18.72	19.57	19.40	22.30	24.24	21.43	21.70	21.70

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Table No.4.16 contd.: Zinc content in ppm for polished rice samples of entries in IVT-Biofortification analyzed at IIRR, Hyderabad Kharif 2021

Entry No	IET No.	V	V	V	Zone V	VI	VI	VI	Zone VI	VII	VII	VII
		RPR	SND	SKL	Mean	KJT	VDN	NVS	Mean	MTU	RNR	WGL
4601	29460 (R)	19.7	16.65	19	18.45	20.7	14.15	30.5	21.78	21.25	13.35	16.6
4602	29482 (R)	36.3	31.9	34.1	34.10	21	22.1	41.55	28.22	25.6	22.65	30.85
4603	29469 (R)	21.8	17.1	21.6	20.17	28.7	16.65	25.65	23.67	41.05	19	21.95
4604	30117	17.1	19.35	16.85	17.77	14.5	13.25	23.95	17.23	21.05	14.15	16.35
4605	30118	23.25	21.45	20.35	21.68	22.3	15.5	28.3	22.03	23.55	16.4	16.25
4606	30119	18.1	17.65	18.75	18.17	19.1	13.15	30	20.75	21.3	14.05	17.4
4607	30120	19.25	15.35	19.35	17.98	17	12.6	30.9	20.17	20	14.45	17.15
4608	30121	16.15	17.4	17	16.85	17.1	13.6	21.85	17.52	20.15	14.25	18.4
4609	30122	19.6	15.45	16.1	17.05	18.9	14	26.95	19.95	18.9	14.6	16.45
4610	30123	17.7	12.95	15	15.22	17.7	12.25	25.35	18.43	17.05	12.9	14.35
4611	30124	19.7	16.75	18.9	18.45	19.5	13.05	27.1	19.88	18.4	13.3	16.05
4612	BPT 5204	16.5	16.75	17.5	16.92	18.9	15.1	43.1	25.70	19.2	14.55	16.45
4613	29458 (R)	22.15	20.5	18.8	20.48	22.5	15.45	21.45	19.80	27.9	16.55	
4614	30125	18.1	15	18.35	17.15	17.6	12.1	20.25	16.65	19.05	13.8	14.1
4615	29484 (R)	28.15	25.2	29.6	27.65	27.3	22.35	19.1	22.92	29.8	20.6	24.2
4616	30126	18.5	15.95	19.85	18.10	18.3	14.35	23.35	18.67	18.85	14.45	17.95
4617	30127	19.45	15.85	15.9	17.07	17.3	12.4	20.7	16.80	16.35	10.6	15.2
4618	30128	19.3	15.35	19.95	18.20	19.7	12.25	21.8	17.92	21	13.25	15.85
4619	30129	18.05	16.5	20.8	18.45	17.6	18.3	22.1	19.33	22.4	15.35	15
4620	30130	19.5	15.6	19.75	18.28	18.6	14.25	28.85	20.57	22.65	13.75	17.8
4621	30131					19.5		17.1	18.30			
4622	30132	23.35	20.65	18.2	20.73	23.9	14.55	33.35	23.93	22.85	14.5	20.25
4623	30133	19.15	15.05	16.45	16.88	17.7	12.9	21.95	17.52	20.5	13.2	17.25
4624	30134	16.2	15.45	16.45	16.03	17.4	11.85	25.05	18.10	18	12.1	15.15
4625	IR 64	20.6	16.65	18.7	18.65	19.5	14.35	24.2	19.35	18.9	12.95	12.65
4626	29465 (R)	22.25	18.6	19.1	19.98	21.2	14.4	25.7	20.43	21.65	13.9	16.5
4627	30135	14.75	14.3	15.05	14.70	15	12.2	22.7	16.63	17.9	13.8	14
4628	30136	19.75	13.9	16.05	16.57	16.5	18.55	25.1	20.05	16.1	12.65	17.2
4629	30137	19.85	17.1	19.1	18.68	20.2	11.85	30.7	20.92	21	16.2	18.45
4630	30138	21.2	21	19.1	20.43	20.2	15.2	30.8	22.07	21.75	14.8	17
4631	30139	18.5	17.35	18.15	18.00	17.7	12.95	22.95	17.87	23.4	16.55	19.7
4632	30140	20.15	14.95	20.05	18.38	16.3	11.95	17.95	15.40	19.7	12.85	15.2
4633	30141	18.85	14.6	14.8	16.08	36.4	15.6	21.55	24.52	21.85	13.65	14.45
4634	30142	20.45	16.9	19.75	19.03	19.9	14.4	19.35	17.88	20.8	14.75	15.25
4635	30143	18.5	15.55	17.85	17.30	17.8	13.75	36.55	22.70	21.3	13.55	16.55
4636	DRR Dhan 45	20.4	17.8	21.9	20.03	17.8	15.1	20.6	17.83	22.4	14.25	17.65
4637	30144	18.6	16.15	19	17.92	16.7	13.8	30.85	20.45	22.65	13.15	16.9
4638	30145	16.05	13.5	19.35	16.30	16.3	12.4	25.85	18.18	19.6	14.05	13.45
4639	30146	23.3	20.35	20.65	21.43		18.5	29.35	23.93	27.25	16.85	18.7
4640	30147	17.35	16.85	19.65	17.95	18.5	11	21.75	17.08	21.95	12.25	15.35
4641	30148	22.9	20.4	23.95	22.42	25.9	19.65	28.4	24.65	28.2	19.55	20.65
4642	30149	20.05		19.65	19.85	23.2	13.45	24.7	20.45	22	14.3	17.85
4643	30150	13.15	12.2	13.65	13.00	15.2	12.45	22.65	16.77	18.15	12.45	15.8
4644	30151	20.4	17.05	18.7	18.72	19.6	14.2	20.6	18.13	20.4	14.7	18.45
4645	30152	16.5	13.15	17.3	15.65	16	13.9	24.75	18.22	17.3	13.05	13.9
4646	30153					23.5		23.8	23.65			
4647	30154	19.3	14.9	23.4	19.20	22.2	14.85	18.2	18.42	21.8	14.85	16.95
4648	30155	14.45	12.1	13.6	13.38	15.9	10.95	17.15	14.67	15.85	10.2	13.15
4649	30156	26.15	21.2	22.85	23.40	28	21.85	20.25	23.37	29.3	22	22.3
4650	30157	17.8	14.85	18.1	16.92	16.6	13.1	28.65	19.45	21.8	13.05	14.35
4651	30158	22.1	17.85	18.25	19.40	22.6	16.2	23.95	20.92	20.7	15.5	16.9
4652	30159	26.6	19	21.5	22.37	25.2	20.1	27.55	24.28	28.35	21	19.8
4653	30160	22.95	16.35	19.55	19.62	23	17.2	32	24.07	25.2	17.85	16.35
4654	Chittimutyalu	20	18.85	19.45	19.43	25	16.45	30.05	23.83	24.15	17.55	19.8
4655	30161	14.15	11.7	12.9	12.92	12.7	12.7	15.9	13.77	15.9	13	13.85
Mean		19.89	17.02	19.05	18.67	19.95	14.70	25.36	20.10	21.78	14.85	17.12

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Table No.4.16 contd.: Zinc content in ppm for polished rice samples of entries in IVT-Biofortification analyzed at IIRR, Hyderabad Kharif 2021

Entry No	IET No.	VII	VII	VII	VII	VII	VII	VII	VII	VII	VII	Zone VII	Overall
		RDR	ADT	CBT	PTB	MNC	MND	GNV	BRM	SRS	MLG	Mean	Mean
4601	29460 (R)	16.9	17.6	14.65	22.2	23	18.4	15.15	27	21.3	27.55	19.61	19.44
4602	29482 (R)	16.5	34.2	8.55	24.3	43	27.2	24.1	51	39.7	33.45	29.32	31.63
4603	29469 (R)	16.7	23.5	7.65	30.1	28.35	21.95	16.45	30.65	27.5	25.95	23.91	23.41
4604	30117	18.2	18.2	9.1	21	27.2	17.35	13.35	27.4	23.4	24.55	19.33	18.79
4605	30118	17.35	22.6	11.6	26.5	26.05	20	16.45	30.85	20.3	26.35	21.10	22.14
4606	30119	15.4	22.3	8.85	23.7	23.55	17.55	12.9	31.2	21.2	24.1	19.50	19.39
4607	30120	18.8	18.2	12.8	22.3	25.85	19.8	14	28.7	22.6	27.75	20.18	19.61
4608	30121	18.8	21.1	8.5	27.2	26.25	16.85	13.4	29.45	22.5	25.5	20.18	18.79
4609	30122	17.2	21.3	9.65	25	21.5	16.65	13.75	25.6	23.3	24.4	19.10	18.89
4610	30123	22.4	17.5	6.6	24.7	23.85	14.7	12.65	25.85	18.5	20.15	17.78	17.42
4611	30124	16.45	19.7	9.35	22	20.1	17.6	12.55	25.95	21.2	23.1	18.13	18.62
4612	BPT 5204	29.4	18.3	8.95	23.3	24.75	16.7	13.65	23.35	23.4	27.6	19.97	20.26
4613	29458 (R)	15.8	22.2	10.5	23	29.05	18.7		29.4	24.5	25.55	22.10	21.79
4614	30125		16.6	10.1	20.9	22	14.65	13.15	30.85	21.3	25.55	18.50	18.20
4615	29484 (R)	16.7	29.9	10.2	22.5	37.1	24.4	21.05	32.6	36.2	36.8	26.31	26.37
4616	30126	19.6	19.1	11.05	23.8	25.3	18.35	15.2	30.3	25.5	26.65	20.47	19.76
4617	30127	20.6	18	7.55	20.3	23	13.6	12.3	22.55	20.5	21.5	17.08	17.20
4618	30128	18.8	20.5	9.9	30.6	24.1	14.85	12.95	29.05	20.9	24.85	19.74	19.52
4619	30129	20.9	21.2	8.9	22.5	26.2	20.95		34.2	36.4	29.05	22.75	21.85
4620	30130	14.1	19.8	10.8	23.5	24.25	16.6	12.15	26.45	19.2	23.55	18.82	19.22
4621	30131	16.35	20.7		22.9		18.8	14.4			25.9	19.84	19.80
4622	30132	16.85	22.4	8.55	26.6	23.85	15.55	13.95	33.1	21.2	26.1	20.44	21.28
4623	30133	16.6	20.1	7.15	23.4	26.15	15	11.85	28.8	21.5	24.05	18.89	18.73
4624	30134	14.95	16.1	10.3	22.6	25.95	16.75	13.55	26.75	21.7	22.3	18.17	17.86
4625	IR 64	14.95	22.3	9.2	26.1	26.45	17.2	12.2	27.2	25	20.1	18.86	19.17
4626	29465 (R)	22.05	23.8	6.5	23.5	24.7	16.35	13.8	29.05	29	26.3	20.55	20.78
4627	30135	16.05	19.8	8.4	21.8	23.35	15.8	12.5	26.25	19.4	27.35	18.18	17.76
4628	30136	23.6	21	9.2	20	19.55	19.55	12.2	23.35	19.7	18.65	17.90	18.10
4629	30137	17	22.6	15.1	25.2	26.1	18	14.45	32.2	25.1	28.15	21.50	21.22
4630	30138	19.65	20.6	10.65	25.1	25.4	11.3	14.05	30	26.1	28.15	20.35	20.48
4631	30139	19.4	21.9	14	22.7	26.25	18.4	14.05	39.8	23.4		21.63	19.88
4632	30140	20.4	27.3	8.55	26.5	25.2	16.2	12.65	28.4	20.2		19.43	18.58
4633	30141	17.8	24.8	11.05	25.4	24.9	17.55	13.05	28.75	22.8		19.67	20.34
4634	30142	26.6	19.2	8.75	23.2		16.55	14.6	27.45	20.8		18.90	19.35
4635	30143	16.3	19.4	8.2	23.2	25	16.8	13.15	28.05	21		18.54	18.94
4636	DRR Dhan 45	13.5	20	8.3	24.8	25.25	16.3	15.2	35.4	25		19.84	19.85
4637	30144	17.5	19.3	8.75	24.1	26.35	15.7	13.2	30.8	22.7		19.26	19.29
4638	30145	21.25	15.9		22.8	23.95	20.7	12.75	29.85	18.3		19.33	17.96
4639	30146	19.15	18.6	10.55	33.4	32.05	15.1	18.45	27.3	25.8		21.93	24.00
4640	30147	16.8	19.9	8.55	26.3	28.35	21.8	14.2	27.5	19.8		19.40	18.97
4641	30148	15.35	23.8	13	29.2	27.85	15.3	18.75	18.35	29.5		21.63	22.85
4642	30149	21.6	19	7.6	29.3	24.6	14.2	14	31.9	22.5		19.90	20.45
4643	30150	20.4	19	8.05	22	23.4	16.05	11.75	31.1	17.8		18.00	17.23
4644	30151	19.6	20.1	9.15	24.1	23.4	13.5	15.25	25.6	20.5		18.73	18.81
4645	30152	16.4	18.5	6.75	21.1	20.9	14.9	12.75	26.8	19.5		16.82	17.40
4646	30153		16.9		40.6		12.45					23.32	21.93
4647	30154	19.1	20.9	10.4	20.5	24.95	21.4	13.75	24.8	21.9		19.28	19.11
4648	30155	16.35	16.8	6.75	24.1	18.3	15.45	9.95	30.3	16.6		16.15	15.60
4649	30156		23.4	10.4	24.8	29.85	21.15	21.4	23.75	25.9		23.11	23.53
4650	30157	16.05	18.3	13.1	24.7	22.1	22.65	13.85	31.55	19.2		19.23	19.05
4651	30158	22.9	23.2	9.9	24.7	25.75	20.55	16.35	29.35	24.5		20.86	21.20
4652	30159	16.6	27.9	9.8	32.7	31.75	18.3	18.05	14.6	28.2		22.25	24.40
4653	30160	19.1	21.3	8.1	24.8	26.1	13.7	17.7	18.45	22.5		19.26	20.65
4654	Chittimutyalu	17.15	23.2	10.4	26.2	26.6		17.05	13.95	26.9		20.27	21.35
4655	30161	20.8	18	9.55	15.5	19.1		11.15	13.75	15.4		15.09	14.92
Mean		18.44	20.87	9.61	24.61	25.54	17.47	14.45	28.05	23.18	25.70	20.01	20.06

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Table No.4.17: Grain Protein content (%) of milled rice in IVT-Biofortification, kharif 2021 at ICAR-NRRI, Cuttack.

Entry No.	IET No.	III	III	III	VI	VII	VII	VII	VII	VII	VII	Over all Mean
		CTK	JYP	MSD	KJT	MTU	BPT	CBT	MND	BRM	GNV	
4601	29460 (R)	7.24	7.38	8.38	6.38	6.63	7.63	9.78	5.17	7.90	4.64	7.11
4602	29482 (R)	7.85	9.46	11.04	7.80	8.03	9.46	7.08	7.55	8.93	7.68	8.49
4603	29469 (R)	5.23	5.47	8.96	6.30	8.81	6.71	7.35	6.43	7.81	4.40	6.75
4604	30117	6.82	9.01	8.17	6.57	7.47	7.81	10.22	6.90	7.79	6.94	7.77
4605	30118	5.50	7.51	9.08	6.62	8.91	7.00	11.05	6.57	6.47	5.17	7.39
4606	30119	4.44	6.76	8.57	6.56	7.84	10.02	9.63	5.52	8.58	3.73	7.16
4607	30120	5.55	9.34	10.78	8.07	9.14	9.12	10.39	6.47	9.92	5.20	8.40
4608	30121	7.59	6.78	8.13	7.76	7.36	5.91	8.13	5.12	8.42	4.52	6.97
4609	30122	8.87	5.34	9.24	4.91	6.64	8.33	8.50	5.26	7.39	4.90	6.94
4610	30123	4.83	8.36	9.50	5.27	7.33	6.79	6.77	5.06	8.84	4.94	6.77
4611	30124	7.52	6.69	10.04	5.98	6.66	8.49	6.64	5.06	6.95	4.74	6.88
4612	BPT 5204	4.58	7.72	8.84	7.02	7.59	6.13	8.44	7.12	7.07	6.04	7.05
4613	29458 (R)	10.97	10.78	10.45	8.69	10.60	8.27	11.93	8.67	9.92		10.03
4614	30125	9.64	8.66	9.09	5.45	7.63	7.29	7.55	5.31	8.44	4.58	7.36
4615	29484 (R)	7.27	10.01	9.35	6.88	7.90	8.94	8.69	7.31	8.03	6.07	8.05
4616	30126	6.48	6.00	8.53	6.16	4.69	7.90	7.33	6.69	13.64	7.10	7.45
4617	30127	9.40	6.30	9.00	6.57	9.12	6.54	8.23	6.90	8.75	5.57	7.64
4618	30128	8.83	5.91	9.43	4.66	7.61	6.44	9.13	6.34	7.30	4.73	7.04
4619	30129	9.77	9.06	9.72	7.44	9.90	10.27	10.08	8.97	10.02	7.50	9.27
4620	30130	10.26	10.67	7.95	11.14	10.46	10.58	11.41	10.31	7.82	10.13	10.07
4621	30131		5.62						6.66		11.92	8.07
4622	30132	8.43	6.77	8.39	6.36	6.52	6.71	6.44	6.27	6.95	5.22	6.81
4623	30133	8.31	7.80	9.83	5.83	8.25	9.23	8.99	7.86	8.66	6.87	8.16
4624	30134	8.30	4.72	9.06	5.50	7.73	7.18	8.89	6.04	9.73	5.84	7.30
4625	IR-64	7.84	4.62	9.49	5.12	7.48	6.99	8.15	3.41	7.15	6.83	6.71
4626	29465 (R)	7.19	5.83	8.01	7.48	7.10	6.96	7.36	7.06	7.56	5.35	6.99
4627	30135	9.68	7.67	7.84	6.47	6.35	8.62	8.86	7.68	7.85	6.70	7.77
4628	30136	7.98	4.86	8.27	5.17	7.71	6.56	8.84	6.01	7.75	6.71	6.99
4629	30137	7.92	6.49	9.87	6.42	5.35	7.17	10.94	5.72	6.78	5.02	7.17
4630	30138	7.86	5.48	6.84	5.60	7.45	8.10	7.51	4.95	7.47	5.98	6.72
4631	30139	8.38	8.83	7.42	7.50	6.87	7.72	10.11	7.46	10.89	6.90	8.21
4632	30140	8.05	7.81	9.77	7.09	6.24	9.11	7.88	8.40	11.18	5.74	8.13
4633	30141	9.35	10.78	10.16	5.47	7.66	7.01	10.84	4.62	10.68	7.96	8.45
4634	30142	8.28	4.62	9.46	5.41	5.54	8.94	6.33	6.90	6.55	6.16	6.82
4635	30143	8.18	5.94	9.93	5.47	6.99	9.79	7.17	5.55	8.64	4.66	7.23
4636	DRR Dhan-45	7.51	5.92	9.10	6.65	6.37	8.57	7.01	7.11	8.16	6.27	7.27
4637	30144	8.65	7.94	8.31	7.63	7.29	7.90	8.25	7.81	8.71	5.49	7.80
4638	30145	8.21	8.55	7.11	7.30	9.01	10.08		7.48	11.04	7.98	8.53
4639	30146	9.81	9.93	10.22	4.93	11.12	10.20	11.37	6.81	7.08	5.51	8.70
4640	30147	8.05	6.33	6.54	6.83	4.62	5.83	7.17	7.53	10.01	6.28	6.92
4641	30148	8.99	7.60	9.43	7.54	8.59	6.45	9.08	5.76	8.06	7.35	7.89
4642	30149	9.13	7.03	9.94	6.31	7.79	8.99	8.23	4.64	9.28	4.81	7.62
4643	30150	7.72	7.98	7.92	6.89	6.62	7.44	7.67	5.55	9.24	4.38	7.14
4644	30151	3.39	5.69	8.08	5.48	6.34	12.61	8.32	4.51	8.33	5.06	6.78
4645	30152	8.14	6.71	8.01	6.22	5.56	6.01	6.56	4.83	8.08	3.79	6.39
4646	30153		6.98						6.11			6.54
4647	30154	8.15	6.10		7.07	6.37	8.30	6.35	5.92	8.28	3.69	6.69
4648	30155	9.22	6.40	14.05	6.06	7.04	6.35	8.65	4.73	7.88	5.19	7.56
4649	30156	7.41	6.86	7.59	7.51	7.59	7.23	8.31	7.50	10.81	7.14	7.79
4650	30157	9.21	5.52	7.98	9.65	6.50	9.55	9.38	7.38	7.78	4.93	7.79
4651	30158	9.95	7.84	6.70	7.61	7.24	9.79	9.39	5.92	8.48	6.86	7.98
4652	30159	11.73	10.13	10.03	8.97	8.90	9.13	11.01	7.27	6.64	6.76	9.06
4653	30160	7.67	8.61	10.31	7.05	8.03	10.90	8.70	4.73	5.32	6.01	7.73
4654	Chittimuthyalu	9.06	9.36	9.57		9.18	6.73	9.61	5.78	7.64	6.10	8.11
4655	30161	8.07	6.49	7.73		4.56	7.55	9.39	5.36	5.76	3.53	6.49
Mean		8.01	7.33	8.98	6.68	7.48	8.10	8.67	6.37	8.39	5.92	7.58

(R): Repeat.

Procedure: 15g milled sample of rice was used in proximate estimation of grain protein content in calibrated NIR Spectroscopy at ICAR-NRRI, Cuttack

VARIETY TRIALS-HILLS

The variety trials under hill ecology were conducted in different elevations to identify high yielding cultures with cold, drought tolerance and resistance to pests and diseases under irrigated as well as rainfed uplands. The early and medium duration trials were evaluated under irrigated transplanted conditions whereas the upland trials were conducted at direct seeded rainfed situation. The trials were evaluated under low hills (< 950 msl), medium hills (951 to 1500 msl) and high hills (> 1501 msl). The trial was sent for evaluation under low elevation hills at Malan, Sundernagar, ICAR-Barapani (Umiam), CAU-Umiam, Lamphalpet, Wangbal, CAU-Imphal, Sirsi and Ponnampet. However, at ICAR-Barapani the trial was conducted at medium elevation instead of low elevation; Medium elevation hills-Rajouri, Bajaura, Palampur, Almora, Bageshwar, Gangtok and Gudalur; High elevations hills-Khudwani, Wadura, Pombay and Upper Shillong.

A total of 5 trials namely, IVT-E(H), AVT1-E(H), IVT-M(H), AVT1-M(H) and IVT-U(H) were conducted with 27, 14, 36, 14 and 18 entries respectively thus making a total of 109 entries (including checks). Each trial was evaluated at low, medium and high hills: IVT-E(H) and AVT-1E(H) at 18 locations (5 low, 7 medium, 6 high), IVT M (H) and AVT 1-M (H) at 26 locations (11 low, 9medium, 6 high), IVT-U(H) at 7 locations (4 low, 3 medium). The trials were sent to 21 locations to conduct 71 experiments. The data of 51 experiments received from 17 locations indicating ~72.0% (Funded 94.0%, Voluntary 63.0%).

List of centres and elevations

I. Low Elevation:	
Northern Hills:	
Lamphelpat-ICAR	774 msl
Wangbal	781 msl
CAU-Imphal	808 msl
Sundernagar	858 msl
CAU, Barapani	940 msl
Malan	950 msl
Southern Hills:	
Sirsi	697 msl
Ponnampet	867 msl
II. Medium Elevation:	
Northern Hills:	
Rajouri	953 msl
Bajaura	1080 msl
Almora-ICAR	1250 msl
Palampur	1267msl
Bageshwar	1320 msl
Gangtok	1322 msl
ICAR- Barapani	1500 msl (Upper Shillong)
Southern Hills:	
Gudalur	1300 msl
III. High Elevation:	
Khudwani	1560 msl
Wadura	1590 msl
Upper Shillong	1735 msl
Pombay	1990 msl

ADVANCE VARIETY TRIAL -1- EARLY (Hills) AVT - 1- E (H)

Locations : 13

Test Entries:11

Checks : Vivekdhan 86 (National), Shalimar Rice 3 (Zonal) and Local check **Table: 5.1**

The AVT-1-E (H) trial was constituted with three checks (Vivekdhan-NC, Shalimar Rice 3-ZC & Local Check) and 11 test entries which includes three (IET's 28197, 28206 and 28200) in third year of testing while remaining eight entries were in second year of testing. AVT-1-E (H) trial was conducted at 13 locations: three in low hills namely Malan (950 msl),Sundernagar (858 msl) in Northern low hills and one in southern low hills viz., Ponnampet (867 msl); Four in medium hills namely Almora (1250 msl), Rajouri (960 msl) and Palampur (1290 msl) in northern medium hills and one in southern medium hills viz., Gudaluru; andtwo in high hills namely Khudwani (1560 msl), and Pombay (1560 msl). Crop failure was reported at Upper Shilling as entries did not flower or grain did not form, whereas atBajura, Chintapally and Wadura trials were not conducted. At Pombay crop got exposed to cold stress causing severe yield reduction and many entries could not flower. The trial was constituted with 11 test entries and 3 checks *ie.*, Vivekdhan 86 (National), Shalimar Rice 3 (Zonal) and local check. Total nine locations data were considered for analysis and interpretation.

The overall mean grain yield across altitudes ranged from 3962 kg/ha (Shalimar rice 3) to 5496 kg/ha (IET 28895). The experimental mean yield under low, medium and high altitude were 4590 (low northern), 4686 (medium northern) and 6211 (high) Kg/ha respectively. The mean flowering duration ranged from 86 days (Shalimar rice 3) to 111 days (IET 28890) while plant height ranged from 87.99 cm (IET 28206) to 124.29 cm (IET 28891). The data pertaining to grain yield, days to 50% flowering, plant height, panicles/m²and quality are presented in tables 5.2, 5.3, 5.4, 5.5 and 5.6. The performance of entries under different elevations are given below.

Low hills (950 msl)

Low hills trails were conducted at both northern and southern hills. In northern low hills, the trial data was received from Malan and Sundernagar. The mean grain yield of entries ranged from 3216 kg/ha (IET 28885) to 5384 kg/ha (IET 28882). Days to 50% flowering ranged from 67 days (Shalimar Rice 3) to 99 days (IET 28890), panicles/m² ranged from 214 (IET 28196) to 355 (Local check) and plant height ranged from 63.28 cm (IET 28206) to 143.85 cm (IET 28891). In southern low hills, the mean grain yield of test entries ranged from 1608 kg/ha (IET 28206) to 5200 kg/ha (IET 28895). Days to 50% flowering ranged from 83 days (Vivekdhan 86 and IET 28885) to 107 days (IET 28890), panicles/m² ranged from 292 (Local check) to 435 (IET 28890) and plant height ranged from 75.25 cm (IET 28884) to 112 cm (IET 28891). The trial was conducted at only one location namely Ponnampet, trial mean yield was 3269 kg/ha and only one entry IET 28895 showed superior yield advantage of >15% over best check, but it had unacceptable quality parameters (High AC of 25.16% and hard GC of 22).

Among test entries in low hills, six entries viz., IET's 28882, 28895, 28883, 28884, 28200 and 28891 out yielded the best check (Vivekdhan 86) with 5% yield advantage.

Performance of promising entries at low altitude in AVT-1– E (H), Kharif-2021

Northern low elevation			
Rank	IET No. / Designation / Cross combination	GY (Kg/ha)/ days to 50% flowering/ grain type	Percentage of yield advantage over the best check (Vivekdhan 86)
1	28882 HPR 3201 HPR 2143/ AC 19146	5384 79 LS	14.9
2	28895 VL 32560 VL 31339/ BL 122	5318 83 LS	13.51
3	28883 VL 32585 VL 31290/ <i>O. minuta</i>	5267 73 LB	12.42
4	28884 TRC BN 793-B-B-27-4-1 Bhalum 3/ Naveen	5153 95 SB	9.98
5	28200 TRC BN-1311-B-B-43-11-1 Bhalum 3/ Naveen	5122 85 SB	9.32
6	28891 HPR 3202 T 23/ IR 67011// Hasan Serai	5097 79 LS	8.79
	<i>Vivekdhan 86(NC)</i>	4685 79	
	Local check	4121 77	
	Shalimar Rice 3 (RC)	3578 67	
Southern low elevation			
Rank	IET No. / Designation / Cross combination	GY (Kg/ha)/ days to 50% flowering/ grain type	Percentage of yield advantage over the best check (Local check)
1	28895 VL 32560 VL 31339/ BL 122	5200 92 LS	25
	<i>Local check</i>	4145 104	
	Vivekdhan 86 (NC)	3096 83	
	Shalimar Rice 3 (RC)	1855 85	

Bold & Italics: Best check & over the best check; NC-National Check; ZC-Zonal Check; LC-Local Check; GY: Grain Yield

Among the six out yielded test entries, only three entries viz., IET 28884, IET 28883 and IET 28200 had acceptable quality parameters, whereas four entries had unacceptable quality parameters, IET 28886 had low AC (17.21%); IET 28895 recorded high AC (25.16%)

and hard GC of 22; IET 28882 showed high AC (25.28%) and hard GC of 24; and IET 28891 had high AC (26.57%) and hard GC of 25.

IET 28884 (TRC BN 793-B-B-27-4-1) derived from the cross Bhalum 3/ Naveen and in second year of testing possessing short bold grains and 95 days to 50% flowering duration ranked 4th (5153 kg/ha) in low northern elevations. It showed significant yield superiority and recorded 9.98% yield improvement over the best check (Vivekdhan 86). It recorded high HRR (69.6 %), ASV (4), intermediate amylose content (23.32%) and soft gel consistency (67 mm).

IET 28200 (TRC BN-1311-B-B-43-11-1) derived from the cross Bhalum 3/ Naveen and in third year of testing possessing short bold grains and 85 days to 50% flowering duration ranked 5th (5122 kg/ha) in low northern elevation. It showed significant yield superiority and recorded 9.32% yield improvement over the best check (Vivekdhan 86). It recorded high HRR (72.4 %), ASV (7), intermediate amylose content (23.08%) and soft gel consistency (55 mm).

Based on yield superiority, two entries namely IET 28884 and IET 28883 recorded required yield advantage over the best check under low northern elevation. Hence, these two entries are promoted to AVT-2-EH under low northern elevation.

Medium hills (951-1500 msl)

The medium hill trial was conducted at both northern and southern elevation. Under medium hills the trial was conducted at 4 locations in Almora (Uttarakhand), Rajouri (Jammu & Kashmir), Palampur (Himachal Pradesh) and in southern hills at Gudaluru (Tamilnadu). In northern medium hills, mean grain yield was ranged from 2898 kg/ha (Shalimar Rice 3) to 5809 kg/ha (IET 28206). Among the checks local check was the top yielder (4536 kg/ha) followed by Vivekdhan 86 (4403 kg/ha) and Shalimar rice 3 (2898 kg/ha). The mean flowering duration ranged from 84 days (Shalimar rice 3) to 108 days (IET 28890); plant height ranged from 92 cm (IET 28884) to 119.7 cm (IET 28891) whereas panicles/m² ranged from 264 (Shalimar rice 3) to 357 (IET 28206). In southern medium hills, the mean grain yield of test entries ranged from 2564 kg/ha (Shalimar rice 3) to 5370 kg/ha (IET 28882). Days to 50% flowering ranged from 96 days (Vivekdhan 86, local check and IET 28883) to 116 days (IET 28890), panicles/m² ranged from 371 (IET 28200) to 443 (IET 28885) and plant height ranged from 75 cm (Local check) to 124.60 cm (IET 28891). The trial was conducted at only one location namely Gudaluru. Among test entries, seven entries viz., **IET's 28206, 28883, 28891, 28196, 28200, 28882 and 28895** out yielded the best check (local check) with 5% yield advantage in Northern medium hills, whereas two entries viz., **IET 28882 and IET 28890** out yielded the best check (Vivekdhan 86) with 15% yield advantage in Southern medium hills.

Performance of promising entries at medium altitude in AVT-1– E (H), Kharif-2021

Northern medium hills			
Rank	IET No. / Designation / Cross combination	GY (kg/ha)/ days to 50% flowering/ grain type	Percentage of yield advantage over the best check (Local check)
1	28206 HPR 3106 HPR 2336/AC 19146// HPR 2143	5809 93 LB	28.00
2	28883 VL 32585 VL 31290/ <i>O. minuta</i>	5771 91 LB	27.22
3	28196 TRC KS-1512-B-B-1-12-1 Kataktara / Swarna	5283 101 LB	16.48
4	28200 TRC BN-1311-B-B-43-11-1 Bhalum 3/ Naveen	5041 101 SB	11.13
5	28882 HPR 3201 HPR 2143/ AC 19146	5001 91 LS	10.25
6	28895 VL 32560 VL 31339/ BL 122	4813 92 LS	6.10
	Vivekdhan 86 (NC)	4403 90	
	Local check	4536 89	
	Shalimar Rice 3 (ZC)	2898 84	
Southern medium hills			
Rank	IET No. / Designation / Cross combination	GY (kg/ha)/ days to 50% flowering/ grain type	Percentage of yield advantage over the best check (Vivekdhan 86)
1	28882 HPR 3201 HPR 2143/ AC 19146	5370 106 LS	21.68
2	28890 TRC GN 117-B-B-12-1-1 Gomatidhan / Tripura Nirog	5146 116 LS	16.61
	Vivekdhan 86 (NC)	4413 96	
	Local check	2884 96	
	Shalimar Rice 3 (ZC)	2564 100	

Among the eight out yielded test entries, three entries namely IET 28891, 28882 and 28895 had unacceptable quality parameters hence dropped, whereas rest five entries had acceptable quality parameters.

IET 28206 (HPR 3106) derived from the cross HPR 2336/AC 19146// HPR 2143 possessing long bold grains and 93 days flowering duration ranked 1st (5809 kg/ha) in third year of testing. It showed significant yield superiority and recorded 28% yield improvement over the best check (local check). It recorded high HRR (72.8 %), ASV (7), intermediate amylose content (24.93%) and gel consistency of 22 mm.

IET 28883 (VL 32585) derived from the cross VL 31290/ *O. Minuta* possessing long bold grains and 91 days to 50% flowering duration ranked 2th (5771 kg/ha) in second year of testing. It showed significant yield superiority and recorded 27.22% yield improvement over the best check (local check). It recorded high HRR (72 %), ASV (4), intermediate amylose content (23.73%) and gel consistency of 22 mm.

IET 28196 (TRC KS-1512-B-B-1-12-1) derived from the cross Katakara / Swarna possessing long bold grains and 101 days to 50% flowering ranked 4th (5283 kg/ha) in third year of testing. It showed significant yield superiority and recorded 16.48% yield improvement over the best check (local check). It recorded high HRR (70.5 %), ASV (7), intermediate amylose content (23.49%) and gel consistency of 51 mm.

IET 28200 (TRC BN-1311-B-B-43-11-1) derived from the cross Bhalum 3/ Naveen possessing short bold grains and 101 days to 50% flowering duration ranked 5th (5041 kg/ha) in third year of testing. It showed significant yield superiority and recorded 11.13% yield improvement over the best check (local check). It recorded high HRR (72.4 %), ASV (7), intermediate amylose content (23.08%) and soft gel consistency (55 mm).

IET 28890 (TRC GN 117-B-B-12-1-1) derived from the cross Gomatiadhan / Tripura Nirog possessing long slender grains and 107 days to 50% flowering ranked 8th (5146 kg/ha) in second year of testing. It showed significant yield superiority and recorded 16.61% yield improvement over the best check (local check) in southern medium hills. It recorded high HRR (68.7 %), ASV (4), intermediate amylose content (24.08%) and gel consistency of 60 mm.

Based on yield superiority and acceptable quality parameters, two entries namely IET 28883 and IET 28890 recorded >5% yield gain over the best check. Hence they are promoted to AVT-2-EH under medium elevation.

High hills (1501 msl)

The trial was conducted at two locations namely Khudwani and Pombay. Mean grain yield of test entries ranged from 2990 kg/ha (IET 28884) to 7693 kg/ha (Shalimar rice 3). Days to 50% flowering ranged from 102 days (Shalimar rice 3) to 124 days (IET 28890). Plant height ranged from 85 cm (IET 28890) to 118.9 (local check) whereas panicles/m² ranged from 163 (IET 28884) to 384 (IET 28885).

Zonal check (Shalimar rice 3) ranked 1st in this trial under high hills. Hence none of the entries were promoted to AVT-2-EH under high elevation

List of promising entries in AVT-1-EH, Kharif 2021

S.No.	Entries	Yield advantage over the best check %	Remarks
Low hills			
1.	IET 28884 (TRC BN 793-B-B-27-4-1)	10	Promoted
Medium hills			
2.	IET 28883 (VL 32585)	12.42 (Low northern Hills) 27.22 (Northern medium hills)	Promoted
3.	IET 28890 (TRC GN 117-B-B-12-1-1)	16.61 (Southern medium hills)	Promoted

Three entries namely IET Nos. 28196, 28206 and 28200 had been evaluated for three years in early hill trials. The yield performance of these 3 entries are furnished in the table mentioned below.

Three years' performance of entries IET 28196, 28206 and 28200 in early hills during 2019, 2020 and 2021 in overall mean

S.No	IET No. / Designation / Cross combination	Year	Yield advantage % over the best check				
			Low elevation		Medium elevation		High elevation
			Northern	Southern	Northern	Southern	
1	28196 TRC KS-1512-B-B-1-12-1 Kataktara / Swarna	2019 (IVT-EH)	9.39	-	-	-	-
		2020 (AVT-1-EH)	-	22	9	-	-
		2021 (AVT-1-EH)	-	-	16.48	-	-
2	28206 HPR 3106 HPR 2336/AC 19146// HPR 2143	2019 (IVT-EH)	-	-	7.48	-	-
		2020 (AVT-1-EH)	17	-	-	-	-
		2021 (AVT-2-EH)	-	-	28.00	-	-
3	28200 TRC BN-1311-B-B-43-11-1 Bhalum 3/ Naveen	2019 (IVT-EH)	12.53	-	-	-	-
		2020 (AVT-1-EH)	-	-	19	-	-
		2021 (AVT-2-EH)	9.32	-	11.13	-	-

State wise performance of IET 28196, 28206 and 28200 in early hills during three years (2019 to 2021)

S. No.	IET No. / Designation / Cross combination	Year	Elevation								
			Low			Medium				High	
			Northern		Southern	Northern			Southern		
			ME	HP	KA	WB	UT	HP	J&K	TN	
1	28196 TRC KS-1512-B-B-1-12-1 Kataktara / Swarna	2019 (IVT-EH)	-	9.39 (2loc)	-	-	-	-	6.7 (1)	-	-
		2020 (AVT-1-EH)	-	-	22 (1 loc)	-	-	33 (1)	-	-	-
		2021 (AVT-1-EH)	-	-	-	-	51 (1)	-	12 (1)	-	-
2	28206 HPR 3106 HPR 2336/AC 19146// HPR 2143	2019 (IVT-EH)	-	-	-	-	8 (1)	-	-	-	-
		2020 (AVT-1-EH)	-	17 (1)	-	-	-	5 (1)	-	-	-
		2021 (AVT-2-EH)	-	-	-	-	45 (1)	6 (1)	24 (1)	-	-
3	28200 TRC BN-1311-B-B-43-11-1 Bhalum 3/ Naveen	2019 (IVT-EH)	-	12.5 (2)	-	-	9.3 (1)	-	-	-	-
		2020 (AVT-1-EH)	-	-	-	-	-	29 (1)	-	-	-
		2021 (AVT-2-EH)	-	9 (2)	-	-	24 (1)	-	10 (1)	-	-

IET 28196 (TRC KS-1512-B-B-1-12-1) recorded significant yield superiority in two consecutive years (2020 & 2021) under medium altitude (Northern hills) in overall mean. It showed yield advantage of 16.48% over best check during 2021 and 9% over best check during 2020. But during 2019 it has shown only 6.7% yield advantage over BVC in a single location tested in Jammu & Kashmir (it had to be >10%), **hence the entry may be re-tested for one more year.**

IET 28206 (HPR 3106) was found promising in medium altitude (northern hills) during the years 2021(third year) and 2019 (first year) over the best check (2021: 28%; 2019: 7.48%). This entry is found promising only for Uttarakhand under northern medium elevations. But during 2019 in Uttarakhand, it has shown only 8% yield advantage over BVC (it had to be >10%). **Hence the entry may be re-tested for one more year.**

IET 28200 (TRC BN-1311-B-B-43-11-1) recorded significant yield superiority in third and first year of testing (2021 & 2019) under low altitude (Northern hills), whereas, in medium altitude (Northern hills) it recorded significant yield superiority in two consecutive years during 2021(11.13%) and 2020 (19%). IET 28200 is found promising for Himachal Pradesh and Uttarakhand under low and medium northern elevations respectively. **Hence the entry is found promising for Himachal Pradesh and Uttarakhand.**

INITIAL VARIETY TRIAL-EARLY (HILLS) IVT-E(H)

Locations: 13

Test Entries: 24

Checks: Vivekdhan 86 (NC), Shalimar Rice 3 (ZC) and Local Check (LC).

Table:5.7

Initial Variety Trial – Early Hills (IVT- E [H]) was constituted with 24 test entries and three checks namely Vivekdhan 86 (NC), Shalimar Rice 3 (ZC) and local check. The trial was sent to 13 locations and data was received from eight locations (Upper Shillong, Almora-ICAR, Khudwani, Pombay, Malan, Palampur, Gudaluru and Ponnampet). The data from five locations (Wadura, Rajouri, Sundernagar, Bajuarua and Chintapally) was not received. Data from eight locations mentioned above was analyzed under three elevations namely Low elevations (Northern Low and Southern Low), Medium elevation (Medium Northern and Medium southern) and High elevation.

Data from Ponnampet, Palampur were not considered due to low experimental mean yield of 2411 kg/ha, 1869 kg/ha respectively. The data from Upper Shillong location was not considered as only the local check was flowered, with a low mean yield of 2400 kg/ha. Overall mean grain yield ranged from 2995 kg/ha (IET 29634) to 6063 kg/ha (IET 29636); days to 50% flowering ranged from 80 days (IET 29634) to 118 days (IET 29642); plant height ranged from 81.74 cm (IET 29637) to 139.44 cm (IET 28892); and number of panicles/m² from 237 (IET 29637) to 339 (IET 28881). The data pertaining to grain yield, days to 50% flowering, plant height and panicles/m² are presented in tables 5.8, 5.9, 5.10 and 5.11. The performance of test entries is described below.

Northern Low Elevation

Data from Malan was considered for analysis under Northern Low Elevation. The mean grain yield of entries ranged from 1417 kg/ha (IET 29634) to 4125 kg/ha (IET 29636), while days to 50% flowering ranged from 80 days (IET 28879 and IET 28881) to 119 days (IET 29642); Plant height ranged from 82.90 cm (IET 29634) to 144.40 cm (IET 29636); Number of panicles/m² ranged from 102 (IET 28887) to 387 (IET 29633). Among checks, Zonal check, Shalimar Rice-3 recorded maximum grain yield of 3375 kg/ha with 98 days to 50% flowering followed by National check (Vivekdhan 86) with 2722 kg/ha which took 82 days to reach 50% flowering.

Among the test entries, four entries namely IET 29636, IET 29633, IET 28887 and IET 29641 recorded yield advantage of more than 10% against the best check (ZC), hence IETs 29636, 29633, 28887 and 29641 are promoted to second year of testing in Northern Low Elevation.

Performance of superior test entries at Northern Low Elevation in IVT-E (H) during Kharif 2021

Northern Low Elevation (one location, Malan)		
IETNo./ Designation/ Cross Combination	Grain Yield(kg/ha) Days to 50% flowering Grain Type	% Yield superiority over best check
IET29636 VL 32654 VL 30424/ HPR 2644	4125 100 LS	22
IET 29633 HPR 3216 HPU 741 / HPR 2512 // HPR 1149	3993 99 LS	18
IET 28887 VL 32558 VL 31329 / Anjali	3847 95 LB	14
IET 29641 VL 32678 VL Dhan 208 / VL 30424	3819 91 LS	13
Vivekdhan86(NC)	2722 82	
<i>Shalimar Rice3(ZC)</i>	3375 98	
Local Check(LC)	2465 94	

Northern medium elevation

Data from single location Almora-ICAR (UK) was considered for analysis under Northern Medium Elevation. The mean grain yield of the location ranged from 1094 kg/ha (IET 29634) to 4990 kg/ha (IET 29641) whereas days to 50% flowering ranged from 79 days (IET 28894 and IET 28881) to 124 days (IET 29642). Plant height ranged from 69 cm (IET 29634) to 140.50 cm (IET 28892). Number of panicles/m² ranged from 214 (IET 28898) to 386 (IET 29634). Among the checks, Local check (VLD 85) recorded highest grain yield of 4083 kg/ha with 87 days to 50% flowering followed by Zonal check (Shalimar Rice-3) 3510 kg/ha with 93 days to 50% flowering.

Performance of superior test entries at Northern Medium Elevation in IVT-E (H) During Kharif 2021

Among the test entries at Northern Medium Elevation, 4 test entries viz., IETs 29641, 29636, 29639 and 29635 recorded significant yield advantage over the best check (Local check, VLD 85); hence they have been promoted to second year of testing.

Northern Medium Elevation (Single location, Almora)		
IET No./ Designation/ Cross Combination	Grain Yield (kg/ha) Days to 50% flowering Grain Type	% Yield superiority over best check
IET29641 VL32678 VL Dhan 208 / VL 30424	4990 999 LS	22
IET29636 VL 32654 VL 30424/ HPR 2644	4865 106 LS	19
IET29639 TRCPSM-9-B-B-20-119-6 CT 9993-5-10-1-M/2* Samba Mahsuri	4615 110 LS	13
IET29635 VL32699 VL Dhan 65/ VL 32057	4583 94 LS	12
Vivekdhan86(NC)	1802 85	
Shalimar Rice-3(ZC)	3510 93	
Local Check(LC)	4083 87	

Southern medium elevation

Under Southern medium elevation, the trial was conducted at only one location i.e., Gudaluru in Tamil Nadu. The mean grain yield of entries ranged from 2875 kg/ha (IET 28894) to 8525 kg/ha (IET 29633), while days to 50% flowering ranged from 81 days (IET 29634) to 106 days (IET 29642). Plant height ranged from 65.30 cm (IET 28899) to 117.20 cm (IET 28892) and number of panicles/m² ranged from 159 (IET 28898) to 403 (IET 29633). Among checks, Zonal check (Shalimar Rice-3) recorded maximum grain yield of 4500 kg/ha with 86 days to 50% flowering followed by National check with 3050 kg/ha which took 91 days to reach 50% flowering.

Performance of superior test entries at Southern medium Elevation in IVT-E (H) during Kharif 2021

Among the test entries, nine entries namely IETs 29633, 29636, 28897, 29640, 28880, 28896, 29638, 28893, 29641 recorded yield advantage over 10% against the best check (ZC), hence the above mentioned entries have been promoted to second year of testing in Southern medium elevation.

Southern Medium elevation(Ilocation,Gudaluru)		
IET No. / Designation/ Cross Combination	Grain Yield(kg/ha) Days to 50% flowering Grain Type	% Yield superiority over best check
IET29633	8525	89
HPR 3216	87	
HPU 741 / HPR 2512 // HPR 1149	LS	
IET29636	8500	89
VL 32654	94	
VL 30424/ HPR 2644	LS	
IET 28897	7625	69
SKUA 547 (K 12-9-1-9-1-2)	91	
Jhelum / DHMAS	MS	
IET 29640	6625	47
HPR 3212	91	
HPR 2668 / HPR 2216	LS	
IET 28880	6500	44
SKUA 548 (K 13-7-7-5-2)	89	
Jhelum / Pusa Basmati 1509	LS	
IET 28896	5700	27
SKUA 558 (K 13-7-7-1-1-1)	89	
Jhelum / Pusa Basmati 1509	MS	
IET 29638	5625	25
VL 32561	91	
VL 30424 / HPR 2143	LS	
IET 28893	5300	18
SKUA 551 (K 12-9-1-9-1-2)	91	
Jhelum / DHMAS	MS	
IET 29641	5250	17
VL32678	89	
VL Dhan 208 / VL 30424	LS	
Vivekdhan86(NC)	3050	
	91	
Shalimar Rice-3(ZC)	4500	
	86	
Local Check (LC)	3025	
	89	

High elevation

At high elevations, Khudwani and Pombay are the locations where the trial IVT -E (H) was conducted. Mean grain yield ranged from 2675 kg/ha (IET 29642) to 8163 kg/ha (Shalimar Rice- 3, ZC), while days to 50% flowering ranged from 80 days (IET 29634) to 122 days (IET 29642). Plant height ranged from 80.60 cm (IET 29642) to 129 cm (IET 28892); number of panicles/m² ranged from 157 (IET 29637) to 387 (IET 28881). Among the checks, Zonal check (Shalimar Rice 3) recorded maximum grain yield (8163 kg/ha with 112days to 50% flowering) followed by National check, Vivekdhan 86 (8082 kg/ha with 96 days to 50% flowering).

None of the entries showed 10% yield advantage over the best check (Local check, Shalimar Rice-4). Hence, none of the entries got promoted in high altitude Hills.

List of test entries promoted to AVT1-E(H) for second year of testing is mentioned below:

Elevation	Entries promoted to AVT1-E(H)
Northern low elevation	IETs 29636, 29633, 28887 and 29641
Northern medium elevation	IETs 29641, 29636, 29639 and 29635
Southern medium elevation	IETs 29633, 29636, 28897, 29640, 28880, 28896, 29638, 28893 and 28884

Table No. 5.1: Composition of entries in Advance Variety Trial 1- Early (Hills) (AVT 1-E (H), kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
2nd Year of testing				
2301	28886	HPR 3203	HPR 2143 / Balwan	LS
2302	28890	TRC GN 117-B-B-12-1-1	Gomatidhan / Tripura Nirog	LS
2303	28885	SKUA 554 (K 12-9-2-14-3-4)	Jhelum / DHMAS	LS
2304	28895	VL 32560	VL 31339 / BL 122	LS
2305	Vivekdhan 86 (NC)			
2306	28882	HPR 3201	HPR 2143 / AC 19146	LS
2307	28884	TRC BN 793-B-B-27-4-1	Bhalum 3 / Naveen	SB
2308	28883	VL 32585	VL 31290 / O. minuta	LB
2309	28891	HPR 3202	T 23 / IR 67011 // Hasan Serai	LS
2310	Shalimar Rice 3 (ZC)			
3rd Year of testing				
2311	28196	TRC KS-1512-B-B-1-12-1	Kataktara / Swarna	LB
2312	28206	HPR 3106	HPR 2336 / AC 19146 // HPR 2143	LB
2313	28200	TRC BN-1311-B-B-43-11-1	Bhalum3 / Naveen	SB
2314	Local Check			

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Table No. 5.2: Grain Yield (kg/ha) of entries in AVT 1 – E (H), Kharif 2021

Elevations		Low Northern							
ENTRY NO	IET NO	Himachal Pradesh				Himachal Pradesh Mean (2)		Low Northern (2) Mean	
		MALAN		Sundernagar					
		MLN		SDR					
2301	28886	3902		4880	4 *	4391	9	4391	9
2302	28890	3985		4284	10	4135	10	4135	10
2303	28885	3671		2760		3216		3216	
2304	28895	5820	1	4815	6 *	5318	2 * 14%	5318	2 * 14%
2305	Vivekdhan 86 (NC)	5721	4	3648		4685	8	4685	8
2306	28882	5771	2	4997	2 *	5384	1 * 15%	5384	1 * 15%
2307	28884	4993	9	5313	1 *	5153	4 * 10%	5153	4 * 10%
2308	28883	5671	5	4863	5 *	5267	3 * 12%	5267	3 * 12%
2309	28891	5241	6	4952	3 *	5097	6 * 9%	5097	6 * 9%
2310	Shalimar Rice 3 (ZC)	4117	10	3039		3578		3578	
2311	28196	5159	7	2763		3961		3961	
2312	28206	5159	7	4526	7	4843	7	4843	7
2313	28200	5737	3	4506	8	5122	5 * 9%	5122	5 * 9%
2314	Local Check	3935		4307	9	4121		4121	
Exp. Mean		4920		4261		4591		4591	
CD		436		374		302		302	
CV%		5.29		5.24		3.92		3.92	
D/S		07-06-2021		25-05-2021					
D/P		05-07-2021		16-06-2021					
Local Check Name		HPR 1068		HPR 2612 (Palam Basmati 1)					

Table No. 5.2 contd: Grain Yield (kg/ha) of entries in AVT 1 – E (H), Kharif 2021

Elevations		Low Southern (1)		Medium Northern				Medium Northern							
ENTRY NO	IET NO	Karnataka		Uttarakhand		Jammu & Kashmir		Himachal Pradesh		Himachal Pradesh Mean (3)		Medium Northern Mean (3)			
		PONNAMPET		Almora-ICAR		Rajouri		Palampur							
		PNP		ALM		RJR		PLM							
2301	28886	3539	5	3833	10	9%	5591		3134	6	3972	10	4186		
2302	28890	2865		5484	3 *	55%	6057		1958		3409		4500	9	
2303	28885	3204	8	2944			5875		1943		2791		3587		
2304	28895	5200	1	4746	7 *	34%	6080	10	3612	4	4749	2* 14.18%	4813	7	6%
2305	Vivekdhan 86 (NC)	3096	10	3532			6568	8	3108	8	4159	8	4403		
2306	28882	3382	6	6063	1 *	72%	5818		3122	7	4630	3* 11.32%	5001	6 *	10%
2307	28884	4524	2	3889	9	10%	7193	6	2321		4209	7	4468	10	
2308	28883	2370		5770	2 *	63%	7773	3	3770	2	4768	1* 14.64%	5771	2 *	27%
2309	28891	3268	7	4905	6 *	39%	8125	2 *	2930	10	4374	6	5320	3 *	17%
2310	Shalimar Rice 3 (ZC)	1855		1413			6170	9	1111		2756		2898		
2311	28196	3582	4	5317	4 *	51%	7477	4	3056	9	3659		5283	4 *	16%
2312	28206	1608		5111	5 *	45%	8341	1 *	3975	1	4553	4* 9.48%	5809	1 *	28%
2313	28200	3130	9	4397	8 *	24%	7386	5	3340	5	4528	5* 8.86%	5041	5 *	11%
2314	Local Check	4145	3	3167			6705	7	3737	3	3993	9	4536	8	
Exp. Mean		3269		4327			6797		2937		4039		4686.83		
CD		1069.27		846.39			1081.23		452.66		243.33		463.25		
CV%		19.49		11.66			9.48		9.18		3.59		5.89		
D/S		16-07-2021		27-05-2021		05-06-2021		04-06-2021							
D/P		16-08-2021		28-06-2021		30-06-2021		19-07-2021							
Local Check Name		KPR-1		VLD 85		K-39		HPR 1068							

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Table No.5.2 contd: Grain Yield (kg/ha) of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	Elevations	Medium Southern						High						Overall Mean (9)						
		Tamil Nadu			Medium Southern Mean (1)	Jammu & Kashmir			Jammu & Kashmir Mean (2)	Jammu & Kashmir Mean (3)	Meghalaya	High Mean (2)								
		Gudaluru				KHUDWANI	Pombay	UPPER SHILLONG												
		GDL				KHD	PBY	@USG												
2301	28886	3622	9	3622	9	8330	3	6820	3	7575	3	6914	8	7575	3	4850	7			
2302	28890	5146	2*	17%	5146	2*	17%	3372		2950		3161		4126		3161	4011			
2303	28885	3009		3009		8466	2	6774	4	7620	2	7038	5	7620	2	4294				
2304	28895	4204	6	4204	6	8006	5	6978	1	7492	4	7021	6	7492	4	5496	1*	10%		
2305	Vivekdhani 86 (NC)	4413	5	4413	5	8084	4	6659	5	7372	5	7104	4	7372	5	4981	6			
2306	28882	5370	1*	22%	5370	1*	22%	7480	8	6222	8	6851	8	6507	9	6851	8	5358	2*	8%
2307	28884	4183	7	4183	7	3219		2761		2990		4391		2990		4266				
2308	28883	3579	10	3579	10	6001	10	5190	10	5596	10	6321	10	5596	10	4999	5			
2309	28891	4496	4	4496	4	7484	7	6477	6	6981	7	7362	1	6981	7	5320	3*	7%		
2310	Shalimar Rice 3 (ZC)	2564		2564		8537	1	6848	2	7693	1	7185	2	7693	1	3962				
2311	28196	4538	3	4538	3	5477		4441		4959		5798		4959		4646	10			
2312	28206	3321		3321		7181	9	5829	9	6505	9	7117	3	6505	9	5006	4			
2313	28200	4038	8	4038	8	5496		4611		5054		5831		5054		4738	9			
2314	Local Check	2884		2884		7788	6	6448	7	7118	6	6980	7	2178	1	7118	6	4791	8	
Exp. Mean		3955		3955		6780		5643		6212		6407		2178		6212		4830		
CD		452		452		742		791		440		414		440		249				
CV%		6.8		6.8		6.52		8.35		4.22		3.85		4.22		3.07				
DS		12-07-2021				07-05-2021				11-05-2021				14-04-2021						
DP		12-08-2021				03-06-2021				11-06-2021				16-06-2021						
Local Check Name		CO-51				Shalimar Rice 4				SHALIMAR RICE 4				MEG-3						

Table No. 5.3: Days to 50%flowering of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	Low Northern				Low Southern	Medium Northern	
		Himachal Pradesh		Himachal Pradesh Mean (2)	Low Northern Mean (2)	Karnataka	Uttarakhand	Jammu & Kashmir
		MALAN	Sundernagar			PONNAMPET	Almora-ICAR	Rajouri
		MLN	SDR	PNP	ALM	RJR		
2301	28886	89	59	74	74	88	92	96
2302	28890	117	80	99	99	107	120	97
2303	28885	85	57	71	71	83	88	87
2304	28895	98	67	83	83	92	97	93
2305	Vivekdhani 86 (NC)	95	62	79	79	83	91	93
2306	28882	91	67	79	79	97	97	95
2307	28884	111	79	95	95	100	108	98
2308	28883	87	60	73	73	85	93	92
2309	28891	93	66	79	79	90	98	92
2310	Shalimar Rice 3 (ZC)	76	57	67	67	85	80	87
2311	28196	106	73	90	90	100	106	96
2312	28206	92	63	78	78	94	100	94
2313	28200	102	68	85	85	97	107	94
2314	Local Check	89	64	77	77	104	89	91

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Table No. 5.3 contd: Days to 50%flowering of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	Medium Northern			Medium Southern	
		Himachal Pradesh		Himachal Pradesh Mean (3)	Medium Northern Mean (3)	Tamil Nadu
		Palampur	PLM			Gudaluru
					GDL	
2301	28886	81		77	90	98
2302	28890			99	108	116
2303	28885	88		77	88	98
2304	28895	86		84	92	99
2305	Vivekdhhan 86 (NC)	86		81	90	96
2306	28882	81		80	91	106
2307	28884	104		98	103	111
2308	28883	88		78	91	96
2309	28891	95		84	95	101
2310	Shalimar Rice 3 (ZC)	87		73	84	100
2311	28196	103		94	101	108
2312	28206	86		81	93	101
2313	28200	101		90	101	101
2314	Local Check	86		80	89	96

Table No. 5.3 contd: Days to 50%flowering of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	High						Overall Mean (9)
		Jammu & Kashmir		Jammu & Kashmir Mean (2)	Jammu & Kashmir Mean (3)	Meghalaya	High Mean (2)	
		KHUDWANI	Pombay			UPPER SHILLONG @USG		
		KHD	PBY					
2301	28886	101	110	106	102	83	106	90
2302	28890	122	126	124	115	87	124	111
2303	28885	98	107	103	97		103	88
2304	28895	107	113	110	104	100	110	95
2305	Vivekdhhan 86 (NC)	110	115	113	106		113	92
2306	28882	110	119	115	108	87	115	96
2307	28884	119	123	121	113	87	121	106
2308	28883	104	112	108	103		108	91
2309	28891	106	113	110	104	84	110	95
2310	Shalimar Rice 3 (ZC)	97	107	102	97	87	102	86
2311	28196	120	121	120	112	111	120	104
2312	28206	112	118	115	108		115	96
2313	28200	121	125	123	113	85	123	102
2314	Local Check	102	106	104	100	62	104	92

Table No. 5.4: Plant Height (cm) of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	Low Northern				Low Southern	Medium Northern
		Himachal Pradesh		Himachal Pradesh (2) Mean	Low Northern (2) Mean	Karnataka	Uttarakhand
		MALAN	Sundemagar			PONNAMPET	Almora-ICAR
		MLN	SDR	PNP	ALM		
2301	28886	120.30	111.10	115.70	115.70	85.88	105.67
2302	28890	94.60	99.90	97.25	97.25	85.00	98.67
2303	28885	121.50	138.31	129.91	129.91	95.88	123.00
2304	28895	11.10	219.93	115.52	115.52	87.38	108.33
2305	Vivekdhhan 86 (NC)	129.30	144.27	136.79	136.79	95.88	116.67
2306	28882	117.00	118.08	117.54	117.54	89.38	111.00
2307	28884	89.30	95.96	92.63	92.63	75.25	88.67
2308	28883	140.30	146.87	143.59	143.59	98.88	128.33
2309	28891	134.40	153.29	143.85	143.85	112.00	130.33
2310	Shalimar Rice 3 (ZC)	118.40	141.45	129.93	129.93	109.75	114.67
2311	28196	113.40	127.45	120.43	120.43	91.63	114.67
2312	28206	11.20	115.36	63.28	63.28	83.25	108.00
2313	28200	113.50	130.57	122.04	122.04	88.25	121.33
2314	Local Check	102.00	101.61	101.81	101.81	95.25	115.67

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Table No. 5.4 contd: Plant Height (cm) of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	Medium Northern				Medium Southern		
		Jammu & Kashmir		Himachal Pradesh		Himachal Pradesh Mean (3)	Medium Northern Mean (3)	Tamil Nadu
		Rajouri	Palampur	Gudaluru				
		RJR	PLM	GDL				
2301	28886	116.77	97.60	109.67	106.68	92.00		
2302	28890	119.33	85.80	93.43	101.27	83.30		
2303	28885	110.42	99.50	119.77	110.97	94.40		
2304	28895	117.80	94.20	108.41	106.78	93.80		
2305	Vivekdhani 86 (NC)	120.30	111.30	128.29	116.09	103.60		
2306	28882	111.65	89.50	108.19	104.05	96.00		
2307	28884	117.40	72.40	85.89	92.82	78.60		
2308	28883	118.20	109.80	132.32	118.78	100.90		
2309	28891	114.90	114.00	133.90	119.74	124.60		
2310	Shalimar Rice 3 (ZC)	116.60	101.90	120.58	111.06	103.50		
2311	28196	109.60	90.80	110.55	105.02	94.10		
2312	28206	113.40	91.40	72.65	104.27	84.90		
2313	28200	115.10	91.00	111.69	109.14	100.60		
2314	Local Check	118.40	88.80	97.47	107.62	75.00		

Table No. 5.4contd: Plant Height (cm) of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	High					High Mean (2)	Overall Mean (9)
		Jammu & Kashmir		Jammu & Kashmir Mean (2)	Jammu & Kashmir Mean (3)	Meghalaya		
		KHUDWANI	Pombay			UPPER SHILLONG		
		KHD	PBY	@USG				
2301	28886	99.00	91.60	95.30	102.46	95.30	102.21	
2302	28890	87.60	82.40	85.00	96.44	85.00	92.96	
2303	28885	110.40	104.70	107.55	108.51	107.55	110.90	
2304	28895	94.60	88.60	91.60	100.33	91.60	101.75	
2305	Vivekdhani 86 (NC)	112.40	107.50	109.95	113.40	109.95	115.69	
2306	28882	93.20	86.50	89.85	97.12	89.85	101.37	
2307	28884	91.50	86.40	88.95	98.43	88.95	88.39	
2308	28883	121.50	113.20	117.35	117.63	117.35	119.78	
2309	28891	119.80	115.30	117.55	116.67	117.55	124.29	
2310	Shalimar Rice 3 (ZC)	112.60	103.40	108.00	110.87	108.00	113.59	
2311	28196	94.30	88.90	91.60	97.60	91.60	102.76	
2312	28206	94.20	90.20	92.20	99.27	92.20	87.99	
2313	28200	95.80	90.30	93.05	100.40	93.05	105.16	
2314	Local Check	124.10	113.80	118.95	118.77	118.95	103.85	

Table No. 5.5: Panicles/m2 of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	Low Northern				Low Southern	Medium Northern
		Himachal Pradesh		Himachal Pradesh Mean (2)	Low Northern Mean (2)	Karnataka	Uttarakhand
		MALAN	Sunderanagar			PONNAMPET	Almora-ICAR
		MLN	SDR	PNP	ALM		
2301	28886	244	263	253	253	325	310
2302	28890	248	305	277	277	435	291
2303	28885	298	270	284	284	391	295
2304	28895	284	313	298	298	341	277
2305	Vivekdhani 86 (NC)	220	270	245	245	336	289
2306	28882	282	335	309	309	358	303
2307	28884	324	297	310	310	369	303
2308	28883	328	312	320	320	363	295
2309	28891	264	285	274	274	363	283
2310	Shalimar Rice 3 (ZC)	198	321	259	259	336	271
2311	28196	208	219	214	214	303	255
2312	28206	347	304	325	325	314	313
2313	28200	220	317	269	269	303	265
2314	Local Check	388	322	355	355	292	295

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Table No. 5.5 contd: Panicles/m2 of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	Medium Northern				Medium Southern
		Jammu & Kashmir		Himachal Pradesh		Tamil Nadu
		Rajouri	Palampur	Himachal Pradesh Mean (3)		Gudaluru
		RJR	PLM			GDL
2301	28886	268	272	260	283	375
2302	28890	285		277	288	431
2303	28885	278	298	289	290	443
2304	28895	296	240	279	271	408
2305	Vivekdhan 86 (NC)	320	250	247	286	404
2306	28882	272	268	295	281	397
2307	28884	369	270	297	314	416
2308	28883	440	322	321	352	381
2309	28891	483	234	261	333	406
2310	Shalimar Rice 3 (ZC)	301	220	246	264	406
2311	28196	408	259	229	307	426
2312	28206	487	270	307	357	377
2313	28200	389	206	248	287	371
2314	Local Check	333	262	324	297	420

Table No. 5.5 contd: Panicles/m2 of entries in AVT 1 – E (H), Kharif 2021

ENTRY NO	IET NO	High					High Mean (2)	Overall Mean (9)
		Jammu & Kashmir		Jammu & Kashmir Mean (2)	Jammu & Kashmir Mean (3)	Meghalaya		
		KHUDWANI	Pombay			UPPER SHILLONG		
		KHD	PBY	@USG				
2301	28886	405	325	365	333		365	310
2302	28890	218	204	211	236		211	302
2303	28885	427	340	384	348		384	338
2304	28895	407	333	370	345		370	322
2305	Vivekdhan 86 (NC)	391	339	365	350		365	313
2306	28882	379	316	348	322		348	323
2307	28884	172	155	163	232		163	297
2308	28883	295	261	278	332		278	333
2309	28891	303	279	291	355		291	322
2310	Shalimar Rice 3 (ZC)	415	339	377	352		377	312
2311	28196	253	216	234	292		234	283
2312	28206	309	268	289	355		289	332
2313	28200	288	248	268	308		268	290
2314	Local Check	390	330	360	351	194	360	337

Table No. 5.6: Grain quality characteristics of entries in AVT 1-E (H), kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
2301	28886	79.7	71.2	70.3	7.59	2.12	3.58	LS	A	7.0	17.21	71
2302	28890	79.3	70.9	68.7	7.12	2.15	3.31	LS	VOC	4.0	24.08	60
2303	28885	79.3	73.6	72.2	7.14	2.11	3.38	LS	A	4.0	23.32	22
2304	28895	80.5	73.8	71.9	7.10	2.15	3.30	LS	VOC	4.0	25.16	22
2305	Vivekdhan-86 (NC)	79.8	70.5	67.0	5.80	2.60	2.23	SB	VOC	4.0	24.46	22
2306	28882	79.2	67.7	58.6	7.07	2.14	3.30	LS	VOC	3.0	25.28	24
2307	28884	80.0	70.8	69.6	5.36	2.30	2.33	SB	VOC	4.0	23.32	67
2308	28883	81.2	74.1	72.0	6.13	2.31	2.65	LB	VOC	4.0	23.73	22
2309	28891	80.5	70.4	63.1	6.84	2.25	3.04	LS	VOC	4.0	26.57	25
2310	Shalimar Rice-3	78.5	71.8	70.8	5.46	2.48	2.20	SB	OC	4.0	25.02	22
2311	28196	79.0	71.4	70.5	6.20	2.44	2.54	LB	VOC	7.0	23.49	51
2312	28206	81.9	74.5	72.8	6.71	2.25	2.98	LB	VOC	7.0	24.93	22
2313	28200	80.1	73.7	72.4	5.88	2.46	2.39	SB	VOC	7.0	23.08	55

HULL: Hulling (%); **Mill:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length(mm); **KB:** Kernel Breadth(mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content(%); **GC:** Gel Consistency; **LB:** Long Bold; **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

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Table No. 5.7: Composition of entries in Initial Variety Trial - Early (Hills) (IVT -E (H), kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
1st Year of testing				
2401	28896 (R)	SKUA 558 (K 13-7-7-1-1-1)	Jhelum / Pusa Basmati 1509	MS
2402	28899(R)	TRC GH 79-B-B-34-4-1	Gomatidhan / Hakuchuk 2	MS
2403	28887 (R)	VL 32558	VL 31329 / Anjali	LB
2404	28880 (R)	SKUA 548 (K 13-7-7-5-2)	Jhelum / Pusa Basmati 1509	LS
2405	Shalimar Rice-3 (ZC)			
2406	29633	HPR 3216	HPU 741 / HPR 2512 // HPR 1149	LS
2407	28888 (R)	SKUA 557 (K 12-4-1-11-2-1-1)	Jhelum / VL Dhan 85	SB
2408	28900 (R)	SKUA 542 (K 11-9-1-1-1-2)	Jhelum / IR 24	SB
2409	28892 (R)	VL 32594	VL Dhan 61 / VSR 8	LS
2410	29634	SKUA 493-1 (Japonica variety)	Koshihikari / K 508	SB
2411	29635	VL 32699	VL Dhan 65 / VL 32057	LS
2412	28893 (R)	SKUA 551 (K 12-9-1-9-1-2)	Jhelum / DHMAS	MS
2413	Vivekdhan 86 (NC)			
2414	28898 (R)	SKUA 549 (K 12-13-1-2-2-2)	K 39 / Shalimar Rice-3	LB
2415	29636	VL 32654	VL 30424 / HPR 2644	LS
2416	29637	TRC PSM -9-B-B-20-119-6	Pyzum / Samba Mahsuri	MS
2417	28879 (R)	SKUA 552 (K 12-3-1-5-1-3)	Jhelum / Shalimar Rice-2	SB
2418	29638	VL 32651	VL 30424 / HPR 2143	LS
2419	28897 (R)	SKUA 547 (K 12-9-1-9-1-2)	Jhelum / DHMAS	MS
2420	29639	TRC CTSM-22-B-B-8-2-1	CT 9993-5-10-1-M / 2* Samba Mahsuri	LS
2421	28889 (R)	SKUA 546 (K 12-9-1-9-1-1)	Jhelum / DHMAS	MS
2422	29640	HPR 3212	HPR 2668 / HPR 2216	LS
2423	29641	VL 32678	VL Dhan 208 / VL 30424	LS
2424	28894 (R)	SKUA 556 (K 39-36-2-1-6)	K 39 / IR 64	MS
2425	29642	TRC PSM -19-B-B-70-99-2	Pyzum / Samba Mahsuri	MS
2426	28881 (R)	SKUA 545 (K 09-6-1-5)	VivekDhan 82 / Jhelum	SB
2427	Local Check			

(R): Repeat

Table No. 5.8: Grain Yield (kg/ha) of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Low Northern		Low Southern		Medium Northern				Medium Northern Mean (1)							
		Himachal Pradesh		Karnataka		Uttarakhand		Himachal Pradesh									
		MALAN	MLN	PONNAMPET	@ PNP	Almora-ICAR	ALM	Palampur	@ PLM	Himachal Pradesh Mean (1)							
2401	28896 (R)	2750		1906		3115		1640		2750		3115					
2402	28899(R)	2500		3774	1	3063		1468		2500		3063					
2403	28887 (R)	3847	3	14%	1646		3615	9	3492	2	3847	3	14%	3615	9		
2404	28880 (R)	3014			1616		2292		397		3014			2292			
2405	Shalimar Rice-3 (ZC)		3375	6		3418	3	3510		2447	10	3375	6	3510			
2406	29633	3993	2 *	18%	3300	4	3417		1587		3993	2 *	18%	3417			
2407	28888 (R)	2444			2098		1427		556		2444			1427			
2408	28900 (R)	2319			1727		1802		503		2319			1802			
2409	28892 (R)	3313	7		3024	10	3260		2725	8	3313	7		3260			
2410	29634	1417			1444		1094		595		1417			1094			
2411	29635	2986			3175	8	4583	4	12%	3148	7	2986		4583	4	12%	
2412	28893 (R)	3139	10		2141		2604		1508		3139	10		2604			
2413	Vivekdhan 86 (NC)		2722			3108	9	1802		701		2722		1802			
2414	28898 (R)	2833			3236	5	2063		1799		2833			2063			
2415	29636	4125	1 *	22%	2926		4865	2 *	19%	3373	4	4125	1 *	22%	4865	2 *	19%
2416	29637	3021			1963		3740	8		575		3021		3740	8		
2417	28879 (R)	2938			1798		3375		622		2938			3375			
2418	29638	3250	9		3199	6	4167	5	2646	9	3250	9		4167	5		
2419	28897 (R)	2757			2337		3438		3320	5	2757			3438			
2420	29639	3438	5		2586		4615	3	13%	1680		3438	5	4615	3	13%	
2421	28889 (R)	2181			1269		3344		939		2181			3344			
2422	29640	2708			1815		3573	10		2368		2708		3573	10		
2423	29641	3819	4	13%	3189	7	4990	1 *	22%	4101	1 *	3819	4	4990	1 *	22%	
2424	28894 (R)	2493			1859		2083		3479	3	2493			2083			
2425	29642	3285	8		1916		3958	7		853		3285	8	3958	7		
2426	28881 (R)	1618			1034		2552		754		1618			2552			
2427	Local Check		2465			3582	2	4083	6	3188	6	2465		4083	6		
Exp. Mean		2917			2411		3201		1869		2917			3201			
CD		557.66			722.61		771.98		741.96		557.66			771.98			
CV%		9.3			14.58		11.73		19.31		9.3			11.73			
D/S		07-06-2021		16-07-2021		20-05-2021		04-06-2021									
DP		08-07-2021		16-08-2021		30-06-2021		10-07-2021									
Local Check Name		HPR 1068		KPR-1		VLD 85		HPR 1068									

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Table No. 5.8 contd: Grain Yield (kg/ha) of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Medium Southern						High			High Mean (2)	Overall Mean (5)	
		Tamil Nadu			Jammu & Kashmir			Jammu & Kashmir Mean (2)	Meghalaya UPPER SHILLONG @USG				
		Gudaluru			KHUDWANI		Pombay						
		GDL			KHD	PBY							
2401	28896 (R)	5700	6 *	27%	8060	9	6484	7	7272	9	5222	7	
2402	28899(R)	3220			3515		3130		3323		3086		
2403	28887 (R)	4700	10		8235	6	6390	10	7313	7	5357	4	
2404	28880 (R)	6500	5 *	44%	6310		4598		5454		4543		
2405	Shalimar Rice-3 (ZC)	4500			9093	1	7233	3	8163	1	5542	3	
2406	29633	8525	1 *	89%	6700		5475		6088		5622	2	
2407	28888 (R)	3740			8183	8	6230		7207	10	4405		
2408	28900 (R)	2925			8200	7	6930	4	7565	4	4435		
2409	28892 (R)	4630			4485		3475		3980		3833		
2410	29634	3025			5343		4098		4721		2995		
2411	29635	4200			3975		3198		3587		3788		
2412	28893 (R)	5330	8	18%	6763		5985		6374		4764		
2413	Vivekdhhan 86 (NC)	3050			8680	3	7483	1	8082	3	4747		
2414	28898 (R)	2945			8715	2	7453	2	8084	2	4802	9	
2415	29636	8500	2 *	89%	6855		5970		6413		6063	1 *	
2416	29637	4250			2981		2753		2867		3349		
2417	28879 (R)	4000			6785		5984		6385		4616		
2418	29638	5625	7 *	25%	5830		5088		5459		4792	10	
2419	28897 (R)	7625	3 *	69%	7060		5818		6439		5340	5	
2420	29639	4325			3148		2655		2902		3636		
2421	28889 (R)	2900			8340	4	6468	8	7404	5	4647		
2422	29640	6625	4 *	47%	7290		6000		6645		5239	6	
2423	29641	5250	9	17%	6418		5480		5949		5191	8	
2424	28894 (R)	2875			7947	10	6648	5	7298	8	4409		
2425	29642	3800			2768		2581		2675		3278		
2426	28881 (R)	4450			8260	5	6533	6	7397	6	4683		
2427	Local Check	3025			7713		6444	9	7079	2400	4746		
Exp. Mean		4676			6580		5429		6004	2400	4560		
CD		836.56			963.95		472.98		573.16		394.29		
CV%		8.7			7.13		4.24		4.64		4.21		
D/S		14-07-2021			07-05-2021		10-05-2021						
D/P		16-08-2021			04-06-2021		09-06-2021						
Local Check Name		TKM-9			Shalimar rice 4		SHALIMAR RICE 4						

Table No. 5.9: Days to 50% flowering of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Low Northern		Low Southern		Medium Northern			Medium Northern Mean (1)	
		Himachal Pradesh		Karnataka		Uttarakhand		Himachal Pradesh		
		MALAN		PONNAMPET		Almora-ICAR		Palampur		
		MLN		@ PNP		ALM		PLM		
2401	28896 (R)	88		84		81		85	88	81
2402	28899(R)	114		96		110		82	114	110
2403	28887 (R)	95		85		101		90	95	101
2404	28880 (R)	86		83		82		82	86	82
2405	Shalimar Rice-3 (ZC)	98		85		93		87	98	93
2406	29633	99		99		109		102	99	109
2407	28888 (R)	81		83		81		82	81	81
2408	28900 (R)	82		76		81		89	82	81
2409	28892 (R)	99		84		107		94	99	107
2410	29634	77		69		84		81	77	84
2411	29635	100		91		94		89	100	94
2412	28893 (R)	88		86		88		85	88	88
2413	Vivekdhhan 86 (NC)	82		88		85		87	82	85
2414	28898 (R)	86		86		92		97	86	92
2415	29636	100		96		106		95	100	106
2416	29637	117		107		121			117	121
2417	28879 (R)	80		74		81		85	80	81
2418	29638	83		96		102		91	83	102
2419	28897 (R)	99		89		96		87	99	96
2420	29639	107		100		110		102	107	110
2421	28889 (R)	86		84		89		82	86	89
2422	29640	92		86		92		85	92	92
2423	29641	91		92		99		90	91	99
2424	28894 (R)	83		84		79		91	83	79
2425	29642	119		108		124			119	124
2426	28881 (R)	80		72		79		90	80	79
2427	Local Check	94		104		87		82	94	87

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Table No. 5.9 contd: Days to 50% flowering of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Medium Southern			High		High Mean (2)	Overall Mean (5)
		Tamil Nadu	Jammu & Kashmir		Jammu & Kashmir (2)	Meghalaya		
		Gudaluru	KHUDWANI	Pombay	Mean	UPPER SHILLONG		
		GDL	KHD	PBY		@USG		
2401	28896 (R)	89	100	105	102	87	102	92
2402	28899(R)	98	113	117	115	85	115	110
2403	28887 (R)	86	107	114	111	95	111	100
2404	28880 (R)	89	90	101	95	87	95	89
2405	Shalimar Rice-3 (ZC)	86	108	116	112	86	112	100
2406	29633	87	115	120	117	90	117	106
2407	28888 (R)	86	98	106	102		102	90
2408	28900 (R)	86	98	105	101	88	101	90
2409	28892 (R)	86	117	122	120	91	120	106
2410	29634	81	76	84	80	89	80	80
2411	29635	91	109	115	112	95	112	102
2412	28893 (R)	91	93	99	96	88	96	92
2413	Vivekdhhan 86 (NC)	91	92	101	96	97	96	90
2414	28898 (R)	86	103	108	105		105	95
2415	29636	94	109	116	112		112	105
2416	29637	84	118	121	120		120	112
2417	28879 (R)	86	95	103	99		99	89
2418	29638	91	103	106	104	95	104	97
2419	28897 (R)	91	94	99	97		97	96
2420	29639	101	116	120	118		118	111
2421	28889 (R)	86	93	99	96	90	96	90
2422	29640	91	101	105	103	89	103	96
2423	29641	89	109	114	111		111	100
2424	28894 (R)	86	101	106	103		103	91
2425	29642	106	120	124	122		122	118
2426	28881 (R)	86	91	99	95	87	95	87
2427	Local Check	89	100	106	103	62	103	95

Table No. 5.10: Plant Height (cm) of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Low Northern	Low Southern	Medium Northern		Himachal Pradesh Mean (1)	Medium Northern Mean (1)
		Himachal Pradesh	Karnataka	Uttarakhand	Himachal Pradesh		
		MALAN	PONNAMPET	Almora-ICAR	Palampur		
		MLN	@ PNP	ALM	PLM		
2401	28896 (R)	126.40	118.13	122.00	87.77	126.40	122.00
2402	28899(R)	89.70	83.75	93.50	89.30	89.70	93.50
2403	28887 (R)	137.60	105.75	124.00	107.85	137.60	124.00
2404	28880 (R)	137.80	125.25	125.00	101.22	137.80	125.00
2405	Shalimar Rice-3 (ZC)	131.60	106.50	110.50	114.54	131.60	110.50
2406	29633	116.10	89.50	96.50	93.65	116.10	96.50
2407	28888 (R)	126.30	113.50	116.00	109.76	126.30	116.00
2408	28900 (R)	114.70	90.88	104.50	97.66	114.70	104.50
2409	28892 (R)	180.50	114.38	140.50	128.53	180.50	140.50
2410	29634	82.90	66.25	69.00	97.43	82.90	69.00
2411	29635	139.10	126.38	124.50	118.23	139.10	124.50
2412	28893 (R)	127.80	105.75	116.00	101.65	127.80	116.00
2413	Vivekdhhan 86 (NC)	118.40	115.75	111.50	99.89	118.40	111.50
2414	28898 (R)	141.20	101.88	121.00	118.25	141.20	121.00
2415	29636	144.40	100.88	119.00	107.82	144.40	119.00
2416	29637	84.80	74.50	85.50		84.80	85.50
2417	28879 (R)	119.90	97.13	112.50	103.86	119.90	112.50
2418	29638	134.60	112.13	121.00	115.15	134.60	121.00
2419	28897 (R)	129.10	100.00	116.50	120.61	129.10	116.50
2420	29639	104.10	84.63	90.00	88.55	104.10	90.00
2421	28889 (R)	132.50	115.13	118.00	114.38	132.50	118.00
2422	29640	120.80	98.00	112.50	101.84	120.80	112.50
2423	29641	102.30	80.13	92.50	92.60	102.30	92.50
2424	28894 (R)	120.30	100.00	108.50	108.53	120.30	108.50
2425	29642	94.70	66.50	80.50		94.70	80.50
2426	28881 (R)	115.90	97.13	111.00	116.86	115.90	111.00
2427	Local Check	96.10	88.75	116.50	99.96	96.10	116.50

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Table No. 5.10 contd: Plant Height (cm) of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Medium Southern	High				High Mean (2)	Overall Mean (5)
		Tamil Nadu	Jammu & Kashmir		Jammu & Kashmir (2) Mean	Meghalaya		
		Gudaluru	KHUDWANI	Pombay		UPPER SHILLONG		
		GDL	KHD	PBY	@USG			
2401	28896 (R)	108.50	132.00	118.20	125.10	125.10	121.42	
2402	28899(R)	65.30	85.90	81.40	83.65	83.65	83.16	
2403	28887 (R)	103.20	124.30	120.30	122.30	122.30	121.88	
2404	28880 (R)	109.80	124.70	117.30	121.00	121.00	122.92	
2405	Shalimar Rice-3 (ZC)	101.90	127.00	120.40	123.70	123.70	118.28	
2406	29633	83.20	92.20	88.70	90.45	90.45	95.34	
2407	28888 (R)	102.40	126.10	118.40	122.25	122.25	117.84	
2408	28900 (R)	91.90	115.20	110.40	112.80	112.80	107.34	
2409	28892 (R)	117.20	140.90	118.10	129.50	129.50	139.44	
2410	29634	72.40	104.40	100.30	102.35	102.35	85.80	
2411	29635	109.40	131.20	119.70	125.45	125.45	124.78	
2412	28893 (R)	110.80	123.50	116.30	119.90	119.90	118.88	
2413	Vivekdhhan 86 (NC)	97.60	122.50	118.60	120.55	120.55	113.72	
2414	28898 (R)	113.00	128.30	117.40	122.85	122.85	124.18	
2415	29636	102.90	116.50	112.70	114.60	114.60	119.10	
2416	29637	71.50	85.20	81.70	83.45	83.45	81.74	
2417	28879 (R)	100.40	120.60	110.30	115.45	115.45	112.74	
2418	29638	107.40	126.90	120.20	123.55	123.55	122.02	
2419	28897 (R)	105.20	122.60	118.20	120.40	120.40	118.32	
2420	29639	89.10	86.70	81.60	84.15	84.15	90.30	
2421	28889 (R)	105.50	127.00	121.00	124.00	124.00	120.80	
2422	29640	102.70	117.60	112.60	115.10	115.10	113.24	
2423	29641	85.90	90.60	87.50	89.05	89.05	91.76	
2424	28894 (R)	97.40	118.00	115.30	116.65	116.65	111.90	
2425	29642	91.80	81.70	79.50	80.60	80.60	85.64	
2426	28881 (R)	97.10	120.60	115.50	118.05	118.05	112.02	
2427	Local Check	81.50	114.10	112.60	113.35	120.00	104.16	

Table No. 5.11: Panicles/m2 of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Low Northern	Low Southern	Medium Northern			Medium Northern Mean (1)
		Himachal Pradesh	Karnataka	Uttarakhand	Himachal Pradesh	Himachal Pradesh Mean (1)	
		MALAN	PONNAMPET	Almora-ICAR	Palampur		
		MLN	@ PNP	ALM	PLM		
2401	28896 (R)	273	517	318	249	273	318
2402	28899(R)	261	435	264	270	261	264
2403	28887 (R)	102	369	257	234	102	257
2404	28880 (R)	285	396	308	243	285	308
2405	Shalimar Rice-3 (ZC)	237	325	297	228	237	297
2406	29633	387	490	285	240	387	285
2407	28888 (R)	309	347	319	261	309	319
2408	28900 (R)	282	303	243	210	282	243
2409	28892 (R)	213	358	236	252	213	236
2410	29634	189	391	386	255	189	386
2411	29635	279	341	311	246	279	311
2412	28893 (R)	159	319	296	258	159	296
2413	Vivekdhhan 86 (NC)	216	330	304	228	216	304
2414	28898 (R)	219	292	214	264	219	214
2415	29636	259	303	256	219	259	256
2416	29637	279	446	282	.	279	282
2417	28879 (R)	207	286	227	243	207	227
2418	29638	315	369	251	267	315	251
2419	28897 (R)	267	264	231	240	267	231
2420	29639	243	385	305	243	243	305
2421	28889 (R)	258	391	312	246	258	312
2422	29640	294	336	319	195	294	319
2423	29641	315	369	308	213	315	308
2424	28894 (R)	255	374	243	252	255	243
2425	29642	300	352	299	.	300	299
2426	28881 (R)	267	341	288	243	267	288
2427	Local Check	237	341	261	225	237	261

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Table No. 5.11 contd: Panicles/m² of entries in IVT – E (H), Kharif 2021

ENTRY NO	IET NO	Medium Southern			High		High Mean (2)	Overall Mean (5)
		Tamil Nadu	Jammu & Kashmir		Meghalaya			
		Gudaluru	KHUDWANI	Pombay	UPPER SHILLONG			
		GDL	KHD	PBY	@USG			
2401	28896 (R)	376	336	299	317		317	320
2402	28899(R)	316	246	230	238		238	263
2403	28887 (R)	353	396	334	365		365	288
2404	28880 (R)	290	360	306	333		333	310
2405	Shalimar Rice-3 (ZC)	290	369	314	341		341	301
2406	29633	403	317	288	302		302	336
2407	28888 (R)	255	384	269	327		327	307
2408	28900 (R)	234	393	318	356		356	294
2409	28892 (R)	356	272	219	245		245	259
2410	29634	251	275	235	255		255	267
2411	29635	369	248	226	237		237	286
2412	28893 (R)	374	354	306	330		330	298
2413	Vivekdhani 86 (NC)	356	389	348	369		369	323
2414	28898 (R)	159	405	361	383		383	271
2415	29636	392	375	326	350		350	321
2416	29637	310	164	150	157		157	237
2417	28879 (R)	335	339	300	319		319	281
2418	29638	357	324	287	305		305	307
2419	28897 (R)	385	334	307	321		321	305
2420	29639	305	170	155	162		162	236
2421	28889 (R)	294	408	349	379		379	324
2422	29640	326	378	299	338		338	323
2423	29641	315	383	321	352		352	328
2424	28894 (R)	213	363	324	344		344	279
2425	29642	255	198	175	186		186	245
2426	28881 (R)	368	416	358	387		387	339
2427	Local Check	374	366	331	348	199	348	314

ADVANCE VARIETY TRIAL 1 – MEDIUM (HILLS) AVT 1-M (H)

Locations: 14

Test Entries: 10

Checks: Vivekdhan 62 (NC), VL Dhan 68 (NC), VL Dhan 65(ZC for North & South), RC Maniphou 11 (ZC for North East) and Local Check Table:5.12

AVT 1 – M (H) trial was constituted with 14 entries including 10 test entries and 4 checks – Vivekdhan 62 (NC), VL Dhan 68 (NC), ZC: VL Dhan 65 (North/South) and RC Maniphou 11 (North East) and a Local Check. Out of 10 test entries, only one entry IET 26594 was in third year of testing (Repeat) and remaining 9 entries were in second year of testing. The trial was sent to 18 locations of various altitudes and data was received from 14 locations. Four locations viz., Imphal (CAU), Wadura-khudwani (WDR-KHD), Bajura (BJR) and Chintapally did not sent the data. Among the 14 locations, data from five locations viz., Wangbal, CAU (Barapani), Sirsi, Umiam (ICAR) and Upper Shillong was not considered for analysis due to low CV, low experimental mean yield and improper grain filling (incomplete data). Data from remaining 9 centers was considered for data analysis and interpretation.

Overall mean yield ranged from 3995 kg/ha (IET 28216) to 5474 kg/ha (IET 28210); days to 50% flowering ranged from 89 days (IET 28224) to 107 days (IET 28216); plant height varied from 103.05 cm (IET 28220) to 130.55 (NC Vivekdhan 62) and number of panicles/m² ranged from 249 (IET 28222 and IET 28907) to 303 (IET 26594).

The data pertaining to yield, flowering, plant height and panicles/m² and quality were presented in tables 5.13, 5.14, 5.15, 5.16 and 5.17. Performance of the test entries at different elevations was discussed below.

Low altitude Northern (950 MSL)

AVT1-M (H) was conducted at 5 locations (Malan, Sundernagar, ICAR-Lamphelpat, Wangbal, and CAU-Umiam), however data of three locations (Malan, Sundernagar and ICAR – Lamphelpat) was considered for analysis. The mean grain yield of the entries ranged from 3511 kg/ha (IET 28217) to 5361 kg/ha (IET 28907); days to 50% flowering varied from 79 days (IET 28224) to 98 days (IET 28220). Among the checks, National check (VL Dhan 68) recorded highest grain yield of 5152kg/ha with 91 days to 50% flowering. Among the test entries, none of them shown more than 5% yield superiority, hence **none of the test entries got promoted under Low Northern altitude.**

Low altitude Southern (950 MSL)

The data from Sirsi location under this altitude was not considered for analysis due to low experimental mean yield, hence **none of the entries got promoted under Low altitude Southern.**

Medium altitude Northern (951-1500 MSL)

AVT-1-M (H) trial was conducted in 4 locations under medium altitude northern region, but data from only three locations viz., Almora, Rajouri and Gangtok was considered for analysis. Data from CAU Umiam was not considered due to low mean yield. The mean

grain yield at medium altitude northern ranged from 3235 kg/ha (IET 28224) to 5530 kg/ha (IET 28907); days to 50% flowering varied between 84 days (IET 28224) and 106 days (IET 28216 & ZC). Among the checks, Zonal check recorded highest yield of 5412 kg/ha with 106 days to 50% flowering. None of the test entries are superior to best Check i.e., Zonal check hence none of the entries are promoted to third year of testing in medium altitude Northern locations.

Medium altitude Southern (951-1500 MSL)

AVT-1-M (H) trial was conducted under medium altitude southern region at only one location i.e. Gudaluru in Tamil Nadu. The mean grain yield at medium altitude southern regions ranged from 1737 kg/ha (IET 28227) to 5600 kg/ha (IET 28222); days to 50% flowering varied between 98 days (NC - VL Dhan 68 and Zonal check) and 119 days (Local check). Among the checks, Local check (CO-51) recorded highest yield of 4620 kg/ha with 119 days to 50% flowering. Among the test entries, IET 28222 and IET 28907 recorded 21%, 10% higher grain yield than the best yielding Local check respectively. Among the 10 test entries, two entries IET 28222 and IET 28907 achieved required yield advantage of $\geq 10\%$ (Single location) and hence promoted to third year of testing. Hence two entries viz., IET 28222 and IET 28907 are promoted to third year of testing under medium altitude southern region.

Performance of the entries in AVT 1- M (H), Kharif 2021 at Medium Southern altitude

Rank	IET No / Designation/ Cross combination	Grain Yield (Kg/ha)/ Days to 50% flowering/ Grain type	% yield superiority over (NC, NC, ZC, LC)	Quality data HRR (%) / AC (%) / GC (mm)/ASV
1	IET 28222 TRC BN-1818-B-B-23-7-1 Bhalum 3 / Naveen	5600	-	73.2
		110	-	22.52
		LS	-	45
			21	7.0
2	IET 28907 CAUS 124 (ULRC 26-11-2-1-1) Kasalath / Borodhan	5059	-	68.9
		109	-	25.08
		MS	-	22
			10	5.0
	VL Dhan 68 (NC)	2607 98		
	Vivekdhan 62 (NC)	2070 102		
	Zonal Check (ZC)	2503 98		
	Local Check (LC) CO-51	4620 119		

High altitude (951-1500 MSL)

AVT1-M (H) trial was conducted at three locations i.e., Khudwani (KHD), Pombay (PBY) and Upper Shillong under High altitudes. However, data of Upper Shillong was not considered due to improper grain filling and incomplete data. The data from only two centers viz., Khudwani (KHD) and Pombay (PBY) centers was considered for analysis and interpretation. The mean grain yield at high altitude northern ranged from 2620 kg/ha (IET 28216) to 7622 kg/ha (IET 28224); days to 50% flowering varied between 103 days (IET 28227 and Local check) and 124 days (NC, VL Dhan 68). Among the checks, local check

produced highest grain yield of 7133 kg/ha with 103 days to 50% flowering. Among the test entries, two entries viz., IET 28224 and IET 28217 recorded yield advantage of 7% and 5% respectively over best check (Local check). **Hence two entries IET 28224 and IET 28217 are promoted to third year of testing under high altitude region.**

Performance of the entries in AVT 1- M (H), Kharif 2021 at High altitude

Rank	IET No / Designation/ Cross combination	Grain Yield (Kg/ha)/ Days to 50% flowering/ Grain type	% Yield superiority over (NC, NC, ZC, LC)	Quality data HRR (%)/ AC (%)/ GC (mm)/ASV
1	IET 28224 SKUA 535 Vivekdhan 82 / Shalimar Rice-3	7622 106 SB	- - - 7%	69.6 24.11 22 4.0
2	IET 28217 SKUA 533-2 Jhelum / Shalimar Rice-1 // Jhelum	7511 106 SB	- - - 5%	68.9 24.69 22 4.0
	VL Dhan 68 (NC)	3691 124		
	Vivekdhan 62 (NC)	6532 113		
	Zonal Check(ZC)	3897 121		
	<i>Local Check (LC)</i>	7133 103		

Three years performance of IET 26594

IET No. / Designation / Cross Combination	Year	% Yield Advantage over BVC				
		Low Hills Northern	Medium Hills Northern	High Hills		
IET 26594	2017	14	ME 17	-	-	-
	2018	-	-	18	SK 28 UT 10	-
	2019	20	HP 20	18	-	-
	2020	-	-	-	-	-
	2021	-	-	-	-	-

IET 26594 showed yield superiority over best check during 2017 in Low northern hills (Meghalaya). In 2019 also it has shown yield superiority against best check in Low northern hills in Himachal Pradesh. It also showed yield superiority in medium northern hills during 2018 in the states of Sikkim and Uttarakhand. It has shown yield advantage over best check in medium northern hills during 2019. Even though, the entry was tested 5 years, it did not show consistently yield advantage in any of the states. It also did not yield superior to best check in 2021. **Hence the entry IET 26594 may be discontinued.**

Promotions in AVT 1 M (H):

- **Medium altitude southern: IET 28222 and IET 28907**
- **High altitude region: IET 28224 and IET 28217.**

INITIAL VARIETY TRIAL – MEDIUM HILLS (IVT-M (H))

Locations: 18

Test Entries: 28

Checks: Vivekdhan 62 (NC), VL Dhan 68 (NC), VL Dhan 65(ZC for North & South), RC Maniphou 11 (ZC for North East) and Local Check Table:5.18

Initial Variety Trial – Medium Hills (IVT-M (H)) was constituted with 36 entries which included 32 test entries and 4 checks. **Vivekdhan62 (NC) & VL Dhan68 (NC)** were used as National checks **VL Dhan65 (ZC for North & South), RC Maniphou (ZC for North East)** as Zonal checks. Trial was sent to 18 locations of various altitudes. Data was not received from 5 locations namely Viz. Imphal (IMP), Wadura (WDR), Sundernagar (SDN), Chintapally (CTP) and Bajura (BJR).

Among the 13 locations, data from five locations namely Malan (MLN), Barapani (CAU), Upper Shillong (USG) and Barapani (UMM) was not considered for analysis due to low experimental mean yield and Wangbal (WBL) due to low CV %. Overall mean yield ranged from 2537 kg/ha (IET 28901) to 5781kg/ha (Local check); days to 50% flowering ranged from 88 days (IET 28906) to 116 days (IET 29657); plant height varied from 82 cm (IET 29644) to 120 (IET 28908 and NC Vivekdhan-62 and number of panicles/m² ranged from 199 (IET 28903) to 296 (IET 28915).

The data pertaining to yield, flowering, plant height and panicles/m² were presented in tables 5.19, 5.20, 5.21 and 5.22. Performance of the test entries at different elevations is discussed below.

Low altitude Northern (950 MSL)

IVT-M (H) was conducted at 4 locations (ICAR-Lamphelpat (LPP), Wangbal (WBL), Barapani (CAU), and Malan (MLN)). The mean grain yield of the entries ranged from 667kg/ha (IET 28901) to 5883 kg/ha (IET 28910); days to 50% flowering varied from 74 days (IET 28901) to 105 days (IET 28910 and IET 28903). Among the checks, local check recorded highest grain yield average of 6367 kg/ha with 102 days to 50% flowering. Among the test entries, none of the entries showed > 5% superior yield performance over the best check (LC) and hence not promoted to 2nd year of testing in northern low altitude locations.

Low altitude Southern (950 MSL)

The data from only Sirsi location under this altitude was considered for analysis. The mean grain yield of the entries ranged from 1246kg/ha (IET 28901) to 6356 kg/ha (IET 29650); days to 50% flowering varied from 78 days (IET 28901) to 119 days (IET 29646). Among the checks, local check recorded highest grain yield average of 6824 kg/ha with 114 days to 50% flowering. Among the test entries, none of the entries showed > 5% superior yield performance over the best check (LC) and hence not promoted to 2nd year of testing in southern low altitude locations.

Medium altitude northern (951-1500 MSL)

The trial was conducted in 3 locations and only two Almora (ALM) and Gangtok (GTK) were considered for analysis. The mean grain yield at medium altitude ranged from 1162 kg/ha (IET 28916) to 4826kg/ha (IET 28656); days to 50% flowering varied between 86 days (IET 28906) and 116 days (IET 29650&IET 29651). Among the checks, zonal check recorded highest yield of 4387 kg/ha with 101 days to 50% flowering. IET 29656 showed 10% and IET 29654 showed 8% (> 5%) superior yield performance over the best check (ZC) and hence promoted to 2nd year of testing in northern medium altitude locations.

Performance of promising entries at Northern Medium altitude Hills in Initial variety Trial – High Altitude Hills IVT- M (H), Kharif 2021

Rank	IET No/ Designation/ Cross Combination	GY/ FD/ GT	% Yield adv. over NC1/NC2/ZC/LC
1	IET 29656	4826	16.35
	(VL32606)	105	36.37
	VivekDhan62/HPR2143	LS	10.01
2	IET 29654	4726	13.93
	(VL32605)	104	33.54
	Vivek Dhan 62/HPR2644	LS	7.73
	Vivekdhan62 (NC1)	4148	72.86
	VL Dhan68 (NC2)	3539	
	Zonal check (ZC)	4387	
	Local check (LC)	2734	

Bold & Italics: Best check & over the best check; NC-National Check; ZC-Zonal Check; LC-Local Check; GY- Grain Yield; FD-Days to 50% flowering; GT- Grain Type.

Medium altitude Southern (951-1500 MSL)

The data from only Gudalur location under this altitude was considered for analysis. The mean grain yield of the entries ranged from 1850kg/ha (IET 28916) to 8750 kg/ha (IET 28915); days to 50% flowering varied from 86 days (IET 29645) to 115 days (IET 29649 & IET 29651). Among the checks, local check recorded highest grain yield average of 8400 kg/ha with 111 days to 50% flowering. Among the test entries, none of the entries showed > 5% superior yield performance over the best check (LC) and hence not promoted to 2nd year of testing in southern medium altitude locations.

High altitude hills (951-1500 MSL)

IVT-M (H) trial was conducted only at two locations i.e., Khudwani (KHD) and Pombay (PBY) and the data was considered for analysis. The mean grain yield at high altitude ranged from 2566 kg/ha (IET 29646) to 7606 kg/ha (IET 28913); days to 50% flowering varied between 99days (IET 28906) and 125 days (IET 29655 and IET 29657).

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Among the checks, local check recorded highest yield of 6703kg/ha with 104 days to 50% flowering. IET 28913, IET 28914, IET 28915, IET 28906 and IET 28909 showed 13.47, 13.31, 12.65, 5.92 and 5.67% (> 5%) superior yield performance over the best check (LC) and hence promoted to 2nd year of testing in High altitude locations.

Performance of promising entries at Northern High elevated Hills in Initial variety Trial – High Altitude Hills IVT- M (H), Kharif 2021

Rank	IET No/ Designation/ Cross Combination	GY/ FD/ GT	Yield adv. Over NC1/NC2/ZC//LC
1	IET 28913 (SKUA 553) K12-5-1-801-1 Jhelum/ VL Dhan85	7606 105 LS	28.41 185.08 169.33 13.47
2	IET 28914 (SKUA 555) K13-39-36-1-1-2 K39/IR64	7595 105 SB	28.23 184.67 168.94 13.31
3	IET 28915 (HPR3205) (HPR2143*3/DHMAS164// HPR2143*3/Pusa1637)	7551 110 LS	27.49 183.02 167.39 12.65
4	IET 28906 (SKUA543) (K-11-5-1-9-4-3) Ch1039/IR24	7100 99 MS	19.87 166.12 151.42 5.92
5	IET28909 (SKUA550) (K-12-9-1-9-1-1) Jhelum/DHMAS	7083 102 MS	19.58 165.48 150.81 5.67
	Vivekdhan62 (NC1)	5923	
	VL Dhan68 (NC2)	2668	
	Zonal check (ZC)	2824	
	Local check (LC)	6703	

List of the entries promoted in IVT-M (H):

- **Low altitude Northern:** None
- **Low altitude Southern:** None
- **Medium altitude Northern:** IET 29656 and IET 29654 were promoted to AVT1-M (H)
- **Medium altitude Southern:** None
- **High altitude hills:** IETs 28913, 28914, 28915, 28906 and 28909 were promoted to AVT 1- M (H)

Table No. 5.12: Composition of entries in Advance Variety Trial 1-Medium (Hills) (AVT1-M (H), kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
2nd Year of testing:				
2501	28210 (R)	CAUS 107 (ULRC 5-2-1-2-2)	Shahsarang / CAU R1	SB
2502	28224 (R)	SKUA 535	Vivekdhan 82 / Shalimar Rice-3	SB
2503	28220 (R)	VL 40530	VL 30929 / Pusa Basmati-1	LS
2504	28222 (R)	TRC BN-1818-B-B-23-7-1	Bhalum 3 / Naveen	LB
2505	Vivekdhan 62 (NC)			
2506	28212 (R)	TRC PSM 164-B-B-13-6-1	Pyzum / BPT 5204	LB
2507	28907	CAUS 124 (ULRC 26-11-2-1-1)	Kasalath / Borodhan	LB
2508	VL Dhan 68 (NC)			
2509	28227 (R)	SKUA 534	Shalimar Rice-1 / China 1039	SB
2510	28216 (R)	CAUS 103 (ULRC 3-4-1-1)	Shahsarang / Mynrii	SB
2511	VL Dhan 65 (ZC for North & South), RC Maniphou 11 (ZC for North East)			
3rd Year of testing:				
2512	26594 (R)	HPR 2929	Kalizini / HPR 2143 // HPR 2143	LS
2nd Year of testing:				
2513	28217 (R)	SKUA 533-2	Jhelum / Shalimar Rice-1 // Jhelum	SB
2514	Local Check			

(R): Repeat

Table No. 5.13: Grain Yield (kg/ha) of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Northern											Low Northern (3)					
		Himachal Pradesh				Himachal Pradesh Mean (2)	Manipur				Meghalaya							
		MALAN		Sundernagar			Lamphelpat-ICAR		WANGBAL		CAU- Barapani							
		MLN	SDR	LPP			@WBL		Manipur Mean(1)		@CAU-BRP							
2501	28210	4382	6	4700	6	4541	4	6933	1	3067	1*	6933	1	8%	4153	1*	5338	3
2502	28224	3819	10	3982	10	3901	9	2900		2733	9	2900			1767	9	3567	
2503	28220	3985	8	2632		3309		5600	10	2800	6	5600	10		3617	4	4072	
2504	28222	4646	4	4891	2	4769	1	6533	4	2733	9	6533	4		3680	2	5357	2
2505	Vivekdhan 62 (NC)	4828	2	3535		4182	6	5189		2867	3	5189			1560	10	4517	9
2506	28212	4299	7	4721	4	4510	5	6344	6	2800	6	6344	6		2510	7	5121	5
2507	28907	4597	5	4741	3	4669	3	6744	2	2800	6	6744	2	5%	3657	3	5361	1
2508	VL Dhan 68 (NC)	4696	3	4703	5	4700	2	6056	9	2667		6056	9		1463		5152	4
2509	28227	2860		5050	1	3955	8	4022		2600		4022			1250		3977	
2510	28216	3803		2955		3379		6622	3	3067	1*	6622	3		2427	8	4460	10
2511	Zonal Check (ZC)	4927	1	2609		3768		6111	8	2667		6111	8		2583	6	4549	8
2512	26594 (R)	3985	8	4348	8	4167	7	6178	7	2533		6178	7		1270		4837	6
2513	28217	3105		4616	7	3861	10	2811		2733	9	2811			1190		3511	
2514	Local Check	3356		4157	9	3757		6400	5	2867	3	6400	5		3407	5	4638	7
Exp. Mean		4092		4117		4105		5603		2781		5603			2467		4604	
CD		343.71		563		317.51		1801.2		90.09		1801.2			492.08		646.44	
CV%		5		8.15		4.61		19.15		1.93		19.15			11.89		8.37	
DS		07-06-2021		25-05-2021				28-06-2021		22-07-2021					10-06-2021			
DP		06-07-2021		16-06-2021				27-07-2021		16-08-2021					08-07-2021			
Local Check Name		HPR 2143		HPR 2612 (Palam Basmati 1)				RC Maniphou-13		Sana-Phou					Shahsarang			

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Table No.5.13 contd: Grain Yield (kg/ha) of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Southern		Medium Northern										Medium Southern						
		Karnataka		Uttarakhand		Jammu & Kashmir		Meghalaya		Sikkim		Sikkim Mean(1)	Medium Northern Mean (3)		Tamil Nadu					
		Sirsi		Almora-ICAR		Rajouri		ICAR-Uniam		Gangtok			Gudahuru	GDL						
		@SRS		ALM		RJR		@ICAR-UMM		GTK										
2501	28210	1940		4944	10	6148	9	2243	1*	4299	2	4299	2	5130	5	4892	3	6%		
2502	28224	2702	2*	1292		7261	2	12%	954	9	1151		1151		3235		2617	10		
2503	28220	3155	1*	5500	3	7216	3	11%	1953	4	3651	4	3651	4	5456	3	3454	7		
2504	28222	2548	3*	5597	2	7364	1*	13%	1987	2	3413	7	3413	7	5458	2	5600	1*	21%	
2505	Vivekdhhan 62 (NC)	1500		5382	4	5625			842	10	3651	4	3651	4	4886	6	2070			
2506	28212	2048	7	5361	5	5489			1355	7	3704	3	3704	3	4851	7	4392	5		
2507	28907	2024	8	6090	1*	13%	6955	5	7%	1975	3	3545	6	3545	6	5530	1	5059	2*	10%
2508	VL Dhan 68 (NC)	2101	5	5069	7	5761			790		873		873		3901		2607			
2509	28227	1964	10	2833		5591			675		1812	10	1812	10	3412		1737			
2510	28216	2066	6	4382		6455	7		1310	8	2672	9	2672	9	4503	10	3829	6		
2511	Zonal Check (ZC)	1696		5014	9	6420	8		1395	6	4802	1	4802	1	5412	4	2503			
2512	26594 (R)	1893		5278	6	5932	10		686		3241	8	3241	8	4817	8	3143	9		
2513	28217	2250	4	2167		7057	4	9%	643						4612	9	3183	8		
2514	Local Check	1994	9	5035	8	6489	6		1840	5	1534		1534		4353		4620	4		
Exp. Mean		2134		4567		6412			1332		2950		2950		4682		3551			
CD		437.3		707.36		868.67			265.72		412.99		412.99		401.8		358.13			
CV%		12.21		9.23		8.07			11.89		8.31		8.31		5.11		6.01			
D/S		04-06-2021		02-06-2021		05-06-2021		06-04-2021		10-06-2021						12-07-2021				
D/P				09-07-2021		29-06-2021		19-05-2021		14-07-2021						11-08-2021				
Local Check Name		Prasanna		VLD 61		K-39		NEH Megha Rice 2		Attey						CO-51				

Table No. 5.13contd: Grain Yield (kg/ha) of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	High										High Mean (2)		Overall Mean (9)		
		Jammu & Kashmir				Jammu & Kashmir Mean (2)		Jammu & Kashmir Mean (3)		Meghalaya						
		KHUDWANI		Pombay						UPPER SHILLONG						
		KHD		PBY						@USG						
2501	28210	7144	6	5828	6	6486	7	6373	6	689		6486	7	5474	1*	7%
2502	28224	8566	1*	6678	3	7622	1*	7%	7502	1*	8.43%	7622	1*	7%	4252	
2503	28220	6811	8	5297	8	6054	8	6441	5			6054	8	4905	6	
2504	28222	4361	10	4039	10	4200	10	5255	9			4200	10	5160	3	
2505	Vivekdhhan 62 (NC)	7258	5	5805	7	6532	6	6229	7			6532	6	4816	8	
2506	28212	4883	9	4436	9	4660	9	4936	10			4660	9	4848	7	
2507	28907	3429		3039		3234		4474				3234		4911	5	
2508	VL Dhan 68 (NC)	3809		3573		3691		4381				3691		4127		
2509	28227	7014	7	6077	5	6546	5	6227	8			6546	5	4111		
2510	28216	2860		2380		2620		3898				2620		3995		
2511	Zonal Check (ZC)	4250		3543		3897		4738				3897		4464	10	
2512	26594 (R)	7983	3	6807	1	7395	3	6907	4	733		7395	3	5211	2	
2513	28217	8279	2*	6742	2	7511	2*	5%	7359	2*	6.3%	7511	2*	5%	4745	9
2514	Local Check	7736	4	6530	4	7133	4	6918	3	2322		7133	4	5095	4	
Exp. Mean		6027		5055		5541		5831		267		5541		4723		
CD		306.6		490.45		277.87		392.52				277.87		273.94		
CV%		3.03		5.78		2.99		4.01				2.99		3.46		
D/S		07-05-2021		11-05-2021						15-04-2021						
D/P		05-06-2021		11-06-2021						14-06-2021						
Local Check Name		Shalimar Rice 4		SHALIMAR RICE 4						MEG-2						

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Table No. 5.14: Days to 50% flowering of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Northern							Low Northern Mean (3)
		Himachal Pradesh		Himachal Pradesh Mean	Manipur		Manipur Mean (1)	Meghalaya	
		MALAN	Sundermagar		Lamphepat-ICAR	WANGBAL		CAU- Barapani	
		MLN	SDR	(2)	LPP	@WBL	@CAU-BRP		
2501	28210	103	79	91	96	90	96	96	93
2502	28224	83	75	79	78	79	78	83	79
2503	28220	103	96	99	96	89	96	87	98
2504	28222	104	89	97	96	100	96	97	96
2505	Vivekdhan 62 (NC)	95	78	87	90	98	90	88	88
2506	28212	106	86	96	96	109	96	95	96
2507	28907	104	88	96	100	103	100	97	97
2508	VL Dhan 68 (NC)	92	92	92	88	90	88	86	91
2509	28227	83	79	81	78	85	78	63	80
2510	28216	108	85	97	96	103	96	99	96
2511	Zonal Check (ZC)	100	86	93	96	94	96	102	94
2512	26594 (R)	92	79	85	88	97	88	85	86
2513	28217	85	80	83	78	87	78	61	81
2514	Local Check	91	83	87	96	87	96	100	90

Table No. 5.14contd: Days to 50% flowering of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Southern	Medium Northern					Medium Northern Mean (3)
		Karnataka	Uttarakhand	Jammu & Kashmir	Meghalaya	Sikkim	Sikkim Mean (1)	
		Sirsi	Almora-ICAR	Rajouri	ICAR-Umiam	Gangtok		
		@SRS	ALM	RJR	@ICAR-UMM	GTK		
2501	28210	79	104	97	115	104	104	102
2502	28224	71	86	82	102	85	85	84
2503	28220	79	109	95	106	101	101	102
2504	28222	86	114	88	116	106	106	102
2505	Vivekdhan 62 (NC)	95	102	93	107	100	100	98
2506	28212	68	108	97	114	102	102	103
2507	28907	85	111	98	116	104	104	104
2508	VL Dhan 68 (NC)	94	101	96	105	85	85	94
2509	28227	91	95	84	82	97	97	92
2510	28216	85	114	101	118	103	103	106
2511	Zonal Check (ZC)	94	100	97	121	122	122	106
2512	26594 (R)	87	93	93	104	99	99	95
2513	28217	67	96	84	97	95	95	92
2514	Local Check	89	102	94	119	115	115	104

Table No. 5.14 contd: Days to 50% flowering of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Medium Southern	High				High Mean (2)	Overall Mean (9)	
		Tamil Nadu	Jammu & Kashmir		Jammu &	Meghalaya			
		Gudaluru	KHUDWANI	Pombay	Kashmir Mean	Kashmir Mean			UPPER
		GDL	KHD	PBY	(2)	(3)			@USG
2501	28210	110	115	120	117	111	78	117	103
2502	28224	99	103	109	106	98	87	106	89
2503	28220	102	110	115	112	107		112	103
2504	28222	110	121	123	122	111	86	122	106
2505	Vivekdhan 62 (NC)	102	111	116	113	106	88	113	99
2506	28212	107	122	124	123	115	87	123	105
2507	28907	109	117	122	120	112	89	120	106
2508	VL Dhan 68 (NC)	98	122	125	124	114		124	100
2509	28227	99	101	105	103	97	78	103	91
2510	28216	109	122	124	123	116	81	123	107
2511	Zonal Check (ZC)	98	118	123	121	113	79	121	104
2512	26594 (R)	104	108	111	110	104	80	110	96
2513	28217	99	104	107	106	99		106	92
2514	Local Check	119	100	105	103	100	68	103	101

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Table No. 5.15: Plant Height (cm) of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Northern							Low Northern Mean (3)
		Himachal Pradesh		Himachal Pradesh Mean (2)	Manipur		Manipur Mean (1)	Meghalaya	
		MALAN	Sundernagar		Lamphelpat-ICAR	WANGBAL		CAU- Barapani	
		MLN	SDR		LPP	@WBL		@CAU-BRP	
2501	28210	177.70	106.30	142.00	114.00	91.00	114.00	99.09	132.67
2502	28224	136.30	136.77	136.54	115.00	101.00	115.00	101.07	129.36
2503	28220	118.40	118.63	118.52	105.00	92.00	105.00	90.43	114.01
2504	28222	114.20	110.04	112.12	116.00	84.00	116.00	92.95	113.41
2505	Vivekdhan 62 (NC)	178.00	131.89	154.95	150.00	115.00	150.00	107.73	153.30
2506	28212	118.70	112.37	115.54	116.00	75.00	116.00	96.82	115.69
2507	28907	135.10	114.94	125.02	124.00	95.00	124.00	106.37	124.68
2508	VL Dhan 68 (NC)	153.30	119.75	136.53	125.00	109.00	125.00	102.30	132.68
2509	28227	133.00	127.71	130.36	115.00	103.00	115.00	102.41	125.24
2510	28216	119.50	115.76	117.63	121.00	99.00	121.00	102.27	118.75
2511	Zonal Check (ZC)	141.90	132.56	137.23	86.00	70.00	86.00	87.76	120.15
2512	26594 (R)	125.60	118.46	122.03	115.00	88.00	115.00	93.47	119.69
2513	28217	128.50	138.45	133.48	120.00	90.00	120.00	95.57	128.98
2514	Local Check	125.60	95.08	110.34	98.00	75.00	98.00	102.52	106.23

Table No. 5.15contd: Plant Height (cm) of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Southern	Medium Northern					Medium Northern Mean (3)
		Karnataka	Uttarakhand	Jammu & Kashmir	Meghalaya	Sikkim	Sikkim Mean (1)	
		Sirsi	Almora-ICAR	Rajouri	ICAR-Ummain	Gangtok		
		@SRS	ALM	RJR	@ICAR-UMM	GTK		
2501	28210	92.40	103.67	113.18	91.29	104.87	104.87	107.24
2502	28224	96.60	113.33	122.20	92.47	83.13	83.13	106.22
2503	28220	100.20	109.33	117.11	82.63	82.57	82.57	103.00
2504	28222	101.00	111.67	126.00	84.35	88.27	88.27	108.65
2505	Vivekdhan 62 (NC)	94.60	130.33	115.70	99.93	124.73	124.73	123.59
2506	28212	91.00	115.67	124.30	88.22	101.67	101.67	113.88
2507	28907	94.20	125.67	123.60	98.57	113.60	113.60	120.96
2508	VL Dhan 68 (NC)	85.20	124.00	114.50	93.70	83.53	83.53	107.34
2509	28227	90.50	105.00	117.90	94.61	113.47	113.47	112.12
2510	28216	111.70	106.33	125.20	93.67	96.07	96.07	109.20
2511	Zonal Check (ZC)	84.50	122.00	120.70	79.96	80.43	80.43	107.71
2512	26594 (R)	85.50	106.67	118.50	84.87	102.33	102.33	109.17
2513	28217	86.00	97.33	133.80	87.77	75.93	75.93	102.35
2514	Local Check	87.20	127.67	118.20	93.92	155.60	155.60	133.82

Table No.5.15 contd: Plant Height (cm) of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Medium Southern	High					High Mean (2)	Overall Mean (9)
		Tamil Nadu	Jammu & Kashmir		Jammu & Kashmir Mean (2)	Jammu & Kashmir Mean (3)	Meghalaya		
		Gudaluru	KHUDWANI	Pombay			UPPER SHILLONG		
		GDL	KHD	PBY			@USG		
2501	28210	94.50	92.30	81.80	87.05	95.76	78.00	87.05	109.81
2502	28224	111.20	127.90	116.80	122.35	122.30		122.35	118.07
2503	28220	102.90	92.00	81.50	86.75	96.87		86.75	103.05
2504	28222	96.30	94.00	82.70	88.35	100.90		88.35	104.35
2505	Vivekdhan 62 (NC)	105.20	125.30	113.80	119.55	118.27		119.55	130.55
2506	28212	118.60	91.10	85.60	88.35	100.33		88.35	109.33
2507	28907	106.00	88.70	81.30	85.00	97.87		85.00	112.55
2508	VL Dhan 68 (NC)	102.00	118.90	111.70	115.30	115.03		115.30	116.96
2509	28227	103.00	118.00	110.80	114.40	115.57		114.40	115.99
2510	28216	100.00	87.90	79.60	83.75	97.57		83.75	105.71
2511	Zonal Check (ZC)	101.40	115.10	110.20	112.65	115.33		112.65	112.25
2512	26594 (R)	95.50	102.40	94.80	98.60	105.23	85.33	98.60	108.81
2513	28217	101.20	113.30	106.20	109.75	117.77		109.75	112.75
2514	Local Check	95.90	117.80	111.20	114.50	115.73	125.00	114.50	116.12

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Table No. 5.16: Panicles/m2 of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Northern							Low Northern Mean (3)
		Himachal Pradesh		Himachal Pradesh Mean (2)	Manipur		Manipur Mean (1)	Meghalaya	
		MALAN	Sundernagar		Lamphepat-ICAR	WANGBAL		CAU- Barapani	
		MLN	SDR		LPP	@WBL		@CAU-BRP	
2501	28210	288	263	276	206	377	206	265	252
2502	28224	262	303	282	208	418	208	236	258
2503	28220	260	270	265	212	376	212	204	247
2504	28222	234	313	274	184	334	184	186	244
2505	Vivekdhan 62 (NC)	238	269	253	182	321	182	204	229
2506	28212	215	330	273	205	266	205	218	250
2507	28907	276	295	285	213	291	213	262	261
2508	VL Dhan 68 (NC)	362	312	337	215	403	215	282	296
2509	28227	238	282	260	213	325	213	232	244
2510	28216	293	326	310	213	385	213	272	278
2511	Zonal Check (ZC)	328	219	274	223	398	223	200	257
2512	26594 (R)	304	303	303	239	419	239	218	282
2513	28217	292	313	303	196	422	196	311	267
2514	Local Check	258	319	289	184	381	184	206	254

Table No. 5.16contd: Panicles/m2 of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Low Southern	Medium Northern					Medium Northern Mean (3)
		Karnataka	Uttarakhand	Jammu & Kashmir	Meghalaya	Sikkim	Sikkim Mean (1)	
		Sirsi	Almora-ICAR	Rajouri	ICAR-Ummain	Gangtok		
		@SRS	ALM	RJR	@ICAR-UMM	GTK		
2501	28210	238	281	307	154	215	215	268
2502	28224	254	252	361	137	128	128	247
2503	28220	258	299	355	118	182	182	278
2504	28222	271	254	370	108	175	175	266
2505	Vivekdhan 62 (NC)	208	262	288	118	251	251	267
2506	28212	294	258	270	126	218	218	248
2507	28907	205	273	340	152	210	210	274
2508	VL Dhan 68 (NC)	208	274	294	164	170	170	246
2509	28227	228	259	287	135	173	173	240
2510	28216	211	284	322	158	218	218	275
2511	Zonal Check (ZC)	225	281	315	116	254	254	283
2512	26594 (R)	195	283	301	126	185	185	256
2513	28217	245	274	347	180	104	104	242
2514	Local Check	208	274	330	119	219	219	274

Table No. 5.16contd: Panicles/m2 of entries in AVT 1 - M (H), Kharif 2021

ENTRY NO	IET NO	Medium Southern	High				High Mean (2)	Overall Mean (9)	
		Tamil Nadu	Jammu & Kashmir		Jammu & Kashmir Mean (2)	Jammu & Kashmir Mean (3)			Meghalaya
		Gudaluru	KHUDWANI	Pombay					UPPER SHILLONG
		GDL	KHD	PBY					@USG
2501	28210	343	325	271	298	301	96	298	278
2502	28224	353	401	346	374	370		374	290
2503	28220	339	330	273	302	320		302	280
2504	28222	344	198	173	185	247		185	249
2505	Vivekdhan 62 (NC)	347	348	301	325	313		325	276
2506	28212	418	285	245	265	267		265	272
2507	28907	311	168	154	161	221		161	249
2508	VL Dhan 68 (NC)	421	275	214	244	261		244	282
2509	28227	356	371	333	352	330		352	279
2510	28216	419	192	160	176	225		176	270
2511	Zonal Check (ZC)	399	237	195	216	249		216	272
2512	26594 (R)	389	391	334	363	342	99	363	303
2513	28217	393	376	317	347	347		347	290
2514	Local Check	420	380	334	357	348	182	357	302

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Table No. 5.17: Grain quality characteristics of entries in AVT 1-M (H), kharif 2021

Entry No.	Designation / IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
2501	28210	80.8	72.6	71.9	5.45	2.23	2.44	SB	VOC	4.0	26.92	47
2502	28224	80.7	73.0	69.6	5.76	2.50	2.30	SB	OC	4.0	24.11	22
2503	28220	80.5	69.7	68.7	6.95	1.94	3.58	LS	A	7.0	27.92	60
2504	28222	79.5	73.9	73.2	6.20	2.45	2.53	LB	VOC	7.0	22.52	45
2505	Vivekdhan-62 (NC)	81.4	75.2	73.7	5.52	2.69	2.05	SB	OC	4.0	24.22	22
2506	28212	79.5	73.2	72.7	6.16	2.43	2.53	LB	VOC	4.0	23.20	45
2507	28907	79.3	71.4	68.9	6.16	2.10	2.93	LB	VOC	5.0	25.08	22
2508	VL Dhan-68 (NC)	80.2	72.9	71.1	6.37	2.19	2.90	LB	VOC	4.0	26.16	45
2509	28227	80.2	70.9	69.3	5.58	2.74	2.03	SB	F	4.0	27.89	51
2510	28216	80.7	68.9	62.8	5.41	2.24	2.41	SB	VOC	4.0	26.31	42
2511	VL Dhan-65 (ZC)	80.3	72.7	71.0	6.30	2.13	2.95	LB	VOC	4.0	25.05	22
2512	26594	83.2	75.3	73.9	7.31	1.97	3.71	LS	VOC	7.0	24.22	30
2513	28217	79.6	70.7	68.9	5.41	2.62	2.06	SB	OC	4.0	24.69	22
2514	Local Check											

HULL: Hulling (%); Mill: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content (%); GC: Gel Consistency; LB: Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

Table No. 5.18: Composition of entries in Initial Variety Trial - Medium (Hills) (IVT -M (H), kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
1st Year of testing				
2601	28908 (R)	VL 40604	VL 30988 / VL 304241077	LS
2602	28901(R)	SKUA 559 (K 13-10-10-3-2-1)	Mushkbudji / DHMAS // Mushkbudji /// Mushkbudji	SB
2603	28904 (R)	HPR 3204	HPU 741 / HPR 2512 // HPR 1149	LS
2604	28918 (R)	TRC BN 723-B-B-69-2-1	Bhalum 3 / Naveen	MS
2605	29643	HPR 3215	HPR 2143 / Balwan	LS
2606	28913 (R)	SKUA 553 (K 12-5-1-8-1-1)	Jhelum / VL Dhan 85	LS
2607	Vivekdhan 62 (NC)			
2608	28911 (R)	CAUS 125 (ULRC 29-8-4-1)	Samba Mahsuri Sub 1 / Shahsarang	SB
2609	28906 (R)	SKUA 543 (K 11-5-1-9-4-3)	CH 1039 / IR 24	MS
2610	28915 (R)	HPR 3205	HPR 2143*3 / DHMAS 164 // HPR 2143*3 / Pusa 1637	LS
2611	28917 (R)	VL 40626	VL 31486 / Pusa Sugandh 2	LS
2612	28910 (R)	TRC GH 491-B-B-7-4-1	Gomatidhan / Hakuchuk 2	MS
2613	28903 (R)	CAUS 123 (ULRC 24-99-3-1-1)	Kasalath / Shahsarang	MS
2614	VL Dhan 68 (NC)			
2615	28905 (R)	VL 32596	VL Dhan 61 / VSR 8	LS
2616	28916 (R)	SKUA 544 (K 11-5-1-9-1-2)	CH 1039 / IR 24	MS
2617	28902 (R)	TRC BN 622-B-B-49-5-2	Bhalum 3 / Naveen	MS
2618	28909 (R)	SKUA 550 (K 12-9-1-9-1-1)	Jhelum / DHMAS	MS
2619	28912 (R)	VL 32511	VL Dhan 85 / O. minuta	LS
2620	29644	HPR 3214	HIM 1 / IR 53915	LS
2621	28914 (R)	SKUA 555 (K 13-39-36-1-1-2)	K 39 / IR 64	SB
2622	29645	VL 32622	VL Dhan 65 / HPR 2644	LS
2623	29646	TRC PSM -1-B-B-1-4-6	Pyzum / Samba Mahsuri	MB
2624	VL Dhan 65 (ZC for North & South) RC Maniphou 11 (ZC for North East)			
2625	29647	RCPL 1-431	Manipur Local 2 / Megha SA 2	MS
2626	29648	CAUS 126 (ULRC 26-1-2-2-1)	Kasalath / BoroDhan	MS
2627	29649	TRC CTSM 29-B-B-4-3-1	CT 9993-5-10-1-M / 2* Samba Mahsuri	SS
2628	29650	RCMR-40 (MC 48-1-1-13)	RCM 10 / RCM 9	LS
2629	29651	CAUS 127 (ULRC 6X7-5-1-1-1)	(Shahsarang / PAU 201) / (Sahsarang / IR 64)	SB
2630	29652	VL 40662	VivekDhan 62 / RP 2421 // VivekDhan 82 /	LS

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Entry No.	IET No.	Designation	Cross Combination	GT
			VL 30424	
2631	29653	TRC BN-2013-B-B-4-4-1	Bhalum 3 / Naveen	LS
2632	29654	VL 32605	VivekDhan 62 / HPR 2644	LS
2633	29655	RCMR-41 (MC 48-2-1-14)	RCM 10 / RCM 9	SB
2634	29656	VL 32606	VivekDhan 62 / HPR 2143	LS
2635	29657	RCMR-42 (MC 49-1-3-43)	RCM 23 / RCM 9	LB
2636	Local Check			

(R): Repeat

Table No. 5.19: Grain Yield (kg/ha) of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Northern											
		Himachal Pradesh		Manipur			Manipur Mean (I)	Meghalaya		Low Northern Mean (I)			
		MALAN		Lamphelpat-ICAR	WANGBAL			CAU-Barapani					
		@MLN		LPP		@WBL		@CAU-BRP					
2601	28908 (R)	1661		4833		4200	10	4833		3175	8	4833	
2602	28901(R)	946		667				667		875		667	
2603	28904 (R)	2223		3800		2650		3800		2780		3800	
2604	28918 (R)	1964		4167		2550		4167		1464		4167	
2605	29643	1589		4800		3000		4800		1043		4800	
2606	28913 (R)	1884		3450		3600		3450		2340		3450	
2607	Vivekdhan 62 (NC)	2902	9	4250		4600	5	4250		1639		4250	
2608	28911 (R)	2098		4533		2650		4533		2547		4533	
2609	28906 (R)	1438		2000		2600		2000		724		2000	
2610	28915 (R)	2661		4600		3750		4600		1281		4600	
2611	28917 (R)	2813		4083		2500		4083		3034		4083	
2612	28910 (R)	2250		5883	2	3500		5883	2	1657		5883	2
2613	28903 (R)	2982	8	5000		2500		5000		3524	5	5000	
2614	VL Dhan 68 (NC)	3098	6	3817		4150		3817		2838		3817	
2615	28905 (R)	2036		5000		4100		5000		3671	4	5000	
2616	28916 (R)	1393		2100		3450		2100		3280	7	2100	
2617	28902 (R)	1607		4567		2500		4567		2135		4567	
2618	28909 (R)	1795		2183		3600		2183		1868		2183	
2619	28912 (R)	3732	3 *	5300	9	4400	6	5300	9	1762		5300	9
2620	29644	3027	7	4667		6100	1 *	4667		1571		4667	
2621	28914 (R)	2304		4500		3600		4500		1646		4500	
2622	29645	3205	5	4817		4100		4817		1681		4817	
2623	29646	2321		5517	8	2600		5517	8	1388		5517	8
2624	Zonal Check (ZC)	2393		5567	7	3900		5567	7	1939		5567	7
2625	29647	2571		4667		3900		4667		3840	3 *	4667	
2626	29648	2839	10	2783		5150	2 *	2783		4259	1 *	2783	
2627	29649	2170		5600	6	2550		5600	6	2334		5600	6
2628	29650	2080		5783	4	4300	8	5783	4	3120	9	5783	4
2629	29651	3768	2 *	4417		3650		4417		3386	6	4417	
2630	29652	2473		4933		4900	3 *	4933		1535		4933	
2631	29653	2438		5833	3	2500		5833	3	2179		5833	3
2632	29654	3304	4	5617	5	4300	8	5617	5	1568		5617	5
2633	29655	920		3133		2550		3133		3909	2 *	3133	
2634	29656	4116	1 *	5167	10	4900	3 *	5167	10	1976		5167	10
2635	29657	1670				3900				2924			
2636	Local Check	1518		6367	1	4400	6	6367	1	3104	10	6367	1
Exp. Mean		2339		4411		3646		4411		2333		4411	
CD		542.51		2141.27		215.89		2141.27		681.05		2141.27	
CV%		11.43		23.88		2.91		23.88		14.38		23.88	
D/S		09-06-2021		28-06-2021		19-07-2021				10-06-2021			
D/P		09-07-2021		26-07-2021		13-08-2021				08-07-2021			
Local Check Name		HPR-2143		RC Manipouh 13		Sana - Pohnu				Shahsarang			

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Table No. 5.19contd: Grain Yield (kg/ha) of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Southern		Medium Northern						Medium Southern				
		Karnataka		Uttarakhand		Meghalava		Sikkim		Tamil Nadu				
		Sirsi		Almora-ICAR		ICAR-Umiam		Gangtok		Gudaluru				
		SRS		ALM		@ICAR-UMM		GTK		GDL				
								Medium Northern Mean (2)						
2601	28908 (R)	5166	3	4406		1905	8	2540		3473		6750	7	
2602	28901(R)	1246				525						2050		
2603	28904 (R)	2502		2542		1668		4107	7	3325		6750	7	
2604	28918 (R)	2296		4167		878		2679		3423		3925		
2605	29643	2624		1760		626		2004		1882		2625		
2606	28913 (R)	1968		1344		1404		2540		1942		2375		
2607	Vivekdhani 62 (NC)	3322		2938		983		5357	1	4148	6	3125		
2608	28911 (R)	1944		3625		1528		3552	9	3589		3975		
2609	28906 (R)	1886		1813		434		1190		1502		2650		
2610	28915 (R)	3690	9	4458		769		1587		3023		8750	1	
2611	28917 (R)	2994		4948	5	1820		2480		3714	10	5250		
2612	28910 (R)	5084	4	3979		994		1627		2803		6180		
2613	28903 (R)	4920	6	4344		2114	5	2619		3482		5300		
2614	VL Dhan 68 (NC)	2050		5094	2	1703		1984		3539		3250		
2615	28905 (R)	2214		3250		2203	4	2183		2717		4125		
2616	28916 (R)	2050		1271		1968	7	1052		1162		1850		
2617	28902 (R)	1534		2823		1281		2123		2473		2875		
2618	28909 (R)	2050		1594		1121		2381		1988		4625		
2619	28912 (R)	1640		4615	10	1057		2024		3320		3625		
2620	29644	2706		3729		942		1032		2381		3225		
2621	28914 (R)	2436		1656		988		1071		1364		2875		
2622	29645	2436		4619	9	1009		2361		3490		3750		
2623	29646	5084	4	4365		833		4762	2	4564	3	3000		
2624	Zonal Check (ZC)	1846		5063	3	1163		3710	8	4387	4	3125		
2625	29647	3568	10	4510		2865	1 *	3393	10	3952	9	7500	5	
2626	29648	2010		4646	8	2555	2 *	2222		3434		8360	3	
2627	29649	2584		3344		1400		992		2168		5000		
2628	29650	6356	2	4375		1872	9	4226	6	4301	5	6500	9	
2629	29651	2174		5031	4	2032	6	1944		3488		8300	4	
2630	29652	2584		4865	7	921		3135		4000	8	3250		
2631	29653	4346	7	3365		1307		4762	2	4064	7	6250		
2632	29654	3486		4948	5	941		4504	4	4726	2	6875	6	
2633	29655	2378		3344		2345	3 *	1746		2545		4500		
2634	29656	2092		5365	1	5%	1186		4286	5	4826	1	6500	9
2635	29657	3772	8	3729		1754		2718		3224		3925		
2636	Local Check	6824	1	3781		1862	10	1687		2734		8400	2	
Exp. Mean		2996		3706		1415		2645		3175		4761		
CD		593.47		885.39		409.03		456.39		562.56		459.07		
CV%		9.76		11.76		14.23		8.49		8.72		4.75		
D/S		04-06-2021		31-05-2021		06-04-2021		09-06-2021				14-07-2021		
D/P		22-06-2021		06-07-2021		19-05-2021		08-07-2021				16-08-2021		
Local Check Name				VLD 61		NEH Megha Rice 2		Attev				TKM-9		

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Table No. 5.19contd: Grain Yield (kg/ha) of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	High								Overall Mean (7)		
		Jammu & Kashmir				Jammu & Kashmir Mean (2)	Meghalaya	High Mean (2)				
		KHUDWANI		Pombay			UPPER SHILLONG					
		KHD		PBY			@USG					
2601	28908 (R)	3573		2888		3231			3231		4308	9
2602	28901(R)	4733		3990		4362			4362		2537	
2603	28904 (R)	3897		3203		3550			3550		3829	
2604	28918 (R)	7200	7	5903	6	6552	7		6552	7	4334	8
2605	29643	5733		4393		5063			5063		3420	
2606	28913 (R)	8608	1 *	6603	1 *	7606	1 * 13%		7606	1 * 13%	3841	
2607	Vivekdhan 62 (NC)	6417	9	5428	8	5923	9		5923	9	4405	7
2608	28911 (R)	3520		2749		3135			3135		3414	
2609	28906 (R)	8325	4 *	5875	7	7100	4 * 6%		7100	4 * 6%	3391	
2610	28915 (R)	8600	2 *	6502	4	7551	3 * 13%		7551	3 * 13%	5455	2
2611	28917 (R)	3650		2849		3250			3250		3751	
2612	28910 (R)	3243		2675		2959			2959		4096	
2613	28903 (R)	3113		2557		2835			2835		3979	
2614	VL Dhan 68 (NC)	2933		2402		2668			2668		3076	
2615	28905 (R)	3077		2945		3011			3011		3256	
2616	28916 (R)	6267	10	5185	10	5726	10		5726	10	2825	
2617	28902 (R)	6133		4583		5358			5358		3520	
2618	28909 (R)	7588	5	6577	3 *	7083	5 * 6%		7083	5 * 6%	3857	
2619	28912 (R)	3270		2925		3098			3098		3343	
2620	29644	5600		4193		4897			4897		3593	
2621	28914 (R)	8600	2 *	6590	2 *	7595	2 * 13%		7595	2 * 13%	3961	
2622	29645	3337		2631		2984			2984		3422	
2623	29646	2901		2230		2566			2566		3980	
2624	Zonal Check (ZC)	3242		2405		2824			2824		3565	
2625	29647	3358		3043		3201		335	3201		4291	10
2626	29648	3743		2823		3283			3283		3798	
2627	29649	3091		2494		2793			2793		3301	
2628	29650	3137		2655		2896			2896		4719	4
2629	29651	6800	8	5268	9	6034	8	1430	6034	8	4848	3
2630	29652	5733		4358		5046			5046		4123	
2631	29653	4000		3424		3712		705	3712		4569	6
2632	29654	3577		3113		3345			3345		4589	5
2633	29655	3042		2352		2697			2697		2928	
2634	29656	3090		2553		2822			2822		4150	
2635	29657	3540		2935		3238			3238		3437	
2636	Local Check	7400	6	6005	5	6703	6	2700	6703	6	5781	1
Exp. Mean		4835		3869		4352		1293	4352		3880	
CD		728.38		507.85		328.94			328.94		361.84	
CV%		7.42		6.47		3.72			3.72		4.59	
D/S		07-05-2021		10-05-2021				14-04-2021				
D/P		05-06-2021		09-06-2021				16-06-2021				
Local Check Name		SHALIMAR RICE 4		SHALIMAR RICE 4				MEG-2				

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Table No. 5.20: Days to 50% flowering of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Northern					Low Northern Mean (1)
		Himachal Pradesh	Manipur		Meghalaya		
		MALAN @MLN	Lamphehpat-ICAR LPP	WANGBAL @WBL	CAU-Barapani @CAU-BRP		
2601	28908 (R)	110	92	93	92	92	
2602	28901(R)	99	74	78	74	74	
2603	28904 (R)	108	88	95	88	88	
2604	28918 (R)	108	91	96	91	91	
2605	29643	92	84	80	84	84	
2606	28913 (R)	86	82	90	82	82	
2607	Vivekdhhan 62 (NC)	107	96	88	96	96	
2608	28911 (R)	117	104	111	104	104	
2609	28906 (R)	84	78	79	78	78	
2610	28915 (R)	95	87	85	87	87	
2611	28917 (R)	99	88	91	88	88	
2612	28910 (R)	114	105	100	105	105	
2613	28903 (R)	98	105	99	105	105	
2614	VL Dhan 68 (NC)	105	86	91	86	86	
2615	28905 (R)	105	89	89	89	89	
2616	28916 (R)	90	77	80	77	77	
2617	28902 (R)	112	101	104	101	101	
2618	28909 (R)	85	76	85	76	76	
2619	28912 (R)	104	87	83	87	87	
2620	29644	94	84	82	84	84	
2621	28914 (R)	84	78	91	78	78	
2622	29645	98	87	90	87	87	
2623	29646	117	104	115	104	104	
2624	Zonal Check (ZC)	97	86	97	86	86	
2625	29647	108	86	109	86	86	
2626	29648	103	86	97	86	86	
2627	29649	116	104	112	104	104	
2628	29650	122	97	96	97	97	
2629	29651	108	96	105	96	96	
2630	29652	89	82	83	82	82	
2631	29653	108	101	96	101	101	
2632	29654	108	88	91	88	88	
2633	29655	125	102	93	102	102	
2634	29656	98	88	90	88	88	
2635	29657	125		97	61		
2636	Local Check	95	102	89	102	102	

Table No. 5.20 contd: Days to 50% flowering of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Southern	Medium Northern			Medium Northern Mean (2)	Medium Southern
		Karnataka Sirsi	Uttarakhand Almora-ICAR	Meghalaya ICAR-Uniam	Sikkim Gangtok		Tamil Nadu Gudaluru
		SRS	ALM	@ICARUMM	GTK		GDL
2601	28908 (R)	92	104	117	105	104	102
2602	28901(R)	78		112			91
2603	28904 (R)	101	103	121	105	104	97
2604	28918 (R)	91	103	121	107	105	94
2605	29643	88	95	109	95	95	94
2606	28913 (R)	82	95	129	96	95	94
2607	Vivekdhhan 62 (NC)	94	100	121	103	101	94
2608	28911 (R)	108	119	126	102	111	111
2609	28906 (R)	77	86	129	87	86	89
2610	28915 (R)	90	99	109	98	98	96
2611	28917 (R)	91	102	126	101	101	97
2612	28910 (R)	101	114	123	107	110	107
2613	28903 (R)	96	113	118	106	109	101
2614	VL Dhan 68 (NC)	89	99	118	101	100	91
2615	28905 (R)	89	100	116	104	102	97
2616	28916 (R)	79	86	129	92	89	89
2617	28902 (R)	117	113	125	112	113	108
2618	28909 (R)	84	86	129	91	89	89
2619	28912 (R)	89	102	117	97	99	89
2620	29644	90	98	113	96	97	97
2621	28914 (R)	83	88	110	93	90	91
2622	29645	84	100	117	100	100	86
2623	29646	119	119	117	102	110	113
2624	Zonal Check (ZC)	85	102	130	99	101	97
2625	29647	105	118	125	97	108	108
2626	29648	101	114	122	97	105	110
2627	29649	110	122	127	90	106	115
2628	29650	111	118	129	114	116	100
2629	29651	101	117	121	115	116	115
2630	29652	84	99	107	105	102	94
2631	29653	96	103	125	114	109	109
2632	29654	84	102	118	107	104	89
2633	29655	100	118	124	105	111	93
2634	29656	84	101	119	109	105	90
2635	29657	112	117	96	114	115	106
2636	Local Check	114	103	134	118	110	111

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Table No. 5.20 contd: Days to 50% flowering of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	High					Overall Mean (7)
		Jammu & Kashmir		Jammu & Kashmir Mean (2)	Meghalaya	High Mean (2)	
		KHUDWANI KHD	Pombay PBY		UPPER SHILLONG @USG		
2601	28908 (R)	112	120	116		116	104
2602	28901(R)	107	112	109		109	92
2603	28904 (R)	110	115	112	94	112	103
2604	28918 (R)	109	113	111	86	111	101
2605	29643	103	112	107	85	107	96
2606	28913 (R)	102	108	105	85	105	94
2607	Vivekdhani 62 (NC)	112	117	115	90	115	102
2608	28911 (R)	118	123	120		120	112
2609	28906 (R)	95	104	99	85	99	88
2610	28915 (R)	108	113	110	90	110	98
2611	28917 (R)	118	121	119		119	102
2612	28910 (R)	121	125	123	90	123	111
2613	28903 (R)	115	120	117	93	117	108
2614	VL Dhan 68 (NC)	117	121	119	86	119	101
2615	28905 (R)	117	121	119	85	119	102
2616	28916 (R)	99	107	103	87	103	90
2617	28902 (R)	113	118	115		115	112
2618	28909 (R)	99	106	102	87	102	90
2619	28912 (R)	122	125	123	88	123	101
2620	29644	110	115	113	85	113	98
2621	28914 (R)	103	107	105		105	92
2622	29645	122	126	124	86	124	101
2623	29646	121	126	123		123	115
2624	Zonal Check (ZC)	126	128	127	90	127	103
2625	29647	122	125	124	85	124	109
2626	29648	123	125	124		124	108
2627	29649	123	126	124		124	113
2628	29650	117	120	119		119	111
2629	29651	114	118	116	82	116	111
2630	29652	111	114	113	87	113	98
2631	29653	116	119	117	84	117	108
2632	29654	122	125	124	100	124	102
2633	29655	123	127	125	109	125	109
2634	29656	121	124	123	110	123	102
2635	29657	124	127	125		125	116
2636	Local Check	102	106	104	68	104	108

Table No. 5.21: Plant Height (cm) of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Northern					
		Himachal Pradesh	Manipur			Meghalaya	Low Northern Mean (I)
		MALAN @MLN	Lampelpat-ICAR	WANGBAL	Manipur Mean (I)	CAU-Barapani	
			LPP	@WBL		@CAU-BRP	
2601	28908 (R)	131.3	140	110	140	114.16	140
2602	28901(R)	115.5	98	.	98	87.66	98
2603	28904 (R)	93.8	109	90	109	90.68	109
2604	28918 (R)	103.9	113	80	113	81.54	113
2605	29643	110.3	126	89	126	93.6	126
2606	28913 (R)	129.1	118	105	118	99.04	118
2607	Vivekdhani 62 (NC)	145.5	145	110	145	100.04	145
2608	28911 (R)	117.0	113	70	113	93.46	113
2609	28906 (R)	119.1	117	101	117	79.6	117
2610	28915 (R)	109.8	103	76	103	74.72	103
2611	28917 (R)	118.6	113	88	113	84.8	113
2612	28910 (R)	85.6	95	70	95	82.5	95
2613	28903 (R)	110.0	115	82	115	114	115
2614	VL Dhan 68 (NC)	132.6	124	100	124	106.3	124
2615	28905 (R)	124.6	120	102	120	107.14	120
2616	28916 (R)	104.3	110	98	110	91.24	110
2617	28902 (R)	83.9	106	75	106	86.94	106
2618	28909 (R)	125.5	125	110	125	105.94	125
2619	28912 (R)	134.3	143	110	143	118.22	143
2620	29644	88.3	96	78	96	71.96	96
2621	28914 (R)	115.2	114	102	114	97.84	114
2622	29645	115.8	119	92	119	102.04	119
2623	29646	87	100	57	100	86.72	100
2624	Zonal Check (ZC)	129.7	93	66	93	84.94	93
2625	29647	113	128	87	128	93.32	128
2626	29648	96.6	137	93	137	80.5	137
2627	29649	90.6	108	70	108	86.42	108
2628	29650	92.2	110	90	110	100.56	110
2629	29651	105.9	108	83	108	75.26	108
2630	29652	119	118	102	118	91.44	118
2631	29653	86.9	98	65	98	91.64	98
2632	29654	128.4	116	100	116	104.86	116
2633	29655	88	111	80	111	104.12	111
2634	29656	126.6	119	100	119	90.7	119
2635	29657	93.9	.	100	.	102.34	.
2636	Local Check	11.6	107	70	107	104.08	107

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Table No. 5.21 contd: Plant Height (cm) of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Southern	Medium Northern				Medium Southern
		Karnataka	Uttarakhand	Meghalaya	Sikkim	Medium Northern Mean (2)	Tamil Nadu
		Sirsi	Almora-ICAR	ICAR-Uniam	Gangtok		Gudaluru
		SRS	ALM	@ICARUMM	GTK		GDL
2601	28908 (R)	101	129	103.66	120.8	125	114.1
2602	28901(R)	95	.	80.76	.		86.2
2603	28904 (R)	91	102	80.18	80	91	83.3
2604	28918 (R)	94	105	74.64	104.8	105	87.5
2605	29643	85	104	83.1	90.8	97	86.5
2606	28913 (R)	91	111	92.14	108.8	110	97.5
2607	Vivekdhan 62 (NC)	112	127	89.54	102.6	115	102.0
2608	28911 (R)	85	95	86.56	93.8	94	84.0
2609	28906 (R)	86	96	69.1	108.4	102	99.0
2610	28915 (R)	86	95	67.82	80.2	88	81.6
2611	28917 (R)	87	115	74.3	107.6	111	85.0
2612	28910 (R)	78	90	75.6	89.6	90	76.0
2613	28903 (R)	94	108	103.5	107	107	80.3
2614	VL Dhan 68 (NC)	96	120	99.4	107.4	114	86.0
2615	28905 (R)	105	123	96.64	80.6	102	87.3
2616	28916 (R)	90	95	84.34	80	88	83.8
2617	28902 (R)	80	95	76.44	60.4	77	74.2
2618	28909 (R)	97	126	99.04	105.8	116	86.0
2619	28912 (R)	97	126	107.72	114.2	120	100.8
2620	29644	78	94	65.06	60.6	77	83.7
2621	28914 (R)	92	117	87.34	85.8	101	84.1
2622	29645	93	118	95.14	112.8	115	95.5
2623	29646	81	90	76.22	70.6	80	82.1
2624	Zonal Check (ZC)	92	124	78.04	75.2	100	95.3
2625	29647	99	113	82.82	102	107	87.4
2626	29648	92	94	73.6	87.8	91	86.5
2627	29649	87	94	75.92	94	94	84.1
2628	29650	92	101	93.66	86	93	81.1
2629	29651	87	101	64.76	90	95	87.4
2630	29652	103	112	84.54	88.6	100	92.4
2631	29653	76	95	81.14	95	95	88.1
2632	29654	95	114	97.96	90.8	102	85.4
2633	29655	91	105	93.62	74.4	90	86.2
2634	29656	92	119	83.8	93.6	106	87.2
2635	29657	106	102	91.84	90.6	96	91.6
2636	Local Check	109	124	97.18	163	143	98.4

Table No. 5.21 contd: Plant Height (cm) of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	High				High Mean (2)	Overall Mean (7)
		Jammu & Kashmir		Jammu & Kashmir Mean (2)	Meghalaya		
		KHUDWANI	Pombay		UPPER SHILLONG		
		KHD	PBY	@USG			
2601	28908 (R)	118.9	113.4	116		116	120
2602	28901(R)	131.0	122.7	127		127	107
2603	28904 (R)	88.2	82.6	85		85	91
2604	28918 (R)	85.1	81.4	83		83	96
2605	29643	96.7	89.3	93		93	97
2606	28913 (R)	115.3	109.2	112		112	107
2607	Vivekdhan 62 (NC)	131.9	118.6	125		125	120
2608	28911 (R)	91.6	84.2	88		88	92
2609	28906 (R)	118.1	111.0	115		115	105
2610	28915 (R)	89.5	85.3	87		87	89
2611	28917 (R)	109.7	104.6	107		107	103
2612	28910 (R)	79.6	77.3	78		78	84
2613	28903 (R)	93.5	90.3	92		92	98
2614	VL Dhan 68 (NC)	116.2	109.2	113		113	108
2615	28905 (R)	117.2	112.3	115		115	106
2616	28916 (R)	106.2	100.2	103		103	95
2617	28902 (R)	87.4	82.3	85		85	84
2618	28909 (R)	120.4	116.1	118		118	111
2619	28912 (R)	123.9	117.4	121		121	117
2620	29644	82	79.4	81		81	82
2621	28914 (R)	120.7	113.5	117		117	104
2622	29645	119.3	114.2	117		117	110
2623	29646	80.5	73.6	77		77	83
2624	Zonal Check (ZC)	122.1	118.4	120		120	103
2625	29647	89.3	86.3	88	76	88	101
2626	29648	82.8	80.1	81		81	94
2627	29649	85.6	77.5	82		82	90
2628	29650	81.2	74.4	78		78	89
2629	29651	89	85.6	87	75	87	93
2630	29652	116.3	107	112		112	105
2631	29653	79.1	74	77	61.33	77	86
2632	29654	115.5	107.7	112		112	103
2633	29655	83.6	80.2	82		82	90
2634	29656	115.2	108.7	112		112	105
2635	29657	86.8	82.3	85		85	93
2636	Local Check	117.9	109.2	114	125	114	118

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Table No. 5.22: Panicles/m2 of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Northern					
		Himachal Pradesh		Manipur		Meghalaya	
		MALAN	Lamphepat-ICAR	WANGBAL	Manipur Mean (1)	CAU-Barapani	Low Northern Mean (1)
		@MLN	LPP	@WBL		@CAU-BRP	
2601	28908 (R)	273	388	433	388	336	388
2602	28901(R)	195	184		184	233	184
2603	28904 (R)	267	218	429	218	246	218
2604	28918 (R)	255	238	330	238	198	238
2605	29643	216	214	395	214	320	214
2606	28913 (R)	288	214	443	214	319	214
2607	Vivekdhan 62 (NC)	279	184	466	184	213	184
2608	28911 (R)	117	308	381	308	294	308
2609	28906 (R)	276	261	452	261	232	261
2610	28915 (R)	276	221	472	221	176	221
2611	28917 (R)	270	205	397	205	362	205
2612	28910 (R)	300	240	406	240	156	240
2613	28903 (R)	330	211	423	211	269	211
2614	VL Dhan 68 (NC)	375	245	505	245	293	245
2615	28905 (R)	207	217	409	217	246	217
2616	28916 (R)	285	226	503	226	294	226
2617	28902 (R)	207	250	337	250	359	250
2618	28909 (R)	234	234	439	234	335	234
2619	28912 (R)	268	245	576	245	213	245
2620	29644	192	225	348	225	229	225
2621	28914 (R)	309	237	432	237	362	237
2622	29645	273	258	415	258	219	258
2623	29646	282	239	220	239	185	239
2624	Zonal Check (ZC)	306	289	393	289	158	289
2625	29647	288	267	417	267	231	267
2626	29648	180	291	412	291	250	291
2627	29649	270	219	388	219	298	219
2628	29650	261	253	305	253	214	253
2629	29651	234	255	297	255	258	255
2630	29652	255	201	403	201	258	201
2631	29653	288	265	359	265	294	265
2632	29654	270	217	416	217	232	217
2633	29655	212	304	373	304	326	304
2634	29656	300	239	435	239	194	239
2635	29657	279		402		204	

Table No. 5.22 contd: Panicles/m2 of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	Low Southern	Medium Northern				Medium Southern
		Karnataka	Uttarakhand	Meghalaya	Sikkim	Medium Northern Mean (2)	Tamil Nadu
		Sirsi	Almora-ICAR	ICAR-Umiam	Gangtok		Gudaluru
		SRS	ALM	@ICARUMM	GTK	GDL	
2601	28908 (R)	271	315	235	160	237	372
2602	28901(R)	208		163			215
2603	28904 (R)	294	224	172	177	200	377
2604	28918 (R)	205	253	138	208	231	367
2605	29643	208	247	224	161	204	351
2606	28913 (R)	228	249	223	141	195	240
2607	Vivekdhan 62 (NC)	211	208	149	223	216	326
2608	28911 (R)	225	265	206	197	231	362
2609	28906 (R)	195	222	162	189	205	355
2610	28915 (R)	245	297	123	187	242	364
2611	28917 (R)	208	234	253	146	190	274
2612	28910 (R)	301	310	109	112	211	317
2613	28903 (R)	218	240	188	81	161	350
2614	VL Dhan 68 (NC)	234	233	205	105	169	274
2615	28905 (R)	208	238	172	179	209	245
2616	28916 (R)	281	226	206	63	145	177
2617	28902 (R)	254	259	251	162	211	180
2618	28909 (R)	211	243	235	96	169	381
2619	28912 (R)	248	275	149	104	189	382
2620	29644	231	259	160	104	182	171
2621	28914 (R)	235	208	253	66	137	280
2622	29645	254	287	153	174	230	248
2623	29646	301	269	129	176	223	237
2624	Zonal Check (ZC)	268	287	110	187	237	329
2625	29647	208	269	162	178	224	387
2626	29648	234	289	175	192	240	386
2627	29649	307	276	208	152	214	238
2628	29650	238	268	150	141	204	366
2629	29651	208	223	181	170	196	387
2630	29652	225	278	180	166	222	354
2631	29653	294	230	206	196	213	381
2632	29654	238	272	162	190	231	358
2633	29655	215	286	228	130	208	356
2634	29656	258	275	135	199	237	330
2635	29657	205	270	143	175	222	390
2636	Local Check	221	273	154	218	246	397

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Table No. 5.22 contd: Panicles/m² of entries in IVT – M (H), Kharif 2021

ENTRY NO	IET No.	High				High Mean (2)	Overall Mean (7)
		Jammu & Kashmir		Jammu & Kashmir Mean (2)	Meghalaya		
		KHUDWANI	Pombay		UPPER SHILLONG		
		KHD	PBY	@USG			
2601	28908 (R)	183	172	177		177	266
2602	28901(R)	209	184	197		197	200
2603	28904 (R)	171	157	164		164	231
2604	28918 (R)	294	294	294		294	265
2605	29643	232	240	236		236	236
2606	28913 (R)	415	344	379		379	261
2607	Vivekdhan 62 (NC)	291	269	280		280	244
2608	28911 (R)	166	175	171		171	242
2609	28906 (R)	388	372	380		380	283
2610	28915 (R)	393	367	380		380	296
2611	28917 (R)	238	225	231		231	218
2612	28910 (R)	166	158	162		162	229
2613	28903 (R)	152	143	147		147	199
2614	VL Dhan 68 (NC)	160	149	154		154	200
2615	28905 (R)	197	172	185		185	208
2616	28916 (R)	330	309	319		319	230
2617	28902 (R)	329	301	315		315	248
2618	28909 (R)	360	324	342		342	264
2619	28912 (R)	193	151	172		172	228
2620	29644	327	275	301		301	227
2621	28914 (R)	391	357	374		374	253
2622	29645	159	165	162		162	221
2623	29646	148	158	153		153	218
2624	Zonal Check (ZC)	168	153	161		161	240
2625	29647	197	180	188	88	188	241
2626	29648	160	184	172		172	248
2627	29649	190	171	180		180	222
2628	29650	181	174	177		177	231
2629	29651	300	251	276	205	276	256
2630	29652	261	217	239		239	243
2631	29653	216	218	217	135	217	257
2632	29654	187	172	179		179	233
2633	29655	162	159	161		161	230
2634	29656	166	170	168		168	234
2635	29657	188	169	178		178	233
2636	Local Check	365	322	343	181	343	283

INITIAL VARIETY TRIAL- UPLAND (HILLS) IVT-U (H)**Locations : 9****Entries:14****Checks : Sukaradhan 1 (NC), Zonal Check (ZC)-Vivek Dhan 154 (ZC1 for North & South), Bhalum-1 (ZC1 for North East, VL Dhan 158 (ZC2 for North and South) and Local Check** **Table: 5.23**

The Initial Variety Trial- Upland (Hills) [IVT-(UH)] comprised of 14 test entries and four checks *viz.*, Sukaradhan 1 (National check), Bhalum-1 as Zonal Check (ZC1) for North Eastern locations, VivekDhan 154 as ZC1for Northern locations and VL Dhan 158 as common ZC (ZC2) and a Local Check. Among the 14 test entries, one entry was in 3rd year of testing and remaining 13 were in first year of testing. The trial was sent to 9 locations spanning 5 hill states comprising Himachal Pradesh, Manipur, Meghalaya, and Uttarakhand *viz.*, Lamphelpat-ICAR, Imphal (CAU), Wangbal, Upper Shilling, Barapani (Umiam), Barapani (CAU), Almora-ICAR, Bageshwar and Malan. Data was received from seven locations and the data from remaining two locations *viz.*, Imphal (CAU), and Upper Shillong was not received.

The analyzed data pertaining to yield, flowering, plant height, panicles/m² and quality are presented in tables 5.24, 5.25, 5.26, 5.27 and 5.28. Over all mean grain yield ranged from 1327 Kg/ha (IET 29661) to 2893 Kg/ha (IET 28230). The experimental mean yield was in the range of 805 Kg/ha (Bageshwar) to 2801 (Wangbal), While the CV% varied from 3.1% (Wangbal) to 41.58% (Lamphelpat-ICAR). The grain yield under Lamphelpat-ICAR and Bageswar was not considered because of high CV% and low experimental mean respectively. Days to fifty percent flowering (DFF) varied from 85 days (IET 29661) to 102 days (IETs 29659 and 29663), plant height (PH) from 75 cm (IET 29664) to 104 cm (VL Dhan 158-ZC) and panicles/m² from 196 (IET 29662) to 275 (IETs 29667 and 29660). The overall mean of the entries at low northern hills ranged from 1633 kg/ha (IET 29661) to 3430 kg/ha (IET 28230), experimental mean from 1664 kg/ha at Lamphelpat to 2806 kg/ha at Wangbal, DFF from 81 days (IET 29661) to 97 days (IET 29663), PH from 71 cm (IET 29662) to 108 cm (IET 29660) and panicles/m² from 201 (IET 29663) to 325 (IET 29667). The overall mean of the entries at medium elevation in northern hills ranged from 867 kg/ha (IET 28230) to 3314 kg/ha (ZC2), experimental mean from 805 kg/ha at Bageshwar to 1485 kg/ha at Almora, DFF from 92 days (IET 29661) to 109 days (IETs 29659 and 29665), PH from 56 cm (IET 29662) to 97 cm (ZC2) and panicles/m² from 155 (LC) to 209 (ZC2).

At lower northern and medium northern elevations, only one entry IET 28230 recorded required yield advantage over the best check and is discussed below.

IET 28230 ranked first and recorded grain yield of 3430 kg/ha in the lower north elevation. It recorded 7.65% yield advantage over best check (local check), 33.25% over NC, 8.81% over ZC1 and 40% over ZC2. The same entry **IET 28230** ranked first in the medium elevation and recorded grain yield of 2088 Kg/ha. It recorded 7.02 % yield advantage over best check (ZC1), 77.70 % over NC, 12.50 % over ZC2 and 48.50 % yield advantage over LC. In Himachal Pradesh IET 28230 ranked first with a yield of 3657 and yield advantage of 17 over the best check. Grain quality analysis revealed high HRR of 72.1% with intermediate AC of 21.32%, soft GC of 46 mm and an ASV of 7.0.

Performance of IET 28230 at Northern Low elevated and Northern medium elevated Hills in Initial Variety Trial-Upland Hills IVT-U (H) during *kharif* 2021.

Rank	IET No/ Designation/ Cross combination	Grain Yield (Kg/ha)/ days to 50% flowering/ grain type	% yield superiority over NC/ZC/ LC	Grain Yield (Kg/ha)/ days to 50% flowering/ grain type	% yield superiority over NC/ZC/ LC
		Low Northern		Medium Northern	
1	IET 28230	3430	33.25	2088	77.70
	TRC PSM-1720- B-B-5-1 Pyzum / BPT 5204	94 SB	8.81 40 7.65	101 SB	7.02 12.50 48.50
	Sukaradhan 1 (NC)	2574 87		1175 100	
	Zonal Check (ZC1)	3152 88		1951 96	
	VL Dhan 158 (ZC2)	2450 89		1856 98	
	Local Check	3186 92		1406 102	

Bold & Italics: Best check & over the best check; NC-National Check; ZC-Zonal Check; LC-Local Check;

Three years' performance of IET 28230

IET 28230 (TRC PSM-1720-B-B-5-1), derived from Pyzum / BPT 5204 with short bold grains and 87 days to 50% flowering recorded required yield advantage over the best check at low elevation in Northern hills in 2019, 2020 and 2021. In 2019, it showed 5.7 and 77% yield advantage in Manipur and Himachal Pradesh respectively. In 2020, it recorded yield advantage of 7 and 87% over the best check in Himachal Pradesh and Manipur respectively. In 2021, the entry recorded a high yield advantage of 17 over the best check in Himachal Pradesh IET 28230 is promising for low northern elevation hills of Himachal Pradesh and Manipur.

Three years' performance of IET 28230

IET No/ Designation/ Cross Combination	Year	Zonal performance/ Rank			performance across the States			Remarks
		Elevation/Rank	Yield	% YA	State/ Rank	Yield	% YA	
IET 28230 TRC PSM-1720-B-B-5-1 Pyzum / BPT 5204	2019	Lower northern (1)	2917	22.71	HP-2 MN-4 UK--	2997 2877	77 5.7	Promising for HP and MN
		2020	Lower northern (1)	3473	24.74	HP-1 MN-1 MA-- UK--	2949 4352		7 87
	2021	Overall (1)	2893	8.31	HP-1	3657	17	
		Lower northern (1) Medium northern (1)	3430 2088	7.65 7.02	MN-- MA-- ME--			

Table No. 5.23: Composition of entries in Initial Variety Trial -Upland (Hills) (IVT-U (H)), kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
1st Year of testing				
2701	29658	VL 20724	VL Dhan 221/ VHC 1427	LB
2702	29659	TRC CTSM-306-B-B-9-1	CT 9993-5-10-1-M/2* Samba Mahsuri	MB
2703	29660	HPR 2415	HPU 741/IR 18482-PLP-3-2-3-4-1-1-1	MS
3rd Year of testing				
2704	28230	TRC PSM-1720-B-B-5-1	Pyzum / BPT 5204	SB
1st Year of testing				
2705	29661	VL 20725	VL Dhan 221 / VHC 1427	LB
2706	Sukaradhan 1 (NC)			
2707	29662	HPR 2889	HPR 2143 / AC 19180 // VL 30424	LS
2708	29663	TRC BN-2004-B-B-2-1-1	Bhalum 3 / Naveen	LS
2709	29664	HPR 2886	HPR 2143 / AC 19180 // VL 30424	LS
2710	29665	RCPL 1-436	Yamuk / Nongwalai	MS
2711	29666	VL 20613	VHC 1462 / NDR 103	LB
2712	VivekDhan 154 (ZC for North & South), Bhalum-1 (ZC for North East)			
2713	29667	TRC BN-2006-B-B-8-3-1	Bhalum 3 / Naveen	MB
2714	29668	HPR 2900 (RB 10)	HPR 2143*3/ DHMAS 164 // HPR 2143*3/ Pusa 1637	LS
2715	29669	VL 20687	SukaraDhan 1 / Anjali	SB
2716	VL Dhan 158 (ZC for North & South)			
2717	29670	HPR 2879	HPR 2143 / AC 19180 // VL 30424	LS
2718	Local Check			

Table No. 5.24: Grain Yield (kg/ha) of entries in IVT – U (H), Kharif 2021

Entry No	IET No	Low Northern											
		Himachal Pradesh		Manipur				Meghalaya		Low Northern Mean (3)			
		MALAN		Lamphelpat-ICAR		WANGBAL		CAU-Barapani					
		MLN		@LPP		WBL		CAU-BRP					
2701	29658	1713		595		2000		2000		1263		1659	
2702	29659	3495	2 12%	1190		1650		1650		1835	8	2327	10
2703	29660	1944		2116	4	3700	2	3700	2	1648	9	2431	8
2704	28230	3657	1* 17%	3770	1	3100	8	3100	8	3533	2	3430	1* 8%
2705	29661	1481		794		2150		2150		1269		1633	
2706	Sukaradhan 1 (NC)	2685	5	1819	7	3500	5	3500	5	1538		2574	5
2707	29662	1806		1819	7	3500	5	3500	5	1628		2311	
2708	29663	2199	9	1554		2200		2200		1963	7	2121	
2709	29664	1597		2315	3	2700	9	2700	9	1165		1821	
2710	29665	1690		1819	7	2400		2400		2258	4	2116	
2711	29666	2384	7	1085		2150		2150		2111	6	2215	
2712	Zonal Check (ZC)	1713		2480	2	3600	3	3600	3	4142	1	3152	3
2713	29667	3287	3 5%	1786	10	2550	10	2550	10	1635		2491	6
2714	29668	2083	10	1819	7	4100	1*	4100	1*	1636	10	2606	4
2715	29669	1644		728		2150		2150		1550		1781	
2716	VL Dhan 158 (ZC)	3125	4	992		2050		2050		2175	5	2450	7
2717	29670	2315	8	1984	5	3550	4	3550	4	1378		2414	9
2718	Local Check	2639	6	1290		3450	7	3450	7	3468	3	3186	2
Exp. Mean		2303		1664		2806		2806		2011		2373	
CD		373.68		1459.93		183.71		183.71		394.74		188	
CV%		7.69		41.58		3.1		3.1		9.3		3.75	
D/S		08-06-2021		19-06-2021		22-07-2021				15-06-2021			
D/P						16-08-2021							
Local Check Name		HPR 2656		RC Maniphou 6		Sana - Phou				Bhalum 3			

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Table No. 5.24 contd: Grain Yield (kg/ha) of entries in IVT – U (H), Kharif 2021

Entry No	IET No	Medium Northern										Overall Mean (5)			
		Uttarakhand				Uttarakhand Mean (1)	Meghalaya		Meghalaya Mean (2)	Medium Northern Mean (2)					
		Almora-ICAR		Bageswar			ICAR-Umiam								
		ALM		@BGS			ICAR-UMM								
2701	29658	1056		556		1056		758		1011		907		1358	
2702	29659	2000	5	1417	1 *	2000	5	1101	8	1468	8	1551	5	2016	7
2703	29660	1685	8	873	5	1685	8	989	9	1319	9	1337	9	1993	9
2704	28230	2056	3	1111	4	2056	3	2120	2	2827	2	2088	1	2893	1 * 8%
2705	29661	972		769	10	972		761		1015		867		1327	
2706	Sukaradhan 1 (NC)	1426	9	574		1426	9	923		1231		1175		2014	8
2707	29662	787		407		787		977		1303		882		1740	
2708	29663	1796	6	648		1796	6	1178	7	1571	7	1487	7	1867	
2709	29664	1194		806	8	1194		699		932		947		1471	
2710	29665	1148		1176	3 *	1148		1355	4	1807	4	1252		1770	
2711	29666	2309	2	556		2309	2	1267	6	1689	6	1788	4	2044	6
2712	Zonal Check (ZC)	1417	10	491		1417	10	2485	1	3314	1	1951	2	2671	2
2713	29667	2037	4	824	7	2037	4	981		1308		1509	6	2098	5
2714	29668	907		1185	2 *	907		982	10	1309	10	945		1942	
2715	29669	1019		870	6	1019		930		1240		975		1459	
2716	VL Dhan 158 (ZC)	2407	1	769	10	2407	1	1305	5	1740	5	1856	3	2212	4
2717	29670	1787	7	676		1787	7	827		1103		1307	10	1971	10
2718	Local Check	731		778	9	731		2081	3	2775	3	1406	8	2474	3
Exp. Mean		1485		805		1485		1207		1609		1346		1962	
CD		544.54		348.56		544.54		236.85		315.79		313.57		210.25	
CV%		17.38		20.53		17.38		9.3		9.3		11.04		5.08	
D/S		04-06-2021		09-06-2021				05-04-2021							
D/P															
Local Check Name		VLD 221		VLD 221				NEH Megha Rice 1							

Table No. 5.25: Days to 50% flowering of entries in IVT – U (H), Kharif 2021

Entry No	IET No	Low Northern						Low Northern Mean (3)				
		Himachal Pradesh		Manipur		Manipur Mean (1)	Meghalaya					
		MALAN		Lamphelpat-ICAR	WANGBAL		CAU-Barapani					
		MLN		@LPP	WBL		CAU-BRP					
2701	29658	76		82		87		87		90		84
2702	29659	92		103		103		103		98		98
2703	29660	89		86		86		86		83		86
2704	28230	93		91		94		94		95		94
2705	29661	77		87		85		85		83		81
2706	Sukaradhan 1 (NC)	80		86		91		91		90		87
2707	29662	90		90		93		93		96		93
2708	29663	90		99		102		102		100		97
2709	29664	90		87		87		87		90		89
2710	29665	86		90		94		94		95		92
2711	29666	81		87		84		84		86		83
2712	Zonal Check (ZC)	77		98		92		92		95		88
2713	29667	90		101		101		101		98		96
2714	29668	90		86		85		85		94		89
2715	29669	80		82		86		86		92		86
2716	VL Dhan 158 (ZC)	90		88		94		94		85		89
2717	29670	89		90		89		89		85		87
2718	Local Check	90		97		89		89		98		92

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Table No. 5.25 contd: Days to 50% flowering of entries in IVT – U (H), Kharif 2021

Entry No	IET No	Medium Northern						Overall Mean (5)
		Uttarakhand		Uttarakhand Mean (1)	Meghalaya	Meghalaya Mean (2)	Medium Northern Mean (2)	
		Almora-ICAR	Bageswar		ICAR-Umiam			
		ALM	@BGS		ICAR-UMM			
2701	29658	82	91	82	113	101	97	89
2702	29659	101	105	101	117	108	109	102
2703	29660	92	93	92	102	92	97	90
2704	28230	89	95	89	114	105	101	97
2705	29661	82	86	82	102	92	92	85
2706	Sukaradhan 1 (NC)	89	93	89	112	101	100	92
2707	29662	98	97	98	115	106	107	98
2708	29663	99	105	99	119	110	109	102
2709	29664	85	95	85	110	100	97	92
2710	29665	102	94	102	117	106	109	99
2711	29666	92	95	92	105	95	98	89
2712	Zonal Check (ZC)	79	90	79	114	104	96	91
2713	29667	96	106	96	117	108	106	100
2714	29668	86	87	86	113	103	99	93
2715	29669	80	87	80	111	101	95	90
2716	VL Dhan 158 (ZC)	92	89	92	104	95	98	93
2717	29670	91	88	91	104	94	97	91
2718	Local Check	87	90	87	117	107	102	96

Table No. 5.26: Plant Height (cm) of entries in IVT – U (H), Kharif 2021

Entry No	IET No	Low Northern						Low Northern Mean (3)
		Himachal Pradesh	Manipur		Manipur Mean (1)	Meghalaya		
		MALAN	Lamphepat-ICAR	WANGBAL		CAU-Barapani		
		MLN	@LPP	WBL		CAU-BRP		
2701	29658	129.00	129.00	92.00	92.00	95.64	105.55	
2702	29659	94.60	94.00	70.00	70.00	82.24	82.28	
2703	29660	124.60	129.00	111.00	111.00	89.26	108.29	
2704	28230	107.00	101.00	85.00	85.00	90.08	94.03	
2705	29661	117.00	116.00	105.00	105.00	99.50	107.17	
2706	Sukaradhan 1 (NC)	107.00	120.00	102.00	102.00	85.90	98.30	
2707	29662	82.80	88.00	75.00	75.00	56.00	71.27	
2708	29663	85.80	113.00	71.00	71.00	81.00	79.27	
2709	29664	103.20	110.00	82.00	82.00	58.62	81.27	
2710	29665	122.40	118.00	110.00	110.00	82.16	104.85	
2711	29666	126.20	115.00	115.00	115.00	81.78	107.66	
2712	Zonal Check (ZC)	123.20	117.00	107.00	107.00	88.60	106.27	
2713	29667	102.00	109.00	80.00	80.00	70.78	84.26	
2714	29668	105.60	109.00	84.00	84.00	63.59	84.40	
2715	29669	120.20	127.00	118.00	118.00	77.64	105.28	
2716	VL Dhan 158 (ZC)	112.40	117.00	115.00	115.00	96.94	108.11	
2717	29670	113.40	102.00	80.00	80.00	65.54	86.31	
2718	Local Check	98.80	117.00	80.00	80.00	91.18	89.99	

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Table No. 5.26 contd: Plant Height (cm) of entries in IVT – U(H), Kharif 2021

Entry No	IET No	Medium Northern						Overall Mean (5)
		Uttarakhand		Uttarakhand Mean (1)	Meghalaya	Meghalaya Mean (2)	Medum Northern Mean (2)	
		Almora-ICAR	Bageswar		ICAR-Umiam			
		ALM	@BGS		ICAR-UMM			
2701	29658	99.50	77.50	99.50	87.84	91.74	93.67	100.80
2702	29659	74.00	75.50	74.00	73.64	77.94	73.82	78.90
2703	29660	106.00	78.00	106.00	81.46	85.36	93.73	102.46
2704	28230	82.00	71.00	82.00	81.48	85.78	81.74	89.11
2705	29661	102.00	98.50	102.00	91.70	95.60	96.85	103.04
2706	Sukaradhan 1 (NC)	90.65	61.00	90.65	77.30	81.60	83.98	92.57
2707	29662	63.00	60.00	63.00	48.20	52.10	55.60	65.00
2708	29663	72.00	56.50	72.00	72.40	76.70	72.20	76.44
2709	29664	79.50	68.50	79.50	50.82	54.72	65.16	74.83
2710	29665	95.00	89.00	95.00	73.56	77.86	84.28	96.62
2711	29666	99.50	96.50	99.50	73.98	77.88	86.74	99.29
2712	Zonal Check (ZC)	87.00	76.00	87.00	80.00	84.30	83.50	97.16
2713	29667	83.00	69.50	83.00	62.98	66.88	72.99	79.75
2714	29668	77.00	71.50	77.00	54.99	59.29	66.00	77.04
2715	29669	88.00	83.50	88.00	69.84	73.74	78.92	94.74
2716	VL Dhan 158 (ZC)	106.00	93.00	106.00	88.34	92.64	97.17	103.74
2717	29670	83.50	62.50	83.50	57.74	61.64	70.62	80.04
2718	Local Check	76.50	74.50	76.50	82.58	86.88	79.54	85.81

Table No. 5.27: Panicles/m2 of entries in IVT – U (H), Kharif 2021

Entry No	IET No	Low Northern						Low Northern Mean (3)
		Himachal Pradesh	Manipur		Manipur Mean (1)	Meghalaya		
		MALAN	Lamphelpat-ICAR	WANGBAL		CAU-Barapani		
		MLN	@LPP	WBL		CAU-BRP		
2701	29658	233	117	311	311	225	256	
2702	29659	393	129	302	302	150	282	
2703	29660	298	109	434	434	235	322	
2704	28230	420	151	278	278	219	306	
2705	29661	308	93	291	291	180	259	
2706	Sukaradhan 1 (NC)	373	160	367	367	166	302	
2707	29662	155	159	293	293	156	201	
2708	29663	338	185	411	411	147	299	
2709	29664	305	161	333	333	171	270	
2710	29665	295	89	235	235	216	249	
2711	29666	400	105	301	301	202	301	
2712	Zonal Check (ZC)	225	121	260	260	238	241	
2713	29667	435	241	363	363	177	325	
2714	29668	280	132	363	363	192	278	
2715	29669	313	110	288	288	150	250	
2716	VL Dhan 158 (ZC)	303	70	288	288	202	264	
2717	29670	308	113	395	395	183	295	
2718	Local Check	325	123	379	379	174	293	

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Table No. 5.27 contd: Panicles/m² of entries in IVT – U (H), Kharif 2021

Entry No	IET No	Medium Northern						Overall Mean (5)
		Uttarakhand		Uttarakhand Mean (1)	Meghalaya	Meghalaya Mean (2)	Medium Northern Mean (2)	
		Almora-ICAR	Bageswar		ICAR-Uniam			
		ALM	@BGS		ICAR-UMM			
2701	29658	249	183	249	144	185	196	232
2702	29659	264	265	264	96	123	180	241
2703	29660	259	204	259	150	193	204	275
2704	28230	269	223	269	140	180	205	265
2705	29661	290	199	290	115	148	202	237
2706	Sukardhan 1 (NC)	275	159	275	106	136	190	257
2707	29662	277	198	277	100	128	188	196
2708	29663	224	237	224	94	121	159	243
2709	29664	211	262	211	109	140	160	226
2710	29665	225	186	225	138	177	181	222
2711	29666	282	188	282	129	166	206	263
2712	Zonal Check (ZC)	222	177	222	152	195	187	219
2713	29667	289	251	289	113	145	201	275
2714	29668	203	259	203	123	157	163	232
2715	29669	281	179	281	96	123	189	225
2716	VL Dhan 158 (ZC)	288	240	288	129	166	209	242
2717	29670	258	207	258	117	150	188	252
2718	Local Check	198	181	198	111	143	155	237

Table No. 5.28: Grain quality characteristics of entries in IVT-U (H), Kharif 2021

Entry No.	Designation / IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
2704	28230	80.1	73.2	72.1	5.88	2.44	2.40	SB	VOC	7.0	21.32	46
2706	Sukardhan-1 (NC)	78.9	70.0	65.8	6.61	2.11	3.13	LS	VOC	4.0	23.34	22
2712	Vivekdhan-154 (ZC)	79.9	71.5	67.1	6.46	2.55	2.53	LB	VOC	4.0	25.90	36
2716	VL Dhan 158 (ZC)	78.7	69.1	66.0	5.61	2.39	2.34	SB	VOC	4.0	25.19	46

HULL: Hulling (%); **Mill:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length (mm); **KB:** Kernel Breadth (mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content (%); **GC:** Gel Consistency; **LB:** Long Bold; **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

SALINE ALKALINE

Salinity is one of the major abiotic stresses limiting crop productivity. Soil salinization occurs majorly due to seawater intrusion, depletion of groundwater table, drought, usage of poor-quality groundwater for irrigation, inappropriate irrigation practices, poor drainage etc., or impacts adversely on all aspects of plant development, and in turn the crop yields. Salt affected soils are referred to as saline, sodic and saline-sodic based on their EC, exchangeable sodium percentage (ESP) and pH. Soils are termed 'saline' if the EC is more than 4dS m^{-1} . If sodium (Na^+) predominates with bicarbonate and carbonate anions, the soils are termed 'sodic' and are characterized by very poor soil structure that dramatically reduces water infiltration and drainage. Saline soils will have an $\text{EC} > 4\text{dS m}^{-1}$ and $\text{ESP} < 15$ with $\text{pH} < 8.8$; sodic soils have an $\text{EC} > 4\text{dS m}^{-1}$ and $\text{ESP} < 15$ percent $\text{pH} 8.5$ to 10.7 while 'saline-sodic' soils will have characteristics of saline and sodic soils: $\text{EC} > 4\text{dS m}^{-1}$ and $\text{ESP} < 15$ percent with variable pH. During kharif, 2021 the salt stress tolerant variety trials were organized into four trials namely (1) Advance Variety Trial 1-Alkaline & Inland Saline Tolerant Variety Trial (AVT 1-AL&ISTVT), (2) Initial Variety Trial –Alkaline & Inland Saline Tolerant Variety Trial (IVT-AL&ISTVT), Initial Variety Trial –Coastal Saline Tolerant Variety Trial (IVT-CSTVT) and (4) Advance Variety Trial –NIL (Coastal Salinity) with specific checks CSR 36 (Alkaline), CSR 23 (Inland saline), Bhuthnath (Coastal saline), CSR 10 (Early), Pusa 44 (Sensitive), FL 478 (Check with Saltol) and Local Check. AVT 1-AL&ISTVT trial was conducted at 18 locations with 14 test entries. IVT-AL&ISTVT trial was conducted at 18 locations with 20 test entries. IVT-CSTVT trial was conducted at 8 coastal saline locations with 31 test entries. AVT 1-NIL (CS) was conducted at 5 coastal saline locations with 2 entries.

ADVANCE VARIETY TRIAL 2 & 1 - ALKALINE AND INLAND SALINE TOLERANT VARIETY TRIAL (AVT2 & AVT 1 - AL & ISTVT)

Locations: 18

Test Entries: 14

Checks: CSR 36 (Alkaline check), CSR 10 (Early duration saline check), FL 478 (Saline Tolerant check), CSR 23 (Inland Saline check), Pusa 44 (Sensitive check) and local check **Table: 6.1**

AVT1 - AL & ISTVT was constituted with 14 entries and six checks namely CSR 36 (Alkaline check), CSR 10 (Early Saline check), FL 478 (Saline Tolerant check), CSR 23 (Inland Saline check), Pusa 44 (Sensitive check), and local check. Among the 14 test entries, four entries (IET Nos.28606, 28608, 27807 and 27823) were in final year of testing; one entry (IET 27077) is a repeat entry tested in AL & ISTVT from 2017-2021. The remaining nine entries (IET Nos. 29353, 29356, 28358, 29354, 29360, 29361, 29364, 29365 and 29366) were promoted from IVT-AL&ISTVT and are in the second year of testing.

The trial was sent to 22 locations and data was received from 18 locations except Chinsurah, Rhotak, Gautam Budha Nagar and Vytilla. The data pertaining to yield, days to

50% flowering, plant height, panicles/m² and quality are presented in tables 6.2, 6.3, 6.4, 6.5 and 6.6 The details of EC and pH of different locations is given in the following table.

General information about soil stress parameters and yield performance of entries under alkalinity and inland salinity in AVT 1-AL & ISTVT, Kharif, 2021

Location/State	Soil pH	Soil EC (dSm-1)	Exptl. mean (kg/ha)	Grain Yield Range (Kg/ha)	CV %	Remarks
Alkalinity						
Karnal (Haryana) (sodicMicroplots)	9.8	0.8	3526	1852-4444	15.7	Data considered for identification of tolerant genotypes
Kurukshetra(Haryana)	9.7	1.0	3335	1527-4107	13.3	Data considered for analysis
Anjanteli	9.7	0.9	3375	1400-4240	10.29	Data considered for analysis
Annamalainagar (Tamil Nadu)	8.5	1.5	2896	1616-3350	10.1	Data considered for analysis
Lucknow (Uttar Pradesh)	9.6	0.96	2491	1014-3722	23.85	Data considered for analysis
Kanpur (Uttar Pradesh)	9.8	0.7	2235	1318-2929	19.2	Data considered for analysis
Karaikal (Puducherry)	8.5	1.8	2822	1833-3618	12.9	Data considered for analysis
Inland Saline						
Karnal (Haryana) (Inland Salinemicroplots)	7.5	8.0	3319	1482-4296	15.6	Data considered for identification of tolerant genotypes
Panipat (Haryana)	7.8	8.0	3495	1540-4267	9.69	Data considered for analysis
Danti, Gujarat	8.3	5.3	2347	1679-2993	19.3	Data included in analysis
Gangavati (Karnataka)	8.0	4.2	3264	2122-4359	14.1	Moderate stress. Data considered for analysis
Normal						
Masodha (Uttar Pradesh)	9.6	2.85	4168	2576-5115	6.45	Sensitive check recorded highest yield among the checks
Kampasagar (Telangana)	9.8	2.0	4643	855-7955	24.61	Sensitive check recorded highest yield among the checks
Trichy	8.7	2.6	2759	929-4290	--	Sensitive check recorded highest yield among the checks
Nawagam	8.3	0.74	4717	3233-6439	10.35	Location not suitable for stress trials
Mandya (Karnataka)	8.3	0.4	4098	2492-6077	6.83	Sensitive check recorded highest yield among the checks
Kapurthala (Punjab)	9.7	0.4	2444	1344-3570	14.9	Stress not appropriate due to late sowing
Brahmavar (Karnataka)	6.6	4.4	2754	649-3956	14.0	Low stress level due to heavy rains and floods.

AVT-2 (Entries which are in 3rd of testing):

Five entries are tested in third/fourth year of testing.

Performance of entries under Alkalinity & Inland Salinity over the years of testing (2017-2021)

IET 27077 (RNR 11718) derived from MTU 1010 / NLR 34449 entered the multi-location testing under inland saline and alkaline stress conditions in IVT AL&ISTVT, 2017.

During 2017, under alkaline stress conditions, IET 27077 with mean grain yield of 3915 recorded 6% yield superiority over the best check, ranked 5 in Zone VI with 3722 kg/ha mean grain yield and 23% yield advantage over best check and based on single location data found promising in Puducherry. In 2018, IET 27077 performed in Zone VI with 5192 kg/ha found promising in Karnataka. In 2019, IET 27077 did not exhibit any yield superiority and repeated for one more year. In 2020, IET 27077 based on single location data in Zone VI with 3717 kg/ha recorded 8 % yield superiority over best check and found promising in Gujarat. During 2021, this culture with 3263 kg/ha exhibited 16% yield superiority over best check in Z-II and found promising in Haryana with 3430 kg/ha and 14% yield superiority over best check. However, failed to exhibit superiority under inland salinity stress. Quality wise, IET 27077 recorded 67.4 % HRR, 23.93% AC, 46mm of GC and 7.0 ASV and medium slender grains. Over the five years of testing this culture exhibited inconsistent performance across locations, zones and states. Hence this culture is not promising and hence discontinued.

IET 27807 (KR 15066 (224-4-3-1-1)) derived from the cross ADT 45 / FL478 entered AL &ISTVT since 2018 and tested for four years up to 2021. During 2018, IET 27807 found promising in Z-II with 4069 and 38% yield superiority over best check. State wise, during 2018, the data from Haryana state not considered as the sensitive check recorded highest yield than tolerant checks. All the entries tested in 2019 in AL& ISTVT are repeated in 2020. During 2020, this culture failed to exhibit any superiority under alkaline conditions, while under saline conditions; IET 27807 recorded a mean grain yield of 3932 kg/ha with 15% yield advantage over best check found promising in Gujarat state. During 2021, under alkaline conditions, this culture with 3093 kg/ha and 10% yield advantage found promising in Z-II and with 3600 kg/ha exhibited 19% yield superiority over best check in Haryana state. In Zone-VII, IET 27807 with 3496 kg/ha and 13% yield advantage found promising in -VII and with 3618 kg/ha and 17.3% yield superiority in Puducherry state. Quality wise, IET 27807 recorded 64.5% HRR, 27.28 AC, ASV of 4.0 and 41 mm of GC at IIRR Hyderabad, while at NRRI, Cuttack this culture recorded 55% HRR, 22.57 % AC, ASV of 3.0 and 37 mm of GC. Based on three-year data, IET 27807 showed performance for one year only in the states of Haryana, Gujarat and Puducherry.

IET 27823 (CSR MAGIC 157) with a pedigree of Fedearroz 50 / SHZ-2 // PSBRc 82 / PSBRc 158 //// IR 77298-14-1-2-10 / IR 4630-22-2-5-1-3 // IR 45427-2B-2-2B-1-1 / Samba Mahsuri + Sub 1 tested in AL&ISTVT during 2018-2021. During 2018, under alkaline stress with 3024 kg/ha recorded 6.4% yield superiority on overall basis but did not exhibit any yield advantage in either zone or in state. All the entries tested in 2019 in AL& ISTVT are repeated in 2020. IET 27823 during 2020, failed to perform under alkaline condition but found promising in Z-II and in Haryana state with 3706 kg/ha and 5.0% yield advantage over best check under inland saline conditions. During 2021, this culture found promising in Z-II and Haryana state under both alkaline and inland saline conditions with required yield superiority. Quality wise, IET 27823 recorded 69.8% HRR, 25.34 AC, ASV of 5.0 and 22 mm of GC at IIRR Hyderabad, while at NRRI, Cuttack this culture recorded 60% HRR, 19.2% AC, ASV of 7.0 and 49 mm of GC. **Based on three year of performance, IET 27823 (CSR MAGIC 157) is found promising in Haryana state only.**

IET 28606 (CSRM1-7) derived from cross IR 71730-51-2/NSIC Rc106 tested in the AL&ISTVT from 2019 to 2021. During 2018, this culture recorded a mean grain yield of 3870 kg/ha exhibited superiority with 23% yield superiority under Alkaline, and with 4143 kg/ha and 24% yield superiority under saline conditions in Z-II and found promising in

Haryana state only. During, 2020, IET 28606, recorded 9.5% yield advantage over best check on overall basis under alkaline conditions. This culture also recorded the required yield advantage in Z-II under both alkaline and inland saline conditions and hence promising in Haryana state. Similarly, during 2021, IET 28606 found promising in Z-II with 3222 kg/ha and 15% yield advantage over best check under alkaline conditions, with 4248 kg/ha and 25% yield superiority found promising in Haryana stage. Quality wise, IET 28606 recorded 66.6% HRR, 23.73 AC, ASV of 7.0 and 44 mm of GC at IIRR Hyderabad, while at NRRI, Cuttack this culture recorded 61% HRR, 21.0% AC, ASV of 5.0 and 41mm of GC. **Based on three year of performance, IET 28606 (CSRM1-7) is found promising in Haryana state only.**

IET 28608 (CSR 449S-13) derived from the cross CSR 30 / CSR 36 tested in AL&ISTVT trials since 2019 to 2021. During 2019, under alkaline stress, this culture exhibited 6% yield superiority over best check with 3343 kg/ha grain yield on overall basis, found promising in Z-II and in Haryana state with 3744 kg/ha and 19 % yield advantage over best check. Under inland salinity (2019), this culture is also found promising in Z-II and in Haryana state with 3896 kg/ha and 19 % yield advantage over best check. During 2020, IET 28608 exhibited superior performance in Z-II and in Haryana state with 3930 kg/ha and 12% yield advantage over best check under inland saline conditions. During 2021, this culture found promising in Z-II and Haryana state under both alkaline and inland saline conditions with required yield superiority. Quality wise, IET 28608 recorded 69.1% HRR, 26.22 AC, ASV of 4.0 and 22 mm of GC at IIRR Hyderabad, while at NRRI, Cuttack this culture recorded 66% HRR, 21.37 AC, ASV of 3.0 and 40 mm of GC. **Based on three year of performance, 28608 (CSR 449S-13) is found promising in Haryana state only.**

AVT-1 (Entries which are in 2nd year of testing):

Nine entries are tested in second year of testing.

Performance of entries in micro-plots (Sodic/ Inland Saline stress conditions) at CSSRI, Karnal

The AVT1-AL&ISTVT trial was conducted at Karnal inland saline as well as alkaline microplot during kharif, 2021. The standard evaluation scores (SES) recorded by the test entries, tolerant and sensitive checks are presented in Table below.

Performance of entries in micro-plots (Sodic/ Inland Saline stress conditions) at CSSRI, Karnal during kharif, 2021

IET No	Sodic Micro Plot		Saline Micro Plot	
	Vigor/SES (Sodic)	Yield (kg/ha)	Vigor/SES (Saline)	Yield (kg/ha)
3rd year entries				
28608	4	4370	4	4148
27077 (R)	5	3704	5	3267
27823	6	4222	5	3926
28606	4	4444	4	4296
27807	6	3407	6	3471
2nd year entries				
29356	6	3852	6	3556
29365	4	3926	5	4074
29354	4	4148	5	3852
29360	6	3111	6	3374

IET No	Sodic Micro Plot		Saline Micro Plot	
	Vigor/SES (Sodic)	Yield (kg/ha)	Vigor/SES (Saline)	Yield (kg/ha)
29361	4	4074	5	3704
29364	7	3407	7	3092
29366	4	3926	6	3630
29358	6	3778	6	3326
29353	4	3704	5	3704
CSR 36 (Alkaline Check)	6	2000	6	1482
CSR 23 (Inland Saline Check)	6	3111	6	3056
CSR 10 (Early duration saline check)	6	3259	6	3098
FL 478 (Saline tolerant check)	6	2815	7	2774
Pusa 44 (Sensitive Check)	6	1852	7	1515
Local Check	7	3407	7	3044
Local Check Name	CSR 36		CSR 27	

Under Alkaline conditions in sodic microplot evaluation, the IET Nos. 28608, 28606, 29365, 29354, 29361, 29366, and 29353 recorded a tolerance score of 4.0 as compared to tolerant and sensitive checks which scored an SES scores of 6-7. Interestingly, the tolerant checks recorded the sensitive score in terms of SES value which is higher/on par with the sensitive check.

Under saline conditions in micro plot evaluation, most of the genotypes recorded an SES score between 5 and 6 except IET 28608 and 28606 which exhibited dual tolerance to sodicity and salinity.

1. Alkaline Stress: Overall mean performance

Under alkalinity, the trial data was received from Karnal (sodic Micro plot), Kapurthala (Ludhiana), Kurukshetra, Anjanteli, Kanpur, Masodha, Lucknow, Nawagam, Trichy, Mandya, Annamalainagar and Kakaikal. However, data from Kapurthala, Masodha, Trichy, Kampasagar, Mandya, Brahmavar and Nawagam was not included in the analysis due low stress levels, sensitive check recording higher yields, and heavy rains and floods during the crop growth stage. The data from sodic microplot evaluation was used for the identification of tolerant genotypes. Hence the data from six locations namely Kurukshetra, Anjanteli, Kanpur, Lucknow, Annamalainagar and Karaikal were found suitable for analysis. Promising genotypes were identified based on significant critical difference of the test entries over the checks-either best check or over early check. On overall basis, the mean grain yield ranged from 1735 kg/ha (Pusa 44) to 3337 kg/ha (IET 29356), days to 50% flowering varied from 79 days (IET 28606) - 99 days (Pusa 44). Plant height of the entries ranged from 81.8 cm (CSR 10) to 102.2 cm (Local check) and the panicles/m² varied from 288 (Pusa 44) to 349 (IET 29353). Among the checks, local check (2908 kg/ha) recorded highest yield followed by CSR 10 (2668 kg/ha), FL 478 (2529 kg/ha), CSR 36 (2518 kg/ha), CSR 23 (2424 kg/ha) and Pusa 44 (1735 kg/ha). Hence, local check is the best check on overall basis.

Among the test entries, IET 29356 (CSAR-7-9-2020), a selection from BC-3-7-9 with a mean grain yield of 3337 kg/ha and 91 days to 50% flowering ranked first on overall basis with 15% yield superiority over the best check. This culture is also found to be superior in zone II with mean grain yield of 3604 kg/ha and 84 days to 50% flowering. Quality wise, IET 29356 recorded long bold grains with 68.1 % head rice recovery, low amylose content of 19.36%, medium GC (47 mm) and high ASV (7). At NRRI, Cuttack, IET 29356 recorded

62% HRR, 19.95% AC, 52 mm of GC and ASV of 5.0. Although this culture tends towards low amylose content (19.36 to 19.95%), IET 29356 is considered for promotion.

IET 29354 (CSR YET 59), derived from CSR 27/CSR 36 cross, with a mean grain yield of 3173 kg/ha and 85 days to 50% flowering exhibited 9% yield advantage over the best check on overall basis. This entry is also found suitable in Z-II with a mean grain yield of 3521 kg/ha and 79 days flowering duration recorded 25% yield superiority over the best check. This culture also exhibited 34.9% yield advantage over the early check- CSR 10. Quality wise, IET 29354 exhibited long slender grain type, 66.1% & 63% head rice recovery, intermediate amylose content (24.81% & 22.27%), GC of 22 mm & 37 mm and intermediate ASV (4 & 5) at IIRR and NRRI respectively. Based on superior yield and desirable quality, IET 29354 is promoted to third year of testing in AVT 2- ALISTVT.

IET 29361 (CSR CPB 69), derived from the cross CSR89IR15/PB1 recorded a mean grain yield of 3321 kg/ha and 86 days flowering duration recorded 14% yield superiority over the best check on overall basis. This culture is exhibited 21% yield superiority over best check in Z-II with a mean grain yield of 3406 kg/ha and 72 days to 50% flowering and in Z-VII with 3370 kg/ha yield, 102 days to 50% flowering and 9% yield superiority over the best check. Quality wise, IET 29361 is a long bold grain type culture with 67.3% & 62% head rice recovery, 25.40 % & 24.82% amylose content, GC of 22 mm & 30 mm and ASV of 4.0 & 3 at IIRR and NRRI respectively. Based on high AC (25.4%) IET 29361 showed slightly high AC (25.4%) this culture is considered for promotion.

IET 29366 (CSR YET 8), derived from CSR 27/CSR 36 cross recorded 3250 kg/ha mean grain yield and 86 days to 50% flowering showed 12% yield advantage over the best check on overall basis. IET 29366 with a mean grain yield of 3254 kg/ha, 78 days flowering duration and 3722 kg/ha, 95 days to 50% flowering with 16% and 18% yield advantage respectively in Z-II and Z-III over the best check found promising. Quality wise, IET 29366 exhibited long bold grain type, 71.6 % & 65% head rice recovery, intermediate amylose content (22.85% & 20.85%), GC of (22 mm & 48 mm) and intermediate ASV (4 & 5) at IIRR and NRRI respectively. Based on superior yield and desirable quality, IET 29366 is promoted to third year of testing in AVT 2- ALISTVT.

On overall basis, IET Nos. 29356, 29354, 29361 and 29366 merit promotion to next level of testing under alkaline conditions.

Zone II (Alkalinity)

For Alkalinity stress, test locations in Zone-II consisted of Anjanteli, Kurukshetra and Kanpur. In zone-II, the mean grain yield ranged from 1565 kg/ha (Pusa 44) to 3604 kg/ha (IET 29356), days to 50% flowering varied from 71 days (FL 478) – 100 days (IET 27077). Plant height of the entries ranged from 84.07 cm (IET 27823) to 107.37 cm (IET 29360) and the panicles/m² varied from 152 (Pusa 44) to 277 (IET 29365). Among the checks, CSR 23 (2870 kg/ha) recorded highest yield followed by local check (2807 kg/ha), CSR 10 (2610 kg/ha), FL 478 (2472 kg/ha), CSR 36 (1919 kg/ha), and Pusa 44 (1565 kg/ha).

In Zone II, in addition to IET nos. 29356, 29354, 29361 and 29366 which were promising on overall and Z-II, four cultures exhibited yield advantage over best check. IET 29365 (CSR TPB 159) derived from Trichy 1/PB1 cross with mean yield of 3291 kg/ha and 78 days to 50% flowering recorded 17% yield superiority over the best check. Quality wise,

IET 29365 is long bold grain type entry with 60.8 % & 62% HRR, 24.64% & 22.27% AC, 22 & 30 mm GC and 7 ASV at IIRR and NRRI respectively.

IET 29360 (CSAR 12-10-2020), a selection from BC-12-12-10 recorded 3162 kg/ha and 81 days to 50% flowering exhibited 13% yield superiority over best check and desirable quality with 71.6% & 63% HRR, 21.91% & 23.55% AC, 22 & 36 mm GC and 4.0 & 3.0 ASV at IIRR and NRRI respectively.

IET 29358 (CSR YET 55) derived from the CSR 27/CSR 36 cross combination exhibited 3146 kg/ha and 88 days to 50% flowering showed 12% yield superiority over the best check. IET 29358 is also found promising in Z-VII with 3298 kg/ha grain yield and 87 days to 50% flowering recorded 7% yield advantage over the best check. Quality wise, IET 29358 recorded desirable quality characteristics with 71.5% & 63% HRR, 22.23% & 21.75% amylose content, 23 & 45 mm gel consistency, 4.0 alkali spreading value at IIRR and NRRI respectively.

IET 29353 (GNV 18-64) derived from the parentage of GNV 1109/CSR 22 recorded a mean grain yield of 3081 kg/ha and 85 days to 50% flowering found promising with 10% yield advantage over best check. IET 29353 also recorded desirable quality with 68.6% HRR, 21.88% & 20.4% AC, 42 mm & 30mm GC, 4.0 & 5.0 ASV at IIRR and NRRI respectively.

IET Nos. 29356, 29354, 29361, 29365, 29366, 29360, 29358 and 29353 merit promotions to next level of testing under alkaline conditions in zone-II based yield superiority and desirable quality characteristics.

Zone III (Alkalinity)

For Alkalinity stress, test locations in Zone-III consisted of one location only namely Lucknow. In zone-III, the mean grain yield ranged from 1014 kg/ha (Pusa 44) to 3722 kg/ha (IET 29366), days to 50% flowering varied from 88 days (IET 28606) – 106 days (IET 29360). Plant height of the entries ranged from 46.2 cm (FL 478) to 65.4 cm (IET 29364) and the panicles/m² varied from 286 (IET 28606) to 518 (IET 29364). Among the checks, CSR 36 (3167 kg/ha) recorded highest yield followed by CSR 10 (3000 kg/ha), local check (2889 kg/ha), CSR 23 (2333 kg/ha) FL 478 (1806 kg/ha) and Pusa 44 (10614 kg/ha).

IET 29366 (CSR YET 8), derived from CSR 27/CSR 36 which is promising on overall basis and Z-II is also found promising in Z-II with 3722 kg/ha, 95 days to 50% flowering and 18% yield advantage over beset check. Quality wise, IET 29366 exhibited long bold grain type, 71.6 % head rice recovery, intermediate amylose content (22.85% & 20.85%), GC of 22 mm & 48 mm and intermediate ASV of 4 & 5 at IIRR and NRRI respectively. Based on superior yield and desirable quality, IET 29366 is promoted to third year of testing in AVT 2- ALISTVT.

IET 29366 merit promotion to next level of testing in Zone III under alkalinity stress.

Zone VII (Alkalinity)

For Alkalinity stress, test locations in zone-VII consisted of Kampasagar, Trichy, Annamalainagar, Mandya, Brahmavar, Nawagam and Karaikal. The data from Annamalainagar, and Karaikal were found suitable for analysis. In zone-VII, the mean grain

yield ranged from 1771 kg/ha (CSR 23) to 3217 kg/ha (IET 29356), days to 50% flowering varied from 82 days (CSR 23 & CSR 10) – 105 days (Pusa 44). Plant height of the entries ranged from 84.43 cm (CSR 10) to 115 cm (local check) and the panicles/m² varied from 280 (CSR 23) to 485 (IET 29353). Among the checks, CSR 36 (3092), recorded highest yield followed by kg/ha), local check (3069kg/ha), FL 478 (2977 kg/ha), CSR 10 (2587 kg/ha), Pusa 44 (2251 kg/ha) and CSR 23 (1771 kg/ha).

IET 29361 (CSR CPB 69), derived from the cross CSR89IR15/PB1 in addition to its performance on overall basis and in Z-II, is also found promising in Z-VII with 3370 kg/ha yield, 102 days to 50% flowering and 9% yield superiority over the best check. IET 29358 (CSR YET 55) derived from the CSR 27/CSR 36 which is promising in Z-II also exhibited superior performance in Z-VII with 3298 kg/ha grain yield and 87 days to 50% flowering recorded 7% yield advantage over the best check. Quality wise, IET 29358 recorded desirable quality characteristics with 71.5% & 63% head rice recovery, 22.23 % & 21.75% amylose content, 23 mm & 45 mm gel consistency, 4.0 & 6.0 alkali spreading value at IIRR and NRRI respectively.

IET Nos. 29361 & 29358 merit promotion to next level of testing in Zone VII under alkalinity stress.

2. Inland Saline Stress

Overall performance

The inland saline stress trial data was received from Karnal, Panipat, Danti, Brahmavar and Gangavati. At Brahmavar, the test entries experienced low stress level due to heavy rains and floods. The data from saline microplot evaluation, Karnal was used for the identification of tolerant genotypes. Hence the data from Panipat, Danti (Navsari) and Gangavati were considered for inclusion in the final analysis. The mean grain yield on overall basis ranged from 2059 kg/ha (Pusa 44) to 3816 kg/ha (IET 29356), days to 50% flowering varied from 86 days (CSR 23) to 113 days (IET 27077). Plant height of the entries ranged from 71.8 cm (CSR 10) to 116.78 cm (IET 28608) and the panicles/m² varied from 257 (CSR 23) to 323 (IET 27077). Among the checks, local (best check- 3394 kg/ha) recorded highest yield followed by CSR 36 (3005 kg/ha), CSR 10 (2840 kg/ha), CSR 23 (2696 kg/ha), FL 478 (2635 kg/ha) and Pusa 44 (2059 kg/ha). Among the test entries, IET 29356 (CSAR -7-9-2020), selection from BC -3-7-9 with mean grain yield of 3816 kg/ha kg/ha and 100 days to 50% flowering recorded 12% yield superiority over best check. This culture is also found promising in Z-II with 4168 kg/ha mean grain yield and 22% yield superiority over the best check. Quality wise, this culture recorded 68.1 % head rice recovery, 19.36 % amylose content, 47 mm gel consistency, 7.0 alkali spreading value and long bold grains at IIRR, Hyderabad. At NRRI Cuttack, this culture recorded 62% HRR, 19.95% AC, soft GC of 52 mm and 5.0 ASV. Although this culture tends towards low amylose content (19.36 to 19.95%), IET 29356 is considered for promotion.

Performance in Zone II

In zone II, the trial data from one location Panipat was available for inclusion in the final analysis. The mean grain yield in Zone II ranged from 1540 kg/ha (Pusa 44) to 4267 kg/ha (IET 28608), days to 50% flowering varied from 85 days (FL 478) to 113 days (IET 27077). Plant height of the entries ranged from 60.0 cm (IET 27807) to 106.0 cm (IET

28608) and the panicles/m² varied from 135 (CSR 36) to 275 (IET 28608). Among the checks, local check (best check- 3410 kg/ha) recorded highest yield followed by CSR 23 (3219 kg/ha), CSR 10 (3153 kg/ha), FL 478 (3052 kg/ha), CSR 36 (1720 kg/ha) and Pusa 44 (1540 kg/ha).

Among the test entries, five cultures were significantly superior to best check with respect to yield. Among them, IET 29356 exhibited superior performance on overall (3816 kg/ha) and in Zone-II 94168 kg/ha). Another culture, IET 29365 (CSR TPB 159) derived from cross Trichy 1/PB1 with a mean grain yield of 4065 kg/ha and 90 days to 50% flowering recorded significantly superiority over the best check. Quality wise, IET 29365 recorded 60.8% head rice recovery, 24.64 % amylose content, 22 mm gel consistency, 7.0 alkali spreading value and long bold grains at IIRR, Hyderabad. At NRRI Cuttack, this culture recorded 62% HRR, 22.7% AC, GC of 30 mm and 7.0 ASV. **Based on yield and desirable quality, IET 29365 merit promotion to next level of testing in Zone II under inland salinity stress.**

Two sister cultures namely IET 29354 (CSR YET 59) and IET 29366 (CSR YET 8) derived from the parentage of CSR 27/CSR 36 with a mean grain yield of 3990 kg/ha and 3959 kg/ha exhibited significantly superiority over the best check in Z-II. Quality wise, IET 29354(CSR YET 59) recorded 66.1% head rice recovery, 24.81 % amylose content, 22 mm gel consistency, 4.0 alkali spreading value and long slender grains at IIRR, Hyderabad. At NRRI Cuttack, this culture recorded 63% head rice recovery, 22.27 % amylose content, 37 mm gel consistency, 5.0 alkali spreading value. While IET 29366 (CSR YET 8), recorded 71.6 % head rice recovery, 22.85 % amylose content, 22 mm gel consistency, 4.0 alkali spreading value and long bold grains at IIRR, Hyderabad. At NRRI Cuttack, this culture recorded 65% head rice recovery, 20.82 % amylose content, 48 mm gel consistency, 5.0 alkali spreading value. **Hence based on yield and quality, the two cultures, IET 29354 and IET 29366 merit promotion to next level of testing in Zone II under inland salinity stress.**

Another culture, IET 29361 (CSR CPB 69) developed from the cross combination of CSR89IR15/PB1 with 3873 kg/ha and 97 days to 50% flowering exhibited significant superiority over the best check in Z-II. Quality wise, IET 29361 recorded 67.3 % head rice recovery, 25.4% amylose content, 22 mm gel consistency, 4.0 alkali spreading value and long bold grains at IIRR, Hyderabad. At NRRI Cuttack, this culture recorded 62% head rice recovery, 24.82% amylose content, 30 mm gel consistency, 3.0 alkali spreading value. **Although this culture recorded slightly high AC, it registered intermediate gel consistency, and required significant yield, this culture is promoted to next level of testing under inland saline stress.**

Performance in Zone VI

In zone VI, the trial data was received from Navsari (Danti) location only and was found suitable for inclusion in the final analysis. The mean grain yield in Zone VI ranged from 1679 kg/ha (IET 29361) to 2933 kg/ha (IET 29356), days to 50% flowering varied from 79 days (IET 28606) to 105 days (IET 27823). Plant height of the entries ranged from 94.93 cm (CSR10) to 155 cm (IET 29364) and the panicles/m² varied from 264 (IET 29358) to 369 (IET 27077). Among the checks, CSR 36 recorded highest yield (2955 kg/ha) followed by the early duration check- CSR 10 (best check- 2880 kg/ha, local check (2683 kg/ha), FL 478 (2620 kg/ha), Pusa 44 (2515 kg/ha), and CSR 23 (1902 kg/ha). **None of the entries registered significant yield superiority over the best check in Z-VI and hence none merit promotion.**

Performance in Zone VII

In zone VII, the trial data was received from Gangavati location was considered for analysis. The mean grain yield in Zone VII ranged from 2003 kg/ha (IET 29354) to 4359 kg/ha (IET 29353), days to 50% flowering varied from 89 days (CSR 10 & CSR 23) to 118 days (Pusa 44). Plant height of the entries ranged from 56.5cm (CSR10) to 117 cm (IET 29366) and the panicles/m² varied from 265 (CSR 23) to 414 (Pusa 44). Among the checks, CSR 36 recorded highest yield (4339 kg/ha) followed by local check (4089kg/ha), CSR 23 (2968 kg/ha), CSR 10 (2488 kg/ha), FL 478 (2233 kg/ha) and Pusa 44 (2211kg/ha). *None of the entries registered significant yield superiority over the best check in Z-VII and hence none merit promotion.*

Performance of 2nd year entries in AVT 1- AL & ISTVT under alkalinity during Kharif 2021

IET No /Designation/ Cross combination	Alkalinity										
	Overall (6)		Zone II(3)			Zone III (1)			Zone VII(2)		
	Yield/ DFP	% Yield gain over BC	Yield/ DFP	% Yield over BC	% over EC (CSR 10)	Yield/ DFP	% over BC	% over EC (CSR 10)	Yield/ DFP	% gain over BC	% over EC (CSR 10)
29356 (CSAR-7-9-2020), selection from BC-3- 7-9	3337 91	15	3604 84	28	38	--	--		--	--	
29354 (CSR YET 59) CSR 27/CSR 36	3173 85	9	3521 79	25	34.9	--	--		--	--	
29361 (CSR CPB 69) CSR89IR15/PB1	3321 86	14	3406 72	21	30	--	--		3370 102	9	
29365 (CSR TPB 159) Trichy 1/PB1	--	--	3291 78	17	26	--	--		--	--	
29366 (CSR YET 8) CSR 27/CSR 36	3250 86	12	3254 78	16	24.6	3722 95	18	24	--	--	
29360 (CSAR 12-10-2020), selection from BC-12- 12-10	--	--	3162 81	13	21	--	--		--	--	
29358 (CSR YET 55) CSR 27/CSR 36	--	--	3146 88	12		--	--		3298 87	7	24
29353 (GNV 18-64) GNV 1109/CSR 22			3081 85	10							
CSR 36 (Alkaline check)	2518 97		1919 90			3167 102			3092 103		
CSR 23 (Inland Saline check)	2414 81		2870 77			2333 93			1771 82		
CSR 10 (Early duration saline check)	2668 81		2610 77			3000 91			2587 82		
FL 478 (Saline Tolerant check)	2529 82		2472 71			1806 93			2977 92		
Pusa 44 (Sensitive check)	1735 99		1565 93			1014 106			2351 105		
Local check	2908		2807			2889			3069		

Performance of entries in AVT 1- AL & ISTVT under Inland Salinity during Kharif 2021

IET No /Designation/ Cross combination	Inland salinity							
	Overall (3)		Zone II (1)		Zone VI (1)		Zone VII (1)	
	Yield/ DFF	% Yield gain over BC	Yield/ DFF	% Yield gain over BC	Yield/ DFF	% Yield gain over BC	Yield/ DFF	% Yield gain over BC
29356 (CSAR-7-9- 2020), selection from BC-3-7-9	3816 100	12	4168 95	22	--	--	--	--
29365 (CSR TPB 159) Trichy 1/PB1			4065 90	19				
29354 (CSR YET 59) CSR 27/CSR 36	--	--	3990 97	17	--	--	--	--
29366 (CSR YET 8) CSR 27/CSR 36	--	--	3959 97	16	--	--	--	--
29361 (CSR CPB 69) CSR89IR15/PB1	--	--	3873 97	14	--	--	--	--
CSR 36 (Alkaline check)	3005 102		1720 98		2955 99		4339 110	
CSR 23 (Inland Saline check)	2696 86		3219 92		1902 78		2968 89	
CSR 10 (Early duration saline check)	2840 89		3153 89		2880 89		2488 89	
FL 478 (Saline Tolerant check)	2635 91		3052 85		2620 81		2233 108	
Pusa 44 (Sensitive check)	2059 108		1540 109		2515 97		2122 118	
Local check	3394 100		3410 94		2683 97		4089 110	

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Alkalinity & Inland Salinity during three years of testing (2019-2021)

IET No / Designation/ Cross combination	GT	Year	Alkalinity/ Salinity	Overall		Zone			State		
				yield (kg/ha)	% gain over BC	Zone/ Rank	Yield (kg/h)	% gain over BC	State/ Rank	Yield (kg/ha)	% gain over BC
27077	SB	2017	Slight Alkaline stress (EC <4 dSm ⁻¹ ; pH 8.5-9.0)	3915	6	VII-5 (1L)	3722	23	PUD-5	3722 (1L)	23
	SB	2018	Inland Salinity	--	--	VII-1	5192 (1L)	16	KA-1	5192 (1L)	16
	MS	2019	Alkalinity	2619	--	--	--	--	--	--	--
			Inland Salinity	3499	--	--	--	--	--	--	--
	MS	2020	Inland Salinity	2996	--	VI-3	3717 (1L)	8	GU-3	3717 (1L)	8
	MS	2021	Alkalinity	2858	--	II-7	3263	16	HA	3430	14
			Inland Salinity	3495	--	II	3467	--	--	--	--
--					VI	2857	--	--	--	--	
27807		2018	Alkalinity	3300	--	II	4069	38	HA	Sensitive recorded check high yield	
		Inland Salinity	Microplot data from Karnal available, where the sensitive check recorded high yield								
	LB	2019		Data not considered and all the entries are repeated for evaluation in kharif, 2020							
	LB	2020	Alkalinity	3659	--	--	--	--	--	--	--
			Inland Salinity	3515	--	VII	3932	15	GU	3932	15
	LB	2021	Alkalinity		--	II	3093	10	HA	3600	19
					--	VII	3496	13	TN	3373	7
			Inland Salinity		--	II	3583	5.0	HA	3583	5.0
27823		2018	Alkalinity	3024	6.4	--	--	--	--	--	
		Inland Salinity	One location data where sensitive check recorded high yield than tolerant checks								
	SB	2019		Data not considered and all the entries are repeated for evaluation in kharif, 2020							
	SB	2020	Alkalinity	3843	--	VII	3642	--	--	--	--
					--	II	3944	--	--	--	--
			Inland Salinity	3328	--	II	3706	5	HA	3706	5.0
LB	2021	Alkalinity	2983	--	II	3279	17	HA	4063	35	
		Inland Salinity	3087	--	II	4220	24	HA	4220	24	
28606		2019	Alkalinity	3161	--	II-1	3870	23	HA	3870	23
		Inland Salinity	4143	--	II	4143	24	HA	4143	24	
		2020	Alkalinity	4089	9.5	II	4078	6.7	HA	4078	6.7
			Inland Salinity	3117	--	II-2	3773	7	HA	3773	7
	LS	2021	Alkalinity	2896	--	II	3222	15	HA	4174	38
Inland Salinity			3445	--	II	4248	25	HA	4248	25	
28608	LS	2019	Alkalinity	3343	6	II-2	3744	19	HA-2	3744	19
			Inland Salinity	?	?	II-2	3986	19	HA-2	3986	19
	LS	2020	Alkalinity	3730	--	II-3	4030	5.5	HA-3	4030	5.5
			Inland Salinity	3870	12	II-1	3930	12	HA-1	3930	12
			Salinity		--	III-2	3750	9	GU (1L)	3750	9
	LS	2021	Alkalinity	3037	--	II-4	3331	19	HA-2	4130	37
Inland Salinity			3046	--	II-1	4267	25	HA-1	4267	25	

Summary

The following entries were promoted to third year of testing in AL& ISTVT

1. Alkalinity

- Overall: IET Nos. 29356, 29354, 29361 and 29366
- Zone II: IET Nos. 29356, 29354, 29361, 29365, 29366, 29360, 29358 and 29353
- Zone III: IET 29366
- Zone VII: IET 29361 and 29358

2. Inland Salinity

- Overall: IET 29356
- Zone II under Inland Salinity: IET Nos. 29356, 29365, 29354, 29366 and 29361

INITIAL VARIETY TRIAL - ALKALINE AND INLAND SALINE TOLERANT VARIETY TRIAL (IVT - AL & ISTVT)

Locations: 18

Test Entries: 20

Checks: CSR 36 (Alkaline check), CSR 10 (Early duration saline check), FL 478 (Saline Tolerant check), CSR 23 (Inland Saline check), Pusa 44 (Sensitive check) and local check **Table: 6.7**

IVT-AL & ISTVT was constituted with 20 entries including two hybrid entries and six checks namely CSR 36 (Alkaline check), CSR 10 (Early Saline check), FL 478 (Saline Tolerant check), CSR 23 (Inland Saline check), Pusa 44 (Sensitive check), and local check. The trial was sent to 22 locations and data was received from 18 locations except Jind, Gautam Budha Nagar, Chinsurah and Vytilla. The data pertaining to yield, days to 50% flowering, plant height and panicles/m² are presented in tables 6.8 and 6.9 respectively. The details of EC and pH of different locations is given in the following table.

General information about soil stress parameters and yield performance of entries IVT-AL & ISTVT, Kharif, 2021

Location/State	Soil pH	Soil EC (dSm -1)	Exptl mean (kg/ha)	Grain Yield Range (Kg/ha)	CV %	Remarks
Alkalinity						
Karnal (Haryana) (sodic Microplots)	9.8	0.8	3330	2296-4370	14.6	Data for identification of tolerant genotypes. However, the sensitive check recorded tolerant score of 5, while tolerant checks recorded sensitive score of 6 & 7 SES.
Kurukshetra(Haryana)	9.7	1.0	3357	1907- 4073	11.2	Data considered for analysis
Anjanteli	9.7	0.9	3306	2707-4013	12	Data considered for analysis
Annamalainagar (Tamil Nadu)	8.5	1.5	2709	1432-4079	11.4	Data considered for analysis
Lucknow (Uttar Pradesh)	9.7	1.21	2014	942-3757	16.4	Data considered for analysis
Kanpur (Uttar Pradesh)	9.8	0.7	2498	1660-4003	24.2	Data considered for analysis
Karaikal (Puducherry)	8.5	1.8	2845	1816-3583	13.3	Data considered for analysis
Mandya (Karnataka)	8.3	0.37	3472	1935-5248	5.86	Data considered for analysis
Kampasagar (Telangana)	9.8	2.0	2751	1128-5167		Data considered for analysis
Inland Saline						
Karnal (Haryana) (Inland Saline Microplots)	7.5	8.0	3407	2444-4222	15.4	Data for identification of tolerant genotypes. However, the sensitive check recorded tolerant score of 5, while tolerant checks recorded sensitive score of 6 & 7 SES.
Panipat (Haryana)	7.8	8.0	3354	2120-4180	11.2	Data considered for analysis
Gangavati (Karnataka)	8.0	4.2	3346	1917-4583	10.2	Moderate stress. Data considered for analysis
Normal						
Masodha (Uttar Pradesh)	9.6	2.85	3620	2593-4854	8.7	Sensitive check recorded highest yield than tolerant checks.
Trichy	8.7	2.6	2448	988-3993	--	Single replication data only available and hence not considered in analysis/
Nawagam	7.8	0.74	3479	1795-4970	15.0	Low stress level as the location not suitable for stress trials
Kapurthala (Punjab)	8.9	0.4	3051	2125-4996	13.5	Stress not appropriate due to late sowing
Brahmavar (Karnataka)	6.6	4.3	3043	1160-3978	15.0	Low stress level due to heavy rains and floods.
Navsari (Danti), Gujarat	8.3	5.5	1222	960-1921	17.3	Low experimental mean. Data excluded in analysis

Performance of IVT-AL & ISTVT entries in micro-plots (Sodic/ Inland Saline stress conditions) at CSSRI, Karnal

The IVT1-AL&ISTVT trial was conducted at Karnal inland saline as well as alkaline microplot during kharif, 2021. The standard evaluation scores (SES) recorded by the test entries, tolerant and sensitive checks are presented in Table below.

Table: Performance of IVT-AL &ISTVT entries in micro-plots (Sodic/Inland Saline stress conditions) at CSSRI, Karnal during kharif, 2021

IET No	Sodic Micro Plot		Saline Micro Plot	
	Vigor/SES (Sodic)	Yield (kg/ha)	Vigor/SES (Saline)	Yield (kg/ha)
30162	4	3630	5	3778
30163	6	2889	6	3259
30164	4	4370	4	4222
30165	4	3556	4	4074
30166	5	3630	5	3185
30167	5	3111	5	3259
30168	6	2815	6	3185
30169	7	3111	6	3185
30170	6	2593	6	2593
30171	4	4074	4	4222
30172	4	4074	4	4000
30173	4	4000	4	4074
30174	4	3481	4	3704
30175	6	2667	6	2815
30176	5	3852	5	3704
29362 (R)	5	3037	5	3704
30177	5	3704	5	3852
30178	6	2741	6	3037
30179	5	4074	5	4000
30180				
CSR 36 (Alkaline Check)	6	3852	6	3556
CSR 23 (Inland Saline Check)	6	3111	6	3333
CSR 10 (Early duration saline check)	7	2296	7	2444
FL 478 (Saline tolerant check)	6	3037	7	2889
Pusa 44 (Sensitive Check)	5	2444	5	2074
Local Check (LC)	7	3111	6	3037
Exp. Mean		3330		3407
F Value		4.57 (p<0.0001)S		3.63 (p<0.0001)S
CD		799		865
CV%		14.6		15.46
Local Check Name	CSR 36		CSR 27	

Under Alkaline conditions in sodic microplot evaluation, the IET Nos. 30162, 30164, 30165, 30171, 30172, 30173 and 30174 recorded a tolerance score of 4.0 as compared to tolerant and sensitive checks. However, the sensitive check recorded tolerant score of 5, while tolerant checks recorded sensitive score of 6 & 7 SES, which scored an SES scores of 6-7. Under saline conditions in microplot evaluation, IET Nos. 30164, 30165, 30171, 30172, 30173 and 30174 recorded a tolerance score of 4.0 as compared to tolerant and sensitive checks. However, the sensitive check recorded tolerant score of 5, while tolerant checks recorded sensitive score of 6 & 7 SES which scored an SES scores of 6-7.

IET Nos. 30164, 30165, 30171, 30172, 30173 and 30174 recorded a tolerance score of 4.0 under sodicity and saline conditions and hence possess dual tolerance.

1. Alkaline Stress

Under alkalinity, the trial data was received from Karnal (sodic Microplot), Kapurthala, Kurukshetra, Anjanteli, Kanpur, Masodha, Lucknow, Kampasagar, Nawagam, Trichy, Mandya, Annamalainagar and Karaikal. However, data from Kapurthala, Masodha, Trichy and Nawagam was not included in the analysis due low stress levels and low

experimental mean. The data from sodic microplot evaluation was used for the identification of tolerant genotypes. Hence the data from eight locations namely were found suitable for analysis. Promising genotypes were identified based on significant critical difference of the test entries over the checks- either best check or over early check.

Performance Overall basis across locations

On overall basis, the mean grain yield ranged from 1960 kg/ha (Pusa 44) to 3518 kg/ha (IET 30165), days to 50% flowering varied from 83 days (CSR 10)–104 days (IET 30170). Plant height of the entries ranged from 81.04 cm (IET 30177) to 104.56 cm (IET 30163) and the panicles/m² varied from 232 (IET 29362) to 336 (IET 30171). Among the checks, local check (3438 kg/ha), recorded highest yield followed by CSR 36 (3181 kg/ha), CSR 23 (2992 kg/ha), CSR 10 (2471 kg/ha), FL 478 (2371 kg/ha) and Pusa 44 (1960 kg/ha). The flowering duration of the test entries varied from 89 (IET 30162) to 104 days (IET 30170) where most of the entries differed with early duration check CSR 10 with a range of 6 - 21 days. Hence, local check is the best check on overall basis. None of the test entries recorded significant yield improvement over the best check on overall basis and hence no entry merit promotion to AVT1-AL ISTVT.

Performance in Zone II

For Alkalinity stress, test locations in Zone-II consisted of Anjanteli, Kurukshetra and Kanpur. In zone-II, the mean grain yield ranged from 2005 kg/ha (Pusa 44) to 3825kg/ha (IET 30164), days to 50% flowering varied from 58 days (IET 30180) – 102 days (IET 30170). Among the checks, the alkaline check CSR 36 and early duration check CSR 10 recorded 86 and 80 days to 50% flowering respectively, while among the test entries the flowering duration varied from 58-102 days. Plant height of the entries ranged from 44.77 cm (IET 30180) to 121.68 cm (IET 30162) and the panicles/m² varied from 140 (CSR 10) to 297 (IET 30164). Among the checks, CSR36 (3406 kg/ha), recorded highest yield followed by local check (3219 kg/ha), CSR 23 (2888 kg/ha), FL 478 (2782 kg/ha), CSR 10 (2545 kg/ha), and Pusa 44 (2005 kg/ha).

The early duration cultures were compared with the early duration check- CSR 10 for their significance. CSR 10 recorded 80 days to 50% flowering in Zone-II. The standard error of mean (SEm) of 2 days was taken into account for early entries. Hence the three entries with 80±2 days plus significant yield superiority over the early check- CSR 10 were identified. IET 30165 (IIRRH 155) recorded a mean grain yield of 3534 kg/ha and 81 days recorded significant yield superiority over early check-CSR-10 in zone-II and is promoted. IET 30162 (NVSR 545) derived from cross combination of RP Bio226/IRGC71598//Nidhi recorded mean grain yield of 3140 kg/ha and 80 days to 50% flowering recorded significant yield superiority over early check-CSR-10 in zone-II and is promoted. Another culture, IET30178(NVSR 6361) derived from the cross NVSR-178/IR 71907-3R-2-1-1 with 3107 kg/ha grain yield and 82 days to 50% flowering exhibited significant superiority over the early check in zone-II and is promoted.

Performance in Zone III

For Alkalinity stress, test locations in Zone-III consisted of one location only namely Lucknow. In zone-III, the mean grain yield ranged from 1014 kg/ha (Pusa 44) to 3722 kg/ha (IET 29366), days to 50% flowering varied from 88 days (IET 28606) – 106 days (IET 29360). Among the checks, the alkaline check CSR 36 and early duration check CSR 10 recorded 109 and 93 days to 50% flowering respectively, while among the test entries the

flowering duration varied from 95 -112 days. Plant height of the entries ranged from 39.9 cm (IET 30179) to 65.8 cm (IET 30165) and the panicles/m² varied from 236 (IET 30166) to 427 (CSR 10). Among the checks, CSR 10 (3757 kg/ha) recorded highest yield followed by local check (3536 kg/ha), CSR 36 (1949 kg/ha) FL 478 (1356 kg/ha) CSR 23 (1160 kg/ha) and Pusa 44 (1060 kg/ha). Since CSR 10 is top yielder among the entries tested, none of the test entries recorded significant yield improvement over the best check in zone-III and hence none merit promotion to AVT1-AL ISTVT.

Performance in Zone VII

For Alkalinity stress, test locations in zone-VII consisted of Kampasagar, Trichy, Annamalainagar, Mandya, Brahmavar, Nawagam and Karaikal. The data from Kampasagar, Annamalainagar, Mandya and Karaikal were found suitable for analysis. In zone-VI, the mean grain yield ranged from 2094 kg/ha (CSR 10) to 3637kg/ha (IET 30165), days to 50% flowering varied from 91 days (IET 30162) – 108 days (IET 30175). Among the checks, the alkaline check CSR 36 and early duration check CSR 10 recorded 104 and 83 days to 50% flowering respectively, while among the test entries the flowering duration varied from 91-108 days. Plant height of the entries ranged from 81.04 cm (IET 30177) to 104.56 cm (IET 30163) and the panicles/m² varied from 238 (IET 29362) to 380 (IET 30172). Among the checks, local check (3577 kg/ha), recorded highest yield followed by CSR 23 (3529 kg/ha), CSR 36 (3320 kg/ha), FL 478 (2316 kg/ha), Pusa 44 (2152 kg/ha) and CSR 10 (2094 kg/ha).None of the test entries recorded significant yield improvement over the best check in zone-VII and hence none merit promotion to AVT1-AL ISTVT.

Table: Performance of entries/checks in IVT - AL & ISTVT under alkalinity, Kharif 2021

IET No/ Check name	Alkalinity				
	Overall/ DFP	Z-II (3)/ DFP	Z-III (1)/ DFP	Z-VII (4)/ DFP	
30165 IIRRH 155	--	3534 81	--	--	Promising in Z-II. Significant over early check (CSR 10).
30162 (NVS 545) RPBio226/IRGC71598//Nidhi	--	3140 80	--	--	Promising in Z-II. Significant over early check (CSR 10).
30178 NVS 6361 NVS-178/IR71907-3R-2-1-1	--	3107 82	--	--	Promising in Z-II. Significant over early check (CSR 10).
CSR 36 (Alkaline check)	3181 104	3406 86	1949 109	3320 104	
CSR 23 (Inland Saline check)	2992 99	2888 80	1160 107	3529 99	
CSR 10 (Early saline check)	2471 83	2545 80	3757 93	2094 83	
FL 478 (Saline Tolerant check)	2371 101	2782 82	1356 96	2316 101	
Pusa 44 (Sensitive check)	1960 98	2005 98	1060 103	2152 98	
Local check	3438 105	3219 102	3536 87	3577 105	
F value	11.28 (P< 0.0001)	5.28 (P< 0.0001)	16.4 (P< 0.0001)	15.25 (P< 0.0001)	
CD	307.59	493.42	465.67	321.53	
CV	7.66	9.9	16.4	7.65	

2. Inland Saline Stress

Overall Performance

For inland saline stress, the data from four locations namely Karnal, Panipat, Danti and Gangavati were received. The data from three locations except were suitable for analysis. Low experimental mean was recorded for the data from Danti. The mean grain yield on overall basis ranged from 2482 kg/ha (Pusa 44) to 4583 kg/ha (IET 30180), days to 50% flowering varied from 88 days (CSR 10) to 124 days (IET 30168). Plant height of the entries ranged from 62.5 cm (CSR 10) to 117 cm (IET 30162) and the panicles/m² varied from 230 (Pusa 44) to 340 (IET 30180). Among the checks, CSR 36 (4105 kg/ha) recorded highest yield followed by local check (3616 kg/ha), FL 478 (2913 kg/ha), CSR 23 (2846 kg/ha), Pusa 44 (2510 kg/ha), and CSR 10 (2482 kg/ha). Among the test entries, IET 30180 (RP Bio 4918-B2-24K) derived from swarna /*O.nivara* recorded mean grain yield of 4583 kg/ha and 115 days to 50% flowering recorded significant superiority over best check-CSR 36 on overall basis and is promoted to AVT1- ALISTVT.

Performance in Zone II

The inland saline stress trial in Zone II, the data from Panipat was found suitable in the final analysis. The mean grain yield on zone II ranged from 2120 kg/ha (Pusa 44) to 4180 kg/ha (IET 30164), days to 50% flowering varied from 88 days (CSR 10 & FL 478) to 123 days (IET 30168). Plant height of the entries ranged from 68 cm (CSR 10) to 128 cm (IET 30162) and the panicles/m² varied from 149 (IET 30170) to 298 (IET 30165). Among the checks, CSR 36 (3640 kg/ha) recorded highest yield followed by CSR 23 (3287 kg/ha), local check (3220 kg/ha), FL 478 (3053 kg/ha), CSR 10 (2753 kg/ha) and Pusa 44 (2120 kg/ha). The early duration cultures were compared with the early duration check- CSR 10 for their significance. CSR 10 recorded 88 days to 50% flowering in Zone-II. The standard error of mean (SEm) of 6 days was taken into account for early entries. Hence the entries with 88±6 days plus significant yield superiority over the early check- CSR 10 were identified.

Among the test entries, IET 30164(CSR 189-11-122), a backcross derivative of Sarjoo 52/ FL 478// Sarjoo 52*3 recorded mean grain yield of 4180 kg/ha with 94 days to 50% flowering exhibited significant superiority over best check-CSR 36 and early check-CSR-10 in zone-II and is promoted. IET 30165 (IIRRH 155), a hybrid culture with grain yield of 3793 kg/ha with 92 days to 50% flowering exhibited significant superiority over early check-CSR-10 in zone-II and is promoted. Another hybrid culture IET 30176 (IIRRH 156) also recorded significant yield superiority over early check-CSR-10 in zone-II with a yield of 3767 kg/ha and 91 days to 50 % flowering and is promoted. In addition, IET 30174 (NVSRR 6236), derived from the parentage of Gurjari/Jaya, with 3673 kg/ha and 91 days to 50% flowering exhibited significant superiority over the early check-CSR-10 in zone-II and is promoted to AVT1- ALISTVT.

IET Nos. 30164, 30165, 30176 and 30174 merit promotion in Zone II under inland salinity for second year of testing in AVT1-AL&ISTVT.

Performance in Zone VI

In Zone VI, data from single location from Danti recorded low experimental mean of less than 2000kg/ha and hence data is not considered. Hence zone-VI, none of the entries merit promotion.

Table: Performance of entries/checks in IVT - AL & ISTVT under inland salinity, Kharif 2021

IET No/ Check name	Inland Salinity			Remarks
	Overall (2)/ DFF	Z- II (1)/ DFF	Z- VII (1)/ DFF	
30180	4583 115	--	--	Significant over best check (BC). Promising on overall basis
30164	--	4180 94	--	Promising in Z-II. Significant over best check
30165	--	3793 92	--	Promising in Z-II. Significant over early check (CSR 10).
30176	--	3767 91	--	Promising in Z-II. Significant over early check (CSR 10).
30174	--	3673 91	--	Promising in Z-II. Significant over early check (CSR 10).
CSR 36 (Alkaline check)	4105 114	3640 104	4569 125	
CSR 23 (Inland Saline check)	2846 106	3287 95	2404 116	
CSR 10 (Early saline check)	2482 88	2753 88	2210 89	
FL 478 (Saline Tolerant check)	2913 97	3053 88	2772 106	
Pusa 44 (Sensitive check)	2510 110	2120 106	2900 114	
Local check	3616 103	3220 95	4011 112	
F value	6.39 (P< 0.0001)	4.26 (P< 0.0001)	12.45 (P< 0.0001)	
CD	558	616	705	
CV	10.05	11.2	10.22	

Performance in Zone VII

In Zone VI, data from single location from Gangavati is only available for analysis. This location recorded moderate salinity stress (pH 8.0 and EC 4.2 dSm⁻¹) and none of the entries exhibited significant yield superiority either over the best check- CSR 36 or early check-CSR 10. Hence none merit promotion to AVT1 ALISTVT.

The following entries were promoted to second year of testing in AL& ISTVT

1. Alkalinity

- Zone II: IET Nos. 30165, 30162 and 30178

2. Inland Salinity

- Overall Inland Salinity: IET 30180
- Zone II under Inland Salinity: IET nos. 30164, 30165, 30176 and 30174

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Table No.6.1: Composition of entries in Advance Variety Trial 2 & 1-Alkaline and Inland Saline Tolerant Variety Trial (AVT 2 & AVT 1-AL & ISTVT), Kharif 2021.

Entry No.	IET No.	Designation	Cross Combination	GT
3rd year of testing				
4801	28608	CSR 449S-13	CSR30 / CSR36	LS
4802	27077 (R)	RNR 11718	MTU 1010 / NLR 34449	MS
4803	27823	CSR MAGIC 157	Fedearroz 50 / SHZ-2 // PSBRc 82 / PSBRc 158 //// IR 77298-14-1-2-10 / IR 4630-22-2-5-1-3 // IR 45427-2B-2-2B-1-1 / Samba Mahsuri + Sub 1	LB
4804	28606	CSRM1-7	IR 71730-51-2 / NSIC RC 106	LS
4805	CSR 36 (Alkaline Check)			
4806	27807	KR 15066 (224-4-3-1-1)	ADT 45 / FL478	LB
2nd year of testing:				
4807	29356	CSAR-7-9-2020	Selection from BC-3-7-9	LB
4808	29365	CSR TPB 159	Trichy 1 / PB1	LB
4809	CSR 23 (Inland Saline Check)			
4810	29354	CSR YET 59	CSR27 / CSR36	LS
4811	29360	CSAR 12-10-2020	Selection from BC-12-12-10	LB
4812	CSR 10 (Early duration saline check)			
4813	29361	CSR CPB 69	CSR 89IR15 / PB1	LB
4814	29364	<i>IIRRH-147 (Hybrid)</i>	-	MS
4815	FL 478 (Saline tolerant check)			
4816	29366	CSR YET 8	CSR 27 / CSR 36	LB
4817	29358	CSR YET 55	CSR27 / CSR36	MS
4818	Pusa 44 (Sensitive Check)			
4819	29353	GNV 18-64	GNV 1109 / CSR 22	LS
4820	Local Check			

(R): Repeat

Table No.6.2: Grain Yield (kg/ha) of entries in (AVT 2 & AVT 1-AL & ISTVT), (Alkalinity), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN													
		HARYANA						HARYANA (2)			UTTAR PRADESH 1(1)			Z2 (3)	
		Anjanteli (Karnal)		Kurukshetra (Karnal)		Mean		KANPUR			Mean				
4801	28608 ^	4167	2 *	4093	2 *	4130	2 *	37%	1733			3331	4 *	19%	
4802	27077 (R)^	3527	10	3333		3430		14%	2929	1	10%	3263	7	16%	
4803	27823	4053	4 *	4073	3 *	4063	3 *	35%	1711			3279	6 *	17%	
4804	28606 ^	4240	1 *	4107	1 *	4174	1 *	38%	1318			3222	9	15%	
4805	CSR 36 (Alkaline Check)	1527		1560		1544			2669	4		1919			
4806	27807 ^	3660	9 *	3540	9	3600	9 *	19%	2078			3093		10%	
4807	29356	4080	3 *	4020	4 *	4050	4 *	34%	2711	2		3604	1 *	28%	
4808	29365	4027	5 *	3913	6	3970	5 *	31%	1933			3291	5 *	17%	
4809	CSR 23 (Inland Saline Check)	3107		3220		3164			2284	10		2870			
4810	29354	3907	6 *	3987	5 *	3947	6 *	31%	2669	4		3521	2 *	25%	
4811	29360	3513		3540	9	3527	10	17%	2433	8		3162	10	13%	
4812	CSR 10 (Early duration saline check)	3053		2700		2877			2078			2610			
4813	29361	3853	8 *	3773	7	3813	7 *	26%	2591	6		3406	3 *	21%	
4814	29364	3133		2993		3063			2100			2742			
4815	FL 478 (Saline tolerant check)	2680		2740		2710			1996			2472			
4816	29366	3887	7 *	3720	8	3804	8 *	26%	2156			3254	8	16%	
4817	29358	3527	10	3213		3370		12%	2698	3		3146		12%	
4818	Pusa 44 (Sensitive Check)	1400		1527		1464			1769			1565			
4819	29353	3367		3413		3390		12%	2464	7		3081		10%	
4820	Local Check	2800		3240		3020			2382	9		2807			
Exp. Mean		3375		3335		3355			2235			2982			
CD		574		735		536			712			468			
CV%		10.29		13.33		9.66			19.29			9.49			
D/S		07-01-2021		07-01-2021					07-03-2021						
D/P		28-07-2021		28-07-2021					08-12-2021						
Local Check Name		CSR 36		CSR 36					CSR 27						
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check			% superior over best check						

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Table No. 6.2 :Contd: Grain Yield (kg/ha) of entries in (AVT 2 & AVT 1-AL & ISTVT), (Alkalinity), Kharif 2021

Entry No	IET No	ZONE III		ZONE III -EASTERN			ZONE VII- SOUTHERN					Overall Mean (6)						
		UTTAR PRADESH2 (1)		UTTAR PRADESH (2)	Z3 (1)	Tamil Nadu (1)	PUDUCHERRY (1)		Z7 (2)									
		Lucknow-ICAR		Mean	Mean	Annamalainagar	Karaikal	Mean										
4801	28608 ^	2333		2033		2333		3058	9	2838		2948		3037	5			
4802	27077 (R)^	1319		2124		1319		2908		3130	6	3019	7	2858				
4803	27823	2167		1939		2167		2645		3246	4	2946		2983	9			
4804	28606 ^	1806		1562		1806		2932		2973		2953	10	2896				
4805	CSR 36 (Alkaline Check)	3167	3	2918	2	3167	3	3148	7	3036	10	3092	5	2518				
4806	27807 ^	1514		1796		1514		3373	2	7%	3618	1	3496	1*	13%	2964	10	
4807	29356	2778	10	2744	5	2778	10	3330	3	6%	3103	7	3217	4	3337	1*	15%	
4808	29365	2833	9	2383		2833	9	2535			2666		2601		2985	8		
4809	CSR 23 (Inland Saline Check)	2333		2309		2333		1615			1927		1771		2414			
4810	29354	2700		2684	8	2700		2633			3143	5	2888		3173	4	9%	
4811	29360	3000	5	2717	7	3000	5	2982			2728		2855		3033	6		
4812	CSR 10 (Early duration saline check)	3000	5	2539	10	3000	5	3107	8		2067		2587		2668			
4813	29361	2972	7	2782	4	2972	7	3175	6		3564	2	3370	2	9%	3321	2*	14%
4814	29364	3333	2	5%	2717	6	3333	2	5%	2843		2756		2800		2860		
4815	FL 478 (Saline tolerant check)	1806		1901		1806		2488			3466	3	2977	9	2529			
4816	29366	3722	1	18%	2939	1	3722	1	18%	3215	5	2802		3009	8	3250	3*	12%
4817	29358	1972		2335		1972		3550	1	13%	3046	9	3298	3	7%	3001	7	
4818	Pusa 44 (Sensitive Check)	1014		1391		1014		2083			2619		2351		1735			
4819	29353	3156	4		2810	3	3156	4		3235	4	1833		2534		2911		
4820	Local Check	2889	8		2636	9	2889	8		3055	10	3082	8	3069	6	2908		
Exp. Mean		2491		2363		2491		2896			2882		2889		2869			
CD		982		570		982		484			618		381		288			
CV%		23.85		14.58		23.85		10.1			12.98		7.98		6.07			
D/S		07-01-2021						16/7/2021			23-07-2021							
D/P		08-10-2021						08-11-2021			24-08-2021							
Local Check Name		CSR56						Trichy-2			TRY-2							
		^ 3rd year of testing.		*Superior to best check		#Superior over hybrid check		% superior over best check										

Table No. 6.2 : Grain Yield (kg/ha) of entries in (AVT 2 & AVT 1-AL & ISTVT), (Sodic Micro Plot), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN (1)		
		HARYANA (1)		
		Sodic (Karnal)		
4801	28608 ^	4370	2*	28%
4802	27077 (R)^	3704	10	9%
4803	27823	4222	3	24%
4804	28606 ^	4444	1*	30%
4805	CSR 36 (Alkaline Check)	2000		
4806	27807 ^	3407		
4807	29356	3852	8	13%
4808	29365	3926	6	15%
4809	CSR 23 (Inland Saline Check)	3111		
4810	29354	4148	4	22%
4811	29360	3111		
4812	CSR 10 (Early duration saline check)	3259		
4813	29361	4074	5	20%
4814	29364	3407		
4815	FL 478 (Saline tolerant check)	2815		
4816	29366	3926	6	15%
4817	29358	3778	9	11%
4818	Pusa 44 (Sensitive Check)	1852		
4819	29353	3704	10	9%
4820	Local Check	3407		
Exp. Mean		3526		
CD		917		
CV%		15.73		
D/S		07-01-2021		
D/P		28-07-2021		
Local Check Name		CSR 36		
		^ 3rd year of testing.		%superior over best check
		*Superior to best check		#Superior over hybrid check

Table No.6.2: Grain Yield (kg/ha) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Saline Micro Plot), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN (1)		
		HARYANA (1)		
		KAUL		
4801	28608 ^	4148	2*	34%
4802	27077 (R)^	3267	5%	
4803	27823	3926	4	27%
4804	28606 ^	4296	1*	39%
4805	CSR 36 (Alkaline Check)	1482		
4806	27807 ^	3471	10	12%
4807	29356	3556	9	15%
4808	29365	4074	3*	32%
4809	CSR 23 (Inland Saline Check)	3056		
4810	29354	3852	5	24%
4811	29360	3374	9%	
4812	CSR 10 (Early duration saline check)	3098		
4813	29361	3704	6	20%
4814	29364	3092		
4815	FL 478 (Saline tolerant check)	2774		
4816	29366	3630	8	17%
4817	29358	3326	7%	
4818	Pusa 44 (Sensitive Check)	1515		
4819	29353	3704	6.5	20%
4820	Local Check	3044		
Exp. Mean		3319		
CD		848		
CV%		15.46		
D/S		07-01-2021		
D/P		28/7/21		
Local Check Name		CSR 27		
		^ 3rd year of testing.		%superior over best check
		*Superior to best check		#Superior over hybrid check

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Table No.6.2: Grain Yield (kg/ha) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Saline), Kharif 2021

Entry No	IET No	ZONE II - NORTHERN (1)			ZONE VI - WESTERN			ZONE VII - SOUTHERN (1)			Overall Mean (3)	
		HARYANA (1)			GUJARAT (1)		Z6 (1)	KARNATAKA (1)				
		Panipat (Karnal)			NAVASARI		Mean	GANGAVATHI				
4801	28608 ^	4267	1 *	25%	2192		2192		2678		3046	9
4802	27077 (R)^	3467			2857	6	2857	6	4162	4	3495	3
4803	27823	4220	3 *	24%	1841		1841		3199		3087	8
4804	28606 ^	4248	2 *	25%	2692	7	2692	7	3396	10	3445	4
4805	CSR 36 (Alkaline Check)	1720			2955	2	2955	2	4339	2 6%	3005	
4806	27807 ^	3583		5%	2212		2212		2721		2839	
4807	29356	4168	4 *	22%	2993	1	2993	1	4287	3	3816	1 12%
4808	29365	4065	5 *	19%	2148		2148		2923		3045	10
4809	CSR 23 (Inland Saline Check)	3219			1902		1902		2968		2696	
4810	29354	3990	6 *	17%	2883	4	2883	4	2003		2959	
4811	29360	3468			2891	3	2891	3	3513	8	3291	6
4812	CSR 10 (Early duration saline check)	3153			2880	5	2880	5	2488		2840	
4813	29361	3873	8	14%	1679		1679		4106	5	3219	7
4814	29364	3253			2273		2273		3558	7	3028	
4815	FL 478 (Saline tolerant check)	3052			2620	9	2620	9	2233		2635	
4816	29366	3959	7	16%	2226		2226		2661		2949	
4817	29358	3586	10	5%	1795		1795		3464	9	2948	
4818	Pusa 44 (Sensitive Check)	1540			2515	10	2515	10	2122		2059	
4819	29353	3662	9	7%	2507		2507		4359	1 7%	3509	2
4820	Local Check	3410			2683	8	2683	8	4089	6	3394	5
Exp. Mean			3495		2437		2437		3264		3025	
CD			560		780		780		966		471	
CV%			9.69		19.37		19.37		14.14		9.42	
D/S			07-01-2021		30-06-2021				24-07-2021			
D/P			28/7/21		44294				31-08-2021			
Local Check Name			CSR 27		GNR-5				CSR 22			
			^ 3rd year of testing.			%superior over best check		#Superior to best check		#Superior over hybrid check		

Table No.6.2: Grain Yield (kg/ha) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN				ZONE III-EASTERN				ZONE VI - WESTERN				ZONE VII - SOUTHERN	
		PUNJAB (1)		Z2 (1)	UTTAR PRADESH (1)		Z3 (1)	GUJARAT (1)		Z6 (1)	TELANGANA (1)				
		LUDHIANA	Mean	MASODHA		Mean	NAWAGAM		Mean	KAMPASAGAR					
4801	28608 ^	2520	9	2520	9	4992	2	4992	2	4668		4668		4962	7
4802	27077 (R)^	1924		1924		4644	8	4644	8	5616	3	5616	3	7955	1 16%
4803	27823	2036		2036		4480	10	4480	10	4282		4282		3026	
4804	28606 ^	1831		1831		3764		3764		4067		4067		2212	
4805	CSR 36 (Alkaline Check)	3339	3	3339	3	3969		3969		6439	1	6439	1	6853	3
4806	27807 ^	2630	8	2630	8	4624	9	4624	9	4674	10	4674	10	6058	5
4807	29356	3143	5	3143	5	4828	5	4828	5	4807	9	4807	9	4551	10
4808	29365	1344		1344		4787	6	4787	6	3233		3233		4372	
4809	CSR 23 (Inland Saline Check)	3570	1	3570	1	3478		3478		3817		3817		1404	
4810	29354	2346	10	2346	10	3181		3181		3833		3833		4641	8
4811	29360	2176		2176		4746	7	4746	7	5402	6	5402	6	5872	6
4812	CSR 10 (Early duration saline check)	3405	2	3405	2	3519		3519		3459		3459		4250	
4813	29361	1994		1994		2576		2576		4573		4573		4564	9
4814	29364	3250	4	3250	4	4951	4	4951	4	5651	2	5651	2	6788	4
4815	FL 478 (Saline tolerant check)	1944		1944		4971	3	4971	3	4176		4176		855	
4816	29366	1805		1805		4214		4214		5372	7	5372	7	7327	2 7%
4817	29358	1617		1617		3294		3294		5177	8	5177	8	4179	
4818	Pusa 44 (Sensitive Check)	2887	6	2887	6	5115	1	5115	1	4020		4020		4513	
4819	29353	2818	7	2818	7	3539		3539		5539	4	5539	4	4096	
4820	Local Check	2308		2308		3682		3682		5533	5	5533	5	4385	
Exp. Mean		2444		2444		4168		4168		4717		4717		4643	
CD		516		516		381		381		1022		805		1620	
CV%		14.91		14.91		6.45		6.45		10.35		12.05		24.64	
D/S		01-07-2021				30/6/21				07-03-2021				29/6/21	
D/P		04-08-2021				08-03-2021				08-06-2021				08-03-2021	
Local Check Name		PR 118				NDR 2008				Dandi				KPS-2874	
			^ 3rd year of testing.			%superior over best check		#Superior to best check		#Superior over hybrid check					

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Table No. 6.2: contd.: Grain Yield (kg/ha) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN										Overall Mean (6)	
		TAMIL NADU	KARNATAKA			KARNATAKA (2)		Z7 (3)					
		@Trichy	MANDYA	BRAHMAWAR	Mean		Mean						
4801	28608 ^	1908	4070		2911	9	3491		3981	10	4021	9	
4802	27077 (R)^	3623	5650	2 *	2667		4159	5 * 14%	5424	2 * 19%	4743	2	
4803	27823	2675	3923		2800		3362		3250		3425		
4804	28606 ^	1996	2837		1822		2330		2290		2756		
4805	CSR 36 (Alkaline Check)	3538	4458	7	2311		3385		4541	5	4562	4	
4806	27807 ^	2940	3830		3913	4	3872	7 6%	4600	4	4288	5	
4807	29356	2073	4116	10	3067	7	3592	10	3911		4085	7	
4808	29365	2167	2492		1356		1924		2740		2931		
4809	CSR 23 (Inland Saline Check)	1817	3026		3649	5	3338		2693		3157		
4810	29354	1979	4916	5 *	3956	1	4436	3 * 22%	4504	6	3812		
4811	29360	3288	4407	8	2822	10	3615	9	4367	7	4238	6	
4812	CSR 10 (Early duration saline check)	929	2130		2267		2199		2882		3172		
4813	29361	3815	5152	3 *	2800		3976	6 9%	4172	8	3610		
4814	29364	3410	6077	1 *	2967	8	4522	2 * 24%	5277	3 * 16%	4947	1 8%	
4815	FL 478 (Saline tolerant check)	2388	3784		1844		2814		2161		2929		
4816	29366	4290	5122	4 *	3933	3	4528	1 * 24%	5461	1 * 20%	4629	3	
4817	29358	2719	3316		2278		2797		3258		3310		
4818	Pusa 44 (Sensitive Check)	3479	4032		649		2341		3065		3536		
4819	29353	2129	4470	6	3944	2	4207	4 * 16%	4170	9	4068	8	
4820	Local Check	4025	4146	9	3133	6	3640	8	3888		3865	10	
Exp. Mean		2759	4098		2754		3741		4008		3734		
CD			396		812		438		679		447		
CV%			6.83		14.08		8.27		11.96		8.46		
D/S		09-09-2021	21/7/21		23/7/21								
D/P			19/8/21		17/8/21								
Local Check Name		(TRY 3)	IR-30864		Karikagga								

^ 3rd year of testing.

%superior over best check

*Superior to best check

#Superior over hybrid check

Table No. 6.3: Days to 50% flowering of entries in (AVT 2 & AVT 1-AL & ISTVT) (Alkalinity), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE-III	
		HARYANA		HARYANA (2)	UTTAR PRADESH 1(1)	Z2 (3)	UTTAR PRADESH2 (1)	
		Anjanteli (Karnal)	Kurukshetra (Karnal)	Mean	KANPUR	Mean	Lucknow-ICAR	
4801	28608	93	95	94	58	82	103	
4802	27077 (R)	115	113	114	71	100	101	
4803	27823	101	102	102	57	87	100	
4804	28606	84	86	85	48	73	88	
4805	CSR 36 (Alkaline Check)	103	106	104	62	90	102	
4806	27807	90	91	91	58	80	105	
4807	29356	94	97	96	61	84	98	
4808	29365	94	93	94	48	78	89	
4809	CSR 23 (Inland Saline Check)	91	92	92	47	77	93	
4810	29354	94	94	94	48	79	92	
4811	29360	91	93	92	60	81	106	
4812	CSR 10 (Early duration saline check)	94	93	94	45	77	91	
4813	29361	84	86	85	45	72	96	
4814	29364	113	117	115	61	97	99	
4815	FL 478 (Saline tolerant check)	85	82	84	46	71	93	
4816	29366	85	85	85	64	78	95	
4817	29358	102	103	103	58	88	102	
4818	Pusa 44 (Sensitive Check)	109	109	109	60	93	106	
4819	29353	94	92	93	68	85	92	
4820	Local Check	105	109	107	58	91	102	
Exp. Mean		96	97	96	56	83	98	
SEm		1	2	1	1	1	1	

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Table No. 6.3 Contd: Days to 50% flowering of entries in (AVT 2 & AVT 1-AL & ISTVT) (Alkalinity), Kharif 2021

Entry No	IET No	ZONE-III		ZONE-VII			Overall Mean (6)
		UTTAR PRADESH (2)	Z3 (1)	Tamil Nadu (1)	PUDUCHERRY (1)	Z7 (2)	
		Mean	Mean	Annamalainagar	Karaikal	Mean	
4801	28608	81	103	82	96	89	88
4802	27077 (R)	86	101	85	106	95	98
4803	27823	78	100	87	108	98	92
4804	28606	68	88	78	89	84	79
4805	CSR 36 (Alkaline Check)	82	102	103	104	103	97
4806	27807	81	105	95	106	101	91
4807	29356	79	98	98	100	99	91
4808	29365	69	89	96	83	90	84
4809	CSR 23 (Inland Saline Check)	70	93	78	86	82	81
4810	29354	70	92	92	91	92	85
4811	29360	83	106	93	105	99	91
4812	CSR 10 (Early duration saline check)	68	91	85	80	82	81
4813	29361	71	96	101	104	102	86
4814	29364	80	99	91	103	97	97
4815	FL 478 (Saline tolerant check)	70	93	88	97	92	82
4816	29366	79	95	84	106	95	86
4817	29358	80	102	80	95	87	90
4818	Pusa 44 (Sensitive Check)	83	106	101	108	105	99
4819	29353	80	92	88	100	94	89
4820	Local Check	80	102	109	102	105	98
Exp. Mean		77	98	91	98	95	89
SEm		1	1	1	1	1	1

Table No. 6.3: Days to 50% flowering of entries in (AVT 2 & AVT 1-AL & ISTVT) (Sodic Micro Plot), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN (1)
		HARYANA (1)
		Sodic (Kamal)
4801	28608	89
4802	27077 (R)	116
4803	27823	104
4804	28606	87
4805	CSR 36 (Alkaline Check)	102
4806	27807	96
4807	29356	94
4808	29365	91
4809	CSR 23 (Inland Saline Check)	92
4810	29354	96
4811	29360	92
4812	CSR 10 (Early duration saline check)	91
4813	29361	93
4814	29364	105
4815	FL 478 (Saline tolerant check)	85
4816	29366	94
4817	29358	96
4818	Pusa 44 (Sensitive Check)	106
4819	29353	94
4820	Local Check	105
Exp. Mean		96
SEm		3

Table No. 6.3: Days to 50% flowering of entries in (AVT 2 & AVT 1-AL & ISTVT) (Saline Micro Plot), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN (1)
		HARYANA (1)
		KAUL
4801	28608	275
4802	27077 (R)	198
4803	27823	257
4804	28606	269
4805	CSR 36 (Alkaline Check)	135
4806	27807	222
4807	29356	220
4808	29365	268
4809	CSR 23 (Inland Saline Check)	184
4810	29354	253
4811	29360	210
4812	CSR 10 (Early duration saline check)	187
4813	29361	245
4814	29364	169
4815	FL 478 (Saline tolerant check)	175
4816	29366	233
4817	29358	216
4818	Pusa 44 (Sensitive Check)	140
4819	29353	257
4820	Local Check	175
Exp. Mean		214
SEm		1

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Table No. 6.3: Days to 50% flowering of entries in (AVT 2 & AVT 1-AL & ISTVT) (Saline), Kharif 2021

Entry No	IET No			ZONE VI - WESTERN		ZONE VII - SOUTHERN		Overall Mean (3)
		HARYANA (1)	Z2 (1)	GUJARAT (1)	Z6 (1)	KARNATAKA (1)	Z7 (1)	
		Panipat (Karnal)	Mean	NAVASARI	Mean	GANGAVATHI	Mean	
4801	28608	90	90	95	95	113	113	99
4802	27077 (R)	113	113	109	109	116	116	113
4803	27823	106	106	105	105	114	114	108
4804	28606	85	85	79	79	106	106	90
4805	CSR 36 (Alkaline Check)	98	98	99	99	110	110	102
4806	27807	98	98	92	92	114	114	101
4807	29356	95	95	92	92	114	114	100
4808	29365	90	90	81	81	106	106	92
4809	CSR 23 (Inland Saline Check)	92	92	78	78	89	89	86
4810	29354	97	97	85	85	111	111	97
4811	29360	93	93	96	96	117	117	102
4812	CSR 10 (Early duration saline check)	89	89	89	89	89	89	89
4813	29361	97	97	97	97	114	114	103
4814	29364	107	107	100	100	111	111	106
4815	FL 478 (Saline tolerant check)	85	85	81	81	108	108	91
4816	29366	97	97	100	100	117	117	105
4817	29358	91	91	92	92	106	106	96
4818	Pusa 44 (Sensitive Check)	109	109	97	97	118	118	108
4819	29353	95	95	90	90	114	114	100
4820	Local Check	94	94	97	97	110	110	100
Exp. Mean		96	96	93	93	110	110	99
SEm		3	3	2	2	1	1	1

Table No. 6.3: Days to 50% flowering of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN		ZONE III-EASTERN		ZONE VI - WESTERN		ZONE VII - SOUTHERN
		PUNJAB (1)	Z2 (1)	UTTAR PRADESH (1)	Z3 (1)	GUJARAT (1)	Z6 (1)	TELANGANA (1)
		LUDHIANA	Mean	MASODHA	Mean	NAWAGAM	Mean	KAMPASAGAR
4801	28608	99	99	103	103	85	85	98
4802	27077 (R)	113	113	95	95	103	103	101
4803	27823	113	113	99	99	95	95	96
4804	28606	93	93	101	101	78	78	95
4805	CSR 36 (Alkaline Check)	112	112	106	106	92	92	111
4806	27807	100	100	107	107	97	97	102
4807	29356	105	105	100	100	94	94	103
4808	29365	92	92	104	104	79	79	96
4809	CSR 23 (Inland Saline Check)	94	94	103	103	78	78	99
4810	29354	97	97	94	94	87	87	100
4811	29360	101	101	98	98	92	92	105
4812	CSR 10 (Early duration saline check)	97	97	100	100	83	83	117
4813	29361	108	108	103	103	89	89	104
4814	29364	106	106	98	98	92	92	99
4815	FL 478 (Saline tolerant check)	95	95	105	105	85	85	100
4816	29366	103	103	99	99	92	92	101
4817	29358	96	96	106	106	89	89	99
4818	Pusa 44 (Sensitive Check)	107	107	98	98	94	94	108
4819	29353	100	100	102	102	90	90	106
4820	Local Check	113	113	104	104	97	97	107
Exp. Mean		102	102	101	101	89	89	102
SEm		1	1	1	1	1	1	2

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Table No. 6.3 Contd: Days to 50% flowering of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					Overall Mean (6)
		TAMIL NADU	KARNATAKA		KARNATAKA (2)	Z7 (3)	
		@Trichy	MANDYA	BRAHMAWAR	Mean	Mean	
4801	28608	83	89	109	99	99	97
4802	27077 (R)	93	100	108	104	103	103
4803	27823	90	96	86	91	93	98
4804	28606	80	89	105	97	96	93
4805	CSR 36 (Alkaline Check)	103	113	107	110	110	107
4806	27807	90	99	101	100	101	101
4807	29356	91	91	102	97	99	99
4808	29365	76	89	110	99	98	95
4809	CSR 23 (Inland Saline Check)	76	83	99	91	93	92
4810	29354	83	89	109	99	99	96
4811	29360	91	98	106	102	103	100
4812	CSR 10 (Early duration saline check)	76	85	97	91	100	96
4813	29361	84	101	99	100	101	101
4814	29364	93	95	105	100	99	99
4815	FL 478 (Saline tolerant check)	90	93	107	100	100	97
4816	29366	91	97	95	96	97	97
4817	29358	84	92	107	99	99	98
4818	Pusa 44 (Sensitive Check)	93	104	107	105	106	103
4819	29353	80	98	95	96	99	98
4820	Local Check	103	103	105	104	105	105
Exp. Mean		88	95	103	99	100	99
SEm			1	1	1	2	1

Table No. 6.4: Plant Height (cm) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Alkalinity), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE-III	
		HARYANA		HARYANA (2)	UTTAR PRADESH 1(I)	Z2 (3)	UTTAR PRADESH2 (1)	
		Anjanteli (Karnal)	Kurukshetra (Karnal)	Mean	KANPUR	Mean	Lucknow-ICAR	
4801	28608	123.00	121.00	122.00	67.55	103.85	71.60	
4802	27077 (R)	103.00	94.00	98.50	111.77	102.92	66.10	
4803	27823	95.00	92.00	93.50	65.22	84.07	60.10	
4804	28606	115.00	105.00	110.00	71.11	97.04	55.20	
4805	CSR 36 (Alkaline Check)	110.00	108.00	109.00	92.55	103.52	70.20	
4806	27807	99.00	97.00	98.00	83.66	93.22	56.50	
4807	29356	114.00	116.00	115.00	81.10	103.70	71.90	
4808	29365	103.00	97.00	100.00	84.33	94.78	46.30	
4809	CSR 23 (Inland Saline Check)	115.00	110.00	112.50	88.11	104.37	61.70	
4810	29354	125.00	111.00	118.00	66.22	100.74	65.70	
4811	29360	125.00	110.00	117.50	87.10	107.37	63.60	
4812	CSR 10 (Early duration saline check)	81.00	124.00	102.50	68.55	91.18	48.40	
4813	29361	99.00	82.00	90.50	71.55	84.18	56.80	
4814	29364	129.00	98.00	113.50	98.10	108.37	65.40	
4815	FL 478 (Saline tolerant check)	96.00	125.00	110.50	69.70	96.90	46.20	
4816	29366	114.00	98.00	106.00	80.66	97.55	73.90	
4817	29358	102.00	115.00	108.50	62.77	93.26	47.90	
4818	Pusa 44 (Sensitive Check)	97.00	97.00	97.00	70.66	88.22	49.70	
4819	29353	97.00	96.00	96.50	76.33	89.78	58.60	
4820	Local Check	110.00	98.00	104.00	104.88	104.29	70.30	
Exp. Mean		107.60	104.70	106.15	80.10	97.47	60.31	

Table No. 6.4 contd.: Plant Height (cm) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Alkalinity), Kharif 2021

Entry No	IET No	ZONE-III		ZONE-VII			Overall Mean (6)
		UTTAR PRADESH (2)	Z3 (1)	Tamil Nadu (1)	PUDUCHERRY (1)	Z7 (2)	
		Mean	Mean	Annamalainagar	Karaikal	Mean	
4801	28608	69.58	71.60	85.00	109.33	97.17	96.25
4802	27077 (R)	88.94	66.10	98.00	109.77	103.88	97.11
4803	27823	62.66	60.10	90.00	112.43	101.22	85.79
4804	28606	63.16	55.20	77.00	111.30	94.15	89.10
4805	CSR 36 (Alkaline Check)	81.38	70.20	88.00	113.50	100.75	97.04
4806	27807	70.08	56.50	84.00	102.17	93.08	87.05
4807	29356	76.50	71.90	87.00	115.97	101.48	97.66
4808	29365	65.32	46.30	100.00	112.07	106.03	90.45
4809	CSR 23 (Inland Saline Check)	74.91	61.70	85.00	100.23	92.62	93.34
4810	29354	65.96	65.70	79.00	108.23	93.62	92.53
4811	29360	75.35	63.60	78.00	111.33	94.67	95.84
4812	CSR 10 (Early duration saline check)	58.48	48.40	89.00	79.87	84.43	81.80
4813	29361	64.18	56.80	86.00	97.27	91.63	82.10
4814	29364	81.75	65.40	93.00	117.97	105.48	100.24
4815	FL 478 (Saline tolerant check)	57.95	46.20	86.00	110.33	98.17	88.87
4816	29366	77.28	73.90	101.00	109.03	105.02	96.10
4817	29358	55.34	47.90	107.00	92.03	99.52	87.78
4818	Pusa 44 (Sensitive Check)	60.18	49.70	85.00	94.67	89.83	82.34
4819	29353	67.47	58.60	82.00	112.80	97.40	87.12
4820	Local Check	87.59	70.30	120.00	110.00	115.00	102.20
Exp. Mean		70.20	60.31	90.00	106.52	98.26	91.54

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Table No. 6.4: Plant Height (cm) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Sodic Micro Plot), Kharif 2021			Table No. 6.4: Plant Height (cm) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Saline Micro Plot), Kharif 2021		
Entry No	IET No	ZONE II-NORTHERN (1)	Entry No	IET No	ZONE II-NORTHERN (1)
		HARYANA (1)			HARYANA (1)
		Sodic (Karnal)			KAUL
4801	28608	84.00	4801	28608	110.00
4802	27077 (R)	75.00	4802	27077 (R)	72.00
4803	27823	73.00	4803	27823	82.00
4804	28606	75.00	4804	28606	79.00
4805	CSR 36 (Alkaline Check)	92.00	4805	CSR 36 (Alkaline Check)	91.00
4806	27807	66.00	4806	27807	59.00
4807	29356	72.00	4807	29356	77.00
4808	29365	80.00	4808	29365	74.00
4809	CSR 23 (Inland Saline Check)	91.00	4809	CSR 23 (Inland Saline Check)	80.00
4810	29354	95.00	4810	29354	75.00
4811	29360	86.00	4811	29360	90.00
4812	CSR 10 (Early duration saline check)	66.00	4812	CSR 10 (Early duration saline check)	61.00
4813	29361	80.00	4813	29361	62.00
4814	29364	94.00	4814	29364	91.00
4815	FL 478 (Saline tolerant check)	68.00	4815	FL 478 (Saline tolerant check)	64.00
4816	29366	110.00	4816	29366	87.00
4817	29358	65.00	4817	29358	69.00
4818	Pusa 44 (Sensitive Check)	72.00	4818	Pusa 44 (Sensitive Check)	66.00
4819	29353	82.00	4819	29353	85.00
4820	Local Check	80.00	4820	Local Check	100.00
Exp. Mean		80.30	Exp. Mean		78.70

Table No. 6.4: Plant Height (cm) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN		ZONE III-EASTERN		ZONE VI – WESTERN		ZONE VII – SOUTHERN
		PUNJAB (1)	Z2 (1)	UTTAR PRADESH (1)	Z3 (1)	GUJARAT (1)	Z6 (1)	TELANGANA (1)
		LUDHIANA	Mean	MASODHA	Mean	NAWAGAM	Mean	KAMPASAGAR
4801	28608	106.75	106.75	111.00	111.00	86.00	86.00	121.07
4802	27077 (R)	84.40	84.40	92.00	92.00	103.00	103.00	107.93
4803	27823	79.65	79.65	96.00	96.00	96.00	96.00	100.60
4804	28606	84.75	84.75	102.00	102.00	79.00	79.00	98.07
4805	CSR 36 (Alkaline Check)	92.80	92.80	103.00	103.00	91.00	91.00	105.93
4806	27807	81.80	81.80	112.00	112.00	96.00	96.00	105.27
4807	29356	90.85	90.85	102.00	102.00	94.00	94.00	105.87
4808	29365	85.00	85.00	105.00	105.00	79.00	79.00	91.87
4809	CSR 23 (Inland Saline Check)	108.40	108.40	107.00	107.00	78.00	78.00	107.00
4810	29354	91.00	91.00	96.00	96.00	87.00	87.00	103.60
4811	29360	98.95	98.95	92.00	92.00	93.00	93.00	113.67
4812	CSR 10 (Early duration saline check)	71.45	71.45	101.00	101.00	83.00	83.00	67.73
4813	29361	86.25	86.25	105.00	105.00	89.00	89.00	96.87
4814	29364	108.05	108.05	103.00	103.00	92.00	92.00	126.80
4815	FL 478 (Saline tolerant check)	83.70	83.70	107.00	107.00	85.00	85.00	88.53
4816	29366	103.80	103.80	96.00	96.00	92.00	92.00	127.07
4817	29358	84.65	84.65	107.00	107.00	89.00	89.00	93.53
4818	Pusa 44 (Sensitive Check)	78.80	78.80	96.00	96.00	94.00	94.00	90.87
4819	29353	90.20	90.20	104.00	104.00	90.00	90.00	100.40
4820	Local Check	82.00	82.00	107.00	107.00	98.00	98.00	105.40
Exp. Mean		89.66	89.66	102.20	102.20	89.70	89.70	102.90

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Table No. 6.4 Contd.: Plant Height (cm) of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					Overall Mean (6)
		TAMIL NADU	KARNATAKA		KARNATAKA (2)	Z7 (3)	
		@Trichy	MANDYA	BRAHMAWAR	Mean	Mean	
4801	28608	111.00	93.33	74.50	83.91	96.30	98.77
4802	27077 (R)	90.00	75.90	60.50	68.20	81.44	87.29
4803	27823	90.00	81.50	77.50	79.50	86.53	88.54
4804	28606	106.00	77.63	81.00	79.31	85.56	87.07
4805	CSR 36 (Alkaline Check)	100.00	94.75	51.00	72.88	83.89	89.75
4806	27807	110.00	94.65	63.00	78.83	87.64	92.12
4807	29356	109.00	105.80	54.50	80.15	88.72	92.17
4808	29365	87.00	91.13	72.50	81.81	85.16	87.42
4809	CSR 23 (Inland Saline Check)	104.00	101.30	42.50	71.90	83.60	90.70
4810	29354	102.00	93.35	61.00	77.18	85.98	88.66
4811	29360	119.00	104.15	69.50	86.83	95.77	95.21
4812	CSR 10 (Early duration saline check)	60.00	58.75	64.00	61.38	63.49	74.32
4813	29361	97.00	94.50	80.50	87.50	90.62	92.02
4814	29364	116.00	106.35	71.00	88.68	101.38	101.20
4815	FL 478 (Saline tolerant check)	103.00	87.10	70.00	78.55	81.88	86.89
4816	29366	133.00	108.90	51.50	80.20	95.82	96.54
4817	29358	84.00	77.85	60.50	69.18	77.29	85.42
4818	Pusa 44 (Sensitive Check)	94.00	82.60	66.50	74.55	79.99	84.79
4819	29353	96.00	83.00	73.50	78.25	85.63	90.18
4820	Local Check	120.00	90.00	81.00	85.50	92.13	93.90
Exp. Mean		101.55	90.13	66.30	78.21	86.44	90.15

Table No. 6.5: Panicles/m2 of entries in (AVT 2 & AVT 1-AL & ISTVT) (Alkalinity), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN					ZONE-III	
		HARYANA		HARYANA (2)	UTTAR PRADESH 1(1)	Z2 (3)	UTTAR PRADESH2 (1)	
		Anjanteli (Karnal)	Kurukshetra (Karnal)	Mean	KANPUR	Mean	Lucknow-ICAR	
4801	28608	281	277	279	171	243	391	
4802	27077 (R)	206	207	206	297	237	288	
4803	27823	251	251	251	162	221	325	
4804	28606	264	261	263	174	233	286	
4805	CSR 36 (Alkaline Check)	135	137	136	299	190	393	
4806	27807	221	221	221	291	244	305	
4807	29356	224	221	222	258	234	334	
4808	29365	271	273	272	286	277	372	
4809	CSR 23 (Inland Saline Check)	183	177	180	253	205	372	
4810	29354	251	248	250	167	222	333	
4811	29360	216	217	216	197	210	450	
4812	CSR 10 (Early duration saline check)	186	186	186	309	227	398	
4813	29361	244	244	244	205	231	457	
4814	29364	164	164	164	270	199	518	
4815	FL 478 (Saline tolerant check)	173	173	173	203	183	408	
4816	29366	239	239	239	284	254	383	
4817	29358	219	219	219	176	205	378	
4818	Pusa 44 (Sensitive Check)	144	144	144	168	152	316	
4819	29353	257	257	257	301	272	310	
4820	Local Check	176	176	176	279	210	422	
Exp. Mean		215	215	215	238	222	372	

Table No. 6.5 Contd.: Panicles/m2 of entries in (AVT 2 & AVT 1-AL & ISTVT) (Alkalinity), Kharif 2021

Entry No	IET No	ZONE-III		ZONE-VII			Overall Mean (6)
		UTTAR PRADESH (2)	Z3 (1)	Tamil Nadu (1)	PUDUCHERRY (1)	Z7 (2)	
		Mean	Mean	Annamalainagar	Karaikal	Mean	
4801	28608	281	391	238	489	363	308
4802	27077 (R)	293	288	267	644	456	318
4803	27823	243	325	261	444	353	282
4804	28606	230	286	234	367	300	264
4805	CSR 36 (Alkaline Check)	346	393	196	500	348	277
4806	27807	298	305	171	578	374	298
4807	29356	296	334	295	644	470	329
4808	29365	329	372	184	433	309	303
4809	CSR 23 (Inland Saline Check)	312	372	205	356	280	258
4810	29354	250	333	234	367	300	267
4811	29360	323	450	272	444	358	299
4812	CSR 10 (Early duration saline check)	354	398	200	367	283	274
4813	29361	331	457	264	356	310	295
4814	29364	394	518	196	433	314	291
4815	FL 478 (Saline tolerant check)	306	408	216	378	297	259
4816	29366	334	383	266	633	450	341
4817	29358	277	378	290	500	395	297
4818	Pusa 44 (Sensitive Check)	242	316	138	456	297	228
4819	29353	305	310	326	644	485	349
4820	Local Check	350	422	314	367	340	289
Exp. Mean		305	372	238	470	354	291

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Table No. 6.5.: Panicles/m2 of entries in (AVT 2 & AVT 1-AL & ISTVT) (Sodic Micro Plot), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN (1)	
		HARYANA (1)	
		Sodic (Karnal)	
4801	28608		253
4802	27077 (R)		197
4803	27823		266
4804	28606		288
4805	CSR 36 (Alkaline Check)		131
4806	27807		218
4807	29356		211
4808	29365		279
4809	CSR 23 (Inland Saline Check)		195
4810	29354		258
4811	29360		211
4812	CSR 10 (Early duration saline check)		188
4813	29361		258
4814	29364		170
4815	FL 478 (Saline tolerant check)		178
4816	29366		226
4817	29358		227
4818	Pusa 44 (Sensitive Check)		144
4819	29353		259
4820	Local Check		175
Exp. Mean			217

Table No. 6.5.: Panicles/m2 of entries in (AVT 2 & AVT 1-AL & ISTVT) (Saline Micro Plot), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN (1)	
		HARYANA (1)	
		KAUL	
4801	28608		275
4802	27077 (R)		198
4803	27823		257
4804	28606		269
4805	CSR 36 (Alkaline Check)		135
4806	27807		222
4807	29356		220
4808	29365		268
4809	CSR 23 (Inland Saline Check)		184
4810	29354		253
4811	29360		210
4812	CSR 10 (Early duration saline check)		187
4813	29361		245
4814	29364		169
4815	FL 478 (Saline tolerant check)		175
4816	29366		233
4817	29358		216
4818	Pusa 44 (Sensitive Check)		140
4819	29353		257
4820	Local Check		175
Exp. Mean			214

Table No. 6.5.: Panicles/m2 of entries in (AVT 2 & AVT 1-AL & ISTVT) (Saline), Kharif 2021

Entry No	IET No	HARYANA (1)		ZONE VI – WESTERN		ZONE VII – SOUTHERN		Overall Mean (3)
		Panipat (Karnal)		GUJARAT (1)	Z6 (1)	KARNATAKA (1)	Z7 (1)	
				NAVASARI	Mean	GANGAVATHI	Mean	
4801	28608	275	275	300	300	305	305	293
4802	27077 (R)	198	198	369	369	401	401	323
4803	27823	257	257	267	267	384	384	303
4804	28606	269	269	276	276	377	377	307
4805	CSR 36 (Alkaline Check)	135	135	288	288	368	368	264
4806	27807	222	222	294	294	323	323	280
4807	29356	220	220	306	306	348	348	291
4808	29365	268	268	288	288	298	298	285
4809	CSR 23 (Inland Saline Check)	184	184	321	321	265	265	257
4810	29354	253	253	309	309	389	389	317
4811	29360	210	210	291	291	358	358	286
4812	CSR 10 (Early duration saline check)	187	187	339	339	379	379	302
4813	29361	245	245	276	276	349	349	290
4814	29364	169	169	303	303	330	330	267
4815	FL 478 (Saline tolerant check)	175	175	279	279	384	384	279
4816	29366	233	233	300	300	398	398	310
4817	29358	216	216	264	264	368	368	283
4818	Pusa 44 (Sensitive Check)	140	140	282	282	414	414	279
4819	29353	257	257	303	303	388	388	316
4820	Local Check	175	175	327	327	346	346	283
Exp. Mean		214	214	299	299	359	359	291

Table No. 6.5: Panicles/m2 of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE II-NORTHERN		ZONE III-EASTERN		ZONE VI – WESTERN	
		PUNJAB (1)	Z2 (1)	UTTAR PRADESH (1)	Z3 (1)	GUJARAT (1)	Z6 (1)
		LUDHIANA	Mean	MASODHA	Mean	NAWAGAM	Mean
4801	28608	208	208	266	266	298	298
4802	27077 (R)	180	180	262	262	295	295
4803	27823	197	197	263	263	289	289
4804	28606	184	184	247	247	236	236
4805	CSR 36 (Alkaline Check)	217	217	229	229	281	281
4806	27807	204	204	262	262	292	292
4807	29356	210	210	253	253	262	262
4808	29365	208	208	256	256	277	277
4809	CSR 23 (Inland Saline Check)	198	198	216	216	301	301
4810	29354	175	175	211	211	286	286
4811	29360	201	201	252	252	289	289
4812	CSR 10 (Early duration saline check)	238	238	226	226	262	262
4813	29361	253	253	211	211	280	280
4814	29364	216	216	253	253	275	275
4815	FL 478 (Saline tolerant check)	184	184	261	261	245	245
4816	29366	238	238	247	247	266	266
4817	29358	231	231	211	211	307	307
4818	Pusa 44 (Sensitive Check)	194	194	267	267	289	289
4819	29353	217	217	234	234	316	316
4820	Local Check	220	220	244	244	245	245
Exp. Mean		209	209	243	243	279	279

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Table No. 6.5: Panicles/m² of entries in (AVT 2 & AVT 1-AL & ISTVT) (Normal), Kharif 2021

Entry No	IET No	ZONE-VII Southern					Overall Mean (5)
		TAMIL NADU	KARNATAKA		KARNATAKA (2)	Z7 (2)	
		@Trichy	MANDYA	BRAHMAWAR	Mean	Mean	
4801	28608	292	338	120	229	229	246
4802	27077 (R)	348	337	161	249	249	247
4803	27823	281	302	179	240	240	246
4804	28606	253	262	96	179	179	205
4805	CSR 36 (Alkaline Check)	361	297	103	200	200	225
4806	27807	227	302	190	246	246	250
4807	29356	209	353	176	265	265	251
4808	29365	234	307	96	201	201	229
4809	CSR 23 (Inland Saline Check)	263	358	188	273	273	252
4810	29354	291	278	165	221	221	223
4811	29360	337	277	137	207	207	231
4812	CSR 10 (Early duration saline check)	206	389	105	247	247	244
4813	29361	317	310	119	214	214	235
4814	29364	286	315	115	215	215	235
4815	FL 478 (Saline tolerant check)	258	272	98	185	185	212
4816	29366	355	312	189	250	250	250
4817	29358	219	350	107	228	228	241
4818	Pusa 44 (Sensitive Check)	322	288	86	187	187	225
4819	29353	243	322	164	243	243	250
4820	Local Check	316	279	168	223	223	231
Exp. Mean		281	312	138	225	225	236

Table No. 6.6: Grain quality characteristics of entries in (AVT 2 & AVT 1-AL & ISTVT) analyzed at ICAR-IIRR, Hyderabad, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
4801	28608	78.8	70.3	69.1	7.09	2.17	3.26	LS	A	4.0	26.22	22
4802	27077	77.2	68.7	67.4	5.41	2.08	2.60	MS	VOC	7.0	23.93	46
4803	27823	78.9	71.9	69.8	6.11	2.31	2.64	LB	VOC	5.0	25.34	22
4804	28606	78.9	70.0	66.6	8.29	1.99	4.16	LS	A	7.0	23.73	44
4805	CSR-36	79.0	70.6	67.4	7.05	2.14	3.29	LS	VOC	4.0	25.75	45
4806	27807	76.0	68.3	64.5	6.28	2.29	2.74	LB	VOC	4.0	27.28	41
4807	29356	79.5	71.9	68.1	6.61	2.27	2.91	LB	VOC	7.0	19.36	47
4808	29365	78.6	71.9	60.8	6.68	2.23	2.99	LB	A	7.0	24.64	22
4809	CSR-23	79.3	69.5	58.1	5.44	2.34	2.32	SB	VOC	4.0	22.88	52
4810	29354	79.6	70.2	66.1	7.63	2.12	3.59	LS	A	4.0	24.81	22
4811	29360	79.1	73.1	71.6	6.61	2.28	2.89	LB	A	4.0	21.91	22
4812	CSR-10	78.4	71.3	69.4	5.50	2.51	2.19	SB	VOC	4.0	24.05	41
4813	29361	78.4	69.2	67.3	6.49	2.24	2.89	LB	A	4.0	25.40	22
4814	29364	80.8	72.3	70.7	5.60	2.05	2.73	MS	VOC	7.0	24.37	22
4815	FL-478	81.6	69.8	66.9	6.37	2.30	2.76	LB	VOC	4.0	24.72	22
4816	29366	79.4	72.9	71.6	6.55	2.30	2.84	LB	A	4.0	22.85	22
4817	29358	80.6	72.1	71.5	5.08	1.86	2.73	MS	A	4.0	22.23	23
4818	Pusa-44	79.9	72.4	71.1	5.52	2.11	2.61	MS	VOC	7.0	23.58	32
4819	29353	77.6	70.0	68.6	6.62	2.07	3.19	LS	VOC	4.0	21.88	42
4820	Local Check											

HULL: Hulling (%); **MILL:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length (mm); **KB:** Kernel Breadth (mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content(%); **GC:** Gel Consistency; **LB:** Long Bold; **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

Table No. 6.7: Composition of entries in Initial Variety Trial -Alkaline and Inland Saline Tolerant Variety Trial – (IVT-AL&ISTVT), Kharif 2021.

Entry No.	IET No.	Designation	Cross Combination	GT
1st year of testing:				
4901	30162	NVSR 545	(RP Bio-226 / IRGC71598) / Nidhi	LS
4902	30163	TR 15045	CSR 36 / IRGC 41-05 // RP Bio 226	SS
4903	30164	CSR 189-11-122	Sajoo 52 / FL478 // Sajoo 52 *3	MB
4904	30165	IIRRH 155 (Hybrid)	-	LS
4905	30166	NDRU 2022	NDR 2008 / BPT 5204	SB
4906	30167	GNV 1109	Selection from ISH 58 / Matataga 6	LB
4907	CSR 36 (Alkaline Check)			
4908	30168	RP Bio 4918-B2-175K-2	Swarna / O. nivara	MS
4909	30169	KPS 6315	MTU 1010 / JGL 13595	LS
4910	CSR 23 (Inland Saline Check)			
4911	30170	NDRU 2021	Narendra UsarDhan 3 / BPT 5204	SB
4912	30171	RP 6112-MS-M-10-2-9-5-23-6-1	BPT 5204 Mutant	MB
4913	30172	CSR 179-11-11	Pusa44 / FL478 // Pusa 44 *3	LS
4914	30173	CSR 189-11-2	Sajoo 52 / FL478 // Sajoo52*3	MS
4915	CSR 10 (Early duration saline check)			
4916	30174	NVSR 6403	Gurjari / Jaya	LS
4917	30175	TR 15029	CSR 36 / IRGC 41-05 // RP Bio 226	MS
4918	30176	IIRRH 156 (Hybrid)	-	MS
4919	FL 478 (Saline tolerant check)			
4920	29362 (R)	NVSR 6236	IET 15429 / IR 72046-B-R-8-3-1-2	LS
4921	30177	CSR 179-11-263	Pusa 44 / FL478 // Pusa 44 * 3	MS
4922	30178	NVSR 6361	NVSR-178 / IR 71907-3R-2-1-1	LB
4923	Pusa 44 (Sensitive Check)			
4924	30179	CSR 179-11-215	Pusa44 / FL478 // Pusa 44 * 3	LB
4925	30180	RP Bio 4918-B2-24K	Swarna / O. nivara	SB
4926	Local Check			

(R) : Repeat

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Table No. 6.8: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT-AL&ISTVT (Alkalinity), Kharif 2021

Entry No	IET No.	ZONE II-NORTHERN												ZONE III-EASTERN					
		HARYANA						UTTAR PRADESH 1			Z2 (3)			UTTAR PRADESH 2(1)			Z3 (1)		
		Anianteli (Karnal)			Kurukshetra (Karnal)			KANPUR			Mean			Lucknow-ICAR			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4901	30162	3567	9	91	3680	9	93	2173		55	3140		80	2595	9	108	2595	9	108
4902	30163	3073		106	3253		115	4003	1	63	3443	6	94	1003		103	1003		103
4903	30164	3973	2	95	4073	1	96	3430	2	70	3825	1	87	3243	4	105	3243	4	105
4904	30165	3967	3	93	3693	8	90	2943	6	61	3534	2	81	2995	6	101	2995	6	101
4905	30166	2800		108	3253		112	2277		56	2777		92	1035		95	1035		95
4906	30167	3107		100	3247		95	1927		59	2760		85	2880	8	103	2880	8	103
4907	CSR 36 (Alkaline Check)	3500	10	106	3767	7	93	2950	5	58	3406	7	86	1949		109	1949		109
4908	30168	3173		120	3053		121	1697		59	2641		100	1186		103	1186		103
4909	30169	3047		96	3100		108	1877		58	2675		87	3089	5	102	3089	5	102
4910	CSR 23 (Inland Saline Check)	3093		85	3187		84	2383		70	2888		80	1160		107	1160		107
4911	30170	3080		126	3047		125	2623		56	2917		102	942		104	942		104
4912	30171	3080		77	3447		74	2037		62	2855		71	1147		97	1147		97
4913	30172	4013	1	108	3827	5	98	2660	10	55	3500	3	87	2927	7	108	2927	7	108
4914	30173	3800	7	73	3907	2	61	2113		56	3273	8	63	983		105	983		105
4915	CSR 10 (Early duration saline check)	2760		93	2853		90	2023		58	2545		80	3757	1	93	3757	1	93
4916	30174	3820	5	106	3800	6	112	2760	8	57	3460	5	92	1140		112	1140		112
4917	30175	2707		92	3000		91	1863		61	2523		81	2410	10	109	2410	10	109
4918	30176	3807	6	85	3833	4	88	2770	7	58	3470	4	77	3435	3	108	3435	3	108
4919	FL 478 (Saline tolerant check)	2833		97	2947		98	2567		51	2782		82	1356		96	1356		96
4920	29362 (R)	3347		97	3407		102	2617		62	3124		87	2301		100	2301		100
4921	30177	3900	4	115	3873	3	120	1660		59	3144		98	1283		108	1283		108
4922	30178	3100		96	2893		95	3327	3	56	3107		82	1872		106	1872		106
4923	Pusa 44 (Sensitive Check)	2140		116	1907		119	1967		59	2005		98	1060		103	1060		103
4924	30179	3753	8	106	3633	10	110	2377		51	3254	9	89	1072		104	1072		104
4925	30180							2737	9	58	2737		58						
4926	Local Check (LC)	3220		119	3240		123	3197	4	64	3219	10	102	3536	2	87	3536	2	87
Exp. Mean		3306	100	3357	101	2498	59	3039	86	2014	103	2014	103						
F Value		4.45(p<0.0001)S			4.45(p<0.0001)S			2.74(p=0.0010)S			5.28(p<0.0001)S			31.79(p<0.0001)S			31.79(p<0.0001)S		
SEm		5			4			1			2			2			2		
CD		630.31			618.85			994.84			493.42			465.67			465.67		
CV%		12			11.22			24.28			9.9			16.4			16.4		
D/S		01-07-2021			01-07-2021			03-07-2021						01-07-2021					
D/P		28-07-2021			28-07-2021			11-08-2021						11-08-2021					
Local Check Name		CSR 36			CSR 36			CSR 27						CSR56					

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 6.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT-AL&ISTVT (Alkalinity), Kharif 2021

Entry No	IET No.	ZONE VII - SOUTHERN															Overall Mean (8)		
		TELANGANA (1)			TAMIL NADU (1)			KARNATAKA (1)			PUDUCHERRY (1)			Z7 (4)					
		KAMPASAGAR			ANNAMALAINAGAR			MANDYA			Karaikal			Mean					
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
4901	30162	2801		90	3485	4	90	3121		90	2648		96	3014		91	3009	7	89
4902	30163	2442		104	3490	3	95	3652		113	3316	5	110	3225	7	105	3029	6	101
4903	30164	2994	10	83	3085	10	98	3832	8	101	2653		91	3141	9	93	3410	3	92
4904	30165	3397	7	93	3311	8	87	5248	1 *	101	2592		97	3637	1	94	3518	1	90
4905	30166	1974		93	1432		98	3383		95	2588		104	2344		97	2343		95
4906	30167	2590		93	3392	5	101	3674	10	93	2749		102	3101		97	2946		93
4907	CSR 36 (Alkaline Check)	5167	1	103	2847		89	2258		122	3007	8	101	3320	6	104	3181	5	98
4908	30168	3968	5	103	2097		87	3488		111	2749		110	3076		103	2676		102
4909	30169	2654		84	3375	6	94	3342		97	2122		97	2873		93	2826		92
4910	CSR 23 (Inland Saline Check)	3263	8	92	3275	9	97	4580	2 *	102	2997	9	106	3529	4	99	2992	9	93
4911	30170	4256	2	103	1844		104	3534		104	3853	1	108	3372	5	105	2897		104
4912	30171	4199	3	94	3329	7	86	3913	7	101	2727		105	3542	3	96	2985	10	87
4913	30172	3526	6	94	2789		102	4149	4 *	105	1816		106	3070		102	3213	4	97
4914	30173	1981		88	3004		106	3497		102	2547		110	2757		102	2729		88
4915	CSR 10 (Early duration saline check)	1795		77	2399		88	1935		84	2248		82	2094		83	2471		83
4916	30174	3071	9	88	2962		106	3971	5	102	2419		98	3106	10	99	2993	8	98
4917	30175	2429		104	4079	1 *	94	2171		124	3632	2	111	3078		108	2786		98
4918	30176	1462		80	1919		99	3502		103	2547		106	2358		97	2909		91
4919	FL 478 (Saline tolerant check)	1609		108	1671		100	2625		98	3357	4	100	2316		101	2371		94
4920	29362 (R)	2051		92	1826		100	4432	3 *	96	2872		105	2795		98	2857		94
4921	30177	2051		92	1857		103	3118		100	3174	7	103	2550		99	2615		100
4922	30178	2494		89	2901		84	3925	6	97	3253	6	106	3143	8	94	2971		91
4923	Pusa 44 (Sensitive Check)	1128		94	1894		95	2870		102	2717		100	2152		98	1960		98
4924	30179	1462		95	2347		87	2861		98	2873		103	2386		96	2547		94
4925	30180	2782			2286		100	3362		101	3557	3	107	2997		102	2945		91
4926	Local Check (LC)	3981	4	103	3536	2	123	3825	9	96	2967	10	98	3577	2	105	3438	2	102
Exp. Mean		2751		94	2709		96	3472		101	2845		102	2944		99	2870		94
F Value		6.77(p<0.0001)S			19.71(p<0.0001)S			48.57(p<0.0001)S			4.44(p<0.0001)S			15.25(p<0.0001)S			11.28(p<0.0001)S		
SEm				2			7			1			1			1			1
CD		675.25			435.73			286.42			624.86			321.53			307.59		
CV%		14.96			11.42			5.86			13.39			7.65			7.66		
D/S		28-06-2021			16-07-2021			21-07-2021			19-07-2021								
D/P		05-08-2021			11-08-2021			19-08-2021			24-08-2021								
Local Check Name		KPS-2874			Trichy 2			IR-30864			TRY-2								

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Table No. 6.8.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – AL&ISTVT (Alkalinity), (State Means), Kharif 2021

Entry No	IET No.	HARYANA (2)			UTTAR PRADESH 1(1)			UTTAR PRADESH 2(1)			UTTAR PRADESH (2)		
		Mean			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4901	30162	3624	10	92	2173		55	2595	9	108	2384		82
4902	30163	3163		110	4003	1	63	1003		103	2503	9	83
4903	30164	4023	1	95	3430	2	70	3243	4	105	3337	2	88
4904	30165	3830	5	92	2943	6	61	2995	6	101	2969	4	81
4905	30166	3027		110	2277		56	1035		95	1656		76
4906	30167	3177		98	1927		59	2880	8	103	2404		81
4907	CSR 36 (Alkaline Check)	3634	9	100	2950	5	58	1949		109	2450		83
4908	30168	3113		121	1697		59	1186		103	1442		81
4909	30169	3074		102	1877		58	3089	5	102	2483	10	80
4910	CSR 23 (Inland Saline Check)	3140		85	2383		70	1160		107	1772		88
4911	30170	3064		126	2623		56	942		104	1783		80
4912	30171	3264		75	2037		62	1147		97	1592		80
4913	30172	3920	2	103	2660	10	55	2927	7	108	2794	6	81
4914	30173	3854	4	67	2113		56	983		105	1548		81
4915	CSR 10 (Early duration saline check)	2807		92	2023		58	3757	1	93	2890	5	76
4916	30174	3810	7	109	2760	8	57	1140		112	1950		85
4917	30175	2854		91	1863		61	2410	10	109	2137		85
4918	30176	3820	6	86	2770	7	58	3435	3	108	3103	3	83
4919	FL 478 (Saline tolerant check)	2890		98	2567		51	1356		96	1962		74
4920	29362 (R)	3377		100	2617		62	2301		100	2459		81
4921	30177	3887	3	118	1660		59	1283		108	1472		83
4922	30178	2997		96	3327	3	56	1872		106	2600	8	81
4923	Pusa 44 (Sensitive Check)	2024		117	1967		59	1060		103	1514		81
4924	30179	3693	8	108	2377		51	1072		104	1725		77
4925	30180				2737	9	58				2737	7	58
4926	Local Check (LC)	3230		121	3197	4	64	3536	2	87	3367	1	76
Exp. Mean		3332		100	2498		59	2014		103	2270		80
F Value		7.17(p<0.0001)S			2.74(p<0.0010)S			31.79(p<0.0001)S			8.13(p<0.0001)S		
SEm				3			1			2			2
CD		482.1			994.84			465.67			639.02		
CV%		8.81			24.28			16.4			20.281		

Table No. 6.8 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – AL&ISTVT (Alkalinity), (State Means), Kharif 2021

Entry No	IET No.	TELANGANA (1)			TAMIL NADU (1)			KARNATAKA (1)			PUDUCHERRY (1)		
		Mean			Mean			Mean			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4901	30162	2801		90	3485	4	90	3121		90	2648		96
4902	30163	2442		104	3490	3	95	3652		113	3316	5	110
4903	30164	2994	10	83	3085	10	98	3832	8	101	2653		91
4904	30165	3397	7	93	3311	8	87	5248	1 *	101	2592		97
4905	30166	1974		93	1432		98	3383		95	2588		104
4906	30167	2590		93	3392	5	101	3674	10	93	2749		102
4907	CSR 36 (Alkaline Check)	5167	1	103	2847		89	2258		122	3007	8	101
4908	30168	3968	5	103	2097		87	3488		111	2749		110
4909	30169	2654		84	3375	6	94	3342		97	2122		97
4910	CSR 23 (Inland Saline Check)	3263	8	92	3275	9	97	4580	2 *	102	2997	9	106
4911	30170	4256	2	103	1844		104	3534		104	3853	1	108
4912	30171	4199	3	94	3329	7	86	3913	7	101	2727		105
4913	30172	3526	6	94	2789		102	4149	4 *	105	1816		106
4914	30173	1981		88	3004		106	3497		102	2547		110
4915	CSR 10 (Early duration saline check)	1795		77	2399		88	1935		84	2248		82
4916	30174	3071	9	88	2962		106	3971	5	102	2419		98
4917	30175	2429		104	4079	1 *	94	2171		124	3632	2	111
4918	30176	1462		80	1919		99	3502		103	2547		106
4919	FL 478 (Saline tolerant check)	1609		108	1671		100	2625		98	3357	4	100
4920	29362 (R)	2051		92	1826		100	4432	3 *	96	2872		105
4921	30177	2051		92	1857		103	3118		100	3174	7	103
4922	30178	2494		89	2901		84	3925	6	97	3253	6	106
4923	Pusa 44 (Sensitive Check)	1128		94	1894		95	2870		102	2717		100
4924	30179	1462		95	2347		87	2861		98	2873		103
4925	30180	2782			2286		100	3362		101	3557	3	107
4926	Local Check (LC)	3981	4	103	3536	2	123	3825	9	96	2967	10	98
Exp. Mean		2751		94	2709		96	3472		101	2845		102
F Value		6.77(p<0.0001)S			19.71(p<0.0001)S			48.57(p<0.0001)S			4.44(p<0.0001)S		
SEm				2			7			1			1
CD		675.25			435.73			286.42			624.86		
CV%		14.96			11.42			5.86			13.39		

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Table No. 6.8.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – AL&ISTVT (Alkalinity), (Data Not Considered), Kharif 2021

Entry No	IET No.	TAMIL NADU (1)		
		@Trichy		
		GY	R	DFP
4901	30162	988		90
4902	30163	2110		104
4903	30164	2153		83
4904	30165	3068	6	93
4905	30166	2080		93
4906	30167	2898	10	93
4907	CSR 36 (Alkaline Check)	3198	4	103
4908	30168	2548		103
4909	30169	2143		84
4910	CSR 23 (Inland Saline Check)	2408		92
4911	30170	2170		103
4912	30171	2128		94
4913	30172	3060	7	94
4914	30173	3013	8	88
4915	CSR 10 (Early duration saline check)	755		77
4916	30174	3713	2	88
4917	30175	3340	3	104
4918	30176	1683		80
4919	FL 478 (Saline tolerant check)	2265		108
4920	29362 (R)	1985		92
4921	30177	3993	1	92
4922	30178	1193		89
4923	Pusa 44 (Sensitive Check)	2208		94
4924	30179	2933	9	95
4925	30180	.		
4926	Local Check (LC)	3168	5	103
Exp. Mean		2448		94
F Value				
SEm				
CD				
CV%				
D/S		09-09-2021		
D/P				
Local Check Name		(TRY 3)		

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Table No. 6.8: Grain Yield (kg/ha), Days to 50% flowering, plant Height (cm) and No. of Panicles/m² of entries in IVT-AL&ISTVT (Sodic Micro Plot), Kharif 2021

Entry No	IET No.	ZONE II-NORTHERN (I)				
		HARYANA (I)				
		Sodic (Karnal)				
		GY	R	DF	PH	NP
4901	30162	3630	9	92	94	196
4902	30163	2889		104	84	214
4903	30164	4370	1	94	91	279
4904	30165	3556		94	105	275
4905	30166	3630	10	103	76	193
4906	30167	3111		96	98	219
4907	CSR 36 (Alkaline Check)	3852	6	104	88	203
4908	30168	2815		119	64	198
4909	30169	3111		94	88	173
4910	CSR 23 (Inland Saline Check)	3111		96	102	222
4911	30170	2593		123	78	141
4912	30171	4074	2	95	101	282
4913	30172	4074	2	106	74	228
4914	30173	4000	5	87	58	248
4915	CSR 10 (Early duration saline check)	2296		93	61	124
4916	30174	3481		96	84	237
4917	30175	2667		92	69	161
4918	30176	3852	6	90	90	229
4919	FL 478 (Saline tolerant check)	3037		95	64	184
4920	29362 (R)	3037		95	77	184
4921	30177	3704	8	107	73	272
4922	30178	2741		93	91	180
4923	Pusa 44 (Sensitive Check)	2444		105	75	154
4924	30179	4074	2	104	64	262
4925	30180					
4926	Local Check (LC)	3111		105	81	191
Exp. Mean		3330		99	81	210
F Value		4.57(p<0.0001)S				
CD		799				
CV%		14.6				
D/S						
D/P						
Local Check Name						

Table No. 6.8: Grain Yield (kg/ha), Days to 50% flowering, plant Height (cm) and No. of Panicles/m² of entries in IVT-AL&ISTVT (Saline Micro Plot), Kharif 2021

Entry No	IET No.	ZONE II-NORTHERN				
		HARYANA (I)				
		Saline (Karnal)				
		GY	R	DF	PH	NP
4901	30162	3778	8	96	93	237
4902	30163	3259		104	81	205
4903	30164	4222	1*	95	93	272
4904	30165	4074	3	93	99	264
4905	30166	3185		104	73	183
4906	30167	3259		97	100	205
4907	CSR 36 (Alkaline Check)	3556		103	87	216
4908	30168	3185		122	68	190
4909	30169	3185		98	92	199
4910	CSR 23 (Inland Saline Check)	3333		95	105	211
4911	30170	2593		124	81	146
4912	30171	4222	2*	95	104	281
4913	30172	4000	5	105	74	251
4914	30173	4074	3	103	52	257
4915	CSR 10 (Early duration saline check)	2444		88	61	139
4916	30174	3704	9	93	87	224
4917	30175	2815		104	77	162
4918	30176	3704	9	92	92	229
4919	FL 478 (Saline tolerant check)	2889		89	67	167
4920	29362 (R)	3704	9	98	83	221
4921	30177	3852	7	108	64	245
4922	30178	3037		93	89	175
4923	Pusa 44 (Sensitive Check)	2074		106	78	135
4924	30179	4000	6	106	59	250
4925	30180					
4926	Local Check (LC)	3037		93	89	183
Exp. Mean		3407		100	82	210
F Value		3.63(p<0.0001)S				
SEm				1		
CD		865				
CV%		15.46				
D/S		01-07-2021				
D/P		28-07-2021				
Local Check Name		CSR 27				

PH: Plant Height (Cm) NP: No. of Panicles/Sqm

For promotion of entries

* **For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).**

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No.6.8: Grain Yield (kg/ha), Days to 50% flowering, Plant Height (cm), No. of Panicles m² of entries and (Data Not Considered) in IVT-AL&ISTVT (Saline), Kharif 2021

Entry No	IET No.	ZONE II-NORTHERN					ZONE VII – SOUTHERN (1)					Overall Mean (2)					TRIAL NOT CONSIDERED				
		HARYANA (1)					KARNATAKA (1)										GUJARATH (0)				
		Panipat (Karnal)					GANGAVATHI					@NAVASARI									
		GY	R	DFE	PH	NP	GY	R	DFE	PH	NP	GY	R	DFE	PH	NP	GY	R	DFE	PH	NP
4901	30162	3460		97	128	268	2104		92	106	349	2782		95	117	308	1119		90	145	279
4902	30163	2887		104	117	199	3738	10	122	105	411	3313		113	111	305	1131		103	127	252
4903	30164	4180	1 *	94	94	243	2567		116	80	321	3374		105	87	282	1265	8	89	101	333
4904	30165	3793	5	92	112	298	1917		113	90	354	2855		102	101	326	1116		98	127	306
4905	30166	3200		104	89	193	4045	7	113	85	338	3623	9	109	87	266	1921	1	104	117	324
4906	30167	3300		98	100	219	4283	6	114	101	296	3792	7	106	100	258	1213		95	106	309
4907	CSR 36 (Alkaline Check)	3640	10	104	101	225	4569	2	125	98	413	4105	3	114	99	319	1052		99	115	291
4908	30168	2933		123	84	159	2798		125	85	381	2866		124	84	270	1265	8	106	103	318
4909	30169	3293		97	90	205	2909		112	80	405	3101		105	85	305	1197		92	106	321
4910	CSR 23 (Inland Saline Check)	3287		95	114	215	2404		116	106	296	2846		106	110	255	1238		99	132	306
4911	30170	3107		116	86	149	2960		118	76	384	3034		117	81	266	1174		104	100	288
4912	30171	3680	8	95	104	283	3481		115	101	389	3581		105	102	336	1417	3	100	112	318
4913	30172	3907	2 *	103	95	257	2144		120	84	336	3026		111	90	296	1001		99	121	282
4914	30173	3773	6	106	73	259	2721		108	80	348	3247		107	76	303	1327	5	100	99	330
4915	CSR 10 (Early duration saline check)	2753		88	68	150	2210		89	57	379	2482		88	63	264	1047		90	80	324
4916	30174	3673	9	91	97	228	4003	9	113	94	363	3838	6	102	95	295	960		90	112	270
4917	30175	2827		105	85	162	3575		126	92	351	3201		116	88	256	1466	2	103	110	342
4918	30176	3767	7	91	103	229	4404	4	116	114	317	4086	4	103	108	273	1190		102	124	294
4919	FL 478 (Saline tolerant check)	3053		88	84	167	2772		106	71	334	2913		97	77	250	1263	10	82	97	240
4920	29362 (R)	3293		97	101	184	4507	3	114	101	414	3900	5	106	101	299	1283	7	98	123	282
4921	30177	3887	3	103	83	272	4345	5	117	82	356	4116	2	110	83	314	1253		100	97	306
4922	30178	3007		94	96	180	3567		111	94	372	3287		102	95	276	1094		94	119	291
4923	Pusa 44 (Sensitive Check)	2120		106	87	154	2900		114	83	306	2510		110	85	230	1055		101	106	312
4924	30179	3807	4	107	76	235	3481		116	77	370	3644	8	111	76	303	1038		98	94	261
4925	30180	.		.	.	.	4583	1	115	104	340	4583	1*	115	104	340	1370	4	102	113	312
4926	Local Check (LC)	3220		95	106	149	4011	8	112	102	349	3616	10	103	104	249	1311	6	99	108	321
Exp. Mean		3354	100	95	211	3346	114	90	356	3374	107	93	286	1222	98	111	300				
F Value		4.26(p<0.0001)S					12.45(p<0.0001)S					6.39(p<0.0001)S					2.40(p=0.0036)S				
SEm			6					2					4						2		
CD		616					705					558					348				
CV%		11.2					10.22					10.05					17.35				
DS		01-07-2021					25-07-2021										30-06-2021				
DP		28-07-2021					01-09-2021										04-08-2021				
Local Check Name		CSR 27					CSR 22										GNR-5				

PH: Plant Height (cm) NP: No. of Panicles/sqm

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 6.8 : Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT-AL&ISTVT (Normal), Kharif 2021

Entry No	IET No.	ZONE II-NORTHERN (1)			ZONE III-EASTERN (1)			ZONE VI - WESTERN (1)			ZONE VII - SOUTHERN (1)			Overall Mean (4)		
		PUNJAB (1)			UTTAR PRADESH (1)			GUJARAT (1)			KARNATAKA (1)					
		LUDHIANA			MASODHA			NAWAGAM			BRAHMAWAR					
		GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE	GY	R	DFE
4901	30162	2548		106	2660		87	2011		90	2980		99	2550		95
4902	30163	3249	7	113	4189		105	2625		99	3067		99	3283		104
4903	30164	2571		106	3278		106	3467		105	2160		104	2869		105
4904	30165	2999		106	3457		105	3902	9	98	3833	4	104	3548	7	103
4905	30166	3496	4	114	3823		101	4675	3	112	1696		98	3423	10	106
4906	30167	3230	8	107	4322	8	100	3766	10	106	3871	2	97	3797	3	102
4907	CSR 36 (Alkaline Check)	2182		112	4239	10	96	4970	1	107	3444		99	3709	5	103
4908	30168	4395	2 *	111	2909		88	4136	5	113	2967		101	3602	6	103
4909	30169	3189	9	105	2709		86	3481		99	3600	9	105	3245		99
4910	CSR 23 (Inland Saline Check)	3679	3	102	4405	6	103	4817	2	102	2196		105	3774	4	103
4911	30170	2578		115	4521	5	105	4461	4	116	3656	8	102	3804	2	109
4912	30171	3284	6	104	2892		102	4025	7	104	3567	10	96	3442	9	101
4913	30172	2515		113	2859		89	4130	6	110	3713	6	104	3304		104
4914	30173	3102	10	110	4388	7	92	3035		110	3067		100	3398		103
4915	CSR 10 (Early duration saline check)	2125		101	4322	8	97	3055		112	3400		98	3226		102
4916	30174	3287	5	99	2593		104	1795		117	3978	1	92	2913		103
4917	30175	3058		112	2610		104	3544		109	3667	7	97	3220		105
4918	30176	3092		109	3125		91	3056		96	2556		95	2957		98
4919	FL 478 (Saline tolerant check)	2457		92	4588	4	103	2152		113	2940		104	3034		103
4920	29362 (R)	2854		99	4854	1	107	3506		105	2644		98	3465	8	102
4921	30177	2660		112	2842		91	3631		99	3871	2	97	3251		100
4922	30178	4996	1 *	99	2809		94	4000	8	93	3800	5	99	3901	1	96
4923	Pusa 44 (Sensitive Check)	2724		113	4654	3	103	2997		102	1889		105	3066		106
4924	30179	3072		110	4820	2	104	2141		90	2300		102	3083		101
4925	30180				2713		90				1160		96	1937		93
4926	Local Check (LC)	2944		114	3557		88	3601		87	3111		103	3303		98
Exp. Mean		3051.45		107	3620.73		97	3479.09		104	3043.5		100	3273		102
F Value		8.59(p<0.0001)S			24.01(p<0.0001)S			5.45(p<0.0001)S			5.16(p<0.0001)S			5.19(p<0.0001)S		
SEm				1			1			1			1			1
CD		582.94			443.51			1082.6			964			463.19		
CV%		13.55			8.7			15.08			15.08			9.94		
DS		01-07-2021			30-06-2021			03-07-2021			23-07-2021					
DP		05-08-2021			03-08-2021			09-08-2021			17-08-2021					
Local Check Name		PR 118			NDR 2008			Dandi			Karikagga					

Table No. 6.9: Plant Height (cm) & Panicles/m² of entries in IVT - AL&ISTVT (Alkalinity), Kharif 2021

Entry No	IET No.	ZONE II-NORTHERN							
		HARYANA				UTTAR PRADESH 1			
		Anjanteli (Karnal)		Kurukshetra (Karnal)		KANPUR		Z2 (3)	
		PH	NP	PH	NP	PH	NP	PH	NP
4901	30162	150	167	116	247	100	263	122	225
4902	30163	124	223	105	203	106	263	112	230
4903	30164	106	278	81	293	75	321	87	297
4904	30165	121	279	105	220	85	230	103	243
4905	30166	96	161	86	186	79	306	87	217
4906	30167	109	177	88	219	83	202	93	199
4907	CSR 36 (Alkaline Check)	107	211	94	203	90	319	97	244
4908	30168	89	160	69	198	73	135	77	164
4909	30169	100	178	80	173	87	229	89	193
4910	CSR 23 (Inland Saline Check)	123	233	103	222	90	183	105	212
4911	30170	92	139	72	141	71	233	78	171
4912	30171	123	292	83	282	89	310	98	294
4913	30172	103	221	80	257	104	301	96	259
4914	30173	85	226	67	259	57	186	69	223
4915	CSR 10 (Early duration saline check)	74	101	63	150	50	168	62	140
4916	30174	115	248	79	228	72	284	88	253
4917	30175	106	179	83	165	86	341	92	228
4918	30176	125	224	86	228	84	349	98	267
4919	FL 478 (Saline tolerant check)	97	159	72	173	81	352	83	228
4920	29362 (R)	117	183	88	184	103	286	102	218
4921	30177	95	284	80	272	80	218	85	258
4922	30178	100	173	92	180	104	307	99	220
4923	Pusa 44 (Sensitive Check)	89	160	83	154	83	232	85	182
4924	30179	83	254	66	262	89	195	79	237
4925	30180					45	185	45	185
4926	Local Check (LC)	107	197	90	191	81	317	92	235
Exp. Mean		105	204	84	212	83	258	89	224

PH: Plant Height NP: No. of Panicles/sqm

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Table No. 6.9 Contd. : Plant Height (cm) & Panicles/m2 of entries in IVT – AL&ISTVT (Alkalinity), Kharif 2021

Entry No	IET No.	ZONE III-EASTERN				ZONE VII - SOUTHERN								Overall Mean (8)	
		UTTAR PRADESH 2		TELANGANA		TAMIL NADU		KARNATAKA		PUDUCHERRY		Z7 (4)			
		Lucknow-ICAR		KAMPASAGAR		ANNAMALAINAGAR		MANDYA		Karaikal		Mean			
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP		
4901	30162	62	257	99		95	299	92	337	105		98	318	102	262
4902	30163	54	330	94		105	313	101	320	119		105	317	101	275
4903	30164	48	313	91		78	269	85	343	80		84	306	80	303
4904	30165	66	354	96		97	331	96	295	111		100	313	97	285
4905	30166	48	236	99		80	207	82	332	118		95	269	86	238
4906	30167	56	418	87		79	322	93	277	105		91	299	88	269
4907	CSR 36 (Alkaline Check)	59	304	97		98	232	102	317	100		99	274	93	264
4908	30168	52	237	97		93	332	84	335	86		90	333	80	233
4909	30169	60	304	91		104	360	78	337	101		94	348	88	263
4910	CSR 23 (Inland Saline Check)	59	304	93		79	338	110	263	105		97	301	95	257
4911	30170	45	355	97		94	319	81	305	101		93	312	81	249
4912	30171	64	488	103		82	302	104	345	114		101	324	95	336
4913	30172	63	375	107		85	332	77	428	105		93	380	90	319
4914	30173	51	277	94		93	340	80	270	96		91	305	78	260
4915	CSR 10 (Early duration saline check)	52	427	99		99	229	58	348	84		85	289	72	237
4916	30174	62	332	94		94	252	85	303	95		92	278	87	275
4917	30175	47	278	99		90	332	76	290	98		91	311	86	264
4918	30176	63	410	92		81	258	98	300	104		94	279	92	295
4919	FL 478 (Saline tolerant check)	53	256	88		82	240	75	335	81		82	287	79	253
4920	29362 (R)	50	260	93		70	197	94	280	104		90	238	90	232
4921	30177	55	292	88		74	204	83	370	78		81	287	79	274
4922	30178	59	367	90		104	223	89	293	93		94	258	91	257
4923	Pusa 44 (Sensitive Check)	49	337	97		107	219	85	313	110		100	266	88	236
4924	30179	40	281	93		99	235	75	272	96		91	253	80	250
4925	30180			98		101	257	96	307	104		100	282	89	250
4926	Local Check (LC)	57	276	92		123	318	82	323	90		97	321	90	270
Exp. Mean		55	323	95		92	279	87	317	99		93	298	87	266

Table No. 6.9: Plant Height (cm) & Panicles/m2 of entries in IVT – AL&ISTVT (Alkalinity), (State Means), Kharif 2021

Entry No	IET No.	HARYANA (2)		UTTAR PRADESH 1(1)		UTTAR PRADESH 2(1)		UTTAR PRADESH (2)	
		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP
4901	30162	133	207	100	263	62	260	81	260
4902	30163	114	213	106	263	54	297	80	297
4903	30164	93	285	75	321	48	317	61	317
4904	30165	113	250	85	230	66	292	76	292
4905	30166	91	173	79	306	48	271	63	271
4906	30167	98	198	83	202	56	310	70	310
4907	CSR 36 (Alkaline Check)	100	207	90	319	59	311	74	311
4908	30168	79	179	73	135	52	186	63	186
4909	30169	90	175	87	229	60	267	73	267
4910	CSR 23 (Inland Saline Check)	113	227	90	183	59	243	75	243
4911	30170	82	140	71	233	45	294	58	294
4912	30171	103	287	89	310	64	399	76	399
4913	30172	92	239	104	301	63	338	83	338
4914	30173	76	242	57	186	51	232	54	232
4915	CSR 10 (Early duration saline check)	69	126	50	168	52	298	51	298
4916	30174	97	238	72	284	62	308	67	308
4917	30175	95	172	86	341	47	309	66	309
4918	30176	106	226	84	349	63	380	73	380
4919	FL 478 (Saline tolerant check)	85	166	81	352	53	304	67	304
4920	29362 (R)	102	184	103	286	50	273	76	273
4921	30177	87	278	80	218	55	255	67	255
4922	30178	96	177	104	307	59	337	82	337
4923	Pusa 44 (Sensitive Check)	86	157	83	232	49	284	66	284
4924	30179	74	258	89	195	40	238	65	238
4925	30180			45	185		185	45	185
4926	Local Check (LC)	98	194	81	317	57	297	69	297
Exp. Mean		95	208	83	258	55	288	69	288

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Table No. 6.9 Contd: Plant Height (cm) & Panicles/m² of entries in IVT – AL&ISTVT (Alkalinity), (State Means), Kharif 2021

Entry No	IET No.	TELANGANA (1)		TAMIL NADU (1)		KARNATAKA (1)		PUDUCHERRY (1)	
		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP
4901	30162	99		95	299	92	337	105	
4902	30163	94		105	313	101	320	119	
4903	30164	91		78	269	85	343	80	
4904	30165	96		97	331	96	295	111	
4905	30166	99		80	207	82	332	118	
4906	30167	87		79	322	93	277	105	
4907	CSR 36 (Alkaline Check)	97		98	232	102	317	100	
4908	30168	97		93	332	84	335	86	
4909	30169	91		104	360	78	337	101	
4910	CSR 23 (Inland Saline Check)	93		79	338	110	263	105	
4911	30170	97		94	319	81	305	101	
4912	30171	103		82	302	104	345	114	
4913	30172	107		85	332	77	428	105	
4914	30173	94		93	340	80	270	96	
4915	CSR 10 (Early duration saline check)	99		99	229	58	348	84	
4916	30174	94		94	252	85	303	95	
4917	30175	99		90	332	76	290	98	
4918	30176	92		81	258	98	300	104	
4919	FL 478 (Saline tolerant check)	88		82	240	75	335	81	
4920	29362 (R)	93		70	197	94	280	104	
4921	30177	88		74	204	83	370	78	
4922	30178	90		104	223	89	293	93	
4923	Pusa 44 (Sensitive Check)	97		107	219	85	313	110	
4924	30179	93		99	235	75	272	96	
4925	30180	98		101	257	96	307	104	
4926	Local Check (LC)	92		123	318	82	323	90	
Exp. Mean		95		92	279	87	317	99	

Table No. 6.9 Contd: Plant Height (cm) & Panicles/m² of entries in IVT – AL&ISTVT (Alkalinity), (Data Not Considered), Kharif 2021

Entry No	IET No.	TAMIL NADU (1)	
		@Trichy	
		PH	NP
4901	30162	119	202
4902	30163	111	294
4903	30164	90	267
4904	30165	106	310
4905	30166	97	241
4906	30167	103	304
4907	CSR 36 (Alkaline Check)	102	342
4908	30168	92	294
4909	30169	90	226
4910	CSR 23 (Inland Saline Check)	116	271
4911	30170	87	243
4912	30171	101	222
4913	30172	91	306
4914	30173	97	327
4915	CSR 10 (Early duration saline check)	55	241
4916	30174	105	328
4917	30175	93	367
4918	30176	107	248
4919	FL 478 (Saline tolerant check)	99	218
4920	29362 (R)	112	221
4921	30177	86	341
4922	30178	94	205
4923	Pusa 44 (Sensitive Check)	99	269
4924	30179	93	274
4925	30180	.	
4926	Local Check (LC)	120	322
Exp. Mean		99	275

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Table No. 6.9: Plant Height (cm) & Panicles/m² of entries in IVT – AL&ISTVT (Normal), Kharif 2021

Entry No	IET No.	ZONE II-NORTHERN (1)		ZONE III-EASTERN (1)		ZONE VI - WESTERN (1)		ZONE VII - SOUTHERN (1)		Overall Mean (4)	
		PUNJAB (1)		UTTAR PRADESH (1)		GUJARAT (1)		KARNATAKA (1)			
		LUDHIANA		MASODHA		NAWAGAM		BRAHMAWAR			
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4901	30162	109	248	89	215	128	211	67	123	98	199
4902	30163	103	176	103	224	121	201	70	139	99	185
4903	30164	79	271	110	239	105	254	79	106	93	218
4904	30165	95	353	103	237	117	234	81	142	99	242
4905	30166	83	228	105	240	111	267	80	90	95	206
4906	30167	92	223	98	250	110	248	55	204	89	231
4907	CSR 36 (Alkaline Check)	85	267	89	254	117	244	81	171	93	234
4908	30168	86	316	92	217	97	208	60	134	84	219
4909	30169	85	286	96	210	99	284	78	193	89	243
4910	CSR 23 (Inland Saline Check)	99	273	101	255	114	284	63	101	94	228
4911	30170	75	272	100	258	92	271	54	180	80	245
4912	30171	96	248	105	210	115	294	83	142	100	223
4913	30172	85	278	89	215	113	221	76	132	90	211
4914	30173	82	265	92	249	90	267	58	140	80	230
4915	CSR 10 (Early duration saline check)	69	238	103	240	154	224	70	130	99	208
4916	30174	99	261	107	200	108	264	74	175	97	225
4917	30175	78	206	110	202	101	248	71	186	90	210
4918	30176	93	264	89	219	108	221	64	102	89	201
4919	FL 478 (Saline tolerant check)	80	208	102	251	95	238	45	114	80	202
4920	29362 (R)	89	265	115	259	115	201	50	107	92	208
4921	30177	71	238	101	207	93	251	43	206	77	225
4922	30178	85	213	117	200	104	231	42	151	87	199
4923	Pusa 44 (Sensitive Check)	77	270	101	248	98	231	44	105	80	213
4924	30179	81	245	103	254	93	271	59	109	84	220
4925	30180			89	221			61	96	75	158
4926	Local Check (LC)	86	215	93	237	109	256	81	176	92	221
Exp. Mean		86	253	100	231	108	245	65	140	89	216

PH: Plant Height (cm) NP: No. of Panicles/sqm

INITIAL VARIETY TRIAL - COASTAL SALINE TOLERANT VARIETY TRIAL (IVT-CSTVT)

Locations: 08

Test Entries: 31

Checks: Bhuthnath (Coastal Saline Check), FL478, CSR 10 (Early duration check), Pusa 44 (Sensitive check) and Local check **Table: 6.10**

IVT – CSTVT trial was constituted with 31 test entries of which 28 entries are in first year of testing and three entries in the final year of testing along with five checks namely Bhuthnath (Coastal Saline Check), FL478, CSR10 (Early duration check), Pusa 44 (Sensitive check) and Local check. The trial was sent to 13 locations and data was received from eight locations. Data from Chinsurah, Canning, Panvel, Navsari, Goa, Machilipatnam, Brahmavar and Karaikal were received. The trial failed at Vytilla and NRRI-Cuttack due to floods during the crop season. Low stress level at Chinsurah, (pH 6.5 7 EC 3.5 dSm⁻¹), Canning (pH 7.25 7 EC 3.21 dSm⁻¹) and Brahmavar ((pH 6.7 7 EC 4.9 dSm⁻¹), while sensitive check recorded highest yield than tolerant checks at Goa and Karaikal. These locations are not considered for analysis. Hence, three among the 8 locations the data namely from Panvel, Navsari and Machilipatnam were found suitable for final analysis under coastal saline stress. The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables, 6.11, 6.12 and 6.13.

The EC and pH of these locations are given in below table.

Location/State	Soil pH	Soil EC (dSm-1)	Exptl mean (kg/ha)	Grain Yield Range (Kg/ha)	CV %	Remarks
Navsari(Danti)	8.4	6.17	2218	1419-4293	19.4	Data considered for analysis under stress
Panvel	7.8	6.02	3607	990-7425	8.7	Data considered for analysis under stress
Machilipatnam	7.6	6.48	4545	1448-6363	17.38	Data considered for analysis under stress
Chinsurah	6.5	3.5	3550	3028-4880	11.85	Data not considered for analysis due to low stress level.
Canning	7.25	3.21	4497	848-7731	28.2	Data not considered for analysis due to low stress level.
Goa	--	--	2273	261-4321	24.6	Data not considered as sensitive check recorded highest yield than tolerant checks
Brahmavar	6.7	4.9	2235	1049-3933	12.0	Data not considered for analysis due to low stress level. Occurrence of frequent rains and floods during crop growth reported.
Karaikal	8.5	1.8	2633	1219-4324	24.3	Data not considered as sensitive check recorded highest yield than tolerant checks.

Performance of entries on overall basis across locations

In overall, data from three locations Panvel, Navsari and Machilipatnam were considered for analysis. The grain yield ranged from 990 kg/ha (IET 30186) to 4897 kg/ha (IET30200), days to 50% flowering ranged from 93 (FL 478) to 125 days (IET30205), plant height of the entries ranged from 82.6 cm (Pusa 44) to 132.73 cm (IET 30194) and the panicles/m² varied from 132 (IET 30186) to 400 (CSR 10). Among the checks, local check (4104 kg/ha), recorded highest yield followed by Bhuthnath (3264 kg/ha), FL 478 (3180 kg/ha), CSR 10 (2801 kg/ha), and Pusa 44 (2565 kg/ha). Promising genotypes were identified based on significant critical difference of the test entries over the checks- either best check or over early check. FL 478 with 93 days to 50% flowering is early best check. None on the entries are found promising as compared to early best check. The local check is the best check for identification of the promising genotypes.

Among the test entries, IET 30200 (CSR 2019IRBD78: IR 77092-2R-B-10) with 4897 kg/ha grain yield and 110 days to 50% flowering recorded significant superiority over best check on overall basis and is promoted to AVT1- CSTVT.

Performance of check in IVT-CSTVT during Kharif2021

IET No/ Name of Check	Overall (3)	Z-VI (2)	Z VII (1)	Remarks
30200 CSR 2019IRBD78: IR 77092-2R-B-10	4897* 110	4718* 110	--	Significantly superior over best check. Promising in Z-VI and on overall basis. Promoted
30201 (CR 4283-274-6-2-1-3) CR Dhan 310 /Getu	--	4583* 104	--	Significantly superior over best check. Promising in Z-VI. Promoted
30207 (MTU 1384) MTU 101/FL 478	--	4463* 117	--	Significantly superior over best check. Promising in Z-VI. Promoted
Bhuthnath (Coastal Saline Check)	3264 101	2823 103	4147 97	
CSR10 (Early saline check)	2801 99	1699 108	3903 83	
FL478 (Saline Tolerant Check)	3180 93	2635 91	4269 96	
Pusa44 (Sensitive Check)	2565 109	1709 116	3420 96	
Local Check	4104 107	3336 105	5641 111	
CD	757	893	1288	

*Significant over best check

Performance in ZoneVI

In zone VI, the data from Danti (Navsari) and Panvel was considered for analysis. The grain yield ranged from 990 kg/ha (IET 30186) to 4718 kg/ha (IET 30200), days to 50% flowering ranged from 91 (FL 478) to 126 days (IET 30187 & 30205), plant height of the entries ranged from 77.5 cm (Pusa 44) to 123.07 cm (IET 30187) and the panicles/m² varied from 132 (IET 30186) to 378 (IET 30205). Among the checks, local check (3336 kg/ha), recorded highest yield followed by Bhuthnath (2823 kg/ha), FL 478 (2635 kg/ha), Pusa 44 (1709 kg/ha) and CSR 10 (1699 kg/ha). Local check is the best check, while CSR 10 (1699) recorded less

yield than sensitive check (1709). FL 478 with 91 days to 50% flowering is the early best check. Hence the promising entries are identified based on significant critical difference of the test entries over the checks- either best check or over early check. However, none of the entries are within the flowering duration of EBC. All the entries are compared with best check-local. In Z-VI, three entries were significantly superior to best check.

Among the test entries, IET 30200 (CSR 2019IRBD78: IR 77092-2R-B-10) with 4718 kg/ha grain yield and 110 days to 50% flowering recorded significant superiority over best check in Z-VII. This culture is also found superior on overall basis and is promoted to AVT1- CSTVT.

IET 30201 (CR 4283-274-6-2-1-3) derived from the parentage of CR Dhan 310 /Getu recorded 4583 kg/ha and 104 days to 50% flowering, exhibited significantly superiority performance over the best check in Z-VII and is promoted.

IET 30207 (MTU 1384), derived from the cross MTU 101/FL 478 with 4463 kg/ha and 117 days to 50% flowering exhibited significantly superiority performance over the best check in Z-VII and is promoted.

Performance in Zone VII

In zone VII, the data from Machilipatnam was considered for analysis. The grain yield ranged from 1448 kg/ha (IET 30191) to 6363 kg/ha (IET 30192), days to 50% flowering ranged from 94 (IET 30196) to 126 days (IET 30207), plant height of the entries ranged from 79.43 cm (CSR 10) to 160.13 cm (IET 30187) and the panicles/m² varied from 162 (IET 30198) to 442 (IET 30181). Among the checks, local check (5641 kg/ha), recorded highest yield followed by FL 478 (4269 kg/ha), Bhuthnath (4147 kg/ha), CSR 10 (3903 kg/ha) and Pusa 44 (3420 kg/ha). Local check is the best check, while CSR 10 with 83 days to 50% flowering is the early best check. Hence the promising entries are identified based on significant critical difference of the test entries over the checks- either best check or over early check. Based on yield and flowering duration, none of the entries exhibited significant superiority over either the best check or early check. Hence none found merit for promotion.

Performance of entries in CSTVT during three years of testing

IET No /Designation/ Cross combination	GT	Year	Overall		Zone			State		
			yield (kg/ha)	% gain over BC	Zone/ Rank	Yield (kg/h)	% gain over BC	State/ Rank	Yield (kg/ha)	% gain over BC
27851 (CR 3903-161-1-3-2) Santepheap / IR82810-407 // IR 71700-247-1-1-2		2018	3636 109	19	Z-III	2821 117	10.2	OD (1L)	2821 117	10.2
					Z-VII	4450 101	9.6	AP (1L)	4450 101	9.6
	MS	2019	3781 108	--	--	--	--	--	--	--
	MS	2020	2789 119	--	Z-III	4038 115	16	--	--	--
	LB	2021	3146 119	--	--	--	--	--	--	--
27847 IIRRH-115 (Hybrid)		2018	2540 96	--	Z-VII	3150 92	15	AP (1L)	3150 92	15
	--	2019	--	--	--	--	--	--	--	--
	MS	2020	4027 104	15	Z-III	3676 105	6	WB (1L)	5111	9.0

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IET No /Designation/ Cross combination	GT	Year	Overall		Zone			State		
			yield (kg/ha)	% gain over BC	Zone/ Rank	Yield (kg/h)	% gain over BC	State/ Rank	Yield (kg/ha)	% gain over BC
	LB	2021	3666	--	Z-VI	4468	46	GU (1L)	4468	46
			105		Z-VII	4955	19.4	AP	4955	19.4
27051 (CR 2851-S- 1-B-4-1- 4-1- 1) Gayatri/SR 26B		2017	2751	24	Z-III	3503	15.0	OD (1L)	3503	15.0
	MS	2018	The entry is considered for repeat in K2019 trials							
		2019 (R)	The entry is considered for repeat in K2020 trials							
		2020 (R)	3125	--	--	--	--	OD(1L)	2622	5.0
		2021	2998	--	Z-VII	6009	6.5	AP (1L)	6009	6.5
			117		(1L)	116		116		

Quality characteristics of entries in CSTVT during three years of testing

IET No.	YEAR	HRR	GT	ASV	AC	GC
27851 (CR 3903-161- 1-3-2)	2019	54.6	MS	5.0	27.13	31
	2020	41.7	MS	4.0	27.74	22
	2021	70.5	LB	5.0	27.69	22
	2021 (NRRI)	56	MS	5.0	23.55	35
27847 (IIRRH-115)	2020	60.9	MS	5.0	26.78	50
	2021	66.7	LB	5.0	25.78	48
	2021 (NRRI)	62	SS	4.0	22.42	33
27051 (CR 2851-S-1- B-4-1- 4-1-1)	2018	57.5	MS	4.0	26.45	38
	2019 (R)	64.6	MS	4.0	26.81	44
	2020	39.6	MS	4.0	26.57	42
	2021	62.5	LB	4.0	25.87	50
	2021 (NRRI)	56	MS	3.0	24.9	31

Performance of entries under CSTVT over the years of testing (2017-2021)

Three entries namely IET nos.27851, 27847 and 27051 are in the final year of testing. The performance of the entries is described below:

IET 27851(CR 3903-161-1-3-2), derived from the parentage Santepheap / IR82810-407 // IR 71700- 247-1-1-2 tested in CSTVT trial since 2018. During 2018, IET 27851 exhibited superior performance in Z-III with 2821 kg/ha and 10.2 % yield advantage and on overall basis with 3636 kg/ha and 19.0 % over best check respectively. During 2020, this culture recorded superior performance with 4030 kg/ha and 16% yield advantage over best check but failed to exhibit superior performance in any state. During 2021, this culture failed to record yield superiority either in zones or in states. Quality wise, this culture exhibited ASV of 4.0-50, high Amylose content of 27.69% (year 2021), 27.74% (year 2020) and 27.13% (Year 2019) with GC of 22mm to 31mm at IIRR, Hyderabad. At NRRI Cuttack, IET 27051 recorded an ASV of 5.0, AC of 23.55 and GC of 35 mm. ***Due to inconsistency in performance, this culture is not found promising.***

IET 27847 (IIRRH 115), a hybrid culture was tested in CSTVT trials during 2018, 2020 and 2021. During 2018, IET 27847 with 3150 kg/ha exhibited superior performance

over the best check by 15.0% and is found promising in Andhra Pradesh state. During 2020, this culture is found promising on overall basis with 4027 kg/ha and 15% yield superiority over the best check, and is also found promising in Z-VI with 4468 kg/ha and 46% yield advantage over the best check. During 2021, this culture is found promising in Z-VII with 4955 kg/ha and 19.4 % yield superiority over the best check. State wise, IET 27847 found promising in Andhra Pradesh for two years (2018 and 2021) while, it is promising for one year each in Gujarat (2020) and Odisha (2021) with required yield superiority over the best check. Quality wise, IET 27847 recorded ASV of 5.0, Amylose content of 26.78% (2020) and 25.78 % (2021) and 48-50 mm GC at IIRR Hyderabad. At NRRI Cuttack, this culture exhibited ASV of 4.0, AC of 22.42% and 33 mm of GC. ***Based on three-year performance, IET 27847 promising in AP for two years, one year each in Gujarat and Odisha.***

IET 27051(CR 2851-S-1-B-4-1- 4-1-1) derived from the cross Gayatri / SR 26B entered IVT- CSTVT in 2017. This culture recorded 2751 kg/ha exhibited 24% superiority over the best check on overall basis and with 3503kg/ha and 15.0% yield advantage over BC in Zone-III. During 2018 and 2019, the entry is considered for repeat. Hence the data from 2018, 2020 and 2021 were considered for identification of its performance across zones and states. During 2017, IET 27051 is found promising in Odisha state with 3503 kg/ha and 15.0% yield superiority over the best check. During 2020 and 2021, IET 27051 could not register the required yield superiority over the best check either in zone or in states. Quality wise, this culture exhibited ASV of 4.0, high Amylose content of 25.87 (year 2021), 26.57 (year 2020), 26.81 (Year 2019) and 26.45 (Year 2018) with GC of 38 mm to 50 mm at IIRR, Hyderabad. At NRRI Cuttack, IET 27051 recorded an ASV of 3.0, AC of 24.9 and GC of 31 mm. ***Hence, this culture is not found promising.***

The following entries were promoted to second year of testing in CSTVT

Overall: IET 30200

Zone VI: IET 30200, 30201& 30207.

Table No. 6.10: Composition of entries in Initial Variety Trial -Coastal Saline Tolerant Variety Trial (IVT-CSTVT), Kharif 2021.

Entry No.	IET No.	Designation	Cross Combination	GT
3rd year of testing				
5001	27851	CR 3903-161-1-3-2	Santepheap / IR82810-407 // IR 71700-247-1-1-2	LB
5002	27847	<i>IIRRH115 (Hybrid)</i>	-	LB
5003	27051	CR 2851-S-1-B-4-1-4-1-1	Gayatri / SR 26B	LB
1st year of testing				
5004	30181	NVSR 6213	IR 71907-3R-2-1-1 / IET 20036	LS
5005	30182	CSR YET 79	CSR 27 / CSR 36	MS
5006	30183	MCM 137 (IR 100120-B-B-B-11)	PR 37866-1B-1-47 / NSIC RC 158	LB
5007	30184	CR 4364-1-IR 103728-B-B-B-B-1	IR 09A136 / IRR1 123 // PR 37275-7-14-5-1-2-2-1-2	LS
5008	30185	BARC KKV 16	CSR 27 / Dwarf mutant	LS
5009	Bhuthnath (Coastal Saline Check)			
5010	30186	RP 6167-R58-1	Swarna / O. rufipogon	SB
5011	30187	CR 2865-1-2B-26-1-1-1	TRC 229-F41/ Savitri / FL496	LS
5012	30188	NVSR 6243	IET 15429 / IET-18710	LS
5013	30189	MCM 134 (MCM 123-3-1-1-1)	BPT 2231 / Pokkali	MS
5014	CSR 10 (Early duration saline check)			
5015	30190	CR 3466-4-2-L-10-M-5-1	IR 64/ FL478 // IR 73931-40-1-2-3-2-22-1 /// Pratiksha	SB
5016	30191	CR 4363-1-IR 83388-B-B-108-3	IR 72022-46-2-3-3-2 / Swarna	LB
5017	30192	CR 4283-274-6-2-2	CR Dhan-310 / Getu	MB
5018	30193	MCM 136 (IR 04A115)	IR 68077-82-2-2-2-3 / IR00A117	MS
5019	FL 478 (Saline Tolerant check)			
5020	30194	CR 2851-S-B-1-B-B-3-2-1	Gayatri / SR 26B	MS
5021	30195	CR 4241-232-6-4-2	R 255 / Luna Sankhi	MB
5022	30196	NVSR 6345	GNR-3 / IET 22608	LB
5023	30197	CR 4256-247-8-2-1	Naveen / FL496	LS
5024	30198	RP Bio 4918-B2-NPK 61	Swarna / O. nivara	SB
5025	30199	CR 4252-243-14-3-1	Naveen / FL478	MB
5026	30200	CSR 2019 IRBD78	IR77092-2R-B-10	SB
5027	30201	CR 4283-274-6-2-1-3	CR Dhan 310 / Getu	MS
5028	30202	CR 2860-S-B-5-2-1-2	Varshadhan / SR26B	MS
5029	Pusa 44 (Sensitive check)			
5030	30203	CR 2851-S-1-7-3-1-2	Gayatri / SR 26B	MB
5031	30204	CR 4307-298-10-1-1	SR 27-8-1 / FL478	MB
5032	30205	MCM 135 (MCM 142-1-1-1-1)	MTU 7029 / Badrakali	MS
5033	30206	CR 4246-237-16-3-3	R255 / Binadhan-10	MB
5034	30207	MTU 1384	MTU 1010 / FL 478	LS
5035	30208	CR 4285-276-1-2-2	CR Dhan-310 / FL478	LS
5036	Local Check			

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Table No. 6.11: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT-CSTVT (Coastal Saline), Kharif 2021

Entry No	IET No	ZONE VI – WESTERN								
		MAHARASHTRA (1)			GUJARAT (1)			Z6 (2)		
		Panvel			NAVASARI			Mean		
		GY	R	DFP	GY	R	DFP	GY	R	DFP
5001	27851			121	1722		119	1722		120
5002	27847			115	2377		102	2377		109
5003	27051	1168		113	1817		121	1493		117
5004	30181	5090	3*	104	1946		100	3518	6	102
5005	30182	2632		113	1560		109	2096		111
5006	30183	1739		102	2347		104	2043		103
5007	30184	2846		89	1692		115	2269		102
5008	30185	4675	5	104	2436		107	3556	5	105
5009	Bhuthnath (Coastal Saline Check)	2788		94	2858	5	112	2823		103
5010	30186	990		111				990		111
5011	30187				1426		126	1426		126
5012	30188	3714		89	2387		102	3051		96
5013	30189			107	1929		98	1929		103
5014	CSR 10 (Early duration saline check)			119	1699		96	1699		108
5015	30190			121	1564		118	1564		119
5016	30191			123	2433		101	2433		112
5017	30192	1201		94	2581		100	1891		97
5018	30193			111	2209		120	2209		116
5019	FL 478 (Saline Tolerant check)	2738		91	2532		90	2635		91
5020	30194	4481	7	109	1695		126	3088		117
5021	30195			100	2650	7	104	2650		102
5022	30196	4328	8	106	1883		95	3106	10	101
5023	30197	4325	9	102	2275		103	3300	8	103
5024	30198	3926		98	2621	9	111	3274	9	105
5025	30199			115	2960	2	105	2960		110
5026	30200	6525	2 *	105	2910	4	114	4718	1 *	110
5027	30201	4872	4*	105	4293	1 *	102	4583	2 *	104
5028	30202	4124	10	107	1514		121	2819		114
5029	Pusa 44 (Sensitive check)			125	1709		107	1709		116
5030	30203	3569		103	1817		119	2693		111
5031	30204	4665	6	91	2693	6	103	3679	4	97
5032	30205			123	1419		130	1419		126
5033	30206	1269		113	2940	3	110	2105		111
5034	30207	7425	1 *	102	1501		132	4463	3 *	117
5035	30208	3386		106	2650	7	98	3018		102
5036	Local Check	4088		105	2584	10	105	3336	7	105
Exp. Mean		3607		107	2218		109	2629		108
F Value		55.61(p<0.0001)S			5.70(p<0.0001)S			5.86(p<0.0001)S		
SEm				0.1			3			2
CD		651			702			893		
CV%		8.73			19.43			22.06		
D/S		28-06-2021			30-06-2021					
D/P		02-08-2021			02-08-2021					
Local Check Name		PANVEL 3			DANDI					
For promotion of entries										
* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).										
# For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).										
In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.										

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Table No. 6.11 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT-CSTVT (Coastal Saline), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN (1)						Overall Mean (3)		
		ANDHRA PRADESH (1)			Z7 (1)					
		Machilipatnam			Mean					
		GY	R	DFP	GY	R	DFP	GY	R	DFP
5001	27851	4569		116	4569		116	3146		119
5002	27847	4955		98	4955		98	3666	9	105
5003	27051	6009	3	116	6009	3	116	2998		117
5004	30181	3399		95	3399		95	3478		100
5005	30182	3448		100	3448		100	2547		107
5006	30183	4292		98	4292		98	2793		101
5007	30184	4829		110	4829		110	3122		104
5008	30185	6139	2	98	6139	2	98	4417	4	103
5009	Bhuthnath (Coastal Saline Check)	4147		97	4147		97	3264		101
5010	30186							990		111
5011	30187	3808		115	3808		115	2617		120
5012	30188	4488		96	4488		96	3530		96
5013	30189	5219	9	96	5219	9	96	3574		100
5014	CSR 10 (Early duration saline check)	3903		83	3903		83	2801		99
5015	30190	5034		115	5034		115	3299		118
5016	30191	1448		93	1448		93	1941		106
5017	30192	6363	1	111	6363	1	111	3382		102
5018	30193	3616		98	3616		98	2913		110
5019	FL 478 (Saline Tolerant check)	4269		96	4269		96	3180		93
5020	30194	4592		113	4592		113	3589	10	116
5021	30195	4270		100	4270		100	3460		101
5022	30196	3155		94	3155		94	3122		98
5023	30197	4431		95	4431		95	3677	8	100
5024	30198	3227		110	3227		110	3258		106
5025	30199	5643	5	109	5643	5	109	4302	6	110
5026	30200	5257	8	110	5257	8	110	4897	1 *	110
5027	30201	4834		94	4834		94	4666	2	101
5028	30202	4541		116	4541		116	3393		115
5029	Pusa 44 (Sensitive check)	3420		96	3420		96	2565		109
5030	30203	4947		112	4947		112	3444		111
5031	30204	5753	4	107	5753	4	107	4370	5	101
5032	30205	5144	10	121	5144	10	121	3282		125
5033	30206	5524	7	99	5524	7	99	3244		107
5034	30207	4524		126	4524		126	4483	3	120
5035	30208	4234		95	4234		95	3423		100
5036	Local Check	5641	6	111	5641	6	111	4104	7	107
Exp. Mean		4545		104	4545		104	3359		107
F Value		4.68(p<0.0001)S			4.68(p<0.0001)S			6.70(p<0.0001)S		
SEm				1			1			2
CD		1288			1288			757		
CV%		17.38			17.38			13.86		
D/S		07-07-2021			07-07-2021					
D/P		11-08-2021			11-08-2021					
Local Check Name		Panduranga			Panduranga					

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Table No. 6.11 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT-CSTVT (Normal), Kharif 2021

Entry No	IET No	ZONE III-EASTERN								
		WEST BENGAL						Z3 (2)		
		CHINSURAH			Canning-ICAR			Mean		
		GY	R	DFE	GY	R	DFE	GY	R	DFE
5001	27851	3954	7	125	4678		68	4316		96
5002	27847	3522		105	7731	1	55	5627	4	80
5003	27051	3275		119	6632	4	71	4954	9	95
5004	30181	3151		105	5433		55	4292		80
5005	30182	4386	4	106	3440		55	3913		81
5006	30183	4139	5	119	7204	2	60	5672	2	89
5007	30184	3799	9	127	6479	7	65	5139	6	96
5008	30185	3614	10	120	3421		62	3518		91
5009	Bhuthnath (Coastal Saline Check)	3398		120	5580		71	4489		96
5010	30186									
5011	30187	4880	1	119	2508		71	3694		95
5012	30188	3090		107	5862	9	51	4476		79
5013	30189				4065		65	4065		65
5014	CSR 10 (Early duration saline check)	3151		95	2629		46	2890		71
5015	30190	3213		106	2433		83	2823		94
5016	30191	3151		118	5299		57	4225		87
5017	30192	4571	3	120	5704		62	5138	7	91
5018	30193	3151		118	3931		65	3541		91
5019	FL 478 (Saline Tolerant check)	3151		94	4423		50	3787		72
5020	30194	3213		119	848		74	2031		96
5021	30195	4756	2	118	5630		61	5193	5	90
5022	30196	3182		96	3951		51	3567		74
5023	30197	4046	6	108	5766	10	57	4906	10	82
5024	30198				1321		77	1321		77
5025	30199	3198		120	6833	3	60	5016	8	90
5026	30200				2020		74	2020		74
5027	30201				5662		56	5662	3	56
5028	30202				2381		71	2381		71
5029	Pusa 44 (Sensitive check)				2020		74	2020		74
5030	30203				6624	5	67	6624	1 *	67
5031	30204	3892	8	119	5662		62	4777		91
5032	30205	3090		127	2007		83	2549		105
5033	30206	3028		120	6538	6	60	4783		90
5034	30207	3015		127	3387		83	3201		105
5035	30208	3213		107	2958		55	3086		81
5036	Local Check	3182		106	6352	8	46	4767		76
Exp. Mean		3550.37		114	4497.49		63	4013		84
F Value		6.47(p<0.0001)S			4.31(p<0.0001)S			8.81(p<0.0001)S		
SEm				0.5			1			4
CD		591.67			2583.5			985.4		
CV%		11.85			28.26			18.67		
D/S		19-07-2021			16-07-2021					
D/P		09-09-2021			26-08-2021					
Local Check Name		Gosaba 5			Cannin 7					

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Table No. 6.11 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT-CSTVT (Normal), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									Overall Mean (4)		
		KARNATAKA (1)			PUDUCHERRY (1)			Z7 (2)					
		BRAHMAVAR			Karaikal			Mean			GY	R	DF
		GY	R	DF	GY	R	DF	GY	R	DF			
5001	27851	2189		103	2384		112	2287		107	3301		102
5002	27847	1656		99	2281		103	1969		101	3798	7	90
5003	27051	1049		99	2729		111	1889		105	3421		100
5004	30181	1833		99	3133	9 *	104	2483		101	3388		91
5005	30182	3740	3	95	2511		111	3126	6	103	3519		92
5006	30183	1433		99	2390		112	1912		105	3792	8	97
5007	30184	2278		105	4324	1 *	109	3301	4	107	4220	3	101
5008	30185	2244		105	2248		110	2246		108	2882		99
5009	Bhuthnath (Coastal Saline Check)	3044	10	106	1561		108	2303		107	3396		101
5010	30186	2529		106				2529		106	2529		106
5011	30187	3891	2	102	2481		111	3186	5	106	3440		101
5012	30188	1449		105	2927	10	110	2188		107	3332		93
5013	30189	1767		110	1649		105	1708		107	2494		93
5014	CSR 10 (Early duration saline check)	1351		109	2162		91	1757		100	2323		85
5015	30190	1789		94	2284		114	2037		104	2430		99
5016	30191	1878		95	2692		109	2285		102	3255		95
5017	30192	2149		99	3938	2 *	112	3044	8	105	4091	5	98
5018	30193	3056	9	99	1427		106	2242		102	2891		97
5019	FL 478 (Saline Tolerant check)	3933	1	100	2212		97	3073	7	98	3430		85
5020	30194	2100		111				2100		111	2054		101
5021	30195	1409		103	1856		110	1633		106	3413		98
5022	30196	1471		104	2234		102	1853		103	2710		88
5023	30197	1667		106	3256	8 *	102	2462		104	3684		93
5024	30198	3073	8	106	2802		112	2938	10	109	2399		98
5025	30199	3393	4	105	3580	6 *	110	3487	3	108	4251	2	99
5026	30200	2189		99	2910		111	2550		105	2373		95
5027	30201	2267		98	3401	7 *	108	2834		103	3777	9	87
5028	30202	1582		101	2130		112	1856		106	2031		95
5029	Pusa 44 (Sensitive check)	1738		100	2644		108	2191		104	2134		94
5030	30203	3178	7	104	3797	4 *	114	3488	2	109	4533	1*	95
5031	30204	3187	6	109	3803	3 *	114	3495	1	111	4136	4	101
5032	30205	1400		102	1219		118	1310		110	1929		107
5033	30206	2122		100	3780	5 *	113	2951	9	106	3867	6	98
5034	30207	1329		99	2190		118	1760		108	2480		107
5035	30208	1871		95	2423		107	2147		101	2616		91
5036	Local Check	3233	5	104	2196		96	2715		100	3741	10	88
Exp. Mean		2235.19		102	2633.97		109	2426		105	3168		96
F Value		15.60(p<0.0001)S			4.23(p<0.0001)S			5.18(p<0.0001)S			6.21(p<0.0001)S		
SEm				1			3			3			2
CD		576.68			1043.9			729.51			677.96		
CV%		12.078			24.312			18.05			25.92		
D/S		23-07-2021			19-07-2021								
D/P		17-08-2021			24-08-2021								
Local Check Name		Karikagga			TRY-2								

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Table No. 6.11 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT – AL&ISTVT (Normal),(State Means & Data Not Considered), Kharif 2021

Entry No	IET No	WEST BENGAL (2)			KARNATAKA (1)			PUDUCHERRY (1)			GOA (0)														
		Mean			Mean			Mean			@GOA														
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP												
5001	27851	4316		96	2189		103	2384		112	800		107												
5002	27847	5627	4	80	1656		99	2281		103	2899		97												
5003	27051	4954	9	95	1049		99	2729		111	2752		109												
5004	30181	4292		80	1833		99	3133	9 *	104	2883		95												
5005	30182	3913		81	3740	3	95	2511		111	2266		100												
5006	30183	5672	2	89	1433		99	2390		112	2966		96												
5007	30184	5139	6	96	2278		105	4324	1 *	109	2412		97												
5008	30185	3518		91	2244		105	2248		110	3136	8	98												
5009	Bhuthnath (Coastal Saline Check)	4489		96	3044	10	106	1561		108	2657		98												
5010	30186				2529		106																		
5011	30187	3694		95	3891	2	102	2481		111	352		111												
5012	30188	4476		79	1449		105	2927	10	110	2496		93												
5013	30189	4065		65	1767		110	1649		105	3509	6	89												
5014	CSR 10 (Early duration saline check)	2890		71	1351		109	2162		91	1754		92												
5015	30190	2823		94	1789		94	2284		114	711		99												
5016	30191	4225		87	1878		95	2692		109	4321	1	94												
5017	30192	5138	7	91	2149		99	3938	2 *	112	3986	2	100												
5018	30193	3541		91	3056	9	99	1427		106	3079	9	96												
5019	FL 478 (Saline Tolerant check)	3787		72	3933	1	100	2212		97	2993		90												
5020	30194	2031		96	2100		111				261		109												
5021	30195	5193	5	90	1409		103	1856		110															
5022	30196	3567		74	1471		104	2234		102	2929		91												
5023	30197	4906	10	82	1667		106	3256	8 *	102	3547	5	93												
5024	30198	1321		77	3073	8	106	2802		112	1119		98												
5025	30199	5016	8	90	3393	4	105	3580	6 *	110	2064		100												
5026	30200	2020		74	2189		99	2910		111	1400		93												
5027	30201	5662	3	56	2267		98	3401	7 *	108	3614	4	98												
5028	30202	2381		71	1582		101	2130		112	983		89												
5029	Pusa 44 (Sensitive check)	2020		74	1738		100	2644		108	3000	10	96												
5030	30203	6624	1 *	67	3178	7	104	3797	4 *	114	713		101												
5031	30204	4777		91	3187	6	109	3803	3 *	114	3724	3	107												
5032	30205	2549		105	1400		102	1219		118	367		92												
5033	30206	4783		90	2122		100	3780	5 *	113	2187		100												
5034	30207	3201		105	1329		99	2190		118	295		88												
5035	30208	3086		81	1871		95	2423		107	1981		99												
5036	Local Check	4767		76	3233	5	104	2196		96	3140	7	89												
Exp. Mean		4013			84			2235.19			102			2633.97			109			2273.19			97		
F Value		8.81(p<0.0001)S						15.60(p<0.0001)S						4.23(p<0.0001)S						8.66(p<0.0001)S					
SEm					4						1						3						2		
CD		985.4						576.68						1043.9						1140.6					
CV%		18.67						12.078						24.312						24.663					
D/S								23-07-2021						19-07-2021						30-06-2021					
D/P								17-08-2021						24-08-2021						29-07-2021					
Local Check Name								Karikagga						TRY-2						Goa Dhan 3					

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Table No. 6.12: Plant Height (cm) & Panicles/m² of entries in IVT – CSTVT (Saline), Kharif 2021

Entry No	IET No	ZONE VI – WESTERN					
		MAHARASHTR		GUJARAT (1)		Z6 (2)	
		Panvel		NAVASARI		Mean	
		PH	NP	PH	NP	PH	NP
5001	27851	84		100	375	92	375
5002	27847	98		96	288	97	288
5003	27051	87	180	100	354	94	267
5004	30181	102	242	102	300	102	271
5005	30182	104	204	121	438	113	321
5006	30183	95	120	114	309	105	215
5007	30184	64	258	93	384	78	321
5008	30185	107	258	105	390	106	324
5009	Bhuthnath (Coastal Saline Check)	107	137	112	312	110	225
5010	30186	96	132			96	132
5011	30187			123	369	123	369
5012	30188	93	239	101	312	97	276
5013	30189	62		104	312	83	312
5014	CSR 10 (Early duration saline check)	108		75	276	91	276
5015	30190	90		108	327	99	327
5016	30191	90		91	345	90	345
5017	30192	86	151	105	318	96	234
5018	30193	130		97	324	113	324
5019	FL 478 (Saline Tolerant check)	85	263	93	312	89	288
5020	30194	106	215	133	387	120	301
5021	30195	76		99	321	88	321
5022	30196	112	234	92	270	102	252
5023	30197	113	186	130	327	121	256
5024	30198	75	167	92	306	84	237
5025	30199	97		97	348	97	348
5026	30200	102	327	114	366	108	347
5027	30201	100	280	97	330	99	305
5028	30202	109	214	121	393	115	303
5029	Pusa 44 (Sensitive check)	82		73	318	78	318
5030	30203	107	223	103	330	105	277
5031	30204	106	283	102	321	104	302
5032	30205	121		84	378	103	378
5033	30206	106	151	93	348	100	250
5034	30207	105	317	95	303	100	310
5035	30208	115	182	92	348	104	265
5036	Local Check	85	252	91	312	88	282
Exp. Mean		97	217	101	336	100	290

PH: Plant Height(cm) NP: No. of Panicles/sqm

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Table No. 6.12 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – CSTVT (Saline), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN (1)				Overall Mean (3)	
		ANDHRA		Z7 (1)			
		Machilipatnam		Mean		PH	NP
		PH	NP	PH	NP		
5001	27851	127	312	127	312	104	344
5002	27847	112	306	112	306	102	297
5003	27051	120	336	120	336	102	290
5004	30181	113	442	113	442	106	328
5005	30182	144	369	144	369	123	337
5006	30183	127	396	127	396	112	275
5007	30184	114	384	114	384	90	342
5008	30185	112	302	112	302	108	316
5009	Bhuthnath (Coastal Saline Check)	129	259	129	259	116	236
5010	30186					96	132
5011	30187	160	316	160	316	142	342
5012	30188	118	342	118	342	104	298
5013	30189	96	350	96	350	88	331
5014	CSR 10 (Early duration saline check)	79	523	79	523	87	400
5015	30190	137	254	137	254	112	291
5016	30191	100	430	100	430	94	388
5017	30192	113	334	113	334	101	267
5018	30193	124	317	124	317	117	321
5019	FL 478 (Saline Tolerant check)	91	336	91	336	90	304
5020	30194	158	274	158	274	133	292
5021	30195	112	387	112	387	96	354
5022	30196	96	298	96	298	100	267
5023	30197	112	309	112	309	118	274
5024	30198	109	162	109	162	92	212
5025	30199	108	359	108	359	101	353
5026	30200	123	334	123	334	113	342
5027	30201	113	338	113	338	103	316
5028	30202	150	338	150	338	127	315
5029	Pusa 44 (Sensitive check)	92	281	92	281	82	299
5030	30203	162	301	162	301	124	285
5031	30204	109	368	109	368	106	324
5032	30205	119	314	119	314	108	346
5033	30206	109	327	109	327	103	275
5034	30207	107	244	107	244	102	288
5035	30208	91	324	91	324	99	285
5036	Local Check	103	297	103	297	93	287
Exp. Mean		117	332	117	332	105	303

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Table No. 6.12 contd...: Plant Height (cm) & Panicles/m² of entries in IVT – CSTVT (Normal), Kharif 2021

Entry No	IET No	ZONE III-EASTERN					
		WEST BENGAL				Z3 (2)	
		CHINSURAH		Canning-ICAR		Mean	
		PH	NP	PH	NP	PH	NP
5001	27851	121	330	104	495	113	413
5002	27847	112	330	105	440	109	385
5003	27051	113	355	105	486	109	420
5004	30181	107	421	109	495	108	458
5005	30182	142	404	128	458	135	431
5006	30183	100	404	116	477	108	440
5007	30184	100	363	105	495	102	429
5008	30185	111	396	105	495	108	446
5009	Bhuthnath (Coastal Saline Check)	128	413	116	440	122	426
5010	30186						
5011	30187	160	256	138	458	149	357
5012	30188	102	347	105	477	103	412
5013	30189			96	495	96	495
5014	CSR 10 (Early duration saline check)	90	413	65	440	78	426
5015	30190	119	479	95	458	107	468
5016	30191	100	479	91	440	96	459
5017	30192	107	413	104	513	106	463
5018	30193	100	389	92	422	96	405
5019	FL 478 (Saline Tolerant check)	103	446	96	477	99	461
5020	30194	190	380	132	495	161	437
5021	30195	112	380	106	468	109	424
5022	30196	100	380	92	458	96	419
5023	30197	117	322	115	495	116	408
5024	30198			76	477	76	477
5025	30199	100	363	111	468	105	415
5026	30200			116	458	116	458
5027	30201			105	513	105	513
5028	30202			127	495	127	495
5029	Pusa 44 (Sensitive check)			78	440	78	440
5030	30203			109	458	109	458
5031	30204	105	388	109	449	107	418
5032	30205	103	338	99	495	101	417
5033	30206	100	380	107	458	103	419
5034	30207	100	272	106	477	103	374
5035	30208	103	289	89	495	96	392
5036	Local Check	113	338	109	394	111	366
Exp. Mean		113	374	104	470	107	432

PH: Plant Height (cm) NP: No. of Panicles/sqm

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Table No. 6.12 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT – CSTVT (Normal), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						Overall Mean (4)	
		KARNATAKA (1)		PUDUCHERRY (1)		Z7 (2)			
		BRAHMAVAR		Karaikal		Mean		PH	NP
		PH	NP	PH	NP	PH	NP		
5001	27851	61	114	110	411	85	263	99	338
5002	27847	65	103	128	567	97	335	103	360
5003	27051	61	92	107	511	84	301	96	361
5004	30181	79	86	122	433	101	260	104	359
5005	30182	60	146	107	389	84	267	109	349
5006	30183	58	98	125	656	91	377	100	408
5007	30184	71	111	117	567	94	339	98	384
5008	30185	81	111	105	444	93	277	100	361
5009	Bhuthnath (Coastal Saline Check)	70	195	121	433	95	314	108	370
5010	30186	71	116			71	116	71	116
5011	30187	66	149	119	467	92	308	121	332
5012	30188	71	99	99	389	85	244	94	328
5013	30189	80	100	105	456	92	278	93	350
5014	CSR 10 (Early duration saline check)	61	110	102	367	81	238	79	332
5015	30190	76	110	114	500	95	305	101	387
5016	30191	73	111	109	467	91	289	93	374
5017	30192	78	119	111	511	94	315	100	389
5018	30193	65	146	99	489	82	317	89	361
5019	FL 478 (Saline Tolerant check)	78	176	107	367	92	271	96	366
5020	30194	71	108			71	108	131	327
5021	30195	66	97	103	433	84	265	97	344
5022	30196	73	91	104	544	89	318	92	368
5023	30197	59	104	112	611	85	358	100	383
5024	30198	65	147	102	522	83	334	81	382
5025	30199	64	187	104	511	84	349	95	382
5026	30200	60	108	112	356	86	232	96	307
5027	30201	56	105	115	456	85	280	92	358
5028	30202	73	99	148	367	110	233	116	320
5029	Pusa 44 (Sensitive check)	64	109	78	222	71	165	73	257
5030	30203	71	173	122	411	96	292	100	347
5031	30204	82	175	122	467	102	321	104	370
5032	30205	81	101	103	567	92	334	97	375
5033	30206	58	113	121	600	90	356	96	388
5034	30207	44	102	119	344	81	223	92	299
5035	30208	65	106	97	422	81	264	89	328
5036	Local Check	80	157	111	400	96	278	103	322
Exp. Mean		68	121	111	460	89	281	98	347

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Table No. 6.12 contd.: Plant Height (cm) & Panicles/m² of entries in IVT – CSTVT (Normal), (State Means & Data not Considered), Kharif 2021

Entry No	IET No	WEST		KARNATAK		PUDUCHERR		GOA (0)	
		Mean		Mean		Mean		@GOA	
		PH	NP	PH	NP	PH	NP	PH	NP
5001	27851	113	413	61	114	110	411	130	237
5002	27847	109	385	65	103	128	567	112	248
5003	27051	109	420	61	92	107	511	115	314
5004	30181	108	458	79	86	122	433	115	253
5005	30182	135	431	60	146	107	389	130	325
5006	30183	108	440	58	98	125	656	121	248
5007	30184	102	429	71	111	117	567	109	281
5008	30185	108	446	81	111	105	444	114	209
5009	Bhuthnath (Coastal Saline Check)	122	426	70	195	121	433	124	259
5010	30186			71	116				
5011	30187	149	357	66	149	119	467	136	253
5012	30188	103	412	71	99	99	389	119	253
5013	30189	96	495	80	100	105	456	96	220
5014	CSR 10 (Early duration saline check)	78	426	61	110	102	367	80	269
5015	30190	107	468	76	110	114	500	125	193
5016	30191	96	459	73	111	109	467	104	325
5017	30192	106	463	78	119	111	511	104	231
5018	30193	96	405	65	146	99	489	119	259
5019	FL 478 (Saline Tolerant check)	99	461	78	176	107	367	99	215
5020	30194	161	437	71	108			154	215
5021	30195	109	424	66	97	103	433		
5022	30196	96	419	73	91	104	544	99	270
5023	30197	116	408	59	104	112	611	122	281
5024	30198	76	477	65	147	102	522	106	204
5025	30199	105	415	64	187	104	511	106	297
5026	30200	116	458	60	108	112	356	126	325
5027	30201	105	513	56	105	115	456	105	336
5028	30202	127	495	73	99	148	367	141	199
5029	Pusa 44 (Sensitive check)	78	440	64	109	78	222	98	303
5030	30203	109	458	71	173	122	411	107	198
5031	30204	107	418	82	175	122	467	105	325
5032	30205	101	417	81	101	103	567	117	253
5033	30206	103	419	58	113	121	600	108	352
5034	30207	103	374	44	102	119	344	111	176
5035	30208	96	392	65	106	97	422	100	259
5036	Local Check	111	366	80	157	111	400	121	326
Exp. Mean		107	432	68	121	111	460	114	262

Table No. 6.13 Grain quality characteristics of entries in IVT-CSTVT analyzed at ICAR-IIRR, Hyderabad, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
5001	27851	79.0	72.0	70.5	6.11	2.14	2.85	LB	VOC	5.0	27.69	22
5002	27847	79.2	71.4	66.7	6.11	2.22	2.75	LB	A	5.0	25.78	48
5003	27051	78.7	65.7	62.5	6.54	2.29	2.46	LB	A	4.0	25.87	50
5009	Bhuthnath	78.2	66.9	64.1	5.59	2.34	2.38	SB	A	4.0	25.98	22
5014	CSR-10	77.7	71.5	70.8	5.52	2.59	2.13	SB	VOC	4.0	23.37	47
5019	FL-478	80.3	71.2	69.1	5.22	1.92	2.71	MS	A	4.0	24.75	43
5029	Pusa-44	77.6	71.0	69.5	5.91	2.24	2.63	MS	VOC	7.0	26.16	22

HULL: Hulling (%); Milling (%): HRR: Head Rice Recovery (%); KL: Kernel Length(mm); KB: Kernel Breadth(mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent; ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB Long Bold; SB::Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

INITIAL VARIETY TRIAL - AROMATIC SHORT GRAIN (IVT-ASG)

Locations: 32

Test Entries: 23

**Checks: Shobini-National; Badshahbhog (Northern & Central), Table: 7.1
CR Sugandh Dhan 907 (Eastern & North Eastern),
Sugandha Samba (Western & Southern)- (Zonal);
Dubraj & Ketekejoha (Quality) and Local
check**

The Initial Variety Trial – Aromatic Short Grain was constituted with 23 test entries and 5 checks viz., Shobini (NC), 3 Zonal checks: Badshahbhog (Northern and Central), CR Sugandh dhan 907 (Eastern & North Eastern), Sugandh Samba (Western & Southern), and 2 quality checks: Dubraj (QC), Ketikijoha (QC) and Local check. The trial was conducted in six zones namely Zone 2 (Northern): UP, Zone 3 (Eastern): Odisha, Bihar, West Bengal and part of UP, Zone 4 (North eastern): Assam and Tripura, Zone 5 (Central): Madhya Pradesh and Chhattisgarh, Zone 6 (western): Maharashtra and Gujarat and Zone 7 (southern): Telangana, Kerala and Karnataka. The trial data was received from 27 locations covering 14 states and 6 zones across the country. Data not received from five locations viz., Hathwara, Varanasi, Gerua-ICAR, Jabalpur and Kampasagar. Data from the locations, where F variance ratio between treatments is non-significant, low experimental mean yield, low CV, high CV was not considered in analysis namely viz., Kanpur (low experimental mean yield and high CV), Jeypore (low experimental mean yield), Pundibari (high CV), Titabar (Very high experimental mean yield and low CV), Waraseoni (low experimental mean yield) and Nawagam (low experimental mean yield).

Overall mean yield ranged from 4865 kg/ha (IET 30228) to 3485 kg/ha (IET 30215); days to 50% flowering ranged from 90 days (IET 30229) to 108 days (IET 30212 & IET 29392); plant height varied from 87.81 cm (IET 30217) to 147.42 cm (IET 30214) and number of panicles/m² ranged from 232 (IET 30211) to 283 (IET 30223). The data pertaining to yield, flowering, plant height, panicles/m² and quality were presented in tables 7.2, 7.3 and 7.4. Among the yield checks, National check is the top yielder (4853 kg/ha) followed by quality check Ketekijoha (4167 kg/ha), quality check Dubraj (3857 kg/ha) then Zonal check (3852 kg/ha) and local check (3097 Kg/ha).

On overall mean basis none of the entries recorded required yield superiority over best varietal check (National check).

Zonal performance of promising entries

Zone 2 (Northern):

In Zone II a total of 23 entries are evaluated. Among the entries IET 30213 (BRR 2177) first ranked derived from MTU 7029 / Taroari basmati dwarf mutant 2 recorded maximum grain yield of 5833 kg/ha (Days to 50% flowering-95 days) with an yield increment that exceed the best varietal check plus CD value at 5 % level of significance, It ranked first in Uttar Pradesh. The quality traits reported to be low HRR (47.7 %), ASV (4.0), intermediate AC (24.49 %) and GC (22 mm) and has strong aroma and grain type is Long slender (KL-6.38, KB-1.73, L/B ratio-3.67). Based on grain type and head rice recovery, the entry does not qualify to be promoted to next year of testing.

Zone - III (Eastern):

In Zone III two entries showed adequate yield advantage over the best check (National check-4632 kg/ha and CD-317 at 5% level of significance). The entry IET 30223 which stood first in zone III has recorded grain yield of 5456 kg/ha (Days to 50% flowering-106 days) and ranked first in Bihar (5568 kg/ha) and second in Odisha (4640 kg/ha). IET 30213 secured second position in zone III, recorded grain yield of 4985 kg/ha (Days to 50% flowering-103 days) and acquired second place in Bihar (5410). The entry IET 30223 has HRR (54.1 %), ASV (4.0), AC (26.51 %) and GC (43 mm) but do not possess the aroma, hence not considered for further testing, while the entry IET 30213 has low HRR (47.7 %), ASV (4.0), intermediate AC (24.49 %), GC (22 mm), possessing strong aroma, but the grain type is Long slender (KL-6.38, KB-1.73, L/B ratio-3.67). Hence, it is not promoted for next level of testing.

Zone - IV (North Eastern):

In Zone IV one entry IET 30209 (NVSR 438) obtained from cross combination CSR-36 / IRGC 13496) / Pusa-1609 has a yield potential of 5790 kg/ha and 101 days to 50% flowering could exceed the value of best varietal check (Dubraj- 4790 kg/ha) plus CD value at 5 % LOS (821) and ranked first in 4th zone and Tripura state. Based on the quality parameters low HRR (44.3 %), ASV (7.0), intermediate AC (24.22 %) and GC (41 mm), no aroma and the grain type is Long slender (KL-6.84, KB-1.99, L/B ratio-3.58). Therefore, the entry IET 30209 not promoted to next level of testing AVT-1 ASG.

Zone - V (Central):

In Zone V over the four locations of Chhattisgarh state, one entry IET 30228 (IGKV DH 66) obtained from the parental lines Dubraj and RP Bio-226 is in first position in 5th zone and Chhattisgarh state exceeding the yield of best varietal check (National check- 4394 kg/ha) plus CD value at 5 % LOS (526) with a grain yield of 5149 kg/ha and 99 days to 50% flowering. The traits pertaining to quality aspects are as follows: HRR (41 %), ASV (4.0), AC (26.34 %) and GC (71 mm), the grain type is Long Bold (KL-6.30, KB-2.44, L/B ratio-2.58) and do not possess aroma. Hence the entry IET 30228 not promoted to next year of testing.

On the basis of required criteria for over and above yield superiority over the best check including the CD value, and quality parameters, especially aroma and grain type none of the entries got promoted.

Zone wise performance of the promising entries in IVT- ASG, Kharif 2021

Rank	IET No/ Designation/ Cross combination	GY/ DFF/ GT	Performance across the states	Remarks
			State Rank & GY	
Promising entries in Zone - II (Northern):				
1	IET 30213 BRR 2177 (MTU 7029 / Taroari basmati dwarf mutant 2)	5833 95 LS	UP-1 5833	Low HRR:47.7 % GT: LS (D)
	<i>National check (NC)</i>	4212 98		
	Zonal Check (ZC)	3581 110		
	Local Check (LC)	3229 106		
	Dubraj (QC1)	2259 114		
	Ketekijoha (QC2)	2246 90		
	CD value at 5% level of significance	1048		
Promising entries in Zone - III (Eastern):				
1	IET 30223 IGKV DH 42 Mutant (Dubraj / RP Bio-226 mutant)	5456 106 SB	OD-2 4640 BI-1 5568	Low HRR: 54.1 % Aroma absent (D)
2	IET 30213 BRR 2177 (MTU 7029 / Taroari basmati dwarf mutant 2)	4985 103 LS	BI-2 5410	Low HRR: 47.7 % GT: LS (D)
	<i>National check (NC)</i>	4632 101		
	Zonal Check (ZC)	3972 102		
	Local Check (LC)	3935 101		
	Dubraj (QC1)	3890 101		
	Ketekijoha (QC2)	4379 103		
	CD value at 5% level of significance	317		

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Rank	IET No/ Designation/ Cross combination	GY/ DFF/ GT	Performance across the states	Remarks
			State Rank & GY	
Promising entries in Zone - IV (North Eastern):				
1	IET 30209 NVS R 438 (CSR-36 / IRGC 13496) / Pusa- 1609)	5790 101 LS	TR-1 5790	Low HRR:44.3% GT: LS Aroma absent (D)
	National check (NC)	4640 93		
	Zonal Check (ZC)	3475 103		
	Local Check (LC)	3890 107		
	Dubraj (QC1)	4790 98		
	Ketekijoha (QC2)	3080 99		
	CD value at 5% level of significance	821		
Promising entries in Zone - V (Central):				
1	IET 30228 IGKV DH 66 (Dubraj / RP Bio-226)	5149 99 LB	CG-1 5149	Low HRR:41% GT: LB Aroma absent (D)
	National check (NC)	4394 101		
	Zonal Check (ZC)	2902 107		
	Local Check (LC)	3582 108		
	Dubraj (QC1)	3294 106		
	Ketekijoha (QC2)	3868 99		
	CD value at 5% level of significance	526		

(D)- Dropped

Table No. 7.1: Composition of entries in Initial Variety Trial -Aromatic Short Grain (IVT-ASG), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	GT
1st year of testing:				
5101	30209	NVSR 438	(CSR-36 / IRGC 13496) / Pusa-1609	LS
5102	30210	RNR 28409	Pusa-1121 / Basmati-370	LS
5103	30211	Samundchini Mutant S-50	Mutant of Samundchini Local Landrace	SB
5104	30212	OR 2594-10	Swarna / Chinikamini	SB
5105	29392 (R)	OR 2594-5	Swarna / Chinikamini	SB
5106	Dubraj (Quality Check)			
5107	30213	BRR 2177	MTU 7029 / Taroari basmati dwarf mutant 2	LS
5108	30214	NDR 2020-1	Kalanamak / BKP 242	MS
5109	30215	Kalanamak Mutant	Goma Rays 250 ppm	MS
5110	30216	NVSR 604	IRRI-AMT-101/GNR-2	MS
5111	29390 (R)	R 1656-2151-1-412-1	Swarna / Jirashankar	SB
5112	30217	Vishnubhog Mutant 71-4	Vishnu Bhog	SB
5113	30218	R 2369-475-2-252-1	Swarna / Kalanamak	SB
5114	Ketekijoha (Quality Check)			
5115	30219	UPR 2825-30-1-2	UPR 3506-15-1 / Sarbati	MS
5116	30220	Vishnubhog Mutant -80	Vishnubhog	SB
5117	30221	NVSR 603	IRRI-AMT-101 / GAR-13	MS
5118	30222	NDR 8400-3	Kalanamak / Sambha Mahsuri-Sub 1	MS
5119	30223	IGKV DH 42 Mutant	Dubraj / RP Bio-226 Mutant	SB
5120	Shobini (National Check)			
5121	30224	RNR 28401	Pusa 1121 / Sumati	LS
5122	30225	NDR 2020-2-1	Kalanamak / Basmati 370	LS
5123	30226	Jeeraphool Mutant-5	Mutant of Jeeraphool Landrace	LS
5124	30227	OR 2594-13	Swarna / Chinikamini	SB
5125	30228	IGKV DH 66	Dubraj / RP Bio -226	LB
5126	30229	BRR 2180	Taroari Basmati dwarf 2 / Sugandha 2	LS
5127	Badshahog-Northern & Central, CR Sugandh Dhan 907- Eastern & North Eastern, Sugandh Samba- Western & Southern--ZC			
5128	Local Check			

(R): Repeat

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Table No. 7.2: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN						ZONE III-EASTERN								
		UTTAR PRADESH			ZZ (1)			ODISHA						BIHAR		
		NAGINA			Mean			ICAR-NRRI (Cuttack)			CHIPLIMA			BIKRAMGANJ		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
5101	30209	2441		91	2441		91	2683		70	3361		126	5667	4	96
5102	30210	5013	2	97	5013	2	97	2490		64	3983	8	123	4656		98
5103	30211	2487		118	2487		118	3029		70	4156	3	105	4424		116
5104	30212	2201		114	2201		114	4695	4	90	3872		122	5185	7	114
5105	29392 (R)	2370		116	2370		116	3438		90	3156		127	3795		116
5106	Dubraj (Quality Check)	2259		114	2259		114	2262		62	3728		107	3762		111
5107	30213	5833	1 *	95	5833	1 *	95	4219	6	72	4011	7	123	6884	1 *	103
5108	30214	2493		112	2493		112	3300		62	3017		107	4187		111
5109	30215	2376		115	2376		115	2653		69	3039		107	3825		116
5110	30216	2715		87	2715		87	4924	3	63	3911	9	107	3820		93
5111	29390 (R)	2461		115	2461		115	3211		70	3817		111	5249	5	112
5112	30217	3301	10	95	3301	10	95	3341		60	4111	4	126	3883		95
5113	30218	3893	5	115	3893	5	115	3895	10	77	3167		122	5176	8	110
5114	Ketekijoha (Quality Check)	2246		90	2246		90	3500		66	3467		123	3709		106
5115	30219	2207		99	2207		99	3600		62	2911		120	5176	8	94
5116	30220	3639	6	111	3639	6	111	2929		62	3156		115	4294		105
5117	30221	3620	7	89	3620	7	89	4938	2	60	4617	1	121	5117	10	94
5118	30222	3060		111	3060		111	3079		59	4039	6	128	3815		106
5119	30223	3346	9	106	3346	9	106	4952	1	92	4328	2	117	6062	2 *	104
5120	Shobini (National Check)	4212	4	98	4212	4	98	3900	9	67	3639		105	5206	6	100
5121	30224	2852		87	2852		87	2426		63	3283		101	4217		99
5122	30225	2611		104	2611		104	3419		61	3683		100	3778		98
5123	30226	3099		110	3099		110	2867		61	3156		120	4279		88
5124	30227	2552		114	2552		114	3867		86	3639		106	4932		113
5125	30228	2487		108	2487		108	3645		73	2806		120	5970	3 *	88
5126	30229	4655	3	87	4655	3	87	4552	5	54	3078		112	4096		89
5127	Zonal Check (ZC)	3581	8	110	3581	8	110	4141	7	67	4056	5	123	4813		113
5128	Local Check (LC)	3229		106	3229		106	4032	8	73	3906	10	113	4185		96
Exp. Mean		3116	104		3116	104		3571	69		3610	115		4649		103
F Value		6.65(p<0.0001)S			6.65(p<0.0001)S			5.85(p<0.0001)S			6.90(p<0.0001)S			16.05(p<0.0001)S		
CD		1048			1048			925			578			592		
CV%		16.39			16.39			12.63			7.81			6.21		
D/S		07-06-2021						09-07-2021			19-07-2021			04-07-2021		
D/P		19-07-2021						17-08-2021			23-08-2021			05-08-2021		
Local Check Name		Type 3						CR Dhan910			Geetanjali			R. Kasturi		
For promotion of entries																
* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).																
# For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).																
In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.																

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Table No. 7.2 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE III-EASTERN														
		BIHAR			WEST BENGAL						UTTAR PRADESH 2(1)			Z 3(7)		
		Sabour			CHINSURAH			BANKURA			MASODHA			Mean		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
5101	30209	3239	10	96	5556	7	97	6158		105	3657		108	4332		100
5102	30210	1515		104	4778		103	5909		106	2759		114	3727		102
5103	30211	1720		108	3389		111	6093		103	2660		94	3639		101
5104	30212	3138		113	3889		113	7143	5	112				4654	6	111
5105	29392 (R)	2795		115	4667		115	6277		110	3125		107	3893		111
5106	Dubraj (Quality Check)	3718	6	104	4500		107	6266		107	2992		111	3890		101
5107	30213	3935	4	101	5778	5	107	6742	7	104	3324		111	4985	2*	103
5108	30214	3040		97	5167		105	5433		93	3723	9	114	3981		98
5109	30215	2689		104	4278		107	5703		102	3989	7*	113	3739		102
5110	30216	2789		94	5278	10	96	6147		99	3590		104	4351		94
5111	29390 (R)	4954	2*	111	5389	8	111	6385	9	107	2028		110	4433	9	104
5112	30217	2529		98	4556		103	6028		104	2793		108	3892		99
5113	30218				6167	3	114	6818	6	108	4322	3*	112	4924	4	107
5114	Ketekijoha (Quality Check)				5222		103	7381	1	106	2992		113	4379	10	103
5115	30219	3840	5	102	5889	4	106	6385	9	103	4122	6*	114	4560	8	100
5116	30220	2404		102	4056		98	5812		107	4322	3*	106	3853		99
5117	30221	2946		95	5389	8	96	6429	8	105	3723	9	115	4737	5	98
5118	30222	2644		100	5056		103	6061		102	3457		118	4022		102
5119	30223	5074	1*	110	6333	2	111	7251	3	107	4189	5*	105	5456	1*	106
5120	Shobini (National Check)	3403	9	107	5611	6	106	7208	4	105	3457		116	4632	7	101
5121	30224				4500		95	5476		107	4322	3*	110	4037		96
5122	30225	2106		98	4333		104	5346		105				3778		94
5123	30226	1618		96	3611		95	5736		101	4455	1*	110	3675		96
5124	30227	3483	8	111	4167		114	5974		111				4344		107
5125	30228	4703	3*	102	6444	1	101	7316	2	107	3723	9	111	4944	3	100
5126	30229	3620	7	92	4111		89	5747		102	2759		113	3995		93
5127	Zonal Check (ZC)	3138		111	3778		94	5487		106	2394		104	3972		102
5128	Local Check (LC)	3113		109	4222		107	4762		102	3324		107	3935		101
Exp. Mean			3126	103	4861	104	6196	105	3448	110	4241	101				
F Value			18.90(p<0.0001)S		6.03(p<0.0001)S		2.35(p<0.0145)S		18.70(p<0.0001)S		18.55(p<0.0001)S					
CD			618		996		1233		444		317					
CV%			9.58		9.98		9.7		6.23		3.64					
D/S			02-07-2021		06-07-2021		09-07-2021		02-07-2021							
D/P			21-07-2021		11-08-2021		06-08-2021		04-08-2021							
Local Check Name			Rajendra Kasturi		Gobindobhog		Danaguri		NDR 6093							

Table No. 7.2 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN						ZONE V - CENTRAL								
		TRIPURA (1)			Z 4(1)			CHHATTISGARH								
		ARUNDHUTINAGAR			Mean			RAIPUR			Ambikhapur			JAGADALPUR		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
5101	30209	5790	1*	101	5790	1*	101	4371	9	102	3485		99	3275		94
5102	30210	3340		89	3340		89	3381		101	3995		100	3132		99
5103	30211	3945		88	3945		88	3697		111	3465	5	109	3796	10	111
5104	30212	4305	7	89	4305	7	89	3919		111	3670		111	3853	9	106
5105	29392 (R)	3205		85	3205		85	3783		113	3405	8	113	3522		112
5106	Dubraj (Quality Check)	4790	4	98	4790	4	98	3273		107	3435		106	2617		101
5107	30213	4210	8	99	4210	8	99	3568		103	3700		100	3685		99
5108	30214	4425	6	96	4425	6	96	3727		106	3020	7	105	3919	8	100
5109	30215	3725		101	3725		101	2982		114	3530		112	3027		109
5110	30216	3610		100	3610		100	4538	6	92	3375		94	4180	5	96
5111	29390 (R)	3115		118	3115		118	5439	1*	109	3190		107	4342	3	106
5112	30217	4110		113	4110		113	3909		96	3290		96	3008		98
5113	30218	3055		81	3055		81	5424	2*	109	4390		109	4316	4	105
5114	Ketekijoha (Quality Check)	3080		99	3080		99	3699		103	3955	4	100	3965	7	99
5115	30219	3330		116	3330		116	4699	5	100	3150	6	103	3633		100
5116	30220	3040		105	3040		105	3270		102	3195		101	3164		100
5117	30221	4850	3	92	4850	3	92	4513	7	92	4740		94	4544	2	95
5118	30222	3920		109	3920		109	2919		106	3565	1	101	3158		104
5119	30223	3035		108	3035		108	5351	3*	107	2610	10	108	3717		110
5120	Shobini (National Check)	4640	5	93	4640	5	93	4482	8	103	4545		102	3678		101
5121	30224	5230	2	104	5230	2	104	2871		97	3450	2	96	3001		97
5122	30225	4160	10	91	4160	10	91	3187		102	3160		102	3555		101
5123	30226	4195	9	107	4195	9	107	3280		102	3230		97	2936		96
5124	30227	3105		115	3105		115	4136		112	3600		110	3776		110
5125	30228	3220		112	3220		112	5126	4	102	4450	9	101	5788	1*	96
5126	30229	3285		111	3285		111	4106		87	3510	3	94	4076	6	99
5127	Zonal Check (ZC)	3475		103	3475		103	2737		108	3180		107	3040		106
5128	Local Check (LC)	3890		107	3890		107	4258	10	108	3290		100	2728		114
Exp. Mean			3860	101	3860	101	3952	103	3556	102	3623	102				
F Value			6.66(p<0.0001)S		6.66(p<0.0001)S		9.39(p<0.0001)S		5.15(p<0.0001)S		2.03(p=0.0343)S					
CD			821		821		751		618		1327					
CV%			10.37		10.37		9.26		8.47		17.86					
D/S			12-07-2021				30-06-2021		05-07-2021		07-07-2021					
D/P			05-08-2021				22-07-2021		02-08-2021		27-07-2021					
Local Check Name			Harinarayan - 5128				CG Devbhog		Vishnubhog		Vishnubhog					

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Table No. 7.2 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE V - CENTRAL						ZONE VI - WESTERN											
		CHHATTISGARH			Z5 (4)			MAHARASHTRA						GUJARAT			Z 6(3)		
		Bilaspur			Mean			KARJAT			Vadagaon			NAVSARI			Mean		
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
5101	30209	4400	6	93	3883	10	97	4167		90	5702	3	102	6011	1*	84	5293	4	92
5102	30210	4325	8	96	3708		99	4688	5	94	5457	4	96	4015		92	4720	8	94
5103	30211	2700		113	3415		111	3719		107	4066		105	4005		109	3930		107
5104	30212	3325		109	3692		109	2958		111	4769		106	4264	10	109	3997		108
5105	29392 (R)	3350		109	3515		112	2448		107	5014		110	4057		107	3840		108
5106	Dubraj (Quality Check)	3850		109	3294		106	4167		108	5427	5	107	3755		105	4450		106
5107	30213	3515		100	3617		100	4667	7	96	3531		96	4390	8	95	4196		95
5108	30214	3410		108	3519		105	3438		109	5014		102	3704		98	4052		103
5109	30215	2635		113	3044		112	2917		106	4295		104	3805		100	3672		103
5110	30216	4360	7	88	4113	7	92	4271		90	5136	9	89	4247		79	4551	10	86
5111	29390 (R)	5325	2	109	4574	4	108	4479	10	106	5763	2	105	4255		105	4832	7	105
5112	30217	3810		90	3504		95	4375		94	4662		88	4142		89	4393		90
5113	30218	3050		106	4295	6	107	4688	5	107	5182	7	107	4706	6	107	4859	6	107
5114	Ketekijoha (Quality Check)	3850		93	3867		99	4479	10	90	5182	7	90	3849		92	4503		90
5115	30219	6975	1*	96	4614	2	100	5729	3	92	4983		91	5203	5	95	5305	3	92
5116	30220	3300		101	3232		101	4635	8	106	4020		104	3965		95	4207		101
5117	30221	4600	5	90	4599	3	93	5000	4	92	5977	1*	90	5737	2*	83	5571	1	88
5118	30222	3385		107	3257		104	2813		106	3913		91	4161		98	3629		98
5119	30223	4175	9	106	3963	8	108	7188	1	105	3562		95	4238		99	4996	5	99
5120	Shobini (National Check)	4870	4	98	4394	5	101	6458	2	92	5029	10	96	4677	7	96	5388	2	94
5121	30224				3107		96	4063		90	3623		88	3999		81	3895		86
5122	30225	3370		98	3318		101	3333		106	3531		99	3791		99	3552		101
5123	30226	3100		101	3137		99	3438		105	3592		98	3719		98	3583		100
5124	30227	3590		108	3776		110	2917		113	4341		110	5660	3*	109	4306		110
5125	30228	5230	3	97	5149	1*	99	4479	10	94	5396	6	90	4121		96	4665	9	93
5126	30229	4000		88	3923	9	92	3854		86	4097		89	5360	4	76	4437		83
5127	Zonal Check (ZC)	2650		108	2902		107	4167		95	3546		99	4352	9	95	4022		96
5128	Local Check (LC)	4050	10	109	3582		108	4219		92	4545		105	3883		98	4216		98
Exp. Mean		3896		102	3750		102	4205		99	4620		98	4360		96	4395		98
F Value		7.59(p<0.0001)S			9.25(p<0.0001)S			9.01(p<0.0001)S			6.67(p<0.0001)S			5.72(p<0.0001)S			18.30(p<0.0001)S		
CD		1005		526				1008			853			778			381		
CV%		12.55			6.83			11.68			9			8.69			4.23		
D/S		30-06-2021						01-07-2021			29-06-2021			02-07-2021					
D/P		25-07-2021						28-07-2021			30-07-2021			22-07-2021					
Local Check Name		Vishnubhog						Karjat Shatabdi			Indrayani			GAR-14					

Table No. 7.2 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN												Overall Mean(19)		
		TELANGANA			KARNATAKA						Z 7(3)					
		RAJENDRANAGAR (1)			MUGAD			Malagi			Mean					
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP
5101	30209	6022	8	110	3725		97	3604		80	4450		96	4385	8	97
5102	30210	4272		101	3333		91	3694		70	3766		87	3933		96
5103	30211	4688		109	3021		89	3740		82	3816		93	3621		103
5104	30212	6082	7	119	3620		112	4460	8	82	4721	8	104	4186		108
5105	29392 (R)	5782	9	115	3610		103	4120		83	4504		100	3785		108
5106	Dubraj (Quality Check)	4279		107	3817		90	4380	9	89	4159		95	3857		102
5107	30213	5006		101	3049		94	3840		64	3965		86	4415	7	98
5108	30214	3619		97	3604		103	3600		89	3608		96	3781		100
5109	30215	3258		96	3897		105	3600		90	3585		97	3485		104
5110	30216	5184		99	4102	9	109	4340	10	96	4542		101	4238	10	93
5111	29390 (R)	5170		104	5075	3	97	3620		62	4622		88	4382	9	104
5112	30217	5107		99	4697	6	102	3640		101	4481		101	3963		97
5113	30218	5440		111	3940		104	3880		96	4420		103	4528	5	105
5114	Ketekijoha (Quality Check)	5415		101	3806		107	5200	2	96	4807	6	101	4167		99
5115	30219	6849	5	99	3673		102	3624		64	4715	9	88	4525	6	98
5116	30220	5029		103	5322	1	100	3660		79	4670	10	94	3853		100
5117	30221	6943	3	99	4835	4	105	3748		90	5175	4	98	4856	2	94
5118	30222	2356		103	3580		103	5260	1	60	3732		88	3697		100
5119	30223	5441		107	4459	8	106	4480	7	81	4793	7	98	4726	4	104
5120	Shobini (National Check)	6960	2	103	5213	2	100	5020	4	82	5731	2	95	4853	3	98
5121	30224	5456		92	4076	10	104	3978		62	4503		86	3931		92
5122	30225	2948		101	3144		95	3684		62	3259		86	3508		96
5123	30226	3592		97	3186		97	3676		70	3485		88	3514		97
5124	30227	6886	4	107	4611	7	112	4300		65	5266	3	94	4196		107
5125	30228	7698	1	101	4752	5	107	5080	3	80	5843	1	96	4865	1	99
5126	30229	5626	10	95	3755		98	3750		61	4377		85	4107		90
5127	Zonal Check (ZC)	6222	6	101	3624		104	4800	6	64	4882	5	90	3852		101
5128	Local Check (LC)	4266		107	3335		108	5000	5	53	4200		89	3907		100
Exp. Mean		5200		103	3959		101	4135		77	4431		94	4111		100
F Value		16.54(p<0.0001)S			4.73(p<0.0001)S			3.28(p<0.0014)S			12.54(p<0.0001)S			49.33(p<0.0001)S		
CD		917			876			1208			533			171		
CV%		8.59			10.78			14.24			5.86			2.03		
D/S		30-06-2021			09-07-2021			26-06-2021								
D/P		26-07-2021						19-07-2021								
Local Check Name		Chittimutyalu			Mugad Suganda											

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Table No. 7.2 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - ASG (State Means), Kharif 2021

Entry No	IET No	UTTAR PRADESH 1(1)			UTTAR PRADESH 2(1)			UTTAR PRADESH (2)			ODISHA (2)			BIHAR (2)			WEST BENGAL (2)		
		Mean			Mean			Mean			Mean			Mean			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
5101	30209	2441		91	3657		108	3049		99	3022		98	4453	7	96	5857	10	101
5102	30210	5013	2	97	2759		114	3886	4	105	3237		94	3086		101	5344		105
5103	30211	2487		118	2660		94	2573		106	3593		87	3072		112	4741		107
5104	30212	2201		114				2201		114	4284	4	106	4162		113	5516		113
5105	29392 (R)	2370		116	3125		107	2747		112	3297		108	3295		115	5472		113
5106	Dubraj (Quality Check)	2259		114	2992		111	2626		112	2995		84	3740		107	5383		107
5107	30213	5833	1 *	95	3324		111	4579	1 *	103	4115	5	97	5410	2 *	102	6260	6	105
5108	30214	2493		112	3723	9	114	3108		113	3159		84	3614		104	5300		99
5109	30215	2376		115	3989	7 *	113	3183		114	2846		88	3257		110	4991		104
5110	30216	2715		87	3590		104	3153		95	4418	3	85	3305		93	5713		98
5111	29390 (R)	2461		115	2028		110	2244		112	3514		90	5102	5 *	111	5887	9	109
5112	30217	3301	10	95	2793		108	3047		101	3726		93	3206		96	5292		104
5113	30218	3893	5	115	4322	3 *	112	4108	2	114	3531		99	5176	4 *	110	6493	3	111
5114	Ketekijoha (Quality Check)	2246		90	2992		113	2619		101	3484		95	3709		106	6302	5	105
5115	30219	2207		99	4122	6 *	114	3165		106	3256		91	4508	6	98	6137	7	104
5116	30220	3639	6	111	4322	3 *	106	3981	3	108	3043		88	3349		104	4934		103
5117	30221	3620	7	89	3723	9	115	3672	9	102	4778	1 *	90	4032		94	5909	8	101
5118	30222	3060		111	3457		118	3259		114	3559		93	3230		103	5559		102
5119	30223	3346	9	106	4189	5 *	105	3768	7	105	4640	2 *	104	5568	1 *	107	6792	2	109
5120	Shobini (National Check)	4212	4	98	3457		116	3835	5	107	3770	9	86	4305	8	103	6410	4	106
5121	30224	2852		87	4322	3 *	110	3587		98	2855		82	4217	9	99	4988		101
5122	30225	2611		104				2611		104	3551		80	2942		98	4840		104
5123	30226	3099		110	4455	1 *	110	3777	6	110	3012		90	2949		92	4674		98
5124	30227	2552		114				2552		114	3753	10	96	4208	10	112	5071		112
5125	30228	2487		108	3723	9	111	3105		109	3226		96	5337	3 *	95	6880	1	104
5126	30229	4655	3	87	2759		113	3707	8	100	3815	8	83	3858		90	4929		96
5127	Zonal Check (ZC)	3581	8	110	2394		104	2987		107	4099	6	95	3976		112	4633		100
5128	Local Check (LC)	3229		106	3324		107	3277		106	3969	7	93	3649		102	4492		105
Exp. Mean		3116		104	3448		110	3329		107	3591		92	3954		103	5528		104
F Value		6.65(p<0.0001)S			18.70(p<0.0001)S			9.21(p<0.0001)S			6.68(p<0.0001)S			31.09(p<0.0001)S			6.86(p<0.0001)S		
CD		1048			444			576			497			405			742		
CV%		16.39			6.23			8.68			6.74			5			6.54		

Table No. 7.2 Contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - ASG (State Means), Kharif 2021

Entry No	IET No	TRIPURA (1)			CHHATTISGARH (4)			MAHARASHTRA (2)			GUJARAT (1)			TELANGANA (1)			KARNATAKA (2)		
		Mean			Mean			Mean			Mean			Mean			Mean		
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF
5101	30209	5790	1 *	101	3883	10	97	4935	8	96	6011	1 *	84	6022	8	110	3665		88
5102	30210	3340		89	3708		99	5073	6	95	4015		92	4272		101	3514		80
5103	30211	3945		88	3415		111	3893		106	4005		109	4688		109	3381		85
5104	30212	4305	7	89	3692		109	3864		108	4264	10	109	6082	7	119	4040		97
5105	29392 (R)	3205		85	3515		112	3731		108	4057		107	5782	9	115	3865		93
5106	Dubraj (Quality Check)	4790	4	98	3294		106	4797		107	3755		105	4279		107	4099		90
5107	30213	4210	8	99	3617		100	4099		96	4390	8	95	5006		101	3445		79
5108	30214	4425	6	96	3519		105	4226		105	3704		98	3619		97	3602		96
5109	30215	3725		101	3044		112	3606		105	3805		100	3258		96	3749		97
5110	30216	3610		100	4113	7	92	4704		89	4247		79	5184		99	4221	10	102
5111	29390 (R)	3115		118	4574	4	108	5121	5	105	4255		105	5170		104	4348	8	79
5112	30217	4110		113	3504		95	4519		91	4142		89	5107		99	4169		101
5113	30218	3055		81	4295	6	107	4935	8	107	4706	6	107	5440		111	3910		100
5114	Ketekijoha (Quality Check)	3080		99	3867		99	4831	10	90	3849		92	5415		101	4503	3	101
5115	30219	3330		116	4614	2	100	5356	4	91	5203	5	95	6849	5	99	3649		83
5116	30220	3040		105	3232		101	4328		105	3965		95	5029		103	4491	4	89
5117	30221	4850	3	92	4599	3	93	5489	2	91	5737	2 *	83	6943	3	99	4292	9	97
5118	30222	3920		109	3257		104	3363		98	4161		98	2356		103	4420	7	81
5119	30223	3035		108	3963	8	108	5375	3	100	4238		99	5441		107	4470	5	93
5120	Shobini (National Check)	4640	5	93	4394	5	101	5744	1	94	4677	7	96	6960	2	103	5117	1	91
5121	30224	5230	2	104	3107		96	3843		89	3999		81	5456		92	4027		83
5122	30225	4160	10	91	3318		101	3432		102	3791		99	2948		101	3414		78
5123	30226	4195	9	107	3137		99	3515		101	3719		98	3592		97	3431		83
5124	30227	3105		115	3776		110	3629		111	5660	3 *	109	6886	4	107	4456	6	88
5125	30228	3220		112	5149	1 *	99	4938	7	92	4121		96	7698	1	101	4916	2	93
5126	30229	3285		111	3923	9	92	3976		87	5360	4	76	5626	10	95	3753		80
5127	Zonal Check (ZC)	3475		103	2902		107	3857		97	4352	9	95	6222	6	101	4212		84
5128	Local Check (LC)	3890		107	3582		108	4382		98	3883		98	4266		107	4168		80
Exp. Mean		3860		101	3750		102	4413		99	4360		96	5200		103	4047		89
F Value		6.66(p<0.0001)S			9.25(p<0.0001)S			10.26(p<0.0001)S			5.72(p<0.0001)S			16.54(p<0.0001)S			4.10(p<0.0002)S		
CD		821			526			620			778			917			765		
CV%		10.37			6.83			6.85			8.69			8.59			9.21		

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Table No. 7.2 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - ASG (Data Not Considered), Kharif 2021

Entry No	IET No	Uttar Pradesh			Odisha			West Bengal			Assam			Madhya Pradesh		
		@KANPUR			@JEYPORE			@Pundibhari			@TITABAR			@Waraseoni		
		GY	R	DFF	GY	R	DFF	GY	R	DFF	GY	R	DFF	GY	R	DFF
5101	30209	1038	8	63	1035		106	3733	10	94	11069		96	1939		84
5102	30210	693		68	1492		111	5400	2	99	7893		100	2037		82
5103	30211	510		67	1364		100	4000	9	112	13475	7	106	4211	3 *	112
5104	30212	207		68	1566	10	116	2667		105	11261		119	3495	7	109
5105	29392 (R)	1093	5	62	1159		115	1700		99	8951		122	3038		114
5106	Dubraj (Quality Check)	303		70	1354		96	2067		87	10491		96	2752		108
5107	30213	703		62	2005	5	107	5000	3	101	9240		109	2551		84
5108	30214	577		73	1188		91	1933		103	12416		102	1859		122
5109	30215	700		70	1175		95	1800		85	10973		102	1756		124
5110	30216	1168	4	69	2708	1	101	4800	5	86	13571	6	96	3141	9	82
5111	29390 (R)	615		70	1065		99	3667		103	15689	2	99	2145		109
5112	30217	291		69	1026		113	6133	1	98	8759		98	2855		85
5113	30218	338		56	1903	6	114	3600		103	10588		115	2780		104
5114	Ketekijoha (Quality Check)	299		64	2281	3	114	4100	7	95	12224		99	2208		81
5115	30219	849	10	65	1231		103	4067	8	97	14630	3	100	2826		90
5116	30220	747		69	1438		101	2613		97	7796		98	3186	8	102
5117	30221	809		62	2124	4	105	4333	6	85	12609	10	97	3524	6	80
5118	30222	649		64	1516		93	2567		90	11069		96	2271		100
5119	30223	976	9	66	2403	2	113	1733		93	12898	9	112	4251	2	103
5120	Shobini (National Check)	1655	2	67	1574	9	112	1800		107	14438	4	105	2746		84
5121	30224	303		69	1872	7	102	2733		99	13090	8	98	2534		86
5122	30225	825		69	1010		94	1800		108	10106		93	2717		96
5123	30226	1079	6	75	1147		97	2200		100	5871		93	3581	5	80
5124	30227	1199	3	69	1009		116	1533		83	13764	5	117	2334		110
5125	30228	446		66	1113		103	4933	4	98	15785	1	122	4262	1	91
5126	30229	1069	7	66	1362		93	3333		81	7989		93	3730	4	76
5127	Zonal Check (ZC)	2905	1	64	1122		105	1800		87	10106		100	3124	10	113
5128	Local Check (LC)	685		58	1737	8	121	2200		116	12320		120	2557		108
Exp. Mean		812		66	1499		105	3152		97	11395		103	2872		97
F Value		3.06(p=0.0024)S			24.60(p<0.0001)S			2.52(p=0.0092)S			40.25(p<0.0001)S			7.20(p<0.0001)S		
CD		1027			268			2508			1132			778		
CV%		61.66			8.72			38.78			4.84			13.2		
D/S		02-07-2021			17-07-2021			09-07-2021			19-07-2021			07-06-2021		
D/P		07-08-2021			16-08-2021			09-08-2021			19-08-2021			20-07-2021		
Local Check Name		NDR 89			Kalajeera			Kalo Nunia			Bakul Joha			Improved Chinnor		

Table No. 7.2 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - ASG (Data Not Considered), Kharif 2021

Entry No	IET No	Gujarat			Kerala			Karnataka		
		@NAWAGAM			@PATTAMBI			@Sirsi		
		GY	R	DFF	GY	R	DFF	GY	R	DFF
5101	30209	4111	3	99	4510		99	3440	5	103
5102	30210	2915		96	4210		98	3080	8	103
5103	30211	2563		128	4448		97	1000		104
5104	30212	2075		126	4852	6	98	2160		110
5105	29392 (R)	2818		126	4786	7	98	1500		110
5106	Dubraj (Quality Check)	2178		101	3724		98	2440		108
5107	30213	3713	6	107	4276		97	1960		100
5108	30214	2629		96	5067	2	97	1840		100
5109	30215	1864		126	3319		97	1720		108
5110	30216	3477	9	97	3652		98	2960		96
5111	29390 (R)	1977		105	4971	4	98	2360		108
5112	30217	2294		94	5529	1	99	2160		96
5113	30218	3698	7	127	4357		98	2200		108
5114	Ketekijoha (Quality Check)	1239		98	5062	3	98	3040	9	96
5115	30219	5131	1	122	3643		99	2240		103
5116	30220	2523		109	4114		99	1900		108
5117	30221	4510	2	93	4752	9	98	2320		96
5118	30222	1855		92	3724		98	1600		101
5119	30223	3545	8	98	4143		99	3300	7	110
5120	Shobini (National Check)	3291	10	108	4124		98	4860	2	103
5121	30224	1855		99	4757	8	97	5920	1	93
5122	30225	1491		102	4029		98	2240		101
5123	30226	1704		94	4081		98	4080	4	100
5124	30227	2333		123	4905	5	99	3440	5	110
5125	30228	3740	5	109	4257		99	3040	9	101
5126	30229	3153		94	4429		98	2120		96
5127	Zonal Check (ZC)	2205		102	4590	10	99	1240		103
5128	Local Check (LC)	3884	4	110	4210		99	4560	3	115
Exp. Mean		2813		106	4376		98	2669		103
F Value		12.77(p<0.0001)S			1.08(p=0.4206)NS			48.39(p<0.0001)S		
CD		779			1507			494		
CV%		13.49			16.78			9.02		
D/S		03-07-2021			16-07-2021			30-06-2021		
D/P		10-08-2021			10-08-2021			20-07-2021		
Local Check Name		GAR 14			JEERAKASHALA					

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Table No. 7.3: Plant Height (cm) & Panicles/m2 of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE II-NORTHERN				ZONE III-EASTERN							
		UTTAR		Z2 (1)		ODISHA				BIHAR			
		NAGINA		Mean		ICAR-NRRI (Cuttack)		CHIPLIMA		BIKRAMGANJ		Sabour	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
5101	30209	95	221	95	221	101		93	266	118	297	120	206
5102	30210	109	255	109	255	119		95	202	109	263	120	214
5103	30211	106	214	106	214	106		94	208	131	273	133	218
5104	30212	92	214	92	214	122		92	228	120	291	119	219
5105	29392 (R)	92	196	92	196	131		99	212	117	291	147	225
5106	Dubraj (Quality Check)	99	176	99	176	126		96	156	147	281	161	266
5107	30213	98	288	98	288	113		92	198	107	321	131	256
5108	30214	113	275	113	275	154		93	216	172	276	161	272
5109	30215	99	228	99	228	148		96	152	169	303	163	197
5110	30216	99	242	99	242	105		91	178	120	299	113	238
5111	29390 (R)	100	226	100	226	137		87	196	144	289	150	256
5112	30217	76	259	76	259	89		95	232	95	282	93	302
5113	30218	79	243	79	243	118		90	218	109	282	.	.
5114	Ketekijoha (Quality Check)	93	250	93	250	130		92	206	109	271	.	.
5115	30219	111	218	111	218	136		91	234	137	282	139	273
5116	30220	83	225	83	225	92		92	212	118	237	103	244
5117	30221	94	246	94	246	103		94	188	114	301	121	281
5118	30222	111	232	111	232	142		99	174	133	289	162	313
5119	30223	90	295	90	295	94		89	182	105	261	102	219
5120	Shobini (National Check)	98	252	98	252	111		89	200	110	289	113	331
5121	30224	101	219	101	219	104		87	236	116	303	.	.
5122	30225	108	208	108	208	134		93	254	138	300	139	169
5123	30226	85	213	85	213	115		98	200	126	304	120	179
5124	30227	90	226	90	226	140		92	214	109	289	119	186
5125	30228	95	240	95	240	110		93	160	118	279	125	250
5126	30229	96	308	96	308	100		96	194	112	264	113	271
5127	Zonal Check (ZC)	113	319	113	319	102		96	188	106	237	122	269
5128	Local Check (LC)	115	238	115	238	114		92	194	113	302	128	224
Exp. Mean		98	240	98	240	118		93	204	122	284	129	243

PH: Plant Height (cm) NP: No. of Panicles/sqm

Table No. 7.3 Contd.: Plant Height (cm) & Panicles/m2 of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE III-EASTERN							ZONE IV- NORTH EASTERN						
		WEST BENGAL				UTTAR PRADESH 2(1)			Z 3(7)		TRIPURA (1)			Z 4(1)	
		CHINSURAH		BANKURA		MASODHA			Mean		ARUNDHUTINAGAR			Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
5101	30209	111	248	135	446	124	270	115	249	117	333	117	333		
5102	30210	113	330	130	512	142	272	118	257	113	255	113	255		
5103	30211	117	248	115	396	115	256	116	230	131	212	131	212		
5104	30212	122	264	95	512	.	.	112	254	93	325	93	325		
5105	29392 (R)	126	281	115	314	116	240	121	225	102	296	102	296		
5106	Dubraj (Quality Check)	141	264	155	545	160	247	141	252	112	285	112	285		
5107	30213	117	281	115	495	134	282	116	263	96	281	96	281		
5108	30214	147	347	160	446	173	281	151	264	137	212	137	212		
5109	30215	146	429	175	413	164	270	152	253	141	213	141	213		
5110	30216	107	413	125	413	108	268	110	259	109	270	109	270		
5111	29390 (R)	139	396	100	578	176	227	133	279	101	223	101	223		
5112	30217	92	248	110	462	104	260	97	256	93	326	93	326		
5113	30218	111	363	120	512	105	277	109	277	132	280	132	280		
5114	Ketekijoha (Quality Check)	126	347	125	429	140	263	120	254	132	243	132	243		
5115	30219	127	281	145	347	124	248	128	239	114	227	114	227		
5116	30220	92	363	135	495	111	271	106	262	123	204	123	204		
5117	30221	104	314	95	462	120	267	107	260	114	320	114	320		
5118	30222	101	281	105	429	168	261	130	251	122	270	122	270		
5119	30223	118	380	100	660	99	282	101	285	162	290	162	290		
5120	Shobini (National Check)	117	314	165	479	144	262	121	269	159	265	159	265		
5121	30224	138	297	135	281	.	282	116	235	130	311	130	311		
5122	30225	106	330	125	429	.	.	122	249	161	230	161	230		
5123	30226	117	281	115	561	100	278	113	259	138	323	138	323		
5124	30227	117	215	115	363	.	.	115	213	127	256	127	256		
5125	30228	101	297	145	512	128	270	117	254	119	239	119	239		
5126	30229	108	281	100	363	105	250	105	233	93	271	93	271		
5127	Zonal Check (ZC)	108	264	95	512	90	260	103	249	112	309	112	309		
5128	Local Check (LC)	152	248	170	380	130	267	128	232	146	299	146	299		
Exp. Mean		119	307	126	455	128	264	119	252	122	270	122	270		

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Table No. 7.3 Contd.: Plant Height (cm) & Panicles/m2 of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE V - CENTRAL									
		CHHATTISGARH								Z5 (4)	
		RAIPUR		Ambikhapur		JAGADALPUR		Bilaspur		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
5101	30209	124	220	98	227	84	230	106		103	225
5102	30210	130	158	108	235	103	190	126		117	194
5103	30211	136	175	109	172	135	261	122		126	202
5104	30212	124	227	110	222	107	235	120		115	228
5105	29392 (R)	120	184	108	201	126	221	133		122	202
5106	Dubraj (Quality Check)	149	195	128	205	122	261	145		136	220
5107	30213	129	199	108	244	96	239	106		110	227
5108	30214	167	199	144	265	150	211	161		156	225
5109	30215	170	213	137	255	148	327	165		155	265
5110	30216	125	190	107	211	113	224	121		116	208
5111	29390 (R)	148	180	125	180	134	220	154		140	193
5112	30217	99	185	86	240	71	219	93		87	214
5113	30218	117	217	104	279	91	232	112		106	243
5114	Ketekijoha (Quality Check)	123	190	101	236	109	227	104		109	218
5115	30219	151	208	139	215	122	194	146		140	206
5116	30220	103	245	98	269	98	303	101		100	272
5117	30221	118	200	108	229	107	207	111		111	212
5118	30222	154	194	146	263	145	184	159		151	213
5119	30223	106	218	83	221	77	274	96		91	238
5120	Shobini (National Check)	111	200	104	223	93	191	107		103	205
5121	30224	124	164	117	239	112	167	.		118	190
5122	30225	148	201	133	260	130	225	157		142	228
5123	30226	109	202	102	284	112	303	118		110	263
5124	30227	124	196	109	208	123	273	116		118	226
5125	30228	121	200	107	186	103	244	112		111	210
5126	30229	116	203	106	232	68	238	103		98	224
5127	Zonal Check (ZC)	185	203	134	247	149	269	169		159	240
5128	Local Check (LC)	104	247	151	251	136	251	156		137	250
Exp. Mean		130	200	115	232	113	236	127		121	223

Table No. 7.3 Contd.: Plant Height (cm) & Panicles/m2 of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE VI - WESTERN								ZONE VII - SOUTHERN	
		MAHARASHTRA				GUJARAT		Z 6(3)		TELANGANA	
		KARJAT		Vadagaon		NAVSARI		Mean		RAJENDRANAGAR (1)	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
5101	30209	129	214	72	316	124	213	108	248	102	603
5102	30210	126	210	78	251	145	218	116	226	103	537
5103	30211	129	192	99	211	149	215	125	206	105	503
5104	30212	137	231	103	217	143	237	128	228	103	580
5105	29392 (R)	133	225	102	262	156	234	130	240	114	537
5106	Dubraj (Quality Check)	175	204	125	281	155	184	152	223	125	577
5107	30213	127	206	98	160	139	244	122	203	116	537
5108	30214	183	214	125	354	187	223	165	263	132	503
5109	30215	161	209	154	203	182	193	165	202	141	590
5110	30216	113	202	90	237	150	246	118	228	104	550
5111	29390 (R)	183	205	123	285	165	247	157	245	151	423
5112	30217	102	215	61	313	132	242	98	256	85	583
5113	30218	128	213	83	291	137	306	116	270	103	527
5114	Ketekijoha (Quality Check)	119	199	110	247	141	267	123	237	100	553
5115	30219	152	226	77	252	168	236	132	238	126	547
5116	30220	170	225	78	276	113	298	120	266	100	637
5117	30221	116	202	82	303	132	297	110	267	105	523
5118	30222	184	205	136	262	181	230	167	232	146	490
5119	30223	112	205	70	256	118	266	100	242	87	607
5120	Shobini (National Check)	128	201	86	271	131	297	115	256	101	577
5121	30224	133	202	112	294	149	275	131	257	115	550
5122	30225	184	221	93	279	154	249	144	250	145	550
5123	30226	147	194	104	315	156	256	136	255	121	603
5124	30227	137	219	118	268	153	242	136	243	122	560
5125	30228	136	203	97	259	153	328	129	263	111	543
5126	30229	107	214	76	236	132	181	105	210	100	550
5127	Zonal Check (ZC)	118	197	82	294	122	242	107	244	98	600
5128	Local Check (LC)	118	213	83	267	131	260	111	246	140	607
Exp. Mean		139	209	97	266	146	247	127	241	114	555

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Table No. 7.3 Contd.: Plant Height (cm) & Panicles/m2 of entries in IVT - ASG, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						Overall Mean(19)	
		KARNATAKA				Z 7(3)			
		MUGAD		Malagi		Mean		PH	NP
		PH	NP	PH	NP	PH	NP		
5101	30209	61	342	59	105	74	350	104	265
5102	30210	71	256	74	110	83	301	111	249
5103	30211	70	295	99	113	92	304	116	232
5104	30212	79	302	91	84	91	322	109	258
5105	29392 (R)	77	347	102	113	98	332	117	244
5106	Dubraj (Quality Check)	87	344	107	127	106	349	132	256
5107	30213	74	341	86	101	92	326	110	260
5108	30214	106	320	136	156	125	326	147	265
5109	30215	104	365	126	103	124	353	147	260
5110	30216	75	352	96	128	91	343	109	259
5111	29390 (R)	81	335	97	125	110	294	131	255
5112	30217	46	423	48	71	59	359	88	270
5113	30218	78	372	67	165	82	354	105	282
5114	Ketekijoha (Quality Check)	71	361	105	90	92	335	113	258
5115	30219	79	263	102	133	102	314	126	244
5116	30220	59	342	56	143	72	374	101	278
5117	30221	67	322	90	166	87	337	105	269
5118	30222	102	291	130	138	126	306	138	251
5119	30223	56	345	81	125	75	359	97	283
5120	Shobini (National Check)	64	299	67	132	77	336	110	266
5121	30224	85	332	89	153	96	345	115	254
5122	30225	92	257	112	133	116	313	131	253
5123	30226	62	321	102	127	95	350	113	275
5124	30227	74	261	114	138	103	319	117	242
5125	30228	76	305	102	181	96	343	113	261
5126	30229	76	282	94	177	90	336	100	251
5127	Zonal Check (ZC)	63	332	61	125	74	352	112	271
5128	Local Check (LC)	76	326	85	182	100	371	123	265
Exp. Mean		75	322	92	130	94	336	116	260

Table No. 7.3 contd.: Plant Height (cm) & Panicles/m2 of entries in IVT – ASG (State Means), Kharif 2021

Entry No	IET No	UTTAR PRADESH 1(1)		UTTAR PRADESH 2(1)		UTTAR PRADESH (2)		ODISHA (2)		BIHAR (2)		WEST BENGAL (2)	
		Mean		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
5101	30209	95	221	124	270	109	245	97	138	119	252	123	347
5102	30210	109	255	142	272	125	263	107	106	114	238	121	421
5103	30211	106	214	115	256	110	235	100	109	132	245	116	322
5104	30212	92	214			92	214	107	119	119	255	109	388
5105	29392 (R)	92	196	116	240	104	218	115	111	132	258	120	297
5106	Dubraj (Quality Check)	99	176	160	247	130	211	111	83	154	273	148	404
5107	30213	98	288	134	282	116	285	103	104	119	288	116	388
5108	30214	113	275	173	281	143	278	123	113	167	274	153	396
5109	30215	99	228	164	270	132	249	122	82	166	250	161	421
5110	30216	99	242	108	268	104	255	98	94	116	268	116	413
5111	29390 (R)	100	226	176	227	138	226	112	103	147	272	120	487
5112	30217	76	259	104	260	90	259	92	121	94	292	101	355
5113	30218	79	243	105	277	92	260	104	114	109	282	115	437
5114	Ketekijoha (Quality Check)	93	250	140	263	117	256	111	108	109	271	126	388
5115	30219	111	218	124	248	118	233	114	122	138	277	136	314
5116	30220	83	225	111	271	97	248	92	111	110	241	113	429
5117	30221	94	246	120	267	107	256	98	99	117	291	100	388
5118	30222	111	232	168	261	140	247	120	93	147	301	103	355
5119	30223	90	295	99	282	94	288	91	96	103	240	109	520
5120	Shobini (National Check)	98	252	144	262	121	257	100	105	112	310	141	396
5121	30224	101	219		282	101	250	96	123	116	303	137	289
5122	30225	108	208			108	208	114	133	138	234	116	380
5123	30226	85	213	100	278	93	245	107	106	123	241	116	421
5124	30227	90	226			90	226	116	112	114	238	116	289
5125	30228	95	240	128	270	112	255	102	85	121	265	123	404
5126	30229	96	308	105	250	100	279	98	102	112	267	104	322
5127	Zonal Check (ZC)	113	319	90	260	102	289	99	99	114	253	102	388
5128	Local Check (LC)	115	238	130	267	122	252	103	102	120	263	161	314
Exp. Mean		98	240	128	264	111	250	105	107	124	266	122	381

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Table No. 7.3 Contd.: Plant Height (cm) & Panicles/m2 of entries in IVT – ASG (State Means), Kharif 2021

Entry No	IET No	TRIPURA (1)		CHHATTISGARH (4)		MAHARASHTRA (2)		GUJARAT (1)		TELANGANA (1)		KARNATAKA (2)	
		Mean		Mean		Mean		Mean		Mean		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
5101	30209	117	333	103	225	100	265	124	213	102	603	60	223
5102	30210	113	255	117	194	102	230	145	218	103	537	73	183
5103	30211	131	212	126	202	114	202	149	215	105	503	85	204
5104	30212	93	325	115	228	120	224	143	237	103	580	85	193
5105	29392 (R)	102	296	122	202	117	244	156	234	114	537	90	230
5106	Dubraj (Quality Check)	112	285	136	220	150	242	155	184	125	577	97	236
5107	30213	96	281	110	227	113	183	139	244	116	537	80	221
5108	30214	137	212	156	225	154	284	187	223	132	503	121	238
5109	30215	141	213	155	265	157	206	182	193	141	590	115	234
5110	30216	109	270	116	208	102	219	150	246	104	550	85	240
5111	29390 (R)	101	223	140	193	153	245	165	247	151	423	89	230
5112	30217	93	326	87	214	82	264	132	242	85	583	47	247
5113	30218	132	280	106	243	106	252	137	306	103	527	72	268
5114	Ketekijoha (Quality Check)	132	243	109	218	115	223	141	267	100	553	88	225
5115	30219	114	227	140	206	114	239	168	236	126	547	91	198
5116	30220	123	204	100	272	124	250	113	298	100	637	58	242
5117	30221	114	320	111	212	99	252	132	297	105	523	78	244
5118	30222	122	270	151	213	160	233	181	230	146	490	116	214
5119	30223	162	290	91	238	91	230	118	266	87	607	69	235
5120	Shobini (National Check)	159	265	103	205	107	236	131	297	101	577	65	216
5121	30224	130	311	118	190	123	248	149	275	115	550	87	242
5122	30225	161	230	142	228	139	250	154	249	145	550	102	195
5123	30226	138	323	110	263	126	254	156	256	121	603	82	224
5124	30227	127	256	118	226	128	243	153	242	122	560	94	199
5125	30228	119	239	111	210	116	231	153	328	111	543	89	243
5126	30229	93	271	98	224	92	225	132	181	100	550	85	229
5127	Zonal Check (ZC)	112	309	159	240	100	246	122	242	98	600	62	228
5128	Local Check (LC)	146	299	137	250	100	240	131	260	140	607	80	254
Exp. Mean		122	270	121	223	118	238	146	247	114	555	84	226

Table No. 7.3 contd.: Plant Height (cm) & Panicles/m2 of entries in IVT-ASG (Data Not Considered), Kharif 2021

Entry No	IET No	Uttar Pradesh		Odisha		West Bengal		Assam	
		@KANPUR		@JEYPORE		@Pundibhari		@TITABAR	
		PH	NP	PH	NP	PH	NP	PH	NP
5101	30209	69	281	93	239	100	267	116	233
5102	30210	94	313	93	393	103	226	108	253
5103	30211	106	184	98	283	104	226	128	210
5104	30212	53	162	120	272	98	289	110	280
5105	29392 (R)	69	174	127	278	118	229	118	240
5106	Dubraj (Quality Check)	90	159	99	278	123	246	150	223
5107	30213	76	245	86	327	95	219	109	228
5108	30214	110	125	105	305	120	245	166	240
5109	30215	103	158	114	330	126	239	162	320
5110	30216	81	163	98	261	106	240	119	280
5111	29390 (R)	90	188	107	254	122	241	155	218
5112	30217	60	305	82	433	89	243	92	298
5113	30218	63	179	97	310	99	263	101	305
5114	Ketekijoha (Quality Check)	86	181	102	261	104	231	114	243
5115	30219	104	259	109	276	121	255	145	253
5116	30220	83	159	84	292	98	301	93	250
5117	30221	84	284	99	282	106	262	113	230
5118	30222	103	225	130	328	146	259	159	288
5119	30223	61	321	82	323	90	243	84	283
5120	Shobini (National Check)	79	163	90	272	100	233	106	250
5121	30224	99	150	107	266	104	236	121	270
5122	30225	93	166	136	316	100	228	159	258
5123	30226	96	136	97	329	113	229	126	265
5124	30227	75	166	123	276	106	228	117	240
5125	30228	78	224	96	317	102	201	117	220
5126	30229	81	180	86	297	93	286	105	293
5127	Zonal Check (ZC)	74	200	80	306	86	232	108	265
5128	Local Check (LC)	66	306	118	281	120	250	130	300
Exp. Mean		83	205	102	299	107	244	123	258

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Table No. 7.3 Contd.: Plant Height (cm) & Panicles/m2 of entries in IVT-ASG (Data Not Considered), Kharif 2021

Entry No	IET No	Madhya Pradesh @Waraseoni		Gujarat @NAWAGAM		Kerala @PATTAMBI		Karnataka @Sirsi	
		PH	NP	PH	NP	PH	NP	PH	NP
		5101	30209	130	283	109	314	97	416	95	266
5102	30210	141	266	108	311	99	416	98	235
5103	30211	132	291	106	204	104	418	106	251
5104	30212	141	291	102	224	97	507	98	243
5105	29392 (R)	147	286	110	266	91	418	94	221
5106	Dubraj (Quality Check)	145	359	120	246	96	392	102	246
5107	30213	135	199	100	272	105	368	93	334
5108	30214	173	271	155	260	89	349	113	251
5109	30215	172	290	140	286	91	431	125	271
5110	30216	145	270	113	249	82	417	94	268
5111	29390 (R)	182	285	132	269	92	382	107	203
5112	30217	127	293	87	230	93	421	77	223
5113	30218	124	280	110	283	97	434	97	236
5114	Ketekijoha (Quality Check)	136	327	110	286	100	470	93	272
5115	30219	173	322	132	277	96	336	105	319
5116	30220	125	400	93	325	99	403	87	240
5117	30221	143	247	115	252	99	393	94	299
5118	30222	197	290	149	269	100	414	113	282
5119	30223	102	316	89	266	98	429	87	235
5120	Shobini (National Check)	137	280	106	288	86	428	91	319
5121	30224	150	273	116	227	90	481	103	306
5122	30225	165	283	131	263	87	382	123	395
5123	30226	134	283	118	260	83	405	89	442
5124	30227	158	218	118	227	88	401	100	322
5125	30228	136	287	108	269	101	468	96	286
5126	30229	125	282	96	221	99	399	97	287
5127	Zonal Check (ZC)	173	270	99	235	98	456	94	282
5128	Local Check (LC)	175	323	104	246	86	366	126	301
Exp. Mean		147	288	113	262	94	414	100	280

Table No.7.4: Grain quality characteristics of entries in IVT-ASG, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC	Aroma
5101	30209	79.9	67.8	44.3	6.84	1.99	3.58	LS	VOC	5.3	320	11.1	1.62	7.0	24.22	41	NS
5102	30210	78.6	66.0	58.9	6.59	1.74	3.78	LS	A	5.0	270	10.3	1.56	5.0	14.98	100	NS
5103	30211	81.2	72.1	69.4	3.84	1.82	2.10	SB	A	4.6	200	6.3	1.64	3.5	21.64	25	MS
5104	30212	82.1	72.7	71.5	4.61	2.21	2.08	SB	VOC	5.1	255	7.7	1.67	4.0	21.58	43	NS
5105	29392 (R)	81.7	72.7	70.9	3.53	2.12	1.66	SB	VOC	4.6	235	6.5	1.84	4.0	21.32	24	NS
5106	Dubraj (QC)	80.1	65.9	58.7	5.18	1.97	2.62	MS	A	5.3	240	9.8	1.89	4.0	25.93	47	SS
5107	30213	80.4	66.7	47.7	6.38	1.73	3.67	LS	VOC	5.3	320	9.8	1.53	4.0	24.49	22	SS
5108	30214	80.5	70.9	53.0	5.14	1.98	2.78	MS	VOC	4.6	240	8.5	1.68	4.0	21.50	50	SS
5109	30215	81.7	72.9	49.6	5.19	1.83	2.83	MS	VOC	5.0	220	7.6	1.46	4.0	21.82	59	SS
5110	30216	78.4	68.9	27.0	5.47	2.16	2.53	MS	OC	5.1	260	9.1	1.66	4.0	19.77	58	MS
5111	29390 (R)	79.0	65.8	61.7	3.95	2.56	1.54	SB	VOC	5.1	250	6.0	1.51	4.0	24.58	48	NS
5112	30217	76.0	65.1	57.3	3.91	2.07	1.88	SB	OC	4.6	245	6.4	1.63	4.0	19.27	42	NS
5113	30218	76.8	68.1	55.4	4.56	2.27	2.00	SB	VOC	5.3	225	7.7	1.68	4.0	24.64	37	NS
5114	Ketakijoha (QC)	80.1	71.3	63.7	5.18	1.77	2.92	MS	VOC	3.8	255	9.5	1.83	7.0	24.72	42	MS
5115	30219	78.4	64.0	37.6	6.44	2.00	3.22	LS	VOC	4.6	370	9.3	1.44	7.0	14.05	71	NS
5116	30220	79.3	71.2	67.0	4.17	1.75	2.13	SB	OC	5.5	235	6.9	1.65	3.0	21.64	45	NS
5117	30221	77.9	65.7	39.5	5.80	2.29	2.53	MS	VOC	5.1	255	8.7	1.50	3.5	21.32	76	MS
5118	30222	79.6	66.4	42.0	5.14	1.79	2.87	MS	OC	5.5	250	8.6	1.67	4.0	19.71	61	NS
5119	30223	79.9	67.3	54.1	5.24	2.17	2.41	SB	A	5.3	270	8.2	1.56	4.0	26.51	43	NS
5120	Shobini (NC)	79.2	70.3	62.3	5.70	1.73	3.29	SS	A	4.6	250	8.8	1.54	4.0	23.90	22	SS
5121	30224	77.1	63.3	47.6	7.02	2.00	3.51	LS	VOC	4.4	360	10.0	1.46	7.0	24.81	43	NS
5122	30225	80.3	68.6	53.5	7.00	1.56	4.48	LS	OC	4.8	305	10.5	1.50	4.0	23.90	22	MS
5123	30226	77.5	63.6	52.7	4.38	1.60	2.73	LS	VOC	5.3	290	8.1	1.84	4.0	22.14	25	NS
5124	30227	83.0	72.9	69.3	3.68	2.18	1.68	SB	VOC	4.6	245	6.7	1.82	4.0	20.91	52	NS
5125	30228	81.8	67.8	41.0	6.30	2.44	2.58	LB	VOC	5.1	255	9.8	1.55	4.0	26.34	71	NS
5126	30229	76.1	63.4	50.8	6.66	1.91	3.48	LS	VOC	5.3	325	9.6	1.44	5.0	14.75	57	NS
5127	Badshahog	81.6	62.0	56.0	3.94	2.03	1.94	SB	VOC	4.6	250	6.3	1.59	4.0	22.02	58	SS
5128	Local Check	82.2	70.8	60.6	5.75	1.88	3.05	SS	A	4.8	265	9.8	1.70	4.0	26.57	42	MS

HULL: Hulling (%); MILLING (%); HRR: Head Rice Recovery (%); KL: Kernel Length(mm); KB: Kernel Breadth(mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent; KLAC: Kernel Length after cooking; WU: Water uptake; VER: Volume expansion ratio; ER: Elongation ratio; ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

INITIAL VARIETY TRIAL-JAPONICA (IVT-J)

Locations: 12 **Test Entries:** 4
Checks: Bhrigudhan, Varundhan, Shalimar Rice-5 and a local check **Table:** 8.1

Initial Variety Trial-Japonica (IVT-Japonica) was constituted in AICRIP for the first time during *kharij*2021. States like Himachal Pradesh and Jammu & Kashmir have released Brighudhan, Varundhan, Shalimar Rice-5 etc belonging to the sub-species group-*japonica* as varieties. Cultivation of *japonica* cultures is gaining momentum both in eastern and western Himalayan states and is being encouraged in hill ecology. It is also gaining popularity in other parts of the country. Considering the potential for exports of japonica rices, there is a demand from private sector to evaluate japonica cultures in AICRIP. Keeping in view the foregoing, the IVT-Japonica trial was constituted with four test entries and four checks. The checks included Bhrigudhan, Varundhan, Shalimar Rice-5 and a local check (LC). The trial was sent to 12 locations and data was not received from NRRI-Cuttack and Gerua-ICAR. Also it is to be noted that F variance ratio between treatments is significant at all the locations, however data was not included from Malda and Lembuchera due to low and high CV respectively. The data pertaining to yield, days to 50% flowering, plant height, panicles/m² and quality are presented in the tables 8.2, 8.3 and 8.4.

Experimental mean at the locations varied from 758 kg/ha at Almora-ICAR to 3867 kg/ha at Pundibhari and CV ranged from as low as 2.42 % at Malda to as high as 41.74 % at Lembuchera. Overall mean grain yield of the entries varied from 1255 kg/ha (IET 30309) to 3440 kg/ha (LC), days to fifty percent flowering from 69 (Shalimar rice-5) to 99 days (LC), plant height from 69 (IET 30307) to 104 cm (LC) and panicles/m² from 223 (Bhrigudhan) to 324 (Shalimar rice-5). On overall basis as well as zonal basis, LC is the best check and also the top ranking entry among all the entries. However, the DFF of the LC at locations varied from 86 days at Jeypore to 99 days at Sirsi with an overall mean of 99 days while DFF of the test entries and other checks was anywhere between 69 to 76 days. The DFF of remaining checks was comparable with the test entries. Hence, check entry with high yield other than LC was considered as the best check.

When second best check was considered (excluding LC), except in eastern zone, none of the entries recorded required yield advantage over the best check. In eastern zone, IET 30306 (Hitomebore) with a grain yield of 2919 kg/ha was found significantly superior to the best check-Shalimar Rice-5. In Odisha, with a grain yield of 1794 kg/ha, it recorded significant superiority over second best check--Shalimar Rice-5.

Considering the significant superiority over the best check (excluding local check), IET 30306 is promoted to second year of testing.

Entries promoted to AVT1-Japonica- IET 30306 (Hitomebore)

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Table No. 8.1: Composition of entries in Initial Variety Trial- Japonica, (IVT-J), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	Grain Type
1st year of testing:				
4701	30306	Hitomebore		SS
4702	30307	Hinohikari		SB
4703	Bhrigudhan (Check)			
4704	30308	Haenuki		SB
4705	Varundhan (Check)			
4706	30309	Akitakomachi		SB
4707	Shalimar Rice-5 (Check)			
4708	Local Check			

Table No. 8.2: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - J, Kharif 2021

Entry No	IET No	ZONE I- HILLY REGION									ZONE III-EASTERN														
		UTTARAKHAND (1)			HIMACHAL PRADESH			ZI (2)			ODISHA (1)														
		Almora- ICAR			MALAN			Mean			JEYPORE														
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP												
4701	30306	1373	2	82	1980	5	89	1677	3	86	1794	2	86												
4702	30307	448	4	74	2821	2	80	1635	4	77	779	7	75												
4703	Bhrigudhan (Check)	389	5	74	2991	1	81	1690	2	77	362	8	82												
4704	30308	294	7	73	1182	7	83	738	7	78	887	5	71												
4705	Varundhan (Check)	528	3	82	2336	4	84	1432	5	83	1045	4	81												
4706	30309	365	6	73	214	8	82	290	8	78	847	6	79												
4707	Shalimar Rice-5 (Check)	206	8	72	1382	6	81	794	6	77	1145	3	71												
4708	Local Check	2460	1	94	2536	3	89	2498	1	92	2259	1	86												
Exp. Mean		758			78			1930			84			1344			81			1140			79		
F Value		46.17(p<0.0001)S			71.39(p<0.0001)S			52.31(p<0.0001)S			25.18(p<0.0001)S														
CD		307			300			260			325														
CV%		23.13			8.88			11.04			16.26														
D/S		24-06-2021			23-06-2021						03-07-2021														
D/P		20-07-2021			23-07-2021						01-08-2021														
Local Check Name		VL Dhan 65			Naggar dhan						Anamnda														
For promotion of entries																									
* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).																									
# For hybrid entries: Yield of entry should be superior over yield of BVC+CD and over yield of BHC+CD (at 5% level of significance).																									
In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.																									

Table No. 8.2 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - J, Kharif 2021

Entry No	IET No	ZONE III-EASTERN						ZONE IV- NORTH EASTERN																	
		WEST BENGAL (1)			Z3 (2)			ASSAM (1)			Z4 (1)														
		Pundibhari			Mean			TITABAR			Mean														
		GY	R	DFP	GY	R	DFP	GY	R	DFP	GY	R	DFP												
4701	30306	4044	4	63	2919	2	75	1733	3	56	1733	3	56												
4702	30307	3489	7	63	2134	7	69	667	7	60	667	7	60												
4703	Bhrigudhan (Check)	3444	8	66	1903	8	74	1300	4	62	1300	4	62												
4704	30308	3778	6	67	2333	6	69	733	6	46	733	6	46												
4705	Varundhan (Check)	4111	2	65	2578	4	73	2633	2	64	2633	2	64												
4706	30309	3867	5	63	2357	5	71	1267	5	62	1267	5	62												
4707	Shalimar Rice-5 (Check)	4067	3	65	2606	3	68	500	8	46	500	8	46												
4708	Local Check	4133	1	87	3196	1	87	5233	1	101	5233	1	101												
Exp. Mean		3867			67			2503			73			1758			62			1758			62		
F Value		3.87(p<0.0119)S			18.81(p<0.0001)S			64.82(p<0.0001)S			64.82(p<0.0001)S														
CD		376			258			520			520														
CV%		5.55			5.88			16.89			16.89														
D/S		02-07-2021						08-07-2021																	
D/P		31-07-2021						12-08-2021																	
Local Check Name		MTU 1153						Numoli																	

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Table No. 8.2 Contd.: Grain Yield (kg/ha) & Days to 50% flowering of entries in IVT - J, Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN												Overall Mean (8)																	
		TELANGANA (1)			KARNATAKA						Z7 (3)																				
		WARANGAL			PONNAMPET			SIRSI			Mean																				
		GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF	GY	R	DF															
4701	30306	2965	4	76	1884	4	82	238	7	72	1696	5	77	2001	3	76															
4702	30307	3541	2	82	1399	5	70	1133	2	84	2024	3	79	1785	4	74															
4703	Bhrigudhan (Check)	2461	7	84	2320	3	73	419	4	87	1733	4	81	1711	5	76															
4704	30308	2636	6	84	1344	6	70	138	8	73	1373	6	76	1374	7	71															
4705	Varundhan (Check)	3265	3	85	2825	2	81	733	3	85	2274	2	84	2185	2	78															
4706	30309	2775	5	82	304	8	72	400	5	81	1160	8	79	1255	8	74															
4707	Shalimar Rice-5 (Check)	2388	8	74	1053	7	70	338	6	73	1260	7	72	1385	6	69															
4708	Local Check	4638	1	101	3249	1	117	3010	1	119	3632	1	112	3440	1	99															
Exp. Mean		3084			84			1797			79			801			84			1894			82			1892			77		
F Value		6.03(p<0.0016)			43.80(p<0.0001)S			128.93(p<0.0001)S			64.44(p<0.0001)S			246.40(p<0.0001)S																	
CD		811			392			223			266			120																	
CV%		15.02			12.46			15.89			8.02			3.62																	
D/S		26-06-2021			15-07-2021			22-06-2021																							
D/P		22-07-2021			16-08-2021			13-07-2021																							
Local Check Name		SOMNATH			Tunga			Prasanna																							

Table No. 8.2Contd. : Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - J (State Means), Kharif 2021

Entry No	IET No	State means			
		KARNATAKA (2)			
		Mean			
		GY	R	DF	
4701	30306	1061	5	77	
4702	30307	1266	4	77	
4703	Bhrigudhan (Check)	1370	3	80	
4704	30308	741	6	72	
4705	Varundhan (Check)	1779	2	83	
4706	30309	352	8	77	
4707	Shalimar Rice-5 (Check)	696	7	72	
4708	Local Check	3130	1	118	
Exp. Mean		1299			82
F Value		117.89(p<0.0001)S			
CD		213			
CV%		9.35			

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Table No. 8.2 contd.: Grain Yield (kg/ha) and Days to 50% flowering of entries in IVT - J (Data Not Considered), Kharif 2021

Entry No	IET No	Trials nor considered						
		West Bengal			Tripura			
		@MALDA			@LEMBUCHERRA			
		GY	R	DFE	GY	R	DFE	
4701	30306	3831	3	80	1721	5	78	
4702	30307	3138	8	47	1784	4	76	
4703	Bhrigudhan (Check)	4396	2	73	2263	3	61	
4704	30308	3209	7	55	1415	7	81	
4705	Varundhan (Check)	5072	1	63	2386	2	82	
4706	30309	3791	4	73	1673	6	70	
4707	Shalimar Rice-5 (Check)	3241	6	69			79	
4708	Local Check	3278	5	74	5330	1	83	
Exp. Mean		3744			67	2367		76
F Value		134.64(p<0.0001)S				3.42(p<0.0774)NS		
CD		159				2418		
CV%		2.42				41.73		
D/S		24-06-2021				20-07-2021		
D/P		24-07-2021				11-08-2021		
Local Check Name		Shatchali				Hakuchuk-2		

Table No. 8.3 : Plant Height (cm) & Panicles/m2 of entries in IVT -J, Kharif 2021

Entry No	IET No	ZONE I- HILLY REGION						ZONE III-EASTERN	
		UTTARAKHAN		HIMACHAL		Z1 (2)		ODISHA (1)	
		Almora- ICAR		MALAN		Mean		JEYPORE	
		PH	NP	PH	NP	PH	NP	PH	NP
4701	30306	93	194	103	307	98	250	104	421
4702	30307	69	199	75	287	72	243	76	444
4703	Bhrigudhan (Check)	92	105	93	137	92	121	86	266
4704	30308	50	210	62	312	56	261	78	399
4705	Varundhan (Check)	89	127	88	288	88	208	80	297
4706	30309	93	126	81	305	87	215	81	356
4707	Shalimar Rice-5 (Check)	48	162	55	317	52	239	77	427
4708	Local Check	118	204	79	318	99	261	79	386
Exp. Mean		81	166	80	284	81	225	83	374
PH: Plant Height (cm) NP: No. of Panicles/sqm									

Table No. 8.3 Contd.: Plant Height (cm) & Panicles/m2 of entries in IVT -J, Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE IV- NORTH EASTERN			
		WEST BENGAL (1)		Z3 (2)		ASSAM (1)		Z4 (1)	
		Pundibhari		Mean		TITABAR		Mean	
		PH	NP	PH	NP	PH	NP	PH	NP
4701	30306	108	286	106	354	95	163	95	163
4702	30307	70	244	73	344	48	141	48	141
4703	Bhrigudhan (Check)	109	227	97	246	99	155	99	155
4704	30308	111	216	94	308	71	136	71	136
4705	Varundhan (Check)	97	212	88	254	83	145	83	145
4706	30309	96	227	89	291	74	150	74	150
4707	Shalimar Rice-5 (Check)	65	265	71	346	94	158	94	158
4708	Local Check	106	295	92	341	129	260	129	260
Exp. Mean		95	247	89	310	87	164	87	164

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Table No. 8.3 Contd.: Plant Height (cm) & Panicles/m² of entries in IVT -J, Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN								Overall Mean (8)	
		TELANGANA		KARNATAKA				Z7 (3)			
		WARANGAL		PONNAMPET		SIRSI		Mean		PH	NP
		PH	NP	PH	NP	PH	NP	PH	NP	PH	NP
4701	30306	146	565	93	301	61	332	100	399	101	321
4702	30307	74	449	47	385	92	346	71	393	69	312
4703	Bhrigudhan (Check)	133	476	84	216	78	200	98	298	97	223
4704	30308	79	380	57	411	55	365	64	385	70	303
4705	Varundhan (Check)	100	408	86	264	75	248	87	307	87	249
4706	30309	96	440	75	429	75	312	82	394	84	293
4707	Shalimar Rice-5 (Check)	111	386	55	469	52	405	73	420	70	324
4708	Local Check	134	389	92	271	93	337	106	332	104	308
Exp. Mean		109	437	74	343	73	318	85	366	85	292

Table No. 8.3 contd.: Plant Height (cm) & Panicles/m² of entries in IVT – J (State Means), Kharif 2021

Entry No	IET No	KARNATAKA	
		PH	NP
4701	30306	77	317
4702	30307	70	365
4703	Bhrigudhan (Check)	81	208
4704	30308	56	388
4705	Varundhan (Check)	81	256
4706	30309	75	371
4707	Shalimar Rice-5 (Check)	54	437
4708	Local Check	92	304
Exp. Mean		73	331

Table No. 8.3 contd.: Plant Height (cm) & Panicles/m² of entries in IVT-J (Data Not Considered), Kharif 2021

Entry No	IET No	West Bengal		Tripura	
		@MALDA		@LEMBUCHERRA	
		PH	NP	PH	NP
4701	30306	101	303	110	463
4702	30307	61	367	53	863
4703	Bhrigudhan (Check)	97	380	66	350
4704	30308	60	282	49	525
4705	Varundhan (Check)	88	394	79	450
4706	30309	76	371	80	800
4707	Shalimar Rice-5 (Check)	64	250	52	700
4708	Local Check	90	306	110	375
Exp. Mean		80	332	75	566

Table No. 8.4: Grain quality characteristics of entries in IVT-J, Kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
4701	30306	80.5	71.3	69.9	5.54	2.55	2.17	SB	OC	4.0	19.30	24
4702	30307	81.4	68.5	43.9	4.72	2.72	1.73	SB	VOC	5.0	16.25	66
4703	Brigudhan	82.3	67.6	59.8	5.04	2.95	1.70	SB	VOC	5.0	17.89	61
4704	30308	84.3	74.7	70.5	4.87	3.08	1.58	SB	VOC	6.0	19.71	86
4705	Varundhan	38.1	31.2	23.7	4.79	2.84	1.68	SB	VOC	5.0	14.63	63
4706	30309	81.2	69.6	64.2	5.04	2.92	1.72	SB	VOC	5.0	15.19	58
4707	Shalimar Rice-5	82.6	71.8	64.2	4.63	2.96	1.56	SB	VOC	5.0	15.16	65
4708	Local Check											

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB: Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

ADVANCE VARIETY TRIAL1- NEAR ISOGENIC LINES COASTAL SALINITY (AVT1- NIL-CS)

Locations: 5 **Test Entries: 2**

Checks: MTU 1010 (Recurrent parent); FL 478 (Donor parent) **Table: 9.1**

Advance Variety Trial1- Near Isogenic Lines -Coastal salinity (AVT1- NIL-CS) was constituted with two NIL entries namely IET 28010 and IET 28008 in the genetic background of MTU 1010 along with their recurrent (RP) and donor parents. NILs of MTU1010 namely IET 28008 and IET 28010 introgressed salinity tolerance from the donor FL 478 exhibiting seedling stage salinity tolerance were tested for coastal salinity. The recurrent parent, MTU 1010 (IET 15644) was released for undivided Andhra Pradesh state for irrigated mid early ecosystem. The information about the test locations along with pH and EC (dSm⁻¹) as well as the experimental mean yield particulars are presented in the table below

Location	pH	EC dSm ⁻¹	Experimental mean yield (kg/ha)	CD	CV (%)	Remarks
Canning	7.6	2.6	4314	464	5.4	Data not considered for analysis
Panvel	--	--	--	--	--	Crop failed due to submergence
Navsari	8.4	6.1	2359	404	13.93	Data considered for analysis
Machilipatnam	7.6	6.48	4570	571	10.15	Data considered for analysis
Brahmavar	6.36	4.13	2214	351	9.9	Data not considered for analysis
Kariakal	8.3	1.8	3257	343	7.7	Data not considered for analysis

(A) Trait verification under stress (Coastal salinity), Kharif, 2021

The NIL entries viz., IET 28008 and IET 28010 are tested for trait verification along with recurrent parent (RP-MTU 1010) and donor parent check (FL 478) under coastal salinity in Advance Variety Trial 1- Near Isogenic Lines-Coastal salinity (AVT 1-NIL-CS). These NILs were tested in saline locations for trait verification in AVT1-NIL-CS as well in normal conditions for assessing the yield performance in AVT1-IME. AVT1- NIL-CS was tested to 13 locations, while the data from 5 locations only. Among the five locations, the trial at Panvel was failed due to submergence, while at Canning, Brahmavar and Karaikal locations, the stress level is low and hence not considered for analysis. Hence the data from Navsari (Z-VI) and Machilipatnam (Z-VII) with desirable stress levels were included in the analysis.

During kharif, 2021, considering the critical difference (CD) value of 392 kg on overall basis, both the NILs namely, IET 28008 and IET 28010 exhibited significant superiority over the RP with 3541 kg/ha and 3929 kg/ha mean grain yield recorded +1.7% and +12.8% yield advantage, 85 & 86 days to 50% flowering; plant height of 96 cm and 97 cm respectively with long slender grain type as compared to their recurrent parent with 3090 kg/ha, 85 days to 50% flowering, plant height of 92 cm and long slender grains. NILs differ slightly with respect to plant height of 4 to 5 cm respectively over the RP.

Zone wise performance of NILs during Kharif, 2021

Based on single location data in Z-VI and Z-VII, IET 28008 with 2297 kg/ha (± 404 CD value) could not exhibit significant superiority (-11.0%) over the RP (2177 kg/ha) in Z-VI. While in Z-VII, IET 28008 recorded grain yield of 4784 kg/ha (± 571 CD value) and 91 days to 50% flowering, plant height of 90 cm exhibited significant yield superiority (+4.6%) over the recurrent parent with 4002 kg/ha, 79 days to 50% flowering and 99 cm of plant height. Quality wise, IET 28008 and its RP: MTU 1010 recorded 71.1%, & 71.2% HRR; 24.55%, & 23.14% amylose content, 55, & 64 mm GC, 4.0, & 4.0 ASV respectively and long slender grains at IIRR, Hyderabad. At NRRI Cuttack, these cultures recorded 63% head rice recovery; 19.65%, & 19.42% AC, 48, & 47 mm gel consistency, 3,5 & 3 ASV respectively.

IET 28010 recorded grain yield of 2755 kg/ha (± 404 CD value), 90 days to 50% flowering; plant height of 94 cm recorded significant yield superiority of +6.7% in Z-VI, as compared to their recurrent parent with 2177 kg/ha, 90 days to 50% flowering, 86 cm of plant height. In Z-VII, IET 28010 recorded grain yield of 5103 kg/ha (± 571 CD value), 81 days to 50% flowering, plant height of 100 cm exhibited significant yield superiority (+11.6%) as compared to their recurrent parent with 4002 kg/ha, 79 days to 50% flowering and 99 cm of plant height. Quality wise, IET 28010 and its RP: MTU 1010 recorded 72.9% & 71.2% HRR; 23.73% & 23.14% amylose content, 61 & 64 mm GC 4.0 & 4.0 ASV respectively and long slender grains at IIRR, Hyderabad. At NRRI Cuttack, these cultures recorded 63% head rice recovery; 20.47% & 19.42% AC 45 & 47 mm gel consistency 5 & 3 ASV respectively.

Performance of NIL entries in AVT-1-NIL (CS), Kharif, 2021

IET No/ Designation/ Cross combination	Z-VI(1)		Z-VII (1)		Overall (2)		Remarks
	Yield/ DFF/PH/GT	% RP	Yield/ DFF/PH/GT	% RP	Yield/ DFF/PH/GT	% RP	
IET 28008	2297	6.0	4784	20	3541	15	Promising in Z-VI, Z-VII and on overall basis
MTU 1291	91		80		85		
MTU 1010 / FL	90 cm		102 cm		96 cm		
478 // *3 MTU 1010	LS		LS		LS		
ET 28010	2755	27	5103	28	3929	27	Promising in Z-VI, Z-VII and on overall basis
MTU 1293	90		81		86		
MTU 1010 / FL	94 cm		100 cm		97 cm		
478 // *3 MTU 1010	LS		LS		LS		
MTU 1010 (Recurrent parent)	2177		4002		3090		
	90		79		85		
	86 cm		99 cm		92 cm		
	LS		LS		LS		
FL 478 (Donor parent)	2209		4389		3299		
	84		83		83		
	78 cm		91 cm		84 cm		
	LB		LB		LB		
CD	404		571		392		
CV (%)	13.93		10.15		9.19		

Performance of NILs under coastal Salinity and normal conditions over the years of testing (2018-2021)

Performance of IET 28008 in normal conditions: IET 28008 was also evaluated in AVT1-IME trials for yield evaluation in the gazette notified states of Andhra Pradesh and Telangana. Over four years of testing (2018-2021), IET 28008 failed to record at least on par

yield comparable to its recurrent parent in Zone-VII consisting of Telangana and Andhra Pradesh states in all the test years except for one year where it showed +8.5 yield advantage in Telangana (2018). Quality wise, IET 28008 is comparable to its recurrent parent in terms of grain type (LS), amylose content of IET 28008 with 23.61%, 24.96% & 24.55 %; GC of 55 mm, 56mm & 55 mm and ASV of 4.0 as compared its RP: MTU 1010 with AC of 24.05%, 23.96% & 23.14%; GC of 66, 63, 64 mm and ASV of 4.0 during 2018, 2020 and 2021 respectively.

Trait verification of IET 28008 across coastal saline locations

IET 28008 (MTU 1291) developed through backcross breeding method from parentage of MTU 1010 / FL 478 // *3 MTU 1010 entered the AVT1 –NIL-CS trial in 2018 and was repeated for two years. During 2018, in Zone-III, this culture recorded 2695 kg/ha grain yield (± 349 CD value) failed to record significant yield advantage over the RP in Z-III (-1.4%) as well as in Odisha state (-1.4%). In Z-VII (2018), this culture recorded a mean yield of 3608 kg/ha (± 492 CD value) failed (-10.5%) to exhibit the required yield superiority as compared to its RP (3543 kg/ha). State wise (2018), IET 28008 failed to perform in its RP notified state Andhra Pradesh where the RP parent recorded highest yield (4075 kg/ha) than NIL culture-IET 28008 (308 kg/ha) and hence the data not considered (AICRIP progress report 2018, Vol.1 Page no.1.632). In 2019, IET 28008 was tested in Z-III and Z-VII. IET 28008 (2727 kg/ha ± 857 CD value) was inferior (-17.2%) to its recurrent parent (2439 kg/ha) in Z-III and state-wise also it is inferior in West Bengal (-17.2%). The data from Z-VI was not considered due to low stress levels (2019). During 2020, trait verification was carried out in Z-VI and Z-VII where NIL entry failed to perform over the RP in either of the zones or in states of Gujarat (-26.7% over RP), Puducherry (-40.6%) and in notified state of AP (-21.0%). In 2021, NIL culture- IET 28008 was tested in Z-VI and Z-VII. In zone-II, it failed (-11.0% over RP) to record significant yield advantage, while in z-VII, it recorded significant yield advantage (+4.6% over RP) and found promising in Andhra Pradesh. ***Based on four years' performance, IET 28008 failed to exhibit significant yield superiority in the trait verification trials over the recurrent parent for the introgressed trait of coastal salinity tolerance across the states as well as in RP notified state. Hence this culture is not found promising.***

IET 28010 (MTU 1293), another sister NIL culture of IET 28008 developed through backcross breeding method from parentage of MTU 1010 / FL 478 // *3 MTU 1010 entered the AVT1 –NIL-CS trial in 2018 and was repeated for two years. The performance under coastal saline and normal conditions is presented below

Performance of IET 28010 in normal conditions: IET 28010 was also evaluated in AVT1-IME trials for yield evaluation in the gazette notified states of Andhra Pradesh and Telangana. Over four years of testing (2018-2021), IET 28010 failed to record either on par yield or significant yield superiority over its recurrent parent in Zone-VII consisting of Telangana and Andhra Pradesh states in all the years tested. Quality wise, IET 28010 is comparable to its recurrent parent in terms of grain type (LS), amylose content of NIL culture IET 28010 with 23.90%, 23.55% & 23.73 %; GC of 56 mm, 61 mm & 61 mm and ASV of 4.0 as compared its RP: MTU 1010 with AC of 24.05%, 23.96% & 23.14%; GC of 66, 63, 64 mm and ASV of 4.0 during 2018, 2020 and 2021 respectively.

Trait verification of IET 28010 across coastal saline locations: During 2018, in Zone-III, this culture recorded 2838 kg/ha grain yield (yield (± 349 CD value) exhibited significant yield advantage (+3.7%) over the RP and found promising in Odisha. However, in Z-VII, IET 28010 (3467kg/ha; ± 492 CD value) failed (-14.0%) to record significant yield over its recurrent parent (3543kg/ha. State wise, this culture failed to perform in its RP notified state Andhra Pradesh where the RP parent recorded highest yield (4075 kg/ha) than NIL culture- IET 28008 (2141 kg/ha) and hence the data not considered (AICRIP progress report 2018 Vol.1 Page no.1.632). In 2019, IET 28010 was tested in Z-III and Z-VII. In zone-III, it was inferior (-7.5% over RP; ± 857 CD value) to its RP yield advantage and also state-wise in West Bengal (-7.5%). During 2020, trait verification was carried out in Z-VI and Z-VII where NIL entry IET28010 failed to perform on par or superior performance over the RP in either of the zones or in states of Gujarat (-29.0 % over RP), Puducherry (-28.3% over RP) and in its notified state AP (-75.7% over RP). In 2021, NIL culture- IET 28010 was tested in Z-VI and Z-VII and found promising in both zones and as well as in the states of Gujarat (6.7% over RP) and Andhra Pradesh (11.6% over RP). **Based on four years' performance, IET 28010 failed to exhibit consistent and significant yield superiority in the trait verification trials over the recurrent parent for the introgressed trait of coastal salinity tolerance across the states as well as in RP notified state. Hence this culture is not found promising.**

Performance of NILs of MTU 1010 under coastal saline stress conditions (2018-2021)

IET No /Designation/ Cross combination	Year	Overall			Zone				State			
		Yield (kg/ha) /DFP	% RP	%RP with CD		Yield (kg/ha) /DFP	% RP	%RP with CD	State	Yield (kg/ha)	% RP	%RP with CD
28008 MTU 1291 MTU 1010 / FL 478 // *3 MTU 1010	2018	3152 103	+6.3	-4.9	III	2695 120	+12.9	-1.4	OD	2695 120	12.9	-1.4
					VII	3608 86	+1.8	-10.5	AP	Data not considered due to low mean and high CV		
	2019	--	--		III	2727 76	+11.8	-17.2	WB	2727 76	11.8	-17.2
									AP	Low stress levels, high yields, data not considered		
	2020	2148 86	-13.6	-23.4	VI	2057 86	-10.5	-26.7	GU	2057 86	-10.5	-26.7
					VII	2194 86	-14.9	-27.3	AP PU	2420 1967	-0.8 -27.7	-21.0 -40.6
2021	3541 85	+15.0	+1.7	VI	2297 91	+6.0	-11.0	GU	2297 91	+6.0	-11.0	
				VII	4784 80	20.0	+4.6	AP	4784 80	20.0	+4.6	
28010 MTU 1293 MTU 1010 / FL 478 // *3 MTU 1010	2018	3153 103	+6.3	-4.9	III	2838 114	18.8	+3.7	OD	2838 114	18.8	+3.7
					VII	3467 90	-2.1	-14.0	AP	Data not considered due to low mean and high CV		
	2019	--	--	--	III	3057 76	25.3	-7.5	WB	3057 76	25.3	-7.5
									AP	Due to low stress and high yields, data not considered		
2020	1593 84	-35.9	-43.2	VI	1992 84	-13.3	-29.0	GU	1992 84	-13.3	-29.0	
				VII	1394 85	-45.9	-53.8	AP PU	743 2044	-69.5 -24.8	-75.7 -38.3	

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IET No	Year	Overall			Zone				State			
	2021	3929 86	+27	+12.8	VI	2755 90	+27.0	+6.7	GU	2755 90	+27.0	+6.7
					VII	5103 81	+27.0	+11.6	AP	5103 81	+27.0	+11.6
MTU 1010 (Recurrent Parent)	2018	2965 102	--	3317	III	2387 120		2736	OD	2387		2736
					VII	3543 84		4035	AP	Data not considered due to low mean and high CV		
	2019	--	--	--	III	2439 74		3296	WB	2439		3296
	2020	2487 85	--	2807	VI	2300 84		2808	GU	2300		2808
					VII	2581 85		3022	AP PU	2440 2721		3064 3317
	2021	3090 85	--	3482	VI	2177 90		2581	GU	2177		2581
					VII	4002 79		4573	AP	4002		4573

Performance of NILs of MTU 1010 under normal conditions (2018-2021) in notified states of MTU 1010

IET No /Designation/ Cross combination	Year	Zone VII			State			
		Yield (kg/ha) /DFP	% RP	%RP With CD	Yield (kg/ha)/DFP	% RP	%RP With CD	
28008 MTU 1291 MTU 1010 / FL 478 // *3 MTU 1010	2018	6456 90	+14.2	+3.86	AP TS	5472/88 7441/93	+7.1 +20.15	-8.6 +8.5
	2019	6230 86	+3.85	-2.8	AP TS	5099/122 7277/89	+1.4 +8.6	-12.1 -1.4
	2020	5000	+6.8	-2.5	AP TS	4486/79 4767/96	+8.3 +8.0	-10.6 -4.4
	2021	5386	+3.6	-2.6	AP TS	5245/107 6059/102	+10.2 +6.5	-6.2 -2.7
28010 MTU 1293 MTU 1010 / FL 478 // *3 MTU 1010	2018	5406 86	-4.3	-13.0	AP TS	4266/83 6546/90	-16.48 +5.69	-28.7 -4.5
	2019	6217 85	+3.6	-2.2	AP TS	5248/121 7273/89	+4.3 +8.5	-9.5 -1.5
	2020	4961	+6.0	-3.2	AP TS	4485/80 4483/96	+8.3 +1.5	-10.6 -10.1
	2021	5080	-2.2	-8.2	AP TS	5138/100 5104/104	+7.9 -10.4	-8.1 -18.0
MTU 1010 (Recurrent Parent)	2018	5650 84	--	6216	AP TS	5108/78 6193/91	--	5988 6855
	2019	5999 85	--	6363	AP TS	5027/112 6699/107	--	5801 7387
	2020	4680	--	5128	AP TS	4140/79 4413/95	--	5022 4989
	2021	5195	--	5535	AP TS	4758/102 5684/103	--	5595 6231

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Comparison of quality characteristics of NILs with recurrent parent (MTU1010)

Year	IET No	Hull	Mill	HRR	KL	KB	L/B	GT	ASV	AC	GC
2018	28008	78.6	70.9	58.8	6.56	2.13	3.07	LS	4.0	23.61	55
	28010	78.1	70.4	61.2	6.35	2.07	3.06	LS	4.0	23.90	56
	MTU 1010	77.6	67.5	59.3	6.14	2.02	3.03	LS	4.0	24.05	66
2020	28008	78.9	66.3	29.5	6.55	1.89	3.46	LS	4.0	24.96	56
	28010	78.2	64.9	26.1	6.36	1.99	3.19	LS	4.0	23.55	61
	MTU 1010	77.8	66.4	57.0	6.29	1.95	3.22	LS	4.0	23.96	63
2021	28008	79.7	72.1	70.1	6.45	1.97	3.27	LS	4.0	24.55	55
	28010	79.9	72.9	71.1	6.46	1.96	3.29	LS	4.0	23.73	61
	MTU 1010	79	71.9	71.2	6.38	1.99	3.20	LS	4.0	23.14	64

Table No. 9.1: Composition of entries in Advance Variety Trial 2– Near Isogenic Lines-Coastal Salinity (AVT 1-NIL –CS) IRR, Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT
2nd Year of testing:				
5701	28010(R)	MTU 1293	MTU 1010 / FL 478 // *3 MTU 1010	LS
5702	MTU 1010 (RP)			
5703	28008(R)	MTU 1291	MTU 1010 / FL 478 // *3 MTU 1010	LS
5704	FL 478 (DP)			

Table No. 9.2: Grain Yield (kg/ha) of entries in AVT1- NIL (CS) (Saline), Kharif 2021

Entry No	IET No	ZONE VI – WESTERN (1)			ZONE VII – SOUTHERN (1)			Overall (2)		
		GUJARAT (1)			ANDHRA PRADESH (1)			Mean		
		NVS			MPM					
5701	28010 (R)	2755	1 *	27%	5103	1 *	28%	3929	1 *	27%
5702	MTU 1010 (RP)	2177	4		4002	4		3090	4	
5703	28008 (R)	2297	2	6%	4784	2 *	20%	3541	2 *	15%
5704	FL 478 (DP)	2209	3		4389	3		3299	3	
Exp. Mean		2359			4570			3465		
CD		404			571			392		
CV%		13.93			10.15			9.19		
D/S		21-07-2021			19-07-2021					
D/P		17-08-2021			16-08-2021					

*Superior to best check #Superior over hybrid check % superior over best check

Table No. 9.2: Grain Yield (kg/ha) of entries in AVT1- NIL (CS) (Normal), Kharif 2021

Entry No	IET No	ZONE III-EASTERN			ZONE VII – SOUTHERN			Z7 (2)		Overall (3)			
		WEST BENGAL (1)			KARNATAKA (1)		PUDUCHERRY (1)	Mean		Mean			
		CNG			BRM		KRK						
5701	28010 (R)	4554	1 *	11%	2644	1 *	37%	3265	2	2955	2	3488	1
5702	MTU 1010 (RP)	4090	4		1930	4		4199	1	3065	1	3406	2
5703	28008 (R)	4475	2	9.42%	2003	3	3.8%	3058	3	2531	3	3179	3
5704	FL 478 (DP)	4136	3		2278	2		2505	4	2391	4	2973	4
Exp. Mean		4314			2214		3257	2735		3261			
CD		464			351		343	405		429			
CV%		5.4			9.9		7.7	10.4		9.9			
D/S		31-07-2021			23-07-2021		10-08-2021						
D/P		21-08-2021			17-08-2021		07-09-2021						

*Superior to best check #Superior over hybrid check % superior over best check

Table No. 9.3: Days to 50% flowering of entries in AVT1- NIL (CS) (Saline), Kharif 2021

Entry No	IET No	ZONE VI – WESTERN	ZONE VII – SOUTHERN	Overall (2)
		GUJARAT (1)	ANDHRA PRADESH (1)	
		NVS	MPM	Mean
5701	28010 (R)	90	81	86
5702	MTU 1010 (RP)	90	79	85
5703	28008 (R)	91	80	85
5704	FL 478 (DP)	84	83	83
Exp. Mean		89	81	85

Table No. 9.3: Days to 50% flowering of entries in AVT1- NIL (CS) (Normal), Kharif 2021

Entry No	IET No	ZONE III-EASTERN	ZONE VII – SOUTHERN		Z7 (2)	Overall (3)
		WEST BENGAL (1)	KARNATAKA (1)	PUDUCHERRY (1)	Mean	
		CNG	BRM	KRK	Mean	Mean
5701	28010 (R)	72	106	72	89	83
5702	MTU 1010 (RP)	72	101	72	87	82
5703	28008 (R)	72	96	75	85	81
5704	FL 478 (DP)	74	101	77	89	84
Exp. Mean		73	101	74	87	82

Table No. 9.4: Plant Height (cm) of entries in AVT1- NIL (CS) (Saline), Kharif 2021

Entry No	IET No	ZONE VI – WESTERN	ZONE VII – SOUTHERN	Overall (2)
		GUJARAT (1)	ANDHRA PRADESH (1)	
		NVS	MPM	Mean
5701	28010 (R)	94	100	97
5702	MTU 1010 (RP)	86	99	92
5703	28008 (R)	90	102	96
5704	FL 478 (DP)	78	91	84
Exp. Mean		87	98	92

Table No. 9.4: Plant Height (cm) of entries in AVT1- NIL (CS) (Normal), Kharif 2021

Entry No	IET No	ZONE III-EASTERN	ZONE VII – SOUTHERN		Z7 (2)	Overall (3)
		WEST BENGAL (1)	KARNATAKA (1)	PUDUCHERRY (1)	Mean	
		CNG	BRM	KRK	Mean	Mean
5701	28010 (R)	98.22	61.75	94.60	78.18	84.86
5702	MTU 1010 (RP)	93.33	51.50	96.20	73.85	80.34
5703	28008 (R)	100.22	49.25	119.80	84.53	89.76
5704	FL 478 (DP)	94.33	41.00	102.20	71.60	79.18
Exp. Mean		96.53	50.88	103.20	77.04	83.53

Table No. 9.5: Panicles/m² of entries in AVT1- NIL (CS) (Saline), Kharif 2021

Entry No	IET No	ZONE VI – WESTERN	ZONE VII – SOUTHERN	Overall (2)
		GUJARAT	ANDHRA PRADESH	
		NVS	MPM	Mean
5701	28010 (R)	377	367	372
5702	MTU 1010 (RP)	371	395	383
5703	28008 (R)	392	383	387
5704	FL 478 (DP)	350	371	360
Exp. Mean		372	379	375

Table No. 9.5: Panicles/m² of entries in AVT1- NIL (CS) (Normal), Kharif 2021

Entry No	IET No	ZONE III-EASTERN	ZONE VII – SOUTHERN		Z7 (2)	Overall (3)
		WEST BENGAL (1)	KARNATAKA (1)	PUDUCHERRY (1)	Mean	
		CNG	BRM	KRK		Mean
5701	28010 (R)	442	128	487	307	352
5702	MTU 1010 (RP)	473	89	380	235	314
5703	28008 (R)	429	110	507	308	349
5704	FL 478 (DP)	423	131	367	249	307
Exp. Mean		442	114	435	275	330

Table No. 9.6: Grain quality characteristics of entries in AVT 1-NIL (CS), kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
5701	28010 (R)	79.9	72.9	71.1	6.46	1.96	3.29	LS	VOC	4.0	23.73	61
5702	MTU 1010 (RP)	79.0	71.9	71.2	6.38	1.99	3.20	LS	VOC	4.0	23.14	64
5703	28008 (R)	79.7	72.1	70.1	6.45	1.97	3.27	LS	VOC	4.0	24.55	55
5704	FL 478 (DP)	78.9	66.6	62.2	6.63	2.24	2.95	LB	OC	4.0	24.37	22

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB: Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

ADVANCE VARIETY TRIAL 1-NIL (Yield Trial IM & IME)

Locations:		Test Entries: 37
Trial Sent	34	
Data Received	24	
Data Considered	16	
Checks:	NIL's :29	Table: 9.7
	No. of recurrent parents: 8	

Advance Variety Trial 1-Near Isogenic Lines (Yield Trial-IME and IM duration) consisted of 29 NILs along with 8 recurrent parents in various zones was conducted. Among the NIL's, 13 are in 2nd year of testing viz., IET 28010 (R), 28008 (R), 28066 (R), 28065 (R), 30276, 30277, 30278, 30279, 28791 (R), 28789 (R), 28018, 28017 and 28818. Whereas, 16 entries are in 1st year of testing viz., IET 30280, 30281, 30282, 29203 (R), 30283, 30284, 30285, 30286, 29548, 30253, 30254, 30261, 30287, 30288, 30289 and 30290. Trial was sent to 34 locations covering 6 zones (II, III, IV, V, VI and VII). However, data was not received from 10 centres viz., IARI-New Delhi, Pantnagar, Ludhiana, Kaul, Chinsurah, Varanasi, Titabar, Gerua-ICAR, Jabalpur and Shirgaon. Twentyfour locations have sent data among which data from eight centers was excluded from analysis namely Jeypore (LEM (Low Experimental Mean): <4000 Kg/ha)), Patna-ICAR, (Low CV: <5), Ranchi (LEM), Pundibari (Low CV), Masoda (Low CV), Lembucherra (LEM & High CV: >20)), Raipur (LEM) and Jagdalpur (LEM). The data pertaining to grain yield, days to 50% flowering, plant height, panicles/m² and quality are presented in tables 9.8, 9.9, 9.10, 9.11 and 9.12 respectively.

No. of NILs developed and notified states of recurrent parents

Sl. No.	Recurrent parent	No. of NILs evaluated	Notified states
1	MTU 1010	8	Andhra Pradesh and Telangana
2	ADT 46	2	Tamil Nadu
3	Pusa 44	2	Karnataka and Kerala (Popular in Punjab)
4	Naveen	6	Odisha and Tripura
5	NLR 34449	2	Andhra Pradesh and Telangana
6	IR 64	1	Tamil Nadu, Madhya Pradesh, Chhattisgarh
7	MTU 1121	4	Andhra Pradesh and Telangana
8	Krishna Hamsa	4	Andhra Pradesh and Telangana (Later recommended to Boro ecology by CVRC)

Near Isogenic lines in the background of recurrent parent MTU 1010

Eight NILs [IETs 28010, 28008, 28066, 28065, 30276, 30277, 30278 and 30279] developed in the background of recurrent parent MTU 1010 were tested in the second year of testing in Zone VII at ten locations. The variety is notified for the states of Andhra Pradesh and Telangana. The performance of MTU 1010 and NILs in Andhra Pradesh and Telangana states and in Zone VII is provided in the table and discussed below. **Two NILs, IET 28010 and IET 28008 are developed for salinity tolerance and are discussed in AVT 1 CS chapter separately.**

Performance of four NILs (IETs 30276, 30277, 30278 and 30279) and recurrent parent MTU 1010 for yield, flowering and target traits (disease resistance) during Kharif 2021

IET No.	Designation	Trait	AP (2)		TS (2)		Zone 7 (10)		Disease reaction	
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	Blast	BB
30276	RP 6529-RMS-1777-56-72-84	BB BL	4581#	83	5563#	91	5269#	89	5.7	6.4
30277	RP 6530-RMS-1780-24-12-74	BB	4700#	83	5218#	92	5691#	90	-	6.2
30278	RP-6531-RMS-1783-14-12-24	BL	3844	88	4812	95	5147#	92	5.7	-
30279	RP 6530-RMS-1778-54-32-44	BB	3891	83	5538#	94	5096#	91	-	5.4
28066(R)	RP 5973-13-1-6-67-129-57	Low P Tol	4655#	90	5685#	98	5508#	95	-	-
28065(R)	RP 5972-13-1-6-67-129-266	Low P Tol	4597#	101	4195	106	4926#	100	-	-
MTU 1010 (RP)			4758	82	5684	92	5195	89	5.4	5.6
CD at 5%			837		547		340			

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BB- Bacterial leaf blight.

IET 30276

IET 30276 (RP 6529-RMS-1777-56-72-84) was derived from the cross MTU 1010*2 / Improved Samba Mahsuri (Xa 21+Pi54). The NIL was developed for bacterial blight and blast resistance in the background of recurrent parent MTU 1010. The test entry showed susceptible reaction to blast (5.7) and bacterial leaf blight (6.4 score). The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Andhra Pradesh (4581 Kg/ha), Telangana (5563 kg/ha) and Zone VII (5269 kg/ha). It possesses long slender grain type and recorded HRR (65.7), ASV (4.0), intermediate AC (23.87), and low GC (22). **IET 30276 is dropped due to susceptibility for bacterial blight, blast diseases.**

IET 30277

IET 30276 (RP 6530-RMS-1780-24-12-74) was derived from the cross MTU 1010*2 / Improved Samba Mahsuri (Xa 21). The NIL was developed for bacterial blight resistance in the background of recurrent parent MTU 1010. The test entry showed susceptible reaction to bacterial leaf blight (6.2 score). The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Andhra Pradesh (4700 Kg/ha), Telangana (5218 kg/ha) and Zone VII (5691 kg/ha). It possesses long slender grain type and recorded HRR (56.4), ASV (4.0), intermediate AC (24.05), and low GC (22). **IET 30277 is dropped due to susceptibility for bacterial blight.**

IET 30278

IET 30278 (RP-6531-RMS-1783-14-12-24) was derived from the cross MTU 1010*2 / Improved Samba Mahsuri (Pi54). The NIL was developed for blast resistance in the background of recurrent parent MTU 1010. The test entry showed susceptible reaction to blast (5.7 score). The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry did not show on par performance with recurrent parent in Andhra Pradesh (3844 Kg/ha), Telangana (4812 kg/ha), but showed on par performance in Zone VII (5147 kg/ha). It possesses long slender grain type and recorded HRR (56.0), ASV (4.0), intermediate AC (23.87), and moderate GC (58). **IET 30278 is dropped due to susceptibility blast and not showing on par yield with recurrent parent in Andhra Pradesh and Telangana.**

IET 30279

IET 30279 (RP 6530-RMS-1778-54-32-44) was derived from the cross MTU 1010*2 / Improved Samba Mahsuri (Xa 21). The NIL was developed for bacterial blight resistance in the background of recurrent parent MTU 1010. The test entry showed susceptible reaction to bacterial leaf blight (5.4 score). The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Telangana (5538 kg/ha) and Zone VII (5096 kg/ha). But it did not yield on par with recurrent parent in Andhra Pradesh. It possesses long slender grain type and recorded HRR (60.0), ASV (4.0), intermediate AC (24.05), and high GC (61). The entry **IET 30279 is dropped due to susceptibility for bacterial blight.**

Disease reaction of the entries to blast disease during Kharif 2021

Location	ALM	BNK	CHP	CTK	GGT	GDL	IHR	JDP	KJT	MLN	MGD	NLR	NWG	NDL	RNC	SI
Screening	N	A	N	A	-	N	A	N	N	N/A	N	A	A	A	N	
LSI	6.5	5.2	5.2	6.1	5.3	4.4	4.9	4.9	4.7	5.8	5.0	5.1	5.5	6.6	5.2	
IET 30276	7	5	5	3	5	8	7	8	6	6	5	6	4	5	5	5.7
IET 30277	8	5	4	5	5	6	7	8	6	9	5	5	6	5	6	6.0
IET 30278	8	5	4	5	5	6	7	6	7	9	5	5	5	5	4	5.7
IET 30279	8	3	6	7	7	6	6	7	6	8	5	6	7	7	8	6.5
MTU 1010	8	5	5	5	5	6	4	5	6	9	5	4	3	7	4	5.4

Disease reaction of the entries to Bacterial leaf blight disease during Kharif 2021

Location	ADT	CHN	CHP	GNV	IHR	JGT	KJT	MTU	MNC	MSD	NVS	NWG	NLR	PNT	PTB	RPR	VRN	SI
Screening	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
LSI	8.5	6.6	7.4	5.9	6.4	6.1	6.6	8.4	5.1	5.4	6.4	6.1	5.4	7.6	6.7	7.5	5.6	
IET 30276	9	7	9	7	3	5	3	9	7	7	7	3	5	5	7	7	9	6.4
IET 30277	9	3	9	9	3	7	3	9	7	5	3	7	3	5	7	7	9	6.2
IET 30278	9	3	7	5	1	5	3	9	7	5	5	7	3	5	9	7	7	5.7
IET 30279	9	7	7	3	1	7	5	5	5	5	7	7	5	5	7	3	3	5.4
MTU 1010	9	7	5	3	5	5	5	9	0	7	7	7	3	5	7	7	5	5.6

Performance of IET 28066(R) and IET 28065(R) for Low Phosphorous Tolerance**IET 28066**

IET 28066 (RP 5973-13-1-6-67-129-57) was derived from the cross MTU 1010*2 / Swarna (*Pup 1*). The NIL was developed for tolerance to low soil Phosphorus in the background of recurrent parent MTU 1010. The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Andhra Pradesh (4655 Kg/ha), Telangana (5685 kg/ha), and in Zone VII (5508 kg/ha). **The entry IET 28066 showed significantly higher yield than recurrent parent and also best check at IIRR, in Zone VII (2 locations) and also over all (3 locations) under P 50%.** It possesses medium slender grain type and recorded HRR (59.2), ASV (5.0), intermediate AC (23.93), and high GC (64). **Therefore, the entry IET 28066 was found promising in Andhra Pradesh, Telangana and Zone VII for Low Phosphorous tolerance.**

IET 28065

IET 28065 (RP 5972-13-1-6-67-129-266) was derived from the cross MTU 1010*2 / Vandana (*Pup 1*). The NIL was developed for tolerance to low soil Phosphorus in the background of recurrent parent MTU 1010. The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Andhra Pradesh (4597 Kg/ha) and in zone VII (4926 kg/ha) but did not show on par yield with recurrent parent in Telangana (4195 kg/ha). **The entry IET 28065 showed significantly higher yield than recurrent parent and also best check at IIRR, in Zone VII (2 locations) and also over all (3 locations) under P 50%.** It possesses medium slender grain type and recorded HRR (60.3), ASV (7.0), intermediate AC (25.19), and moderate GC (48). **Therefore, the entry IET 28065 was found promising in Andhra Pradesh and in Zone VII for Low Phosphorous tolerance.**

Performance of Two NILs IET 28066 and IET 28065 for grain yield (t/ha) under P 0 condition (No P application)

Grain yield (t/ha)	Locations		Overall (2)
	Varanasi (Zone 3)	Mandya (Zone 7)	
Genotype			
IET 28066 (R)	5.13	4.43	4.78
IET 28065 (R)	3.23	3.75	3.49
MTU 1010 (RP)	3.50	4.84	4.17
Swarna (Positive Check)	5.20	5.15	5.17
CD	0.68	1.12	0.70

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BB- Bacterial leaf blight.

Performance of Two NILs IET 28066 and IET 28065 for grain yield (t/ha) under P 50 (50% of Recommended P applied)

Grain yield (t/ha)	Zone 5	Zone 7			Overall (3)
	(1)				
Genotypes	Raipur	IIRR	Gangavati	Z 7 (2) Mean	
IET 28066 (R)	3.56	6.40 *	5.21	5.81 *	5.06 *
IET 28065 (R)	2.87	6.56 *	4.01	5.28 *	4.48
MTU 1010 (RP)	2.97	3.35	4.84	4.10	3.72
Swarna (Positive Check)	4.32	4.49	4.97	4.73	4.59
CD	0.53	0.55	0.46	0.31	0.25

On par yield with RP/Best check ($\mu \pm CD$); *Significant yield superiority over RP/Best check ($> \mu + CD$); BB-Bacterial leaf blight.

Near Isogenic lines in the background of recurrent parent ADT 46

Two NILs IET 28791 and IET 28789 were developed in the background of recurrent parent ADT 46 and were tested in the second year in Zone VII at ten locations. The variety is notified for the states of Tamil Nadu. The performance of ADT 46 and its NILs in Tamil Nadu and in Zone VII is provided in the table and discussed below.

Performance of four NILs (IET 28791 and IET 28789) and recurrent parent ADT 46 for yield, flowering and target trait Submergence tolerance during Kharif 2021

IET No.	Designation	Trait	TN (2)		Zone VII (10)		Submergence tolerance
			Kg/ha	DFP	Kg/ha	DFP	
28791	KR 16024	Sub	7540#	112	6851#	107	Data not available
28789	KR 16022	Sub	7930#	108	7177*	106	Data not available
ADT 46 (RP)			7327	110	6796	106	Data not available
CD at 5%			831		340		

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$)

IET 28791

IET 28791 (KR 16024) was derived from the cross ADT 46*3 / Swarna Sub-1 (Sub-1). The NIL was developed for submergence tolerance in the background of recurrent parent ADT 46. The performance of the test entry was compared for yield performance with RP for state of Tamil Nadu and Zone VII. The entry showed on par performance with recurrent parent in Tamil Nadu (7540 Kg/ha) and in Zone VII (6851 kg/ha). It possesses long slender grain type and recorded HRR (70.3), ASV (7.0), high AC (26.10), and low GC (22). **Owing to non-availability of data on submergence for trait verification, the entry IET 28791 may be repeated next year.**

IET 28789

IET 28789 (KR 16022) was derived from the cross ADT 46*3 / Swarna Sub-1 (Sub-1). The NIL was developed for submergence tolerance in the background of recurrent parent ADT 46. The performance of the test entry was compared for yield performance with RP for state of Tamil Nadu and Zone VII. The entry showed on par performance with recurrent parent in Tamil Nadu (7930 Kg/ha) and significant yield superiority in Zone VII (7177 kg/ha). It possesses long bold grain type and recorded HRR (70.7), ASV (7.0), intermediate AC (22.76), and low GC (22). **Owing to non-availability of data on submergence for trait verification, the entry IET 28789 may be repeated next year.**

Near Isogenic lines in the background of recurrent parent PUSA 44

Two NILs IET 28018 and IET 28017 developed in the background of recurrent parent PUSA 44 were tested in the second year of testing in Zone III at two locations. The variety is notified for the states of Karnataka and Kerala but became popular in Punjab. The performance of PUSA 44 and NILs in Odisha and Bihar states and in Zone III is provided in the table and discussed below.

Performance of two NILs (IET 28018 and IET 28017) and recurrent parent PUSA 44 for yield, flowering and target traits (disease resistance) during Kharif 2021

IET No.	Designation	Trait	Odisha (1)		Bihar (1)		Zone 3 (2)		Drought tolerance
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	
28018	RP 6529-RMS-1777-56-72-84	Drought	5497#	103	3822*	110	4660*	106	Data not available
28017	RP 6530-RMS-1780-24-12-74	Drought	5007#	106	3764*	103	4386#	105	Data not available
PUSA 44 (RP)			5210	117	3115	109	4163	113	
CD at 5%			665		577		438		

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$)

IET 28018

IET 28018 (Pusa 1823-12-82) was derived from the cross Pusa 44 / IR 81896-B-B-142 // Pusa 44*3 (Drought tolerant QTL). The NIL was developed for drought tolerance in the background of recurrent parent PUSA 44. The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. The entry showed on par performance with recurrent parent in Odisha (5497 Kg/ha), significantly higher yield than RP in Bihar (3822 kg/ha) and in Zone III (4660 kg/ha). It possesses long bold grain type and recorded HRR (66.4), ASV (7.0), high AC (25.96), and low GC (22). **Since the data on drought for this entry IET 28018 for trait verification is not available, the entry IET 28018 may be repeated next year. Since PUSA 44 is notified for Karnataka and Kerala in Zone VII and Popular in Punjab, the entry IET 28018 may be tested for drought tolerance in Karnataka, Kerala or Punjab.**

IET 28017

IET 28017 (Pusa 1823-12-62) was derived from the cross Pusa 44 / IR 81896-B-B-142 // Pusa 44*3 (Drought tolerant QTL). The NIL was developed for drought tolerance in the background of recurrent parent PUSA 44. The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. The entry showed on par yield with recurrent parent in Odisha (5007 Kg/ha), and significantly higher yield in Bihar (3764 kg/ha) and on par yield in Zone III (4386 kg/ha). It possesses long bold grain type and recorded HRR (65.3), ASV (7.0), high AC (25.31), and low GC (22). **Since the data on drought for this entry IET 28017 for trait verification is not available, the entry IET 28017 may be repeated next year. Since PUSA 44 is notified for Karnataka and Kerala in Zone VII and Popular in Punjab, the entry IET 28017 may be tested for drought tolerance in Karnataka, Kerala or Punjab.**

Near Isogenic lines in the background of recurrent parent Naveen

Six NILs IET 30280, IET 30281, 30282, 29203 (R), IET 30283 and IET 30284 were developed in the background of recurrent parent Naveen were tested in the first year of testing in Zone III (2 locations) & Zone IV (one location). The variety is notified for the state of Odisha and Tripura. The data from one location, Lembucherra (Tripura) in Zone IV was not considered for analysis due to low mean. Hence data from Zone III is considered. The performance of Naveen and its NILs in Odisha and Bihar states and in Zone III is provided in the table and discussed below.

Performance of two NILs (IET 30280, IET 30281, 30282, 29203 (R), IET 30283 and IET 30284) and recurrent parent Naveen for yield and flowering during Kharif 2021

IET No.	Designation	Trait	Odisha (1)		Bihar (1)		Zone 3 (2)	
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP
30280	CR 4345-13-7-2-1	BB	5923#	96	5161#	89	5542*	93
30281	CR 4332-37-2-1-1	Herbicide	5758#	96	3492	91	4625	93
30282	CR 4331-74-2-2-1	BPH	6220*	95	5095#	90	5658*	93
29203 (R)	CR 4331-85-1-2-1	BPH	5652#	96	4435#	89	5044#	93
30283	CR 4345-23-8-1-1	BB	5523#	96	4435#	90	5378#	93
30284	CR4332-184-2-2-1	Herbicide	6143#	94	3946	91	5045#	92
Naveen (RP)			5503	96	4669	91	5086	93
CD at 5%			665		577		438	

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$)

Performance of NILs IET 30280 and IET 30283 of Naveen for Bacterial leaf blight resistance**IET 30280**

IET 30280 (CR 4345-13-7-2-1) was derived from the cross Naveen*3 / IRBB66. The NIL was developed for bacterial blight resistance in the background of recurrent parent Naveen. **The test entry IET 30280 showed susceptible reaction to Bacterial leaf blight (6.5 score).** The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. The entry showed on par performance with recurrent parent in Odisha (5923 Kg/ha), Bihar (5161 kg/ha) and significantly higher yield than recurrent parent in Zone III (5542 kg/ha). It possesses short bold grain type and recorded low HRR (27.9), ASV (4.0), intermediate AC (22.96), and low GC (22). **IET 30280 is dropped due to susceptibility to bacterial blight and also due to low HRR.**

IET 30283

IET 30283 (CR 4345-23-8-1-1) was derived from the cross Naveen*3 / IRBB66. The NIL was developed for bacterial blight resistance in the background of recurrent parent Naveen. The test entry IET 30283 showed susceptible reaction to Bacterial leaf blight (6.6 score). The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. The entry showed on par performance with recurrent parent in Odisha (5523 Kg/ha), Bihar (4435 kg/ha) and in Zone III (5378 kg/ha). It possesses short bold grain type and recorded low HRR (34.5), ASV (4.0), intermediate AC (24.31), and low GC (22). **IET 30283 is dropped due to susceptibility to bacterial blight and also due to low HRR.**

Disease reaction of the entries to Bacterial leaf blight disease during Kharif 2021

Location	ADT	CHN	CHP	GNV	IIRR	JGT	KJT	MTU	MNC	MSD	NVS	NWG	NLR	PNT	PTB	RPR	VRN	SI
Screening	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
LSI	8.5	6.6	7.4	5.9	6.4	6.1	6.6	8.4	5.1	5.4	6.4	6.1	5.4	7.6	6.7	7.5	5.6	
IET 30280	9	7	7	5	3	5	7	9	7	7	7	7	5	7	7	7	5	6.5
IET 30283	9	5	7	7	3	7	7	9	7	5	7	9	5	7	7	7	5	6.6
Naveen	9	7	9	7	7	7	9	9	7	7	7	7	7	9	7	7	7	7.6

Performance of NILs IET 30282 and IET 29203 (R) of Naveen for BPH resistance**IET 30282**

IET 30282 (CR 4331-74-2-2-1) was derived from the cross Naveen*3 / CR 3006-8-2. The NIL was developed for BPH resistance in the background of recurrent parent Naveen. **The test entry IET 30282 showed moderate resistance reaction to BPH (3.74 score) in comparison to recurrent parent (8.2 score).** The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. The entry showed significantly higher yield over recurrent parent in Odisha (6220 kg/ha) and in Zone III (5658 kg/ha) and on par performance with recurrent parent in Bihar (5095 Kg/ha). It possesses short bold grain type and recorded low HRR (31.7), ASV (4.0), intermediate AC (24.08), and low GC (22). **The entry IET 30282 is dropped due to poor grain quality parameters - low HRR (31.7%).**

IET 29203 (R)

IET 29203 (R) (CR 4331-85-1-2-1) was derived from the cross Naveen*3 / CR 3006-8-2. The NIL was developed for BPH resistance in the background of recurrent parent Naveen. **The test entry 29203 (R) showed moderate resistance reaction to BPH (4.54 score) in comparison to recurrent parent (8.2 score).** The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. The entry showed on par performance with recurrent parent in Odisha (5652 kg/ha), Bihar (4435 Kg/ha) and in Zone III (5044). It possesses short bold grain type and recorded low HRR (39.9), ASV (5.0), intermediate AC (25.81), and low GC (22). **The entry IET 29203 (R) is dropped due to poor grain quality parameters like low HRR (39.9%) and high AC (25.81).**

Reaction of the entries IET 30282 and IET 29203 (R) to BPH during Kharif 2021

IET	BPH Reaction (Glass house)					Mean
	IIRR	CBT	LDN	PNT	MND	
30282	0.6	2.4	3.7	9.0	3.0	3.74
29203 (R)	2.3	2.4	4.0	9.0	5.0	4.54
Naveen (RP)	9.0	8.6	NG	8.2	7.0	8.20

Performance of NILs IET 30281 and IET 30284 of Naveen for Herbicide tolerance

The trial for herbicide tolerance was conducted at 5 locations viz., Cuttack, Hazaribag, Ranchi, Titabar and Varanasi. Out of these five locations, as per the data analysis, the interaction effects were not significant at Titabar and Varanasi. Therefore, the data from these two locations was not considered. The data from remaining 3 locations viz., Cuttack, Hazaribag and Ranchi was considered.

IET 30281

The entry IET 30281 (CR 4332-37-2-1-1) was derived from the cross Naveen*3/Robin. The NIL was developed for herbicide tolerance in the background of recurrent parent Naveen. The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. **The entry showed on par performance with recurrent parent in Odisha (5758 kg/ha), but did not show on par performance in Bihar (3492 Kg/ha) and in Zone III (4625 kg/ha).**

The entry introgressed with herbicide tolerant gene under the treatment of Imazethapyr spray has yielded 4.30, 4.09, 3.85, 4.08 t/ha at Cuttack, Hazaribag, Ranchi and over all mean yield respectively, whereas the recurrent parent, Naveen not yielded any grain at Cuttack and Hazaribag and yielded only 0.06 and 0.02 t/ha at Ranchi and overall mean respectively. It yielded significantly higher yield at all three locations and over all mean compared to recurrent parent. Under manual weeding condition also the entry IET 30281 yielded 4.63, 4.17, 4.62, 4.47 t/ha at Cuttack, Hazaribag, Ranchi and over all mean yield respectively which is significantly higher than the recurrent parent. **Owing to its superiority under herbicide spray over recurrent parent and also under manual weeding, the entry IET 30281 is considered as herbicide tolerant.** It possesses medium slender grain type and recorded low HRR (14.0), ASV (4.0), intermediate AC (23.84) and low GC (22). **The entry IET 30281 is dropped due to poor grain quality parameter like low HRR (14%).**

IET 30284

The entry IET 30284 (CR 4332-184-2-2-1) was derived from the cross Naveen*3/Robin. The NIL was developed for herbicide tolerance in the background of recurrent parent Naveen. The performance of the test entry was compared for yield performance with RP for state of Odisha, Bihar and Zone III. **The entry showed on par performance with recurrent parent in Odisha (6143 kg/ha) and in Zone III (5045 kg/ha), but did not show on par performance in Bihar (3946 Kg/ha).**

The entry introgressed with herbicide tolerant gene under the treatment of Imazethapyr spray has yielded 4.08, 3.96, 3.92, 3.99 t/ha at Cuttack, Hazaribag, Ranchi and over all mean yield respectively, whereas the recurrent parent, Naveen not yielded any grain at Cuttack and Hazaribag and yielded only 0.06 and 0.02 t/ha at Ranchi and overall mean respectively. It yielded significantly higher yield at all three locations and over all mean compared to recurrent parent. Under manual weeding condition also the entry IET 30281 yielded 4.44, 4.10, 4.38, 4.31 t/ha at Cuttack, Hazaribag, Ranchi and over all mean yield respectively which is significantly higher than the recurrent parent. **Owing to its superiority under herbicide spray over recurrent parent and also under manual weeding, the entry IET 30284 is considered as herbicide tolerant.** It possesses short bold grain type and recorded low HRR (27.2), ASV (4.0), intermediate AC (24.34) and low GC (22). **The entry IET 30284 is dropped due to poor grain quality parameter like low HRR (27.2%).**

Treatment	IET	Grain yield (t/ha)			Mean (t/ha)
		Cuttack	Hazaribag	Ranchi	
Imazethapyr (Herbicide spray)	30281	4.30*	4.09*	3.85*	4.08*
	30284	4.08*	3.96*	3.92*	3.99*
	Naveen (Recurrent parent)	0	0	0.06	0.02
Weed Free (Manual weeding)	30281	4.63*	4.17*	4.62*	4.47*
	30284	4.44*	4.10*	4.38*	4.31*
	Naveen (Recurrent parent)	3.61	3.61	4.52	3.91
CD		0.01	0.11	0.64	

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$)

Near Isogenic lines in the background of recurrent parent NLR 34449

Two NILs IET 30285 and IET 30286 developed in the background of recurrent parent NLR 34449 were tested in Zone VII at ten locations. The variety is notified for the states of Andhra Pradesh and Telangana. The performance of NLR 34449 and NILs in Andhra Pradesh and Telangana states and in Zone VII is provided in the table and discussed below.

Performance of four NILs (IET 30285 and IET 30286) and recurrent parent NLR 34449 for yield, flowering and target traits (disease resistance) during Kharif 2021

IET No.	Designation	Trait	AP(2)		TS (2)		Zone VII (10)		Disease reaction BB
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	
30285	RP-6471-RMS-18-30-82	BB	5197#	87	5417#	94	4892#	92	5.5
30286	RP-6471-RMS-87-10-106	BB	5912*	89	5112#	98	5562*	95	5.9
NLR 34449 (RP)			4947	88	5528	96	5039	94	6.8
CD at 5%			837		547		340		

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BB- Bacterial leaf blight.

IET 30285

IET 30285 (RP-6471-RMS-18-30-82) was derived from the cross NLR 34449*2/Improved Samba Mahsuri. The NIL was developed for bacterial blight resistance in the background of recurrent parent NLR 34449. **The test entry IET 30285 showed susceptible reaction to bacterial leaf blight (5.5 score).** The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Andhra Pradesh (5197 Kg/ha), Telangana (5417 kg/ha) and Zone VII (4892 kg/ha). It possesses short slender grain type and recorded HRR (60.1), ASV (4.0), intermediate AC (23.05), and low GC (22). **IET 30285 is dropped due to susceptibility for bacterial blight.**

IET 30286

IET 30286 (RP-6471-RMS-87-10-106) was derived from the cross NLR 34449*2/Improved Samba Mahsuri. The NIL was developed for bacterial blight resistance in the background of recurrent parent NLR 34449. **The test entry IET 30286 showed susceptible reaction to bacterial leaf blight (5.9 score).** The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Telangana (5112 Kg/ha), and significantly higher yield in Andhra Pradesh (5912 kg/ha) and Zone VII (5562 kg/ha). It possesses short slender grain type and recorded HRR (64.9), ASV (4.0), intermediate AC (24.66), and low GC (22). **IET 30286 is dropped due to susceptibility for bacterial blight.**

Disease reaction of the entries to Bacterial leaf blight disease during Kharif 2021

Location	ADT	CHN	CHP	GNV	IIR	JGT	KJT	MTU	MNC	MSD	NVS	NWG	NLR	PNT	PTB	RPR	VRN	SI
Screening	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
LSI	8.5	6.6	7.4	5.9	6.4	6.1	6.6	8.4	5.1	5.4	6.4	6.1	5.4	7.6	6.7	7.5	5.6	
IET 30285	9	1	9	5	1	7	3	5	3	7	7	7	7	5	5	7	5	5.5
IET 30286	9	3	9	9	1	5	5	5	1	5	9	7	7	7	5	7	7	5.9
NLR 34449	9	7	9	5	9	5	5	-	5	5	7	5	7	9	7	9	5	6.8

Near Isogenic lines in the background of recurrent parent IR 64

One NIL IET 29548 was developed in the background of recurrent parent IR 64 was tested in Zone V, Zone VI and Zone VII. The NIL IET 29548 developed by introgressing Pup 1 QTL for low Phosphorous tolerance. The variety was notified for the states of Tamil Nadu, Madhya Pradesh and Chhattisgarh. The data from Chhattisgarh was not considered for analysis due to low mean yield and it was not tested in any location in Madhya Pradesh. Hence data from Tamil nadu in Zone VII is considered for yield evaluation. The performance of IR 64 and its NIL in Tamil nadu and zone VII is provided in the table and discussed below.

Performance of NILs (IET 29548) and recurrent parent IR 64 for yield, flowering during Kharif 2021

IET No.	Designation	Trait	Tamil Nadu (2)		Zone 7 (10)	
			Kg/ha	DFP	Kg/ha	DFP
29548	RP 5974-RMS-3-2-8-38-255-32	Low P tolerance	5664*	92	5241	90
IR 64			4467	89	5590	91
	CD at 5%		831		340	

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$)

IET 29548

IET 29548 (RP 5974-RMS-3-2-8-38-255-32) was derived from the cross IR 64*2 / Swarna (Pup 1). The NIL was developed for tolerance to low soil Phosphorus in the background of recurrent parent IR64. The performance of the test entry was compared for yield performance with RP for state of Tamil Nadu and in Zone VII. The entry IET 29548 recorded superior yield over recurrent parent IR 64 in Tamil Nadu (6554 kg/ha). It possesses long slender grain type and recorded HRR (50.7), ASV (4.0), intermediate AC (24.08), and high GC (75). **The entry IET 29548 did not show significantly higher yield than recurrent parent and also best check, any zone either at P 0 or P 50% levels, hence it is dropped.**

Performance of NIL IET 29548 recurrent parent IR 64 at P 0 level

Grain yield (t/ha)	Locations			Overall (3)
	Karjat	Gangavati	Mandya	
Genotype				
IET 29548	4.03	3.95	4.85	4.27
IR 64 (RP)	3.37	3.65	5.09	4.04
Swarna (Positive Check)	4.11	5.02	3.01	4.04
CD	0.3	1.07	1.15	0.62

Performance of NIL IET 29548 recurrent parent IR 64 at P 50% level

Grain yield (t/ha)	Locations			Overall (3)
	Karjat	Gangavati	IIRR	
Genotype				
IET 29548	4.67	3.41	1.89	3.32
IR 64 (RP)	4.13	3.8	4.89	4.18
Swarna (Positive Check)	4.3	5.15	4.13	4.3
CD	0.466	1.265	0.397	0.29

Near Isogenic lines in the background of recurrent parent Krishna Hamsa

Four NILs IET 30287, IET 30288, IET 30289 and IET 30290 were developed in the background of recurrent parent Krishna Hamsa were tested in Zone III (2 locations), Zone IV (1 location) and VII (10 locations). The variety was originally notified for the states of Andhra Pradesh and Telangana, but later extended to Boro regions of Zone III and Zone IV. The performance of Krishna Hamsa and its NILs in Andhra Pradesh, Telangana, Odisha, Bihar states and in Zone III and VII is provided in the table and discussed below. The data from Zone IV (Lembucherra, Tripura) was not considered, hence not discussed.

Performance of four NILs (IET 30287, IET 30288, IET 30289 and IET 30290) and recurrent parent, Krishna Hamsa for yield, flowering and target traits (disease resistance and drought tolerance) in Zone III during Kharif 2021

IET No.	Designation	Trait	Odisha (1)		Bihar (1)		Zone III (2)	
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP
30287	RP 6496-MAID-241-45-24-3-2-1-1	BB+Drt	3820*	93	4729*	93	4275*	93
30288	RP 6496-MAID-246-24-6-3-1-1-1	Drt	6037*	101	4127#	100	5082*	101
30289	RP 6496-MAID-378-73-37-7-3-1-1	BB	8850*	119	3115	113	5983*	116
30290	RP 6518-MAID 27-9-3-3-1	BL, BB	2877#	84	3906#	82	3392#	83
Krishna Hamsa (RP)			2770	87	3768	89	3269	88
CD at 5%			665		577	95	438	

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BB- Bacterial leaf blight.

Performance of four NILs (IET 30287, IET 30288, IET 30289 and IET 30290) and recurrent parent, Krishna Hamsa for yield, flowering and target traits (disease resistance and drought tolerance) in Zone VII during Kharif 2021

IET No.	Designation	Trait	Andhra Pradesh (2)		Telangana (2)		Zone VII (10)	
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP
30287	RP 6496-MAID-241-45-24-3-2-1-1	BB+Drt	4893#	77	3962#	89	4581#	88
30288	RP 6496-MAID-246-24-6-3-1-1-1	Drt	6093*	92	4343#	108	5393*	100
30289	RP 6496-MAID-378-73-37-7-3-1-1	BB	6853*	97	3767	117	5439*	105
30290	RP 6518-MAID 27-9-3-3-1	BL, BB	5311#	77	3438	85	4622*	87
Krishna Hamsa (RP)			4625	79	4373	86	4245	87
CD at 5%			837		547		340	

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BB- Bacterial leaf blight.

Disease reaction of the entries to Bacterial leaf blight disease during Kharif 2021

Location	ADT	CHN	CHP	GNV	IIRR	JGT	KJT	MTU	MNC	MSD	NVS	NWG	NLR	PNT	PTB	RPR	VRN	SI
Screening	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
LSI	8.5	6.6	7.4	5.9	6.4	6.1	6.6	8.4	5.1	5.4	6.4	6.1	5.4	7.6	6.7	7.5	5.6	
IET 30287	9	9	9	7	1	7	7	9	7	7	5	7	5	5	5	9	5	6.6
IET 30289	5	7	9	5	-	5	5	9	0	5	7	7	5	7	7	7	3	5.8
IET 30290	9	9	9	9	7	7	7	9	9	7	5	5	7	3	7	9	9	7.5
Krishna Hamsa	9	9	9	5	7	7	9	9	5	7	5	9	7	5	9	9	7	7.5

Disease reaction of the entries to blast disease during Kharif 2021

Location	ALM	BNK	CHP	CTK	GGT	GDL	IIRR	JDP	KJT	MLN	MGD	NLR	NWG	NDL	RNC	SI
Screening	N	A	N	A	-	N	A	N	N	N/A	N	A	A	A	N	
LSI	6.5	5.2	5.2	6.1	5.3	4.4	4.9	4.9	4.7	5.8	5.0	5.1	5.5	6.6	5.2	
IET 30290	9	9	9	9	7	7	7	9	9	7	5	5	7	3	7	5.6
Krishna Hamsa	9	9	9	5	7	7	9	9	5	7	5	9	7	5	9	6.3

Performance of two NILs IET 30287 and IET 30288 for drought tolerance

Genotype	Grain yield (kg/ha)	Difference with RP	%RP	%BSC	%BTC	Remarks
IET 30287	1133	-1394	-55.16	-28.74	-51.16	Not promising
IET 30288	991	-1536	-60.78	-37.67	-57.28	Not promising
Krishna Hamsa (RP)	2527					

Experimental details and results of drought experiment is mentioned in AVT 1 NIL DRT

IET 30287

IET 30287 (RP 6496-MAID-241-45-24-3-2-1-1) was derived from the cross Krishna Hamsa / IRBB 60 // Krishna Hamsa / Tetep /// Krishna Hamsa / IR 81896-96-B-B-195. The NIL was developed for bacterial blight resistance and drought tolerance in the background of recurrent parent Krishna Hamsa. **The test entry IET 30287 showed susceptible reaction to bacterial leaf blight (6.6 score). The entry was also not found promising (-55.16%) for drought tolerance in comparison to recurrent parent Krishna Hamsa.** The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh and Telangana in Zone VII and Odisha and Bihar in Zone III. The entry showed superior yield over recurrent parent in Odisha (3820 kg/ha), Bihar (4729 kg/ha) and in Zone III (4275 kg/ha); The entry IET 30287 also showed on par performance with recurrent parent in Andhra Pradesh (4893 Kg/ha), Telangana (3962 kg/ha) and in Zone VII (4581 kg/ha). It possesses long slender grain type and recorded HRR (62.3%), ASV (7.0), intermediate AC (24.69), and low GC (22). **IET 30287 is dropped due to susceptibility for bacterial blight and not promising for drought tolerance.**

IET 30288

IET 30288 (RP 6496-MAID-246-24-6-3-1-1-1) was derived from the cross Krishna Hamsa / IRBB 60 // Krishna Hamsa / Tetep /// Krishna Hamsa / IR 81896-96-B-B-195. The NIL was developed for drought tolerance in the background of recurrent parent Krishna Hamsa. **The entry was not found promising (-60.78) for drought tolerance in comparison to recurrent parent Krishna Hamsa.** The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh and Telangana in Zone VII and Odisha and Bihar in Zone III. The entry showed superior yield over recurrent parent in Odisha (6037 kg/ha), Zone III (5082 kg/ha), Andhra Pradesh (6093 Kg/ha) and Zone VII (5393 kg/ha). The entry showed on par performance with recurrent parent in Bihar (4127 kg/ha) and Telangana (4343 kg/ha). It possesses long slender grain type and recorded HRR (67.6%), ASV (4.0), intermediate AC (23.84), and low GC (25). **IET 30288 is not promising for drought tolerance in comparison to recurrent parent and hence dropped.**

IET 30289

IET 30289 (RP 6496-MAID-378-73-37-7-3-1-1) was derived from the cross Krishna Hamsa / IRBB 60 // Krishna Hamsa / Tetep. The NIL was developed for bacterial blight resistance in the background of recurrent parent Krishna Hamsa. **The test entry IET 30289 showed susceptible reaction to bacterial leaf blight (5.8 score).** The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh and Telangana in Zone VII and Odisha and Bihar in Zone III. The entry showed superior yield over recurrent parent in Odisha (8850 kg/ha), Andhra Pradesh (6853 kg/ha), Zone III (5983 kg/ha) but did not yield on par yield in Bihar and Telangana. It possesses medium slender grain type and recorded HRR (62.2%), ASV (4.0), intermediate AC (23.17), and medium GC (42). **IET 30289 is dropped due to susceptibility for bacterial blight and not promising for drought tolerance.**

IET 30290

IET 30290 (RP 6518-MAID 27-9-3-3-1) was derived from the cross Krishna Hamsa / IRBB 60. The NIL was developed for bacterial blight and blast resistance in the background of recurrent parent Krishna Hamsa. **The test entry IET 30289 showed susceptible reaction to**

bacterial leaf blight (7.5 score) and blast (5.6). The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh and Telangana in Zone VII and Odisha and Bihar in Zone III. The entry showed superior yield over recurrent parent in Zone VII (4622 kg/ha). It showed on par yield with recurrent parent in Odisha (2877 kg/ha), Bihar (3906), Zone III (3392) and in Andhra Pradesh (4311 kg/ha). It did not show on par yield with recurrent parent in Telangana state. It possesses long slender grain type and recorded HRR (50.4), ASV (3.0), intermediate AC (21.97), and high GC (68). **IET 30290 is dropped due to susceptibility for bacterial blight and not promising for drought tolerance.**

Near Isogenic lines in the background of recurrent parent MTU 1121

Three NILs IET 28818 (2nd year), IET 30253 (1st year), IET 30254 (1st year), were developed in the background of recurrent parent MTU 1121 for Low Phosphorous tolerance and one entry IET 30261 was developed for Low Nitrogen tolerance and were tested in Zone VII at ten locations. The recurrent parent MTU 1121 is notified for the states of Andhra Pradesh and Telangana. The performance of MTU 1121 and its NILs in Andhra Pradesh and Telangana states and in Zone VII is provided in the table and discussed below.

Performance of four NILs (IETs 28818, 30253, 30254 and 30261) and recurrent parent MTU 1121 for yield, flowering during Kharif 2021

IET No.	Designation	Trait	AP(2)		TS (2)		Zone 7 (10)	
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP
28818	RP 6317-S35-BC2F4-49-25-621	Low P Tol	6483#	96	5110	107	5557#	99
30253	RP 6317-RMS-S35-BC2F4-49-25-8-26	Low P Tol	5880#	91	5917#	109	6279*	99
30254	RP 6317-RMS-S35-BC2F4-49-25-5-10	Low P Tol	6974#	98	5762#	109	5959#	99
30261	RP 6317-RMS-S35-BC2F4-49-25-12-18	Low N Tol	7230*	95	5236#	105	5721#	97
MTU 1121 (RP)			6247	97	5681	111	5921	98
CD at 5%			837		547		340	

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$)

Performance of NIL IET 28818 recurrent parent MTU 1121 at P 0 level

Genotypes	Locations		Overall (2)
	Varanasi	Mandya	
IET 28818	5.20	7.27	6.24
MTU 1121 (RP)	5.03	6.85	5.94
Swarna (Positive Check)	5.20	5.15	5.17
CD	0.68	1.12	0.7

Performance of NIL IET 28818 recurrent parent MTU 1121 at P 50% level

Grain yield (t/ha)	Zone V	Zone VII		Zone VII (2) Mean	Overall (3)
	Raipur	IIRR	Gangavati		
IET 28818	4.63	6.58*	4.26	5.42*	5.15*
MTU 1121 (RP)	2.97	3.35	4.84	4.1	3.72
Swarna (Positive Check)	4.32	4.49	4.97	4.73	4.59
CD	0.53	0.55	0.46	0.31	0.25

IET 28818

IET 28818 (RP 6317-S35-BC2F4-49-25-621) was derived from the cross MTU 1121*2 / Swarna (*Pup 1*). The NIL was developed for tolerance to low soil Phosphorus in the background of recurrent parent MTU 1121. The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII. The entry showed on par performance with recurrent parent in Andhra Pradesh (6483 Kg/ha), and in Zone VII (5557 kg/ha). But the entry did not perform on par with recurrent parent in Telangana for grain yield. **The entry IET 28818 showed significantly higher yield than recurrent parent and also best check at IIRR (6.58 t/ha), in Zone VII (5.42) and also over all (5.15) under P 50%.** It possesses medium slender grain type and recorded HRR (67.9), ASV (7.0), intermediate AC (25.31), and moderate GC (47). **Therefore, the entry IET 28818 was found promising in Andhra Pradesh and Zone VII and overall for Low Phosphorous tolerance.**

IET 30253

NIL entry **IET 30253** (RP 6317-RMS-S35- BC2F4-49-25-8-26) was developed for low phosphorous tolerant (*Pup1* QTL). The entry did not show significant yield advantage over the recurrent parent under low P stress condition (0% and 50% P). Hence, this entry is dropped.

Table: Grain yield (t/ha) of IVT LPT P 0% Kharif 2021

P 0%					
IET No	ZONE VI (1)	ZONE VII (2)			Overall (3)
	MAHARASHTRA	KARNATAKA		KA Mean	
	KARJAT	GANGAVATHI	MANDYA		Mean
IET 30253	3.352	4.152	5.585	4.868	4.363
IET 30254	3.184	4.546	6.389	5.467	4.706
MTU 1121 (RP)	3.279	4.650	6.430	5.540	4.786
Rasi (Positive Check)					
Swarna (Positive Check)	4.108	5.016	3.005	4.010	4.043
BPT 5204 (Sensitive Check)	3.288	3.919	3.794	3.857	3.667
CD	0.3028	1.073	1.146	0.75	0.62
CV%	5.2	12.9	9.9	7.6	9.1

Table: Grain yield (t/ha) of IVT LPT P 50% Kharif 2021

P 50%						
IET No	ZONE V (1)	ZONE VI (1)	ZONE VII		ZONE VII (2)	Overall (4)
	Chhattisgarh (1)	MAHARASHTRA (1)	KARNATAKA	TS		
	RAIPUR	Mean	GANGAVATHI	IIRR	Mean	Mean
30253	4.087	4.570	4.419	4.199	4.309	4.319
30254	3.883	3.911	3.522		3.522	3.772
MTU 1121 (RP)	3.920	4.200	4.470	4.710	4.590	4.325
Rasi (Positive Check)	4.453					4.453
Swarna (Positive Check)	3.613	4.302	5.151	4.130	4.641	4.299
BPT 5204 (Sensitive Check)	3.563	4.525	3.859	2.915	3.387	3.715
CD	0.429	0.466	1.265	0.3973	0.633	0.29
CV%	7.4799	6.645	16.225	6.923	10.65	4.67

IET 30254

The NIL entry IET 30254 (RP 6317-RMS-S35- BC2F4-49-25-5-10) was developed for low P tolerance tolerant (Pup1 QTL). The entry did not show significant yield advantage over the recurrent parent under low P stress condition (0% and 50% P). Hence, this entry is dropped.

IET 30261

The NIL entry IET 30261 (RP 6317-RMS-S35- BC2F4-49-25-12-18) was developed for tolerant of low nitrogen stress. Under 0% N condition, the entry did not record significant yield advantage over the recurrent parent. Whereas, at 50% nitrogen condition, the test entry recorded significant yield advantage over the RP in Zone II and could not record yield superiority in Zone VII as well as overall basis.

Under normal nitrogen condition, the yield entry recorded on par yield with RP in Telangana state and Zone VII while it recorded significant yield advantage over the RP in state of AP. The entry recorded 65.1% HRR, ASV 4.0, AC 21.91 and 50 GC as desirable grain quality parameters. The entry possesses medium slender grain type similar to RP. **Hence, the NIL entry IET 30261 is promoted.**

Table: Grain yield (t/ha) of IVT LNT N 50% Kharif 2021

Entry No	IET No	ZONE II (1)	ZONE VII			Overall (3)
		Punjab (1)	Karnataka (1)	Telangana (1)	Z7(2)	
		Ludhiana	Gangavathi	IIRR	Mean	
5422	30261	12.09	4.13	6.24	5.18	7.49
5423	MTU 1121 (RP)	10.77	3.63	6.38	5.01	6.93
5426	Rasi (Check)					
5433	Varadhan (Check)	6.22	3.12	4.22	3.67	4.52
5438	TellaHamsa (Check)	6.66	3.55	4.35	3.95	4.85
5442	Swarna (Tolerant Check)	3.68	4.51	5.43	4.97	4.54
Exp. Mean		7.88	3.79	5.33	4.56	5.67
F Value		113.58(p<0.001)S	4.04(p<0.0001)S	31.48(p<0.0001)S	12.03(p<0.0001)S	35.21(p<0.0001)S
CD		0.62	0.87	0.58	0.74	0.59
CV%		4.92	12.36	7.36	10.39	6.54

Table No. 9.7: Composition of entries in Advance Variety Trial 1- Near Isogenic Lines (Yield Trial- IME and IM duration) Kharif 2021

Entry No.	IET No.	Designation	Cross combination	GT	Trait
2nd Year of testing					
5501	28010 (R)	MTU 1293	MTU 1010 / FL 478 // *3 MTU 1010	LS	CS
5502	28008 (R)	MTU 1291	MTU 1010 / FL 478 // *3 MTU 1010	LS	CS
5503	28066(R)	RP 5973-13-1-6-67-129-57	MTU 1010*2 / Swarna	LS	LPT
5504	28065(R)	RP 5972-13-1-6-67-129-266	MTU 1010 *2 / Vandana	LS	LPT
5505	30276	RP 6529-RMS-1777-56-72-84	MTU1010*2 / Improved Samba Mahsuri (Xa21+Pi54)	LS	BB & BL
5506	30277	RP 6530-RMS-1780-24-12-74	MTU 1010*2 / Improved Samba Mahsuri (Xa21)	LS	BB
5507	30278	RP 6531-RMS-1783-14-12-24	MTU 1010*2 / Improved Samba Mahsuri (Pi54)	LS	BL
5508	30279	RP 6530-RMS-1778-54-32-44	MTU 1010*2 / Improved Samba Mahsuri (Xa21)	LS	BB
5509	MTU 1010 (RP)				
2nd Year of testing					
5510	28791 (R)	KR 16024	ADT 46*3 / Swarna Sub-1	LS	Sub
5511	28789 (R)	KR 16022	ADT 46*3 / Swarna Sub-1	LS	Sub
5512	ADT 46 (RP)				
5513	28018	Pusa 1823-12-82	Pusa 44 / IR81896-B-B-142 // Pusa 44*3	LS	Drt
5514	28017	Pusa 1823-12-62	Pusa 44 / IR81896-B-B-142 // Pusa 44*3	LS	Drt
5515	Pusa 44 (RP)				
1st Year of testing					
5516	30280	CR 4345-13-7-2-1	Naveen*3 / IRBB 66	MS	BB
5517	30281	CR 4332-37-2-1-1	Naveen*3 / Robin	MS	Herbicide
5518	30282	CR 4331-74-2-2-1	Naveen*3 / CR 3006-8-2	MS	BPH
5519	29203 (R)	CR 4331-85-1-1-1	Naveen*3 / CR 3006-8-2		BPH
5520	30283	CR 4345-23-8-1-1	Naveen*3 / IRBB 66	MS	BB
5521	30284	CR 4332-184-2-2-1	Naveen*3 / Robin	MS	Herbicide
5522	Naveen (RP)				
5523	30285	RP 6471-RMS-18-30-82	NLR 34449*2 / ISM	MS	BB
5524	30286	RP 6471-RMS-87-10-106	NLR 34449*2 / ISM	MS	BB
5525	NLR 34449 (RP)				
5526	29548	RP 5974-RMS-3-2-8-38-255-32	IR64*2 / Swarna	LS	LPT
5527	IR 64 (RP)				
2nd Year of testing					
5528	28818	RP 6317-S35-BC2F4-49-25-6-21	MTU 1121 * 2 / Swarna	LS	LPT
1st Year of testing					
5529	30253	RP 6317-RMS-S35-BC2F4-49-25-8-26	MTU 1121* 2 / Swarna	LS	LPT
5530	30254	RP 6317-RMS-S35-BC2F4-49-25-5-10	MTU 1121* 2 / Swarna	LS	LPT
5531	30261	RP 6317-RMS-S35-BC2F4-49-25-12-18	MTU 1121*2 / Swarna	LS	LNT
5532	MTU 1121 (RP)				
5533	30287	RP 6496-MAID-241-45-24-3-2-1-1	Krishna Hamsa / IRBB60 // Krishna Hamsa / Tetep /// Krishna Hamsa / IR 81896-96-B-B-195	MS	BB +Drt
5534	30288	RP6496-MAID-246-24-6-3-1-1-1	Krishna Hamsa / IRBB60 // Krishna Hamsa / Tetep /// Krishna Hamsa / IR 81896-96-B-B-195	LS	Drt
5535	30289	RP6495-MAID-378-73-37-7-3-1-1	Krishna Hamsa / IRBB60 // Krishna Hamsa / Tetep	LS	BB
5536	30290	RP 6518- MAID 27-9-3-3-1	Krishna Hamsa * 3 / IRBB 60	LS	BL, BLB
5537	Krishna Hamsa (RP)				

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Table No.9.8: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-III), Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		ODISHA				ODISHA (1)		BIHAR		BIHAR	
		ICAR-NRRI (Cuttack)		@JEYPORE		Mean		BIKRAMGANJ (Dhangain)		@Patna-ICAR	
5513	28018	5497	10	3903	9	5497	10	3822	10	6017	4
5514	28017	5007		4885	3	5007		3764		5543	8
5515	Pusa 44 (RP)	5210		3072		5210		3115		5277	10
5516	30280	5923	5	3756		5923	5	5161	2	5863	5
5517	30281	5758	6	3973	7	5758	6	3492		4533	
5518	30282	6220	2	5006	2	6220	2	5095	3	5187	
5519	29203 (R)	5652	7	5164	1	5652	7	4435	6	5380	9
5520	30283	5523	8	3929	8	5523	8	5232	1	7700	1
5521	30284	6143	3	4781	4	6143	3	3946	8	5680	7
5522	Naveen (RP)	5503	9	4003	6	5503	9	4669	5	6660	2
5533	30287	3820		2254		3820		4729	4	5717	6
5534	30288	6037	4	4234	5	6037	4	4127	7	6643	3
5535	30289	8850	1	2729		8850	1	3115		672	
5536	30290	2877		3769	10	2877		3906	9	3780	
5537	Krishna Hamsa (RP)	2770		1850		2770		3768		4737	
Exp. Mean		5386		3820		5386		4158		5293	
CD		665		644		665		577		308	
CV%		7.38		10.07		7.38		8.29		3.48	
D/S		27-07-2021		26-07-2021				24-07-2021		20-07-2021	
D/P		28-08-2021		26-08-2021				24-08-2021		16-08-2021	
		*Superior to best check		#Superior over hybrid check		% superior over best check					

Table No.9.8 Contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-III), Kharif 2021

Entry No	IET No	ZONE III-EASTERN									
		BIHAR (1)		WEST BENGAL (0)				UTTAR PRADESH (0)		Z3 (2)	
		Mean		@RANCHI		@Pundibhari		@MASODHA		Mean	
5513	28018	3822	10	3762	3	3933		3468		4660	9
5514	28017	3764		4938	1	3956		4140		4386	
5515	Pusa 44 (RP)	3115		2822	9	4956	2	5511	6	4163	
5516	30280	5161	2	3145	6	5111	1	5403	7	5542	3
5517	30281	3492		2381		4000	10	5538	4	4625	10
5518	30282	5095	3	3704	4	3867		5699	2	5658	2
5519	29203 (R)	4435	6	2792	10	4933	3	5860	1	5044	8
5520	30283	5232	1	3145	6	4267	5	4355	10	5378	4
5521	30284	3946	8	2763		4756	4	5108	8	5045	7
5522	Naveen (RP)	4669	5	3233	5	3911		5565	3	5086	5
5533	30287	4729	4	3939	2	3800		5538	4	4275	
5534	30288	4127	7	1822		4156	6	4140		5082	6
5535	30289	3115		2322		4156	6			5983	1
5536	30290	3906	9	2146		4133	8	4516	9	3392	
5537	Krishna Hamsa (RP)	3768		3086	8	4133	8	4167		3269	
Exp. Mean		4158		3067		4271		4929		4772	
CD		577		681		210		358		438	
CV%		8.29		13.27		2.95		4.33		5.49	
D/S				22-07-2021		01-08-2021		21-07-2021			
D/P				11-08-2021		31-08-2021		21-08-2021			
		*Superior to best check		#Superior over hybrid check		% superior over best check					

Table No.9.8 contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-IV), Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN (0)	
		TRIPURA (0)	
		@Lembucherra	
5516	30280	4364	6
5517	30281	4899	3
5518	30282	4687	4
5519	29203 (R)	3203	9
5520	30283	5413	1
5521	30284	4006	7
5522	Naveen (RP)	5111	2
5533	30287	3013	10
5534	30288	3739	8
5535	30289	1918	
5536	30290	2678	
5537	Krishna Hamsa (RP)	4386	5
Exp. Mean		3951	
CD		2297	
CV%		26.41	
D/S		02-08-2021	
D/P		21-08-2021	
*Superior to best check #Superior over hybrid check			
%superior over best check			

Table No.9.8 contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-V & VI), Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL								ZONE VI – WESTERN					
		CHHATTISGARH (0)				MAHARASHTRA (1)				Z5 (1)			MAHARASHTRA2 (1)		
		@RAIPUR		@JAGADALPUR		SAKOLI		Mean		KARJAT					
5526	29548	4562	1 *	3629	2	4226	2	4226	2	5938	1	8%			
5527	IR 64 (RP)	3050	2	3672	1	4257	1	4257	1	5516	2				
Exp. Mean		3806		3650		4242		4242		5727					
CD		416		520		800		800		1053					
CV%		9.25		12.05		15.95		15.95		15.56					
D/S		20-07-2021		29-06-2021						28-07-2021					
D/P		09-08-2021		20-07-2021						20-08-2021					
*Superior to best check #Superior over hybrid check %superior over best check															

Table No.9.8 Contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-V & VI), Kharif 2021

Entry No	IET No	ZONE VI – WESTERN										Overall Mean (4)			
		MAHARASHTRA (2)				GUJARAT				GUJARAT (2)				Z6 (3)	
		Mean		NAVASARI		NAWAGAM		Mean		Mean					
5526	29548	5082	1	4%	4904	2	4038	2	4471	2	4960	1	4777	1	
5527	IR 64 (RP)	4886.5	2		5112	1	4196	1	4654	1	4941	2	4770	2	
Exp. Mean		4984		5008		4117		4563		4951		4773			
CD		657		561		658		431		443		399			
CV%		11.15		9.47		13.53		8		7.56		7.07			
D/S				22-07-2021		28-07-2021									
D/P				10-08-2021		30-08-2021									

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Table No.9.8 contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									
		ANDHRA PRADESH				ANDHRA PRADESH (2)		TELANGANA		TELANGANA (2)	
		MARUTERU	Nellore	Mean		RAJENDRANAGAR	WARANGAL	Mean			
5501	28010 (R)	5333	4943		5138	4989	10	5218		5104	
5502	28008 (R)	5513	4977		5245	4999	9	7119	5	6059	4
5503	28066(R)	4553	4756		4655	5088	5	6281		5685	7
5504	28065(R)	4397	4796		4597	3495		4894		4195	
5505	30276	3833	5329		4581	5125	4	6001		5563	
5506	30277	4383	5017		4700	5040	7	5396		5218	
5507	30278	2800	4887		3844	4069		5555		4812	
5508	30279	3440	4342		3891	4671		6405	9	5538	
5509	MTU 1010 (RP)	4267	5249		4758	4532		6836	6	5684	8
5510	28791 (R)	5850	7404	6	6627	5250	3	7530	3	6390	3
5511	28789 (R)	7527	8135	2	7831	5847	1	7609	2	6728	2
5512	ADT 46 (RP)	6607	8124	3	7366	5321	2	8303	1	6812	1
5513	28018	4120	6060		5090	4198		5606		4902	
5514	28017	7423	5697		6560	4436		6050		5243	
5515	Pusa 44 (RP)	5463	6105		5784	4358		5770		5064	
5523	30285	5757	4637		5197	4531		6303	10	5417	
5524	30286	6817	5006		5912	4349		5874		5112	
5525	NLR 34449 (RP)	4990	4904		4947	4916		6139		5528	
5526	29548	4620	5079		4850	4506		6774	7	5640	10
5527	IR 64 (RP)	6103	9042	1	7573	4492		5643		5068	
5528	28818	6027	6939	8	6483	4609		5611		5110	
5529	30253	6437	5323		5880	4393		7440	4	5917	5
5530	30254	7490	6457	10	6974	5026	8	6498	8	5762	6
5531	30261	6637	7823	4	7230	4945		5527		5236	
5532	MTU 1121 (RP)	5260	7234	7	6247	5078	6	6284		5681	9
5533	30287	4843	4943		4893	3747		4177		3962	
5534	30288	5417	6769	9	6093	3756		4930		4343	
5535	30289	5893	7812	5	6853	3036		4497		3767	
5536	30290	5570	5051		5311	2779		4096		3438	
5537	Krishna Hamsa (RP)	4447	4802		4625	3633		5113		4373	
Exp. Mean		5394	5921		5658	4507		5983		5245	
CD		995	1167		837	635		954		547	
CV%		11.29	12.06		9.05	8.63		9.75		6.38	
D/S		16-07-2021	04-09-2021			23-07-2021		21-07-2021			
D/P		14-08-2021	06-10-2021			16-08-2021		16-08-2021			
			*Superior to best check		#Superior over hybrid check			% superior over best check			

Table No.9.8 Contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN									
		TAMIL NADU				TAMIL NADU (2)		KERALA (1)		KARNATAKA	
		ADUTHURAI	COIMBATORE	Mean		PATTAMBI	MANDYA				
5501	28010 (R)	5321		4086		4704		6448		3076	
5502	28008 (R)	5826	10	5894		5860	8	7190		2720	
5503	28066(R)	6070	8	4792		5431		7600	10	3981	
5504	28065(R)	5428		5204		5316		7771	4	4775	
5505	30276	4755		5416		5086		6552		4011	
5506	30277	6485	6	4806		5646		7711	6	6126	5
5507	30278	4595		6250	9	5423		7775	3	4007	
5508	30279	4557		5516		5037		7152		4843	
5509	MTU 1010 (RP)	3914		4522		4218		6203		5761	7
5510	28791 (R)	7485	3	7594	2	7540	2	7629	7	6148	3
5511	28789 (R)	8035	1	7824	1	7930	1	7867	2	4762	
5512	ADT 46 (RP)	7905	2	6749	6	7327	3	7721	5	5418	10
5513	28018	4645		3675		4160		7343		5453	9
5514	28017	5505		6405	8	5955	7	6676		5268	
5515	Pusa 44 (RP)	4986		6628	7	5807	9	7606	8	5174	
5523	30285	3165		3031		3098		7124		4805	
5524	30286	4633		5277		4955		7492		5761	7
5525	NLR 34449 (RP)	3563		5169		4366		7346		4341	
5526	29548	6116	7	5212		5664		7384		6135	4
5527	IR 64 (RP)	6055	9	2879		4467		6260		6482	1
5528	28818	4327		3196		3762		8102	1	6156	2
5529	30253	7095	4	6975	4	7035	4	7603	9	4539	
5530	30254	5765		5046		5406		6527		5809	6
5531	30261	3830		5127		4479		6990		5345	
5532	MTU 1121 (RP)	5153		6977	3	6065	6	7562		4281	
5533	30287	3150		5186		4168		6251		4007	
5534	30288	6911	5	6833	5	6872	5	6984		3295	
5535	30289	5428		6057	10	5743	10	7121		4792	
5536	30290	4297		4456		4377		7343		3985	
5537	Krishna Hamsa (RP)	3358		3703		3531		7454		3552	
Exp. Mean			5279		5350		5314		7226		4827
CD			747		1310		831		1383		720
CV%			8.66		14.98		9.57		11.71		9.13
D/S			28-08-2021		12-08-2021				20-07-2021		21-07-2021
D/P			03-10-2021		06-09-2021				15-08-2021		16-08-2021

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Table No.9.8 Contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (IME &IM) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN							Overall Mean (10)		
		KARNATAKA		KARNATAKA (2)		PUDUCHERRY (1)		Z7 (10)			
		GANGAVATHI	Mean	Mean	Karaikal	Mean					
5501	28010 (R)	7340	3	5208		4045		5080		5080	
5502	28008 (R)	5962		4341		3658		5386		5386	
5503	28066(R)	6071		5026		5889	5	5508		5508	
5504	28065(R)	5163		4969		3339		4926		4926	
5505	30276	6083		5047		5583	8	5269		5269	
5506	30277	6032		6079	6	5912	3	5691	9	5691	9
5507	30278	5692		4850		5843	6	5147		5147	
5508	30279	6090	10	5467		3942		5096		5096	
5509	MTU 1010 (RP)	5974		5868	8	4688		5195		5195	
5510	28791 (R)	7846	2	6997	1	5778	7	6851	2	6851	2
5511	28789 (R)	8269	1	6516	4	5896	4	7177	1	7177	1
5512	ADT 46 (RP)	5657		5538		6151	2	6796	3	6796	3
5513	28018	4981		5217		3764		4985		4985	
5514	28017	5917		5593	10	4050		5743	7	5743	7
5515	Pusa 44 (RP)	5276		5225		4186		5555		5555	
5523	30285	5301		5053		4261		4892		4892	
5524	30286	6276	8	6019	7	4133		5562		5562	
5525	NLR 34449 (RP)	5545		4943		3473		5039		5039	
5526	29548	2728		4432		3860		5241		5241	
5527	IR 64 (RP)	3513		4998		5433	9	5590	10	5590	10
5528	28818	7141	5	6649	2	3458		5557		5557	
5529	30253	6827	7	5683	9	6162	1	6279	4	6279	4
5530	30254	7282	4	6546	3	3688		5959	5	5959	5
5531	30261	6942	6	6144	5	4046		5721	8	5721	8
5532	MTU 1121 (RP)	6205	9	5243		5178		5921	6	5921	6
5533	30287	4186		4097		5318	10	4581		4581	
5534	30288	5199		4247		3840		5393		5393	
5535	30289	5160		4976		4592		5439		5439	
5536	30290	4019		4002				4622		4622	
5537	Krishna Hamsa (RP)	3833		3693		2550		4245		4245	
Exp. Mean		5750		5128		4576		5472		5472	
CD		993		1054		881		340		340	
CV%		8.44		12.57		11.77		3.8		3.8	
D/S		27-07-2021				30-08-2021					
D/P		18-08-2021				01-10-2021					

Table No. 9.9: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE III) Kharif 2021

Entry No	IET No	ZONE III-EASTERN				
		ODISHA		ODISHA (1)	BIHAR	
		ICAR-NRRI (Cuttack)	@JEYPORE	Mean	BIKRAMGANJ (Dhangain)	@Patna-ICAR
5513	28018	103	99	103	110	99
5514	28017	106	98	106	103	103
5515	Pusa 44 (RP)	117	101	117	109	96
5516	30280	96	98	96	89	87
5517	30281	96	100	96	91	87
5518	30282	95	100	95	90	99
5519	29203 (R)	96	99	96	89	85
5520	30283	96	97	96	90	90
5521	30284	94	97	94	91	89
5522	Naveen (RP)	96	100	96	91	90
5533	30287	93	91	93	93	88
5534	30288	101	113	101	100	91
5535	30289	119	114	119	113	116
5536	30290	84	92	84	82	76
5537	Krishna Hamsa (RP)	87	93	87	89	89
Exp. Mean		99	99	99	95	92

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Table No. 9.9 Contd.: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE III) Kharif 2021

Entry No	IET No	ZONE III-EASTERN				
		BIHAR (1)	WEST BENGAL (0)		UTTAR PRADESH (0)	Z3 (2)
		Mean	@RANCHI	@Pundibhari	@MASODHA	Mean
5513	28018	110	94	98	102	106
5514	28017	103	96	101	107	105
5515	Pusa 44 (RP)	109	96	87	104	113
5516	30280	89	90	98	102	93
5517	30281	91	89	88	105	93
5518	30282	90	91	92	108	93
5519	29203 (R)	89	91	88	107	93
5520	30283	90	90	91	97	93
5521	30284	91	89	95	101	92
5522	Naveen (RP)	91	90	100	110	93
5533	30287	93	91	98	104	93
5534	30288	100	90	89	108	101
5535	30289	113	91	102		116
5536	30290	82	76	90	95	83
5537	Krishna Hamsa (RP)	89	90	98	102	88
Exp. Mean		95	90	94	104	97

Table No. 9.9 contd.: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE IV) Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN (0)
		TRIPURA (0)
		@Lembucherra
5516	30280	63
5517	30281	69
5518	30282	63
5519	29203 (R)	76
5520	30283	61
5521	30284	59
5522	Naveen (RP)	63
5533	30287	60
5534	30288	77
5535	30289	79
5536	30290	62
5537	Krishna Hamsa (RP)	60
Exp. Mean		66

Table No. 9.9 contd.: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE V & VI) Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL				ZONE VI - WESTERN
		CHHATTISGARH (0)		MAHARASHTRA (1)	Z5 (1)	MAHARASHTRA2 (1)
		@RAIPUR	@JAGADALPUR	SAKOLI	Mean	KARJAT
5526	29548	82	92	76	76	88
5527	IR 64 (RP)	83	93	78	78	83
Exp. Mean		83	93	77	77	85

Table No. 9.9 Contd.: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE V & VI) Kharif 2021

Entry No	IET No	ZONE VI - WESTERN					Overall Mean (4)
		MAHARASHTRA (2)	GUJARAT		GUJARAT (2)	Z6 (3)	
		Mean	NAVASARI	NAWAGAM	Mean	Mean	
5526	29548	82	75	100	87	87	85
5527	IR 64 (RP)	81	76	99	87	86	84
Exp. Mean		81	76	99	87	87	84

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Table No. 9.9 contd.: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE VII) Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		ANDHRA PRADESH		ANDHRA PRADESH (2)	TELANGANA		TELANGANA (2)
		MARUTERU	Nellore	Mean	RAJENDRANAGAR	WARANGAL	Mean
5501	28010 (R)	80	84	82	96	86	91
5502	28008 (R)	80	84	82	97	87	92
5503	28066(R)	88	91	90	101	95	98
5504	28065(R)	102	100	101	111	100	106
5505	30276	83	83	83	96	87	91
5506	30277	84	82	83	97	87	92
5507	30278	86	89	88	100	90	95
5508	30279	82	84	83	99	88	94
5509	MTU 1010 (RP)	81	83	82	97	86	92
5510	28791 (R)	111	84	97	122	117	119
5511	28789 (R)	108	83	95	122	117	120
5512	ADT 46 (RP)	109	83	96	122	111	117
5513	28018	91	92	91	102	97	100
5514	28017	93	93	93	104	99	102
5515	Pusa 44 (RP)	93	92	93	106	99	103
5523	30285	87	88	87	97	90	94
5524	30286	87	90	89	103	92	98
5525	NLR 34449 (RP)	86	89	88	101	91	96
5526	29548	83	82	83	97	88	92
5527	IR 64 (RP)	82	98	90	97	86	92
5528	28818	99	94	96	111	103	107
5529	30253	99	83	91	114	103	109
5530	30254	97	100	98	115	102	109
5531	30261	96	94	95	109	101	105
5532	MTU 1121 (RP)	98	96	97	118	103	111
5533	30287	71	83	77	96	82	89
5534	30288	91	93	92	119	97	108
5535	30289	109	84	97	119	115	117
5536	30290	71	83	77	93	77	85
5537	Krishna Hamsa (RP)	75	82	79	92	80	86
Exp. Mean		90	88	89	105	95	100

Table No. 9.9 Contd.: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE VII) Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN				
		TAMIL NADU		TAMIL NADU (2)	KERALA (1)	KARNATAKA
		ADUTHURAI	COIMBATORE	Mean	PATTAMBI	MANDYA
5501	28010 (R)	90	82	86	95	85
5502	28008 (R)	87	83	85	94	79
5503	28066(R)	90	98	94	99	109
5504	28065(R)	105	97	101	98	106
5505	30276	89	87	88	99	97
5506	30277	95	87	91	99	98
5507	30278	92	88	90	99	99
5508	30279	93	89	91	97	97
5509	MTU 1010 (RP)	92	84	88	97	102
5510	28791 (R)	116	107	112	120	95
5511	28789 (R)	115	101	108	121	94
5512	ADT 46 (RP)	115	105	110	121	91
5513	28018	92	91	92	99	98
5514	28017	93	96	95	99	98
5515	Pusa 44 (RP)	92	97	95	111	100
5523	30285	91	91	91	99	99
5524	30286	91	97	94	101	103
5525	NLR 34449 (RP)	95	96	96	100	103
5526	29548	102	82	92	96	101
5527	IR 64 (RP)	93	84	89	98	103
5528	28818	92	94	93	103	106
5529	30253	98	101	99	103	92
5530	30254	93	97	95	102	93
5531	30261	93	97	95	103	92
5532	MTU 1121 (RP)	89	92	90	102	91
5533	30287	92	92	92	99	91
5534	30288	93	102	97	102	104
5535	30289	93	114	103	113	106
5536	30290	101	79	90	114	93
5537	Krishna Hamsa (RP)	91	86	88	98	94
Exp. Mean		95	93	94	103	97

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Table No. 9.9 Contd.: Days to 50% flowering of entries in AVT1- NIL (IME & IM) (ZONE VII) Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN				Overall Mean (10)
		KARNATAKA GANGAVATHI	KARNATAKA (2) Mean	PUDUCHERRY (1) Karaikal	Z7 (10) Mean	
		5501	28010 (R)	88	86		81	87	87
5502	28008 (R)	89	84	81	86	86
5503	28066(R)	98	103	84	95	95
5504	28065(R)	93	100	87	100	100
5505	30276	91	94	81	89	89
5506	30277	93	96	80	90	90
5507	30278	92	96	87	92	92
5508	30279	91	94	88	91	91
5509	MTU 1010 (RP)	88	95	80	89	89
5510	28791 (R)	106	100	94	107	107
5511	28789 (R)	107	100	94	106	106
5512	ADT 46 (RP)	106	98	94	106	106
5513	28018	99	99	81	94	94
5514	28017	97	98	90	96	96
5515	Pusa 44 (RP)	97	98	80	97	97
5523	30285	95	97	81	92	92
5524	30286	102	102	87	95	95
5525	NLR 34449 (RP)	97	100	84	94	94
5526	29548	85	93	81	90	90
5527	IR 64 (RP)	84	94	81	91	91
5528	28818	102	104	91	99	99
5529	30253	105	99	92	99	99
5530	30254	97	95	94	99	99
5531	30261	97	95	90	97	97
5532	MTU 1121 (RP)	103	97	91	98	98
5533	30287	93	92	81	88	88
5534	30288	108	106	86	100	100
5535	30289	108	107	89	105	105
5536	30290	76	85		87	87
5537	Krishna Hamsa (RP)	91	92	81	87	87
Exp. Mean		96	97	86	95	95

Table No.9.10: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE III) , Kharif 2021

Entry No	IET No	ZONE III-EASTERN				
		ODISHA		ODISHA (1)	BIHAR	
		ICAR-NRRI (Cuttack)	@JEYPORE	Mean	BIKRAMGANJ (Dhangain)	@Patna-ICAR
5513	28018	78.60	87.00	78.60	93.66	95.28
5514	28017	86.80	88.33	86.80	88.22	68.33
5515	Pusa 44 (RP)	62.80	86.89	62.80	107.33	76.53
5516	30280	98.40	110.33	98.40	97.66	106.56
5517	30281	97.40	98.42	97.40	104.66	109.22
5518	30282	100.40	105.56	100.40	94.33	105.56
5519	29203 (R)	102.20	103.33	102.20	100.44	103.11
5520	30283	100.50	105.89	100.50	110.11	110.00
5521	30284	103.20	107.78	103.20	98.55	101.89
5522	Naveen (RP)	102.40	111.67	102.40	106.00	112.78
5533	30287	72.00	95.07	72.00	94.22	88.06
5534	30288	80.60	86.22	80.60	96.44	108.83
5535	30289	91.00	107.10	91.00	96.66	82.94
5536	30290	61.20	95.50	61.20	92.33	82.78
5537	Krishna Hamsa (RP)	73.00	84.74	73.00	104.33	81.33
Exp. Mean		87.37	98.26	87.37	99.00	95.55

Table No. 9.10 Contd.: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE III) , Kharif 2021

Entry No	IET No	ZONE III-EASTERN				
		BIHAR (1)	WEST BENGAL (0)		UTTAR PRADESH (0)	Z3 (2)
		Mean	@RANCHI	@Pundibhari	@MASODHA	Mean
5513	28018	93.66	60.33	103.00	108.00	86.13
5514	28017	88.22	61.00	98.00	111.00	87.51
5515	Pusa 44 (RP)	107.33	57.67	101.00	111.00	85.07
5516	30280	97.66	78.00	108.00	124.00	98.03
5517	30281	104.66	78.33	103.00	132.00	101.03
5518	30282	94.33	80.00	110.00	129.00	97.37
5519	29203 (R)	100.44	78.00	106.00	121.00	101.32
5520	30283	110.11	80.67	99.00	126.00	105.31
5521	30284	98.55	81.67	105.00	124.00	100.88
5522	Naveen (RP)	106.00	80.67	105.60	123.00	104.20
5533	30287	94.22	72.33	106.00	105.00	83.11
5534	30288	96.44	78.00	107.00	118.00	88.52
5535	30289	96.66	78.00	101.80		93.83
5536	30290	92.33	76.33	102.00	112.00	76.77
5537	Krishna Hamsa (RP)	104.33	70.00	103.00	101.00	88.67
Exp. Mean		99.00	74.07	103.89	117.50	93.18

Table No. 9.10 contd.: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE IV), Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN (0)	
		TRIPURA (0)	
		@Lembucherra	
5516	30280	104.50	
5517	30281	99.50	
5518	30282	109.00	
5519	29203 (R)	102.50	
5520	30283	114.00	
5521	30284	109.50	
5522	Naveen (RP)	114.00	
5533	30287	93.50	
5534	30288	90.00	
5535	30289	107.50	
5536	30290	88.50	
5537	Krishna Hamsa (RP)	87.00	
Exp. Mean		101.63	

Table No. 9.10 contd.: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE V & VI) Kharif 2021

Entry No	IET No	ZONE-V - CENTRAL				ZONE VI - WESTERN
		CHHATTISGARH (0)		MAHARASHTRA (1)	Z5 (1)	MAHARASHTRA2 (1)
		@RAIPUR	@JAGADALPUR	SAKOLI	Mean	KARJAT
5526	29548	104.75	70.40	96.00	96.00	104.40
5527	IR 64 (RP)	103.73	72.60	96.00	96.00	96.20
Exp. Mean		104.24	71.50	96.00	96.00	100.30

Table No. 9.10 contd.: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE V & VI) Kharif 2021

Entry No	IET No	ZONE VI - WESTERN					Overall Mean (4)
		MAHARASHTRA (2)	GUJARAT		GUJARAT (2)	Z6 (3)	
		Mean	NAVASARI	NAWAGAM	Mean	Mean	
5526	29548	100.20	107.00	127.00	117.00	112.80	108.60
5527	IR 64 (RP)	96.10	106.80	133.00	119.90	112.00	108.00
Exp. Mean		98.15	106.90	130.00	118.45	112.40	108.30

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Table No. 9.10 contd.: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		ANDHRA PRADESH		ANDHRA PRADESH (2)	TELANGANA		TELANGANA (2)
		MARUTERU	Nellore	Mean	RAJENDRANAGAR	WARANGAL	Mean
5501	28010 (R)	120.53	81.47	101.00	95.73	113.87	104.80
5502	28008 (R)	127.20	87.27	107.23	91.33	114.20	102.77
5503	28066(R)	126.07	95.53	110.80	96.13	116.47	106.30
5504	28065(R)	113.60	80.87	97.23	78.93	91.40	85.17
5505	30276	115.27	80.87	98.07	99.60	110.73	105.17
5506	30277	113.33	81.20	97.27	102.27	112.33	107.30
5507	30278	129.20	105.80	117.50	99.80	109.80	104.80
5508	30279	120.47	81.27	100.87	101.40	103.07	102.23
5509	MTU 1010 (RP)	121.80	82.73	102.27	90.33	115.80	103.07
5510	28791 (R)	147.73	108.27	128.00	102.47	122.87	112.67
5511	28789 (R)	158.60	110.80	134.70	103.00	121.07	112.03
5512	ADT 46 (RP)	148.53	107.07	127.80	99.67	118.13	108.90
5513	28018	116.27	79.67	97.97	91.80	102.87	97.33
5514	28017	112.47	76.07	94.27	88.80	93.87	91.33
5515	Pusa 44 (RP)	110.67	76.13	93.40	95.33	93.47	94.40
5523	30285	108.27	73.53	90.90	93.00	93.73	93.37
5524	30286	124.20	77.93	101.07	96.33	109.87	103.10
5525	NLR 34449 (RP)	113.13	74.13	93.63	82.80	95.87	89.33
5526	29548	110.40	72.60	91.50	94.33	100.20	97.27
5527	IR 64 (RP)	117.40	100.63	109.02	86.87	97.27	92.07
5528	28818	137.07	94.67	115.87	94.40	115.93	105.17
5529	30253	137.20	77.67	107.43	92.87	114.13	103.50
5530	30254	133.47	95.60	114.53	90.67	110.80	100.73
5531	30261	135.53	100.07	117.80	94.33	109.67	102.00
5532	MTU 1121 (RP)	132.47	94.87	113.67	91.80	110.93	101.37
5533	30287	101.07	67.53	84.30	84.13	96.93	90.53
5534	30288	115.20	81.27	98.23	87.80	103.13	95.47
5535	30289	137.13	99.73	118.43	87.73	105.93	96.83
5536	30290	96.00	59.13	77.57	81.33	93.87	87.60
5537	Krishna Hamsa (RP)	101.13	65.27	83.20	82.03	99.20	90.62
Exp. Mean		122.71	85.65	104.18	92.57	106.58	99.57

Table No. 9.10 Contd.: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN				
		TAMIL NADU		TAMIL NADU (2)	KERALA (1)	KARNATAKA
		ADUTHURAI	COIMBATORE	Mean	PATTAMBI	MANDYA
5501	28010 (R)	93.20	99.27	96.23	90.76	90.20
5502	28008 (R)	85.20	105.87	95.53	99.23	86.40
5503	28066(R)	75.40	108.07	91.73	100.40	98.53
5504	28065(R)	65.80	90.01	77.90	93.86	96.80
5505	30276	65.00	103.87	84.43	98.93	90.40
5506	30277	85.20	103.80	94.50	94.66	101.33
5507	30278	81.20	117.53	99.37	98.83	98.47
5508	30279	73.80	105.27	89.53	99.53	99.93
5509	MTU 1010 (RP)	65.20	100.70	82.95	94.66	104.07
5510	28791 (R)	107.60	123.87	115.73	85.73	104.33
5511	28789 (R)	94.80	116.73	105.77	85.40	86.47
5512	ADT 46 (RP)	92.40	120.00	106.20	82.33	91.07
5513	28018	65.20	94.13	79.67	82.66	89.20
5514	28017	64.80	98.07	81.43	94.40	96.33
5515	Pusa 44 (RP)	65.40	95.23	80.32	101.73	83.27
5523	30285	68.80	88.73	78.77	94.86	91.33
5524	30286	74.20	97.50	85.85	89.40	90.73
5525	NLR 34449 (RP)	64.60	94.80	79.70	90.50	91.07
5526	29548	62.60	98.67	80.63	92.00	108.67
5527	IR 64 (RP)	84.20	94.17	89.18	92.00	107.33
5528	28818	85.00	102.67	93.83	101.30	109.73
5529	30253	75.40	109.60	92.50	88.10	95.87
5530	30254	74.80	109.93	92.37	87.65	95.87
5531	30261	92.60	109.87	101.23	98.60	100.87
5532	MTU 1121 (RP)	92.80	109.33	101.07	104.50	103.27
5533	30287	65.00	105.00	85.00	84.50	93.07
5534	30288	67.40	103.77	85.58	91.80	80.07
5535	30289	65.00	109.87	87.43	90.70	104.07
5536	30290	65.60	84.33	74.97	91.30	98.67
5537	Krishna Hamsa (RP)	65.00	85.67	75.33	96.92	94.13
Exp. Mean		76.11	102.88	89.49	93.24	96.05

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Table No.9.10 Contd.: Plant Height (cm) of entries in AVT1- NIL (IME & IM) (ZONE VII) , Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN				Overall Mean (10)
		KARNATAKA	KARNATAKA (2)	PUDUCHERRY (1)	Z7 (10)	
		GANGAVATHI	Mean	Karaikal	Mean	
5501	28010 (R)	102.00	96.10	101.93	98.90	98.90
5502	28008 (R)	99.00	92.70	108.27	100.40	100.40
5503	28066(R)	103.00	100.77	114.31	103.39	103.39
5504	28065(R)	82.00	89.40	103.54	89.68	89.68
5505	30276	92.50	91.45	118.31	97.55	97.55
5506	30277	105.00	103.17	119.89	101.90	101.90
5507	30278	110.00	104.23	121.36	107.20	107.20
5508	30279	99.00	99.47	114.66	99.84	99.84
5509	MTU 1010 (RP)	100.00	102.03	93.25	96.85	96.85
5510	28791 (R)	114.50	109.42	129.13	114.65	114.65
5511	28789 (R)	121.00	103.73	129.61	112.75	112.75
5512	ADT 46 (RP)	110.50	100.78	126.20	109.59	109.59
5513	28018	84.00	86.60	93.79	89.96	89.96
5514	28017	84.50	90.42	91.59	90.09	90.09
5515	Pusa 44 (RP)	82.00	82.63	97.66	90.09	90.09
5523	30285	82.00	86.67	87.39	88.16	88.16
5524	30286	83.00	86.87	93.44	93.66	93.66
5525	NLR 34449 (RP)	73.50	82.28	93.30	87.37	87.37
5526	29548	92.50	100.58	88.29	92.03	92.03
5527	IR 64 (RP)	91.50	99.42	95.39	96.68	96.68
5528	28818	91.00	100.37	112.99	104.48	104.48
5529	30253	102.00	98.93	118.53	101.14	101.14
5530	30254	97.00	96.43	111.66	100.74	100.74
5531	30261	93.50	97.18	118.23	105.33	105.33
5532	MTU 1121 (RP)	92.00	97.63	112.33	104.43	104.43
5533	30287	84.00	88.53	91.10	87.23	87.23
5534	30288	86.50	83.28	113.85	93.08	93.08
5535	30289	98.50	101.28	114.82	101.35	101.35
5536	30290	87.00	92.83		84.14	84.14
5537	Krishna Hamsa (RP)	72.00	83.07	88.59	84.99	84.99
Exp. Mean		93.83	94.94	107.01	97.59	97.59

Table No. 9.11: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE III) , Kharif 2021

Entry No	IET No	ZONE III-EASTERN				
		ODISHA		ODISHA (I)	BIHAR	
		ICAR-NRRI (Cuttack)	@JEYPORE	Mean	BIKRAMGANJ (Dhangain)	@Patna-ICAR
5513	28018	341	353	341	255	336
5514	28017	331	401	331	264	326
5515	Pusa 44 (RP)	597	292	597	337	295
5516	30280	386	363	386	292	284
5517	30281	398	549	398	316	292
5518	30282	382	349	382	261	318
5519	29203 (R)	367	281	367	322	297
5520	30283	383	280	383	299	316
5521	30284	395	341	395	327	312
5522	Naveen (RP)	379	287	379	273	303
5533	30287	415	328	415	286	330
5534	30288	454	355	454	295	332
5535	30289	480	285	480	320	364
5536	30290	437	256	437	291	308
5537	Krishna Hamsa (RP)	399	403	399	343	313
Exp. Mean		410	342	410	299	315

Table No. 9.11 Contd.: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE III) , Kharif 2021

Entry No	IET No	ZONE III-EASTERN				
		BIHAR (1)	WEST BENGAL (0)		UTTAR PRADESH (0)	Z3 (2)
		Mean	@RANCHI	@Pundibhari	@MASODHA	Mean
5513	28018	255	159	270	219	298
5514	28017	264	204	285	232	298
5515	Pusa 44 (RP)	337	146	185	272	467
5516	30280	292	163	291	274	339
5517	30281	316	180	293	273	357
5518	30282	261	164	281	253	321
5519	29203 (R)	322	159	282	253	344
5520	30283	299	136	235	254	341
5521	30284	327	164	303	234	361
5522	Naveen (RP)	273	162	289	264	326
5533	30287	286	182	265	257	350
5534	30288	295	163	274	232	375
5535	30289	320	159	276		400
5536	30290	291	214	288	240	364
5537	Krishna Hamsa (RP)	343	215	267	235	371
Exp. Mean		299	171	272	249	354

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Table No. 9.11 contd.: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE IV) , Kharif 2021

Entry No	IET No	ZONE IV- NORTH EASTERN (0)	
		TRIPURA (0)	
		@Lembucherra	
5516	30280		325
5517	30281		363
5518	30282		350
5519	29203 (R)		338
5520	30283		325
5521	30284		463
5522	Naveen (RP)		363
5533	30287		400
5534	30288		438
5535	30289		325
5536	30290		388
5537	Krishna Hamsa (RP)		388
Exp. Mean			372

Table No. 9.11contd.: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE V & VI) , Kharif 2021

Entry No	IET No	ZONE-V – CENTRAL				ZONE VI – WESTERN
		CHHATTISGARH (0)		MAHARASHTRA (1)	Z5 (1)	MAHARASHTRA2 (1)
		@RAIPUR	@JAGADALPUR	SAKOLI	Mean	KARJAT
5526	29548	166	126	235	235	211
5527	IR 64 (RP)	204	124	227	227	198
Exp. Mean		185	125	231	231	204

Table No. 9.11 Contd.: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE V & VI) , Kharif 2021

Entry No	IET No	ZONE VI – WESTERN					Overall Mean (4)
		MAHARASHTRA (2)	GUJARAT		GUJARAT (2)	Z6 (3)	
		Mean	NAVASARI	NAWAGAM	Mean	Mean	
5526	29548	223	293	275	284	260	254
5527	IR 64 (RP)	212	285	283	284	255	248
Exp. Mean		218	289	279	284	258	251

Table No. 9.11 contd.: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE VII) Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		ANDHRA PRADESH		ANDHRA PRADESH (2)	TELANGANA		TELANGANA (2)
		MARUTERU	Nellore	Mean	RAJENDRANAGAR	WARANGAL	Mean
5501	28010 (R)	299	238	268	376	402	389
5502	28008 (R)	297	271	284	378	394	386
5503	28066(R)	268	278	273	391	394	392
5504	28065(R)	288	291	290	384	395	390
5505	30276	295	233	264	375	392	384
5506	30277	290	240	265	373	395	384
5507	30278	286	220	253	347	382	364
5508	30279	308	233	271	347	426	386
5509	MTU 1010 (RP)	306	222	264	358	395	376
5510	28791 (R)	308	362	335	418	411	415
5511	28789 (R)	312	362	337	367	400	384
5512	ADT 46 (RP)	341	380	360	415	402	408
5513	28018	297	258	277	411	397	404
5514	28017	304	240	272	391	384	388
5515	Pusa 44 (RP)	315	233	274	400	395	397
5523	30285	299	242	271	440	383	411
5524	30286	301	262	282	376	388	382
5525	NLR 34449 (RP)	284	291	287	395	410	403
5526	29548	323	211	267	422	405	414
5527	IR 64 (RP)	304	231	267	469	404	436
5528	28818	319	218	268	413	408	411
5529	30253	290	233	262	347	400	374
5530	30254	293	233	263	362	394	378
5531	30261	284	202	243	335	387	361
5532	MTU 1121 (RP)	297	229	263	378	409	393
5533	30287	299	269	284	440	414	427
5534	30288	288	262	275	422	370	396
5535	30289	297	264	281	364	409	387
5536	30290	304	271	287	427	400	413
5537	Krishna Hamsa (RP)	297	293	295	449	408	428
Exp. Mean		300	259	279	392	398	395

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Table No. 9.11 Contd.: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE VII) Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN				
		TAMIL NADU		TAMIL NADU (2)	KERALA (1)	KARNATAKA
		ADUTHURAI	COIMBATORE	Mean	PATTAMBI	MANDYA
5501	28010 (R)	392	432	412	445	376
5502	28008 (R)	343	445	394	456	331
5503	28066(R)	402	460	431	486	347
5504	28065(R)	246	428	337	506	331
5505	30276	339	427	383	478	331
5506	30277	403	452	427	558	307
5507	30278	270	443	357	514	304
5508	30279	286	425	356	456	344
5509	MTU 1010 (RP)	230	423	327	494	382
5510	28791 (R)	411	463	437	499	384
5511	28789 (R)	382	438	410	583	347
5512	ADT 46 (RP)	421	473	447	482	373
5513	28018	248	440	344	601	373
5514	28017	296	447	371	538	336
5515	Pusa 44 (RP)	225	457	341	466	298
5523	30285	202	447	324	479	391
5524	30286	219	435	327	514	318
5525	NLR 34449 (RP)	198	458	328	536	342
5526	29548	325	448	387	498	302
5527	IR 64 (RP)	331	437	384	548	373
5528	28818	282	452	367	474	300
5529	30253	414	447	431	477	340
5530	30254	227	445	336	441	340
5531	30261	181	465	323	557	344
5532	MTU 1121 (RP)	310	457	383	480	304
5533	30287	202	452	327	569	340
5534	30288	379	458	419	497	411
5535	30289	420	475	448	472	367
5536	30290	202	440	321	534	329
5537	Krishna Hamsa (RP)	231	463	347	549	369
Exp. Mean		301	448	374	506	344

Table No. 9.11 Contd.: Panicles/m2 of entries in AVT1- NIL (IME & IM) (ZONE VII) Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN				Overall Mean (10)
		KARNATAKA	KARNATAKA (2)	PUDUCHERRY (1)	Z7 (10)	
		GANGAVATHI	Mean	Karaikal	Mean	
5501	28010 (R)	362	369	352	367	367
5502	28008 (R)	384	358	332	363	363
5503	28066(R)	360	353	324	371	371
5504	28065(R)	358	345	300	353	353
5505	30276	339	335	308	352	352
5506	30277	360	333	280	366	366
5507	30278	347	326	316	343	343
5508	30279	321	332	318	346	346
5509	MTU 1010 (RP)	378	380	288	348	348
5510	28791 (R)	375	380	350	398	398
5511	28789 (R)	431	389	392	401	401
5512	ADT 46 (RP)	345	359	338	397	397
5513	28018	357	365	336	372	372
5514	28017	356	346	286	358	358
5515	Pusa 44 (RP)	377	337	292	346	346
5523	30285	413	402	312	361	361
5524	30286	456	387	330	360	360
5525	NLR 34449 (RP)	366	354	310	359	359
5526	29548	405	354	284	362	362
5527	IR 64 (RP)	351	362	310	376	376
5528	28818	331	315	260	346	346
5529	30253	387	363	330	367	367
5530	30254	360	350	316	341	341
5531	30261	320	332	308	338	338
5532	MTU 1121 (RP)	336	320	284	348	348
5533	30287	379	359	312	367	367
5534	30288	394	402	296	378	378
5535	30289	406	386	350	382	382
5536	30290	372	350		364	364
5537	Krishna Hamsa (RP)	378	373	310	375	375
Exp. Mean		370	357	315	363	363

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Table No. 9.12: Grain quality characteristics of entries in AVT 1-NIL (Yield Trial- IME & IM duration) kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
5501	28010	79.7	69.9	57.0	6.40	2.03	3.15	LS	VOC	4.0	24.05	56
5502	28008	78.3	68.3	52.7	6.57	2.00	3.28	LS	VOC	4.0	23.72	50
5503	28066	79.8	70.1	59.2	5.22	2.04	2.55	MS	VOC	5.0	23.93	64
5504	28065	76.9	68.0	60.3	5.03	1.77	2.84	MS	A	7.0	25.19	48
5505	30276	79.0	73.7	65.7	6.76	1.95	3.46	LS	VOC	4.0	23.87	22
5506	30277	79.0	68.8	56.4	6.60	1.96	3.36	LS	VOC	4.0	24.05	22
5507	30278	79.3	69.1	56.0	6.69	1.97	3.39	LS	VOC	4.0	23.87	58
5508	30279	79.6	71.7	60.0	6.80	1.88	3.61	LS	VOC	4.0	24.05	61
5509	MTU-1010 (RP)	79.2	70.3	56.1	5.46	2.00	2.73	MS	A	4.0	23.99	63
5510	28791	81.5	72.8	70.3	6.41	2.04	3.14	LS	A	7.0	26.10	22
5511	28789	80.6	72.6	70.7	6.13	2.18	2.89	LB	A	7.0	22.76	22
5512	ADT-46 (RP)	81.4	73.7	71.6	6.09	2.22	2.74	LB	VOC	7.0	25.43	22
5513	28018	78.4	69.7	66.4	6.20	2.30	2.69E & IM	LB	VOC	7.0	25.96	22
5514	28017	77.5	68.2	65.3	6.16	2.21	2.78	LB	VOC	7.0	25.31	22
5515	Pusa-44 (RP)	77.4	69.7	67.7	5.54	2.11	2.62	MS	VOC	7.0	25.87	22
5516	30280	78.5	65.9	27.9	5.31	2.19	2.42	SB	A	4.0	22.96	22
5517	30281	77.3	57.7	14.0	5.45	2.07	2.63	MS	VOC	4.0	23.84	22
5518	30282	79.3	66.5	31.7	5.10	2.07	2.46	SB	VOC	4.0	24.08	22
5519	29203	79.5	68.7	39.9	5.46	2.12	2.57	MS	VOC	5.0	25.81	22
5520	30283	78.7	67.0	34.5	5.39	2.18	2.47	SB	A	4.0	24.31	22
5521	30284	78.5	67.4	27.2	5.19	2.08	2.49	SB	VOC	4.0	24.34	22
5522	Naveen	79.4	67.1	32.3	5.18	2.06	2.51	MS	VOC	5.0	26.08	43
5523	30285	80.4	73.1	60.1	5.27	1.69	3.11	SS	A	4.0	23.05	22
5524	30286	78.4	73.5	64.9	5.28	1.71	3.08	SS	A	4.0	24.66	22
5525	NLR 34449	79.9	72.0	62.6	5.19	1.72	3.01	SS	A	4.0	25.37	45
5526	29548	79.6	72.8	50.7	6.69	2.02	3.31	LS	VOC	4.0	24.08	75
5527	IR 64	79.0	69.3	56.2	6.58	2.07	3.17	LS	VOC	4.0	23.96	57
5528	28818	79.3	71.9	67.9	5.47	2.03	2.69	MS	VOC	7.0	25.31	47
5529	30253	79.6	69.6	66.0	5.54	2.05	2.70	MS	VOC	4.0	21.50	56
5530	30254	80.3	71.9	67.9	5.45	2.17	2.51	MS	A	4.0	20.56	63
5531	30261	79.9	70.7	65.1	5.21	2.05	2.54	MS	VOC	4.0	21.91	50
5532	MTU-1121	78.4	70.9	67.9	5.33	2.01	2.65	MS	VOC	4.0	21.88	22
5533	30287	77.2	68.9	62.3	6.44	1.88	3.42	LS	A	7.0	24.69	22
5534	30288	78.4	70.8	67.6	6.64	1.94	3.42	LS	VOC	4.0	23.84	25
5535	30289	77.8	67.4	62.2	4.85	1.74	2.78	MS	A	4.0	23.17	42
5536	30290	78.4	65.8	50.4	7.11	1.96	3.62	LS	VOC	3.0	21.97	68
5537	Krishna Hamsa	80.1	71.1	64.4	6.41	1.92	3.33	LS	A	4.0	26.04	55

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content (%); GC: Gel Consistency; LB Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

ADVANCE VARIETY TRIAL 1- NIL (YIELD LATE)

Advance Variety Trial 1- NIL (Yield Late) was constituted with 18 NILs (Near Isogenic lines) and four recurrent parents (Swarna, Improved Samba Mahsuri, Samba Mahsuri and WGL-14). Among the 18 NILs, five lines each were in the background of recurrent parents Swarna, Improved Samba Mahsuri, WGL 14 whereas three lines were in the background of Samba Mahsuri. One NIL entry, IET 29209 was in second of testing and remaining 17 NILs were in the first year of testing. The trial was conducted at 27 locations and data was received from 21 locations. Six locations namely, NRRI Cuttack, Chinsurah, Varanasi, Jabalpur, Shirgoan and Aduthurai did not send the data. Data received from six locations namely, Jeypore (2220 kg/ha), Pantnagar (CV 4.7%), Ranchi (2835 kg/ha), Pundibhari (4649 kg/ha), Jagdalpur (3444 kg/ha), Maruteru (4726 kg/ha) not considered for analysis due to low experimental yield (<5t/ha) or low CV (CV <5.0). All the 18 NILs along with respective recurrent parents were evaluated in Zone VII, whereas, five NILs of recurrent parent Improved Samba Mahsuri was tested in Zone III, V, VI. The performance of NILs were assessed in the notified states of the recurrent parent. NILs were compared with respective recurrent parent using CD value to identify the promising NILs.

Notified states of recurrent parent used in development in NILs

S. No.	Recurrent parent	Notified states
1	Improved Samba Mahsuri	Andhra Pradesh, Telangana, Chhattisgarh, Jharkhand, Odisha, Gujarat, Maharashtra and Bihar
2	Samba Mahsuri	Andhra Pradesh, Telangana
3	Swarna	Andhra Pradesh, Telangana
4	WGL-14	Andhra Pradesh, Telangana and Kerala

Trait verification of blast and bacterial blight resistance

NILs along with RP were screened for blast resistance in 32 locations in NSN1 trial (Table). Based on LSI, level of infection in susceptible checks and recurrent parents, data from 20 locations was not considered for analysis. Data from remaining 12 locations was considered for assessing the level of resistance in NILs.

Similarly, the test entries were screened for bacterial blight resistance at 24 locations (Table). Based on LSI, level of infection in susceptible checks and recurrent parents, data from 16 locations was not considered for analysis. Data from remaining 8 locations was considered for assessing the level of resistance in NILs.

Trait verification for drought, low nitrogen and low phosphorous tolerance

NILs nominated for drought tolerance (in the background of WGL 14) were screened at eight locations. However, data of seven centres were not considered due to very highest or very high grain yield of sensitive check IR64 besides low yield of tolerant check Sabagi Dhan. Data from Hazaribagh centre was only considered for analysis and identification of promising entries by comparing NIL with recurrent parent using CD value.

NIL entries and recurrent parents (Improved Samba Mahsuri) were evaluated at six locations under 0% and 50% N condition. Based on F value significance, Ludhiana, Gangavathi and IIRR at 0% and 50% N were considered for assessing the performance of the NIL test entry.

Similarly, the test entries and recurrent parent (Improved Samba Mahsuri) were also evaluated for low phosphorous tolerance at 0% (five locations) and 50% (six locations).

Based F value significance, Raipur (50%P) Karjat (0% and 50%P), Gangavathi (0% and 50%P), Mandya (50%P) and IIRR (50%P) were considered for assessing the test entries.

Performance of Near Isogenic Lines

Near Isogenic lines in the background of recurrent parent Swarna

The variety Swarna is notified for state of Andhra Pradesh and Telangana. Five NILs developed in the background of recurrent parent Swarna were tested in the first year of testing in Zone VII at eight locations.

The performance of Swarna and NILs in Andhra Pradesh, Telangana state and Zone VII is provided in the table and discussed below.

Performance of five NILs and recurrent parent Swarna for yield, flowering and target traits during Kharif 2021

IET No	Designation	Trait	AP (1)		TS (2)		Zone 7 (8)		SI	
			Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	Blast	BB
30291	RP 6532-RMS 1911-42-13-24	BB	5248	94	5089	100	5341	100	6.0	5.3
30292	RP 6535-Patho 12-1-4-4	BL BB	4276	94	7876*	97	6381#	100	5.1	5.3
30293	RP 6532-RMS 1916-16-10-39	BB	4335	89	5203	97	5180	99	4.7	4.8
30294	RP 6535- Patho 12-5-8-1	BL BB	4559	92	7362#	97	6257#	99	5.0	6.5
30295	RP 6533-RMS 1908-11-22-19	BL BB	5476	93	5233	96	5176	98	3.3	4.3
Swarna (RP)			6553	102	6736	108	6220	106	5.8	4.4
CD at 5%			903		707		370			

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BL-Blast; BB-Bacterial leaf blight

IET 30291

IET 30291 (RP 6532-RMS 1911-42-13-24) derived from cross Swarna*2 / Improved Samba Mahsuri (*Xa21*). The NIL was developed for bacterial blight resistance (*Xa21*) in the background of recurrent parent Swarna. The performance of the test entry was compared for yield performance with RP for state of Andhra Pradesh, Telangana and Zone VII.

The test entry showed susceptible reaction to bacterial leaf blight (6.0 score) and did not show on par yield with recurrent parent in the state of AP (5248 Kg/ha), TS (5089 Kg/ha) and Zone VII (5341 Kg/ha). It possesses medium slender grain type and recorded low HRR (44.1), ASV (4.0), high AC (25.52), and low GC (22) as undesirable grain quality parameters. Hence, **IET 30291 is dropped due to susceptibility for bacterial blight, below par yield with RP, low HRR (44.1) and high AC (25.52) with low GC (22).**

IET 30292

IET 30292 (RP 6535-Patho 12-1-4-4) derived from cross Swarna /C101LAC/ C101A51/Tetep. The NIL was developed for blast and bacterial blight resistance (*Pi1+Pi2+Pi54*) in the background of recurrent parent Swarna.

The entry showed susceptible reaction to blast (5.1 score) and bacterial blight (5.3 score). The entry recorded below par yield with RP in AP (4276 Kg/ha) whereas it recorded significant yield superiority over RP in TS (7876 Kg/ha) and on par yield with RP in Zone VII (6381 Kg/ha).

The entry recorded 6381 Kg/ha with 100 days to 50% flowering. It showed on par yield with recurrent parent in Zone VII (3.0%). It possesses short bold slender grain type and recorded HRR (62.1), ASV (4.0), AC (23.70), and GC (29) as desirable grain quality parameters. **The entry IET 30292 is dropped due to susceptible reaction to blast and bacterial blight.**

IET 30293

IET 30293 (RP 6532-RMS 1916-16-10-39) derived from cross Swarna*2/Improved Samba Mahsuri (*Xa21*) possess medium slender grain type. The NIL was developed for bacterial blight resistance (*Xa21*) in the background of recurrent parent Swarna.

The test entry showed moderate resistance to bacterial blight disease (4.8 score) and blast (4.7 score). It recorded below par yield with RP in AP (4335 Lg/ha), TS (5203 Kg/ha) and Zone VII (5180 Kg/ha).

Further, the entry recorded HRR (66.7), ASV (3.0), low AC (15.40), and high GC (53) as undesirable grain quality parameters. **Hence IET 30293 is dropped below par yield and low AC (15.40) with high GC (53).**

IET 30294

IET 30294 (RP 6535- Patho 12-5-8-1) derived from cross Swarna / C101LAC / C101A51 / Tetep possess short bold grain type. The NIL was developed for blast and bacterial blight resistance (*Pi1+Pi2+Pi54*) in the background of recurrent parent Swarna.

The entry recorded moderate resistance reaction to blast (5.0 score) and susceptible reaction to bacterial blight (6.5 score). The entry showed on yield with RP in TS (7362 Kg/ha) and Zone VII (6257 Kg/ha), while below par yield in AP (4559 Kg/ha).

Although the entry recorded desirable HRR (57.3) and ASV (4.0), while high AC (27.72) with GC (40) was undesirable grain quality parameters. **Hence, IET 30294 is dropped due to high AC (27.72) and susceptible reaction to bacterial blight.**

IET 30295

IET 30295 (RP 6533-RMS 1908-11-22-19) derived from cross Swarna*2 / Improved Samba Mahsuri (*Xa21+Pi54*) possess medium slender grain type. The NIL was developed for blast and bacterial blight resistance (*Xa21+Pi54*) in the background of recurrent parent Swarna.

The entry recorded moderate resistance reaction to blast (3.3 score) and bacterial blight (4.3 score). However, the test entry recorded below par yield with recurrent parent in AP (5476 Kg/ha), TS (5233 Kg/ha) and Zone VII (5176 Kg/ha).

It recorded HRR (64.5), ASV (4.0), AC (23.29), and GC (22) as desirable grain quality parameters. **The test entry IET 30295 is below par yield with recurrent parent.**

Near Isogenic lines in the background of recurrent parent Improved Samba Mahsuri

Recurrent parent Improved Samba Mahsuri is notified for Andhra Pradesh, Telangana, Chhattisgarh, Jharkhand, Odisha, Gujarat, Maharashtra and Bihar. Therefore, five NILs of Improved Samba Mahsuri were tested in Zone III, V, VI and VII. The performance of NILs and recurrent parent is provided in the table and discussed below.

Table: performance of NILs of Improved Samba Mahsuri during Kharif 2021

IET No	Trait	BIHAR (1)		UP (1)		ZONE III (2)		CG (1)	
		Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP
30296	BL BB	3631	103	4092	112	3862	108	4810#	111
30246	LPT	3908	106	4926	112	4417	109	4049	111
30263	LNT	4589#	103	5548#	114	5069#	109	5054#	112
30297	BL BB	3478	103	5696#	114	4587	109	4028	111
30298	BL BB	4069#	93	5630#	117	4850#	105	4107	104
Improved Samba Mahsuri (RP)		4455	101	5532	117	4994	109	5149	111
CD		392	101	416		285	108	453	110

Continued

IET No	Trait	MA1 (1)		Zone V (2)		MA2 (1)		MA		GUJ (2)	
		Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP
30296	BL BB	3863*	98	4337#	105	4079#	94	3971*	96	4809#	100
30246	LPT	3838*	102	3944#	107	3571	101	3704.5#	101	5274#	104
30263	LNT	3977*	102	4516#	107	3354	98	3665.5#	100	4969#	107
30297	BL BB	4198*	103	4113#	107	4292#	94	4245*	99	4458#	99
30298	BL BB	5164*	88	4636*	96	4704#	90	4934*	89	4590#	97
Improved Samba Mahsuri (RP)		3282	91	4216	101	4271	90	3777	91	4642	96
CD		397	97	318	104	614	95	413	96	595	100

Continued

IET No	Trait	Z VI (3)		AP(1)		TS (2)		Zone VII (8)		SI	
		Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	BL	BB
30296	BL BB	4565#	98	5407*	99	5364*	99	5623*	102	4.0	4.0
30246	LPT	4706#	103	5397*	97	4472#	102	5054#	101	5.1	3.9
30263	LNT	4430#	104	5610*	100	4146#	101	5162#	103	5.3	5.0
30297	BL BB	4403#	97	5149*	98	4595#	101	5231#	100	4.3	3.3
30298	BL BB	4628#	95	4211#	95	4636#	94	4792#	96	6.8	4.0
Improved Samba Mahsuri (RP)		4518#	94	4236	89	4131	91	4925	94	6.9	3.8
CD		421	98	903		707		370			

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BL-Blast; BB-Bacterial leaf blight

IET 30296

IET 30296 (RP 6537-Bio-Patho-1-8-6-6) derived from cross Improved Samba Mahsuri*2 / C101A51 possess medium slender grain type. The NIL was developed for blast and bacterial blight resistance (*Xa21+xa13+Pi2*) in the background of recurrent parent Improved Samba Mahsuri.

Variety DRR Dhan 62 possessing the gene combinations of *xa5+xa13+Xa21* and *Pi2+Pi54* is released by CVRC, hence the NIL test entry IET 30296 is not considered for analysis.

IET 30246

IET 30246 (RP 5970-RMS-1-3-17-65-27-41) derived from cross Improved Samba Mahsuri*2 / Swarna possess medium slender grain type. The NIL was developed for low phosphorous tolerance (*Pup1* QTL) in the background of recurrent parent Improved Samba Mahsuri.

Variety DRR Dhan 60 possessing the gene combinations of *xa5+xa13+Xa21* and *Pup1* QTL is released by CVRC, hence the NIL test entry IET 30246 is not considered for analysis.

Table: Grain yield (t/ha) under P 0% condition during Kharif 2021

IET No	ZONE VI (1)	ZONE VII (2)			Overall (3)
	MAHARASHTRA (1)	KARNATAKA (2)			
	KARJAT	GANGAVATHI	MANDYA	Mean	Mean
IET 30246	3.24	3.565	4.386	3.975	3.730
Improved Samba Mahsuri (Negative Check)	3.730	4.035	4.930	4.482	4.232
Rasi (Positive Check)	-	-	-	-	-
Swarna (Positive Check)	4.108	5.016	3.005	4.010	4.043
BPT 5204 (Sensitive Check)	3.288	3.919	3.794	3.857	3.667
CD	0.3028	1.073	1.146	0.75	0.62
CV%	5.199	12.94	9.93	7.56	9.13

Table Grain yield (t/ha) under P 50% condition during Kharif 2021

IET No	ZONE V (1)	ZONE VI (1)	ZONE VII		Overall (4)
	Chhattisgarh (1)	MAHARASHTRA (1)	KARNATAKA (1)	Telangana (1)	
	RAIPUR	KARJAT	GANGAVATHI	IIRR	Mean
IET 30246	3.253	3.638	2.261	3.294	3.112
Improved Samba Mahsuri (Negative Check)	3.190	4.347	3.673	3.931	3.785
Rasi (Positive Check)	4.453	-	-	-	4.453
Swarna (Positive Check)	3.613	4.302	5.151	4.130	4.299
BPT 5204 (Sensitive Check)	3.563	4.525	3.859	2.915	3.715
CD	0.429	0.466	1.265	0.3973	0.29
CV%	7.48	6.65	16.23	6.92	4.67

IET 30263

IET 30263 (RP 5970-RMS-1-3-17-65-12-12) derived from cross Improved Samba Mahsuri*2 / Swarna possess medium slender grain type. The NIL was developed for low nitrogen tolerance in the background of recurrent parent Improved Samba Mahsuri.

The test entry recorded moderate resistance to bacterial blight (5.0 score).

Under normal condition, the entry recorded on par yield RP in the state of Bihar (4589 Kg/ha), UP (5548 Kg/ha), Chhattisgarh (5054 Kg/ha), Maharashtra (3665 Kg/ha), Gujarat (4969 Kg/ha), AP (5610), Telangana (4146 Kg/ha), while zone wise, the entry recorded on par yield with RP in zone III (5069 Kg/ha), V (4516 Kg/ha), VI (4430 Kg/ha) and VII (5162 Kg/ha).

Under low nitrogen stress condition (0% and 50%), the test entry did not record superior yield advantage over the best tolerant check as well as recurrent parent.

The entry recorded low HRR (45.3), ASV (4.0), AC (23.93), and GC (22) as desirable grain quality parameters. **Hence, the test entry is dropped due to yield inferiority under low N stress condition, susceptibility to bacterial blight disease and low HRR (45.3)**

Table Grain yield (t/ha) under N 0% condition during Kharif 2021

IET No	ZONE II (1)		Z VII (2)		Overall (3)
	PUNJAB (1)	KARNATAKA (1)	TELANGANA (1)	Mean	
	LUDHIANA	MANDYA	IIRR		Mean
IET 30263	4.1600	4.3860	2.1565	3.2712	3.5675
Improved Samba Mahsuri (RP)	4.2033	4.1447	2.5335	3.3391	3.6272
Rasi (Check)		6.3158		6.3158	6.3158
Varadhan (Check)	5.3083	5.3728	2.2615	3.8172	4.3142
TellaHamsa (Check)	5.5250	5.0000	2.4455	3.7228	4.3235
Swarna (Tolerant Check)	3.6183	5.1754	2.3020	3.7387	3.6986
BPT 5204 (Sensitive Check)	3.5533	3.9474		3.9474	3.7504
CD	0.5136	1.3401	0.2619	0.67	0.54
CV%	5.6	11.6	5.9	11.0	7.4

Table Grain yield (t/ha) under N 50% condition during Kharif 2021

IET No	ZONE II (1)		ZONE VII (2)		Overall (3)
	PUNJAB (1)	KARNATAKA (1)	TELANGANA (1)	Mean	
	LUDHIANA	GANGAVATHI	IIRR		Mean
IET 30263	5.568	1.983	4.403	3.193	3.985
Improved Samba Mahsuri (RP & Check)	6.153	2.627	4.433	3.530	4.404
Rasi (Check)					
Varadhan (Check)	6.218	3.121	4.220	3.671	4.520
TellaHamsa (Check)	6.662	3.552	4.347	3.949	4.853
Swarna (Tolerant Check)	3.683	4.508	5.433	4.970	4.541
BPT 5204 (Sensitive Check)	5.568	3.574		3.574	4.571
CD	0.6179	0.867	0.576	0.74	0.59
CV%	4.9	12.4	7.4	10.4	6.5

IET 30297

IET 30297 (RP 6538-Bio-Patho-2-9-2-36) derived from cross Improved Samba Mahsuri*2 / Tetep possess medium slender grain type. The NIL was developed for blast and bacterial

blight resistance (*Xa21+xa13+Pi54*) in the background of recurrent parent Improved Samba Mahsuri.

Variety DRR Dhan 62 possessing the gene combinations of *xa5+xa13+Xa21* and *Pi2+Pi54* is released by CVRC, hence the NIL test entry IET 30297 is not considered for analysis.

IET 30298

IET 30298 (RP 6288-12-305-92) derived from cross Improved Samba Mahsuri*2 // RP Biopatho-1 and RP Bio Patho-2 possess medium slender grain type. The NIL was developed for blast and bacterial blight resistance (*Xa21+Pi54*) in the background of recurrent parent Improved Samba Mahsuri.

Variety DRR Dhan 62 possessing the gene combinations of *xa5+xa13+Xa21* and *Pi2+Pi54* is released by CVRC, hence the NIL test entry IET 30298 is not considered for analysis.

Near Isogenic lines in the background of recurrent parent Samba Mahsuri

Three NILs developed in the background of Samba Mahsuri was tested in Zone VII. The Recurrent parent Samba Mahsuri is notified for Andhra Pradesh and Telangana State. Performance of Samba Mahsuri and three NILs is provided in the table and discussed below.

IET No.	Trait	AP (1)		TS (2)		Zone VII (8)		SI	
		Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	BL	BB
30299	BL	4246#	82	4191	87	4783	92	4.8	6.0
30300	BL	4276#	82	4313	87	4524	91	4.2	6.8
29209	BB	4345#	90	5329#	94	5670#	95	4.1	5.3
Samba Mahsuri (RP)		4469	94	5220	100	5304	100	6.6	5.8
CD at 5%		903		707		370			

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BL-Blast; BB-Bacterial leaf blight

IET 30299

IET 30299 (RP 6536- Patho-6-10-24-25) derived from cross Samba Mahsuri / C101LAC / C101A51 / Tetep possess short bold grain type. The NIL was developed for blast resistance (*Pi1+Pi2+Pi54*) in the background of recurrent parent Samba Mahsuri.

The entry recorded moderate resistance to blast (4.8 score) and recorded on par yield with RP in Andhra Pradesh (4246 Kg/ha) while below par yield in TS (4191 Kg/ha) and Zone VII (4783 Kg/ha).

The entry recorded low HRR (49.7), ASV (4.0), AC (26.04), and GC (43) as grain quality parameters. **Hence, the test entry IET 30299 dropped due to low HRR (49.7).**

IET 30300

IET 30300 (RP 6536-Patho 6-1-5-23) derived from cross Samba Mahsuri / C101LAC / C101A51 / Tetep possess short bold grain type. The NIL was developed for blast resistance (*Pi1+Pi2+Pi54*) in the background of recurrent parent Samba Mahsuri.

The test entry recorded moderate resistance to blast (4.2 score) and on par yield with RP in Andhra Pradesh (4276 Kg/ha) while below par yield in TS (4313 Kg/ha) and Zone VII (4524 Kg/ha).

The entry recorded low HRR (50.6), ASV (4.0), AC (24.28), and GC (22) as grain quality parameters. **The test entry dropped due to low HRR (50.6).**

IET 29209

IET 29209 (RP 6472-RMS-20-35-15-4) derived from cross Samba Mahsuri*2 / MTS-Xa21+Pi54 possess medium slender grain type. The NIL was developed for blast and bacterial blight resistance (*Xa21+Pi54*) in the background of recurrent parent Samba Mahsuri.

Variety DRR Dhan 62 possessing the gene combinations of *xa5+xa13+Xa21* and *Pi2+Pi54* is released by CVRC, hence the NIL test entry IET 29209 is not considered for analysis.

Near Isogenic lines in the background of recurrent parent WGL-14

Recurrent parent WGL 14 is notified for AP, TS and Kerala. Five NILs developed in the background of recurrent parent WGL 14 was tested in Zone VII under normal condition. Drought experiment data from Hazaribagh centre was considered for trait verification and assessing the performance of drought tolerant NILs in comparison to recurrent parent and drought tolerant check. The performance of WGL 14 and NILs is provided in the table and discussed below.

NILs and WGL 14 performance under normal and drought stress condition

IET No	Trait	Normal								Drought (1)
		AP(1)		TS (2)		KE (2)		Zone 7 (8)		
		Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	Kg/ha	DFP	
30301	Drt	5238*	108	4939	114	7076#	119	5235#	109	174.0
30302	Drt	4365#	95	5075#	101	7810#	100	5232#	99	1089.0
WGL -14 (RP)		4246	94	5673	95	7616	101	5523	97	1111
Sabagidhan										2320
CD		903		707		1321		370		318.64

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BL-Blast; BB-Bacterial leaf blight

NILs and WGL 14 performance for yield, blast and bacterial blight disease

IET No	Trait	AP (1)		TS (2)		KL (2)	Zone 7 (8)			SI	
		Kg/ha	DFP	Kg/ha	DFP		Kg/ha	DFP	BL	BB	
30303	BL	5744*	97	5101#	102	7206#	104	5736#	100	5.0	6.1
30304	BB	4673#	97	4204	104	7511#	103	4861	101	6.4	5.0
30305	BL	5248*	94	5526#	101	7302#	100	5876#	98	5.2	5.3
WGL -14 (RP)		4246	94	5673	95	7616	101	5523	97	6.8	5.3
CD		903		707		1321		370			

On par yield with RP ($\mu \pm CD$); *Significant yield superiority over RP ($> \mu + CD$); BL-Blast; BB-Bacterial leaf blight

IET 30301

IET 30301 (RP 6497-MAID-344-44-34-4-3-1-1) derived from cross WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-1 /// WGL14 / RP 5925-24 // WGL14 / RP 5925-

23 /// WGL14 / IR 96321-1447-561-B-1 // WGL14 / IR 81896-96-B-B-195 //// WGL14 / IR74371-46-1-1-13 possess medium slender grain type. The NIL was developed for drought tolerance (qDTY) in the background of recurrent parent WGL 14.

Under drought stress condition, the test entry recorded significantly lower yield (174 Kg/ha) than the recurrent parent (1111 Kg/ha) and drought tolerant check Sabagi Dhan (2320 Kg/ha). However, under normal condition, the entry recorded significant yield superiority over RP in AP (5238 Kg/ha), on par yield with RP in Kerala (7076 Kg/ha) and Zone VII (5235 Kg/ha), while below par yield in TS (4939 Kg/ha). The entry recorded HRR (57.0), ASV (5.0), AC (25.54), and GC (33) as grain quality parameters. Hence, the test entry **IET 30301 is dropped due to susceptible to drought stress and high AC (25.54) with low GC (33).**

IET 30302

IET 30302 (RP 6498-MAID-451-51-45-5-4-1-1) derived from cross WGL14 / Rathuheenati // WGL14 / RP 5925-23 /// WGL14 / RP5925-24 // WGL14 / IR 96321-1447-561-B-1 //// WGL14 / RP Bio Patho-1 possess medium slender grain type. The NIL was developed for drought tolerance (qDTY3.1) in the background of recurrent parent WGL 14.

Under drought stress condition, the test entry recorded on par yield (1089 Kg/ha) with recurrent parent (1111 Kg/ha), but significantly lower yield than drought tolerant check Sabagi Dhan (2320 Kg/ha). While under normal condition, the entry recorded on par yield with RP in AP (4365 Kg/ha), TS (5075 Kg/ha), Kerala (7810 Kg/ha) and Zone VII (5232 Kg/ha). The entry recorded low HRR (52.3), ASV (5.0), AC (23.87), and GC (22) as grain quality parameters. Hence, the test entry **IET 30302 is dropped due to susceptible to drought stress and low HRR (52.3).**

IET 30303

IET 30303 (WGL 1467) derived from cross WGL-14 / NLR-145 / 3* WGL-14 possess medium slender grain type. The NIL was developed for blast resistance (*Pi54+Pi1*) in the background of recurrent parent WGL 14.

The test entry showed moderate resistance to blast disease (5.0 score). The entry recorded significant yield superiority over RP in AP (5744 Kg/ha) while it showed on par yield with RP in TS (5101 Kg/ha), KE (7206 Kg/ha) and Zone VII (5736 Kg/ha). The entry recorded low HRR (34.7), ASV (4.5), AC (23.67), and GC (22) as grain quality parameters. **The test entry IET 30303 is dropped due to low HRR (34.7).**

IET 30304

IET 30304 (RP 6494-MAID-162-27-9-3-1-1-1) derived from cross WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-2 /// WGL14 / RP 5925-23 // WGL14 / IR 96321-1447-561-B-1 possess medium slender grain type. The NIL was developed for bacterial blight resistance (*Xa5+Xa21*) in the background of recurrent parent WGL 14.

The test entry showed moderate resistance to bacterial blight disease (5.0 score). The entry recorded on par yield with RP in AP (4673 Kg/ha) a Kg/hand Kerala (7511) while it showed below par yield with RP in TS (4204 Kg/ha) and Zone VII (4861 Kg/ha). The entry recorded low HRR (39.8), ASV (4.0), AC (20.88), and GC (22) as grain quality parameters. **The test entry IET 30304 is dropped due to low HRR (39.8).**

IET 30305

IET 30305 (WGL 1472) derived from cross WGL-14 / NLR-145 / 3* WGL-14 possess medium slender grain type. The NIL was developed for blast resistance (*Pil+ Pi54*) in the background of recurrent parent WGL 14.

The test entry showed susceptible to blast disease (5.2 score). The entry recorded significant yield superiority over RP in AP (5248 Kg/ha) while it showed on par yield with RP in TS (5526 Kg/ha), KE (7302 Kg/ha) and Zone VII (5876 Kg/ha).

The entry recorded low HRR (52.7), ASV (5.0), AC (24.75), and GC (22) as grain quality parameters. **The test entry IET 30305 is dropped due to susceptible reaction to blast disease and low HRR (52.7).**

Table: Reactions of NILs, Recurrent parent and susceptible checks for leaf blast disease (Locations considered)

IET No.	Locations considered												
	GNV	IIRR	JDP	KJT	LNV	MLN	MND	NVS	NWG	RNR	RNC	CTK	SI
Location	A	A	N	N	N	N/A	N/A	N	A	A	N	A	
Screening	5.1	4.9	4.9	4.7	4.4	5.8	4.6	4.9	5.5	4.4	5.2	6.1	
LSI	5.1	4.9	4.9	4.7	4.4	5.8	4.6	4.9	5.5	4.4	5.2	6.1	
30291	5	5	8	6	3	7	9	5	5	9	5	5	6.0
30292	5	3	7	5	6	4	7	3	5	5	6	5	5.1
30293	3	4	5	5	5	1	7	5	4	7	5	5	4.7
30294	4	3	6	5	6	1	5	5	5	7	6	7	5.0
30295	2	4	5	4	3	1	2	5	4	1	5	3	3.3
Swarna (RP)	5	7	8	6	6	6	9	4	4	5	5	5	5.8
30296	5	3	1	5	5	1	3	6	5	3	6	5	4.0
30246	-	5	6	3	5	4	7	5	5	5	6	5	5.1
30263	6	4	7	7	6	4	7	3	6	5	4	5	5.3
30297	3	3	3	7	6	1	3	5	6	5	4	5	4.3
30298	5	6	8	7	6	7	9	6	6	9	5	7	6.8
Improved Samba Mahsuri (RP)	5	7	7	7	6	7	9	5	6	9	6	9	6.9
30299	9	3	4	7	3	1	4	4	8	5	5	5	4.8
30300	9	3	1	5	3	1	2	3	7	5	6	5	4.2
29209	4	4	2	6	3	1	4	3	5	3	5	9	4.1
Samba Mahsuri (RP)	7	8	7	5	6	9	6	5	8	9	6	3	6.6
30301	9	5	8	6	6	9	7	5	6	9	8	5	6.9
30302	9	4	7	6	6	3	7	6	6	7	7	5	6.1
30303	-	4	7	5	5	1	7	4	7	5	5	5	5.0
30304	9	5	7	6	5	4	9	6	6	7	6	7	6.4
30305	9	4	7	4	5	1	4	5	8	5	5	5	5.2
WGL -14 (RP)	9	7	8	6	6	7	9	4	8	5	6	7	6.8
HR-12	9	9	8	7	8	8	9	7	9	7	8	9	8.2
TN1	9	7	7	5	6	9	9	7	7	9	5	5	7.1
Tetep	3	1	2	2	3	1	3	2	3	3	2	5	2.5

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Table: Reactions of NILs, Recurrent parent and susceptible checks for leaf blast disease (Locations not considered)

IET No.	Locations not considered																			
	MTU	NDL	NLR	MGD	JGT	ALM	GGT	BNK	CBT	CHP	GDL	HZB	PTB	PNP	REW	UMM	GER	KHD	USG	WBL
Location	A	A	A	N	A	N	-	A	A	N	N	N	N	N	A	N	N	A	N	N
Screening	3.3	6.6	5.1	5.0	5.6	6.5	5.3	5.2	3.5	5.2	4.4	4.7	4.6	4.3	4.4	4.4	2.7	1.5	2.8	2.5
30291	6	7	7	5	9	7	5	5	8	5	4	8	6	5	6	4	1	0	-	2
30292	6	7	5	7	5	6	5	3	3	5	4	7	5	3	5	6	0	2	-	3
30293	3	5	5	7	5	4	5	5	2	4	4	3	4	5	4	7	3	3	0	2
30294	5	5	4	5	5	6	5	7	2	7	3	5	4	4	3	8	3	2	-	2
30295	3	7	5	7	5	4	3	3	3	6	3	3	5	5	7	9	5	2	7	3
Swarna (RP)	9	7	4	7	3	7	5	3	3	6	3	8	5	6	6	4	1	1	7	3
30296	2	9	5	7	7	2	5	7	5	5	3	1	4	6	5	-	5	2	7	4
30246	2	9	5	7	5	5	5	5	5	6	3	3	5	5	5	5	3	1	0	2
30263	2	7	6	5	7	5	5	7	3	6	3	5	4	6	4	4	3	2	5	-
30297	2	7	5	7	5	1	7	7	8	5	3	2	6	6	3	-	7	2	0	2
30298	7	7	8	5	5	8	5	7	0	7	3	8	7	6	2	5	5	1	8	2
Improved Samba Mahsuri (RP)	7	9	9	5	5	5	5	7	4	4	3	4	4	6	7	3	3	1	0	3
30299	4	9	7	5	7	4	5	5	8	6	3	3	5	5	6	6	0	2	7	2
30300	3	7	5	7	5	3	5	7	3	3	0	1	4	3	6	6	3	0	6	3
29209	4	7	5	5	3	5	5	3	3	5	5	3	3	6	6	6	3	2	6	4
Samba Mahsuri (RP)	7	5	5	5	5	5	7	3	8	4	4	3	2	3	4	6	1	0	8	2
30301	7	5	6	5	-	7	5	7	8	4	5	8	5	3	5	9	5	2	6	-
30302	6	9	6	5	7	5	5	5	7	7	4	3	4	5	3	8	1	0	3	3
30303	3	9	7	5	3	6	5	7	3	3	2	7	4	3	4	4	0	1	0	-
30304	6	9	9	5	7	7	5	7	8	5	8	6	5	2	3	-	1	2	9	4
30305	3	5	7	5	3	6	5	7	6	6	2	7	4	4	2	-	1	3	7	2
WGL -14 (RP)	7	7	6	5	5	7	7	7	4	5	4	8	5	3	2	-	5	2	9	2
HR-12	7	7	7	7	9	8	5	7	8	7	7	8	7	7	7	8	3	4	9	2
TN1	4	5	6	3	9	9	5	3	6	6	4	8	5	5	3	7	5	3	8	3
Tetep	1	9	5	1		5	5	3	2	4	1	3	4	3	5	8				

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Table: Reactions of NILs, Recurrent parent and susceptible checks for bacterial blight disease (Locations considered)

S.NO	Entry No.	IET No.	Locations considered									
			Locations	CHN	GNV	LDN	MNC	NWG	IIRR	CTK	TTB	SI
			Screening	A	A	A	A	A	A	A	A	
		LSI	6.6	5.9	4.9	5.1	6.1	6.4	5.6	4.6		
268	5601	30291	7	9	3	5	9	3	3	3	5.3	
269	5602	30292	5	9	7	5	5	3	5	3	5.3	
270	5603	30293	7	7	3	5	5	3	5	3	4.8	
271	5604	30294	7	9	7	7	7	7	5	3	6.5	
272	5605	30295	3	5	5	7	5	3	3	3	4.3	
273	5606	Swarna (RP)	5	5	7	0	5	7	3	3	4.4	
274	5607	30296	1	9	3	5	7	1	5	1	4.0	
275	5608	30246	-	7	3	5	5	1	5	1	3.9	
276	5609	30263	9	9	3	5	7	1	5	1	5.0	
277	5610	30297	5	5	3	3	5	1	3	1	3.3	
278	5611	30298	5	5	3	3	5	3	3	5	4.0	
279	5612	Improved Samba Mahsuri (RP)	3	5	3	5	5	3	3	3	3.8	
280	5613	30299	7	7	7	5	5	7	5	5	6.0	
281	5614	30300	7	7	7	9	7	7	5	5	6.8	
282	5615	29209	-	9	3	5	7	3	5	5	5.3	
283	5616	Samba Mahsuri (RP)	7	5	7	5	5	1	3	5	4.8	
284	5617	30301	5	7	3	3	7	5	3	3	4.5	
285	5618	30302	7	5	7	7	5	7	3	5	5.8	
286	5619	30303	-	9	7	5	7	5	5	5	6.1	
287	5620	30304	7	7	3	3	7	3	5	5	5.0	
280	5621	30305	-	7	7	7	5	3	3	5	5.3	
289	5622	WGL -14 (RP)	7	7	7	5	5	3	3	5	5.3	
291	TN1	TN1	9	9	7	9	9	7	9	9	8.5	
296	IR-50	IR-50	9	5	3	9	7	7	5	7	6.5	
300	Co-39	Co-39	-	9	-	9	9	7	9		8.6	

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Table: Reactions of NILs, Recurrent parent and susceptible checks for bacterial blight disease (Locations not considered)

IET No.	Locations not considered															
	CHT	GER	KJT	NLR	PTN	SBR	VRN	ADT	CHP	JGT	MTU	MSD	NVS	PNT	PTB	RPR
Screening	A	N	A	A	A	A	A	A	A	A	A	A	A	A	A	A
LSI	5.4	2.4	6.6	5.4	3.2	3.6	5.6	8.5	7.4	6.1	8.4	5.4	6.4	7.6	6.7	7.5
30291	5	7	7	7	5	5	5	9	7	5	9	5	7	5	9	5
30292	5	1	7	7	5	7	7	9	5	3	9	3	7	1	5	7
30293	3	3	7	7	3	1	5	9	9	5	9	3	5	5	7	-
30294	5	0	7	5	3	7	5	7	7	5	9	5	7	1	7	7
30295	5	0	5	3	3	5	5	3	9	5	9	5	5	5	5	7
Swarna (RP)	5	3	3	3	1	1	3	7	9	5	9	3	7	5	5	7
30296	7	3	3	5	3	5	5	9	9	3	7	5	5	5	5	7
30246	5	1	3	5	3	1	7	9	9	5	7	5	7	7	5	7
30263	5	1	3	7	5	3	3	9	9	5	7	5	5	9	5	7
30297	5	1	5	5	5	5	5	9	9	5	9	7	7	3	5	7
30298	5	3	5	5	3	3	7	9	9	9	7	5	5	5	5	7
Improved Samba Mahsuri (RP)	5	1	7	5	3	7	5	9	9	7	7	7	7	7	7	7
30299	7	5	7	5	3	5	5	9	9	7	9	5	5	9	9	7
30300	5	3	9	3	1	0	5	9	7	7	9	7	5	9	9	9
29209	5	1	3	7	3	0	1	9	9	7	9	3	5	7	7	7
Samba Mahsuri (RP)	3	1	3	5	3	0	3	9	9	5	-	5	7	7	5	7
30301	7	3	3	3	5	0	5	7	9		7	5	5	7	7	7
30302	7	1	5	7	5	3	3	9	9	5	9	7	7	5	9	7
30303	7	1	3	5	3	5	5	9	9	5	9	5	5	5	7	7
30304	5	1	7	7	3	3	7	9	9	5	9	5	3	3	7	3
30305	7		7	5	0	3	7	7	9	7	9	5	5	5	5	5
WGL -14 (RP)	5	3	7	3	3	3	5	9	9	7	9	5	7	9	7	5
TN1	5	3	9	7	7	1	7	9	9	9	9	9	9	9	7	7
IR-50	5	3	3	5	5	3	7	9	7	9	7	5	5	9	7	9
Co-39	5	-	5	-	3	0	-	-	-		9	5	7	7		-

Table No. 9.13: Composition of entries in Advance Variety Trial 1- Near Isogenic Lines (Yield Trial- Late duration) Kharif2021

Entry No.	IET No.	Designation	Cross combination	GT	Trait
1st Year of testing					
5601	30291	RP 6532-RMS 1911-42-13-24	Swarna*2 / Improved Samba Mahsuri (Xa21)	MB	BB
5602	30292	RP 6535-Patho 12-1-4-4	Swarna / C101LAC / C101A51 / Tetep	SB	BL & BB
5603	30293	RP 6532-RMS 1916-16-10-39	Swarna*2 / Improved Samba Mahsuri (Xa21)	MB	BB
5604	30294	RP 6535- Patho 12-5-8-1	Swarna / C101LAC / C101A51 / Tetep	SB	BL & BB
5605	30295	RP 6533-RMS 1908-11-22-19	Swarna*2 / Improved Samba Mahsuri (Xa21+Pi54)	MB	BB & BL
5606	Swarna (RP)				
5607	30296	RP 6537-Bio-Patho-1-8-6-6	Improved Samba Mahsuri*2 / C101A51	MS	BL & BB
5608	30246	RP 5970-RMS-1-3-17-65-27-41	Improved Samba Mahsuri*2 / Swarna	MS	LPT
5609	30263	RP 5970-RMS-1-3-17-65-12-12	Improved Samba Mahsuri*2 / Swarna	MS	LNT
5610	30297	RP 6538-Bio-Patho-2-9-2-36	Improved Samba Mahsuri*2 / Tetep	MS	BL & BB
5611	30298	RP 6288-12-305-92	Improved Samba Mahsuri*2 // RP Biopatho-1 and RP Bio Patho-2	MS	BB & BL
5612	Improved Samba Mahsuri (RP)				
5613	30299	RP 6536- Patho-6-10-24-25	Samba Mahsuri / C101LAC / C101A51 /Tetep	MS	BL
5614	30300	RP 6536-Patho 6-1-5-23	Samba Mahsuri / C101LAC / C101A51 / Tetep	MS	BL
2nd Year of testing					
5615	29209	RP 6472-RMS-20-35-15-4	Samba Mahsuri*2 / MTS-Xa21+Pi54	MS	BB
5616	Samba Mahsuri (RP)				
1st Year of testing					
5617	30301	RP 6497-MAID-344-44-34-4-3-1-1	WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-1 /// WGL14 / RP 5925-24 // WGL14 / RP 5925-23 //// WGL14 / IR 96321-1447-561-B-1 // WGL14 / IR 81896-96-B-B-195 //// WGL14 / IR74371-46-1-1-13	MS	Drt
5618	30302	RP 6498-MAID-451-51-45-5-4-1-1	WGL14 / Rathuheenati // WGL14 / RP 5925-23 /// WGL14 / RP5925-24 // WGL14 / IR 96321-1447-561-B-1 //// WGL14 / RP Bio Patho-1	MS	Drt
5619	30303	WGL 1467	WGL-14 / NLR-145 / 3* WGL-14	MS	BL
5620	30304	RP 6494-MAID-162-27-9-3-1-1-1	WGL 14 / Improved Samba Mahsuri // WGL 14 / RP Bio Patho-2 /// WGL14 / RP 5925-23 // WGL14 / IR 96321-1447-561-B-1	MS	BB
5621	30305	WGL 1472	WGL-14 / NLR-145 / 3* WGL-14	MS	BL
5622	WGL -14 (RP)				

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Table No.9.14 Contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	ZONE VI - WESTERN														Overall Mean (7)			
		MAHARASHTRA 2 (1)		MA2 (1)		MAHARASHTRA (2)		GUJARAT		GUJARAT (2)		Z6 (3)							
		KJT		Mean				NVS	NWG	Mean		Mean							
5607	30296	4079	4	4079	4	3971	3	5.15%	5343	4	4274	2*	4809	3	4565	3	4299	6	
5608	30246	3571	5	3571	5	3705	5		6192	2	4356	1*	5274	1*	14%	4706	1	4406	4
5609	30263	3354	6	3354	6	3666	6		6260	1*	3677	6	4969	2	7%	4430	5	4637	2
5610	30297	4292	2	4292	2	4245	2	12%	4838	6	4078	3	4458	6		4403	6	4373	5
5611	30298	4704	1	4704	1	10%	4934	1	31%	5338	5	3842	4	4590	5	4628	2	4693	1
5612	Improved Samba Mahsuri (RP)	4271	3	4271	3		3777	4		5456	3	3828	5	4642	4	4518	4	4568	3
Exp. Mean		4045		4045		4049			5571		4009		5001		4606		4496		
CD		614		614		413			778		380		595		421		233		
CV%		11.5		11.5		7.7			10.6		6.3		9.0		6.9		3.9		
D/S		28-07-2021							22-07-2021		23-07-2021								
D/P		20-08-2021							10-08-2021		30-08-2021								

Table No.9.14 contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII - SOUTHERN														
		ANDHRA PRADESH		ANDHRA PRADESH (1)		TELANGANA		TELANGANA (2)		TAMIL NADU (1)						
		@MTU	NLR	Mean		RNR	WGL	Mean		CBT						
5601	30291	3456		5248	7	5248	7		5317		4861		5089		7441	4
5602	30292	4463	10	4276		4276			8134	1	7618	2	7876	1	7916	1
5603	30293	4069		4335		4335			6001	6	4405		5203	10	5379	
5604	30294	4384		4559		4559			6821	2	7903	1	7362	2	5323	
5605	30295	4700	9	5476	4	5476	4		5411		5054	9	5233	8	5217	
5606	Swarna (RP)	3571		6553	1	6553	1		6730	3	6742	3	6736	3	7107	7
5607	30296	4796	8	5407	5	5407	5		5562	8	5166	7	5364	6	7163	6
5608	30246	6598	5	5397	6	5397	6		4826		4117		4472		6540	10
5609	30263	7018	1	5610	3	5610	3		4375		3916		4146		6366	
5610	30297	3986		5149	10	5149	10		4624		4565		4595		5323	
5611	30298	5476	7	4211		4211			3840		5431	4	4636		5748	
5612	Improved Samba Mahsuri (RP)	4090		4236		4236			4462		3799		4131		5908	
5613	30299	2317		4246		4246			4507		3875		4191		5357	
5614	30300	3212		4276		4276			4513		4113		4313		5347	
5615	29209	4126		4345		4345			5542	9	5116	8	5329	7	7826	2
5616	Samba Mahsuri (RP)	3636		4469		4469			5416	10	5024	10	5220	9	6796	8
5617	30301	6687	2	5238	9	5238	9		4899		4978		4939		6049	
5618	30302	3891		4365		4365			5233		4916		5075		6256	
5619	30303	3700		5744	2	5744	2		6088	4	4113		5101		6778	9
5620	30304	6541	6	4673		4673			4008		4400		4204		5456	
5621	30305	6619	4	5248	7	5248	7		5701	7	5351	5	5526	5	7453	3
5622	WGL -14 (RP)	6641	3	4246		4246			6004	5	5341	6	5673	4	7353	5
Exp. Mean		4726		4878		4878			5364		5036		5200		6368	
CD		2038.01		902.67		902.67			1117.97		847.87		707.4		1097.39	
CV%		26.17		11.23		11.23			12.65		10.22		8.26		10.46	
D/S		17-07-2021		04-09-2021					17-07-2021		18-07-2021				23-08-2021	
D/P		09-08-2021		23-10-2021					13-08-2021		16-08-2021				20-09-2021	

*Superior to best check #Superior over hybrid check

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Table No.9.14 Contd.: Grain Yield (kg/ha) of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN											
		KERALA (1)		KARNATAKA			KARNATAKA (2)		PUDUCHERRY (1)		Zone 7 (8)		
		PTB		MND	GNV	Mean		KRK		Mean			
5601	30291	5863		4704	5	3436		4070		5858		5341	9
5602	30292	6311		5002	3	6308	2	5655	2	5483		6381	1
5603	30293	7222		3906		3974	10	3940		6217	5	5180	
5604	30294	7470	10	4964	4	6564	1	5764	1	6450	1	6257	2
5605	30295	7800	4	3377		2782		3080		6292	4	5176	
5606	Swarna (RP)	7343		4632	6	4564	8	4598	6	6092	7	6220	3
5607	30296	7279		4286		3923		4105	9	6200	6	5623	7
5608	30246	6984		4570	7	2984		3777		5017		5054	
5609	30263	7473	9	4194		3407		3801		5958	10	5162	
5610	30297	8117	1	4512	9	3234		3873		6325	3	5231	
5611	30298	7489	8	4319		3532		3926		3767		4792	
5612	Improved Samba Mahsuri (RP)	7584	6	4045		3449		3747		5917		4925	
5613	30299	7965	2	4416	10	3423		3920		4475		4783	
5614	30300	7273		2992		3231		3112		4450		4524	
5615	29209	7257		3651		5250	3	4451	8	6375	2	5670	6
5616	Samba Mahsuri (RP)	7143		4223		4712	7	4468	7	4650		5304	10
5617	30301	7076		3862		4295	9	4079	10	5485		5235	
5618	30302	7810	3	3622		3654		3638		6000	9	5232	
5619	30303	7206		5931	1	5006	4	5469	3	5025		5736	5
5620	30304	7511	7	2977		3942		3460		5917		4861	
5621	30305	7302		5142	2	4718	6	4930	4	6092	7	5876	4
5622	WGL -14 (RP)	7616	5	4555	8	4981	5	4768	5	4087		5523	8
Exp. Mean		7323		4267		4153		4211		5551		5368	
CD		1320.59		550.64		1093.21		560.55		1061.76		369.87	
CV%		10.94		7.83		15.97		7.99		11.61		4.14	
D/S		20-07-2021		21-07-2021		24-07-2021				27-08-2021			
D/P		15-08-2021		17-08-2021		25-08-2021				28-09-2021			

Table No. 9.15: Days to 50% flowering of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	ZONE III-EASTERN						
		ODISHA (0)		BIHAR		BIHAR(1)	JHARKHAND (0)	WEST BENGAL (1)
		@JYP	BKG	@PTN	Mean	@RCI	@PNB	
5607	30296	117	103	100	103	98	89	
5608	30246	104	106	102	106	99	88	
5609	30263	112	103	102	103	98	101	
5610	30297	108	103	100	103	97	94	
5611	30298	96	93	94	93	93	98	
5612	Improved Samba Mahsuri (RP)	103	101	97	101	95	87	
Exp. Mean		107	101	99	101	97	93	

Table No. 9.15 Contd.: Days to 50% flowering of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE-V – CENTRAL			
		UTTAR PRADESH (1)		ZONE 3 (2)		CHHATTISGARH		MAHARASHTRA 1 (1)	MA1 (1)
		MSD	Mean	RPR	@JDP	Mean	SKL	Mean	
5607	30296	112	108	111	106	111	98	98	
5608	30246	112	109	111	104	111	102	102	
5609	30263	114	109	112	105	112	102	102	
5610	30297	114	109	111	106	111	103	103	
5611	30298	117	105	104	93	104	88	88	
5612	Improved Samba Mahsuri (RP)	117	109	111	97	111	91	91	
Exp. Mean		114	108	110	102	110	97	97	

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Table No. 9.15 Contd.: Days to 50% flowering of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	Zone 5 (2) Mean	ZONE VI – WESTERN							Overall Mean (7)
			MAHARASHTRA 2 (1)	MA2 (1)	MAHARASHTRA (2)	GUJARAT		GUJARAT (2)	Z6 (3)	
			KJT	Mean	Mean	NYS	NWG	Mean	Mean	
5607	30296	105	94	94	96	88	113	100	98	103
5608	30246	107	101	101	101	97	111	104	103	106
5609	30263	107	98	98	100	102	112	107	104	106
5610	30297	107	94	94	99	89	109	99	97	103
5611	30298	96	90	90	89	83	111	97	95	98
5612	Improved Samba Mahsuri (RP)	101	90	90	91	81	111	96	94	100
Exp. Mean		104	95	95	96	90	111	100	98	103

Table No. 9.15 contd.: Days to 50% flowering of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						
		ANDHRA PRADESH		ANDHRA PRADESH (1)	TELANGANA		TELANGANA (2)	TAMIL NADU (1)
		@MTU	NLR	Mean	RNR	WGL	Mean	CBT
5601	30291	91	94	94	104	96	100	98
5602	30292	87	94	94	99	95	97	97
5603	30293	89	89	89	98	96	97	104
5604	30294	89	92	92	100	95	97	98
5605	30295	88	93	93	98	94	96	98
5606	Swarna (RP)	93	102	102	111	104	108	112
5607	30296	94	99	99	105	92	99	103
5608	30246	98	97	97	103	101	102	97
5609	30263	96	100	100	103	100	101	102
5610	30297	93	98	98	105	98	101	103
5611	30298	89	95	95	95	93	94	92
5612	Improved Samba Mahsuri (RP)	94	89	89	91	91	91	94
5613	30299	89	82	82	91	83	87	93
5614	30300	85	82	82	91	83	87	92
5615	29209	87	90	90	95	92	94	91
5616	Samba Mahsuri (RP)	93	94	94	105	95	100	103
5617	30301	114	108	108	113	114	114	114
5618	30302	96	95	95	103	99	101	102
5619	30303	93	97	97	103	101	102	102
5620	30304	93	97	97	105	102	104	104
5621	30305	94	94	94	103	98	101	103
5622	WGL -14 (RP)	93	94	94	96	94	95	98
Exp. Mean		93	94	94	101	96	98	100

Table No.9.15 contd.: Days to 50% flowering of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		KERALA (1)	KARNATAKA		KARNATAKA (2)	PUDUCHERRY (1)	Zone 7 (8)
		PTB	MND	GNV	Mean	KRK	Mean
5601	30291	111	98	105	102	91	100
5602	30292	114	102	105	103	93	100
5603	30293	102	103	105	104	91	99
5604	30294	103	102	105	103	96	99
5605	30295	101	101	104	102	95	98
5606	Swarna (RP)	107	112	109	110	93	106
5607	30296	120	105	105	105	90	102
5608	30246	115	92	109	100	96	101
5609	30263	115	101	109	105	95	103
5610	30297	101	99	105	102	92	100
5611	30298	99	98	105	101	90	96
5612	Improved Samba Mahsuri (RP)	108	92	102	97	86	94
5613	30299	99	104	98	101	87	92
5614	30300	102	97	99	98	87	91
5615	29209	102	97	99	98	95	95
5616	Samba Mahsuri (RP)	100	105	107	106	90	100
5617	30301	119	106	104	105	95	109
5618	30302	100	96	105	100	95	99
5619	30303	104	95	105	100	96	100
5620	30304	103	97	105	101	93	101
5621	30305	100	95	104	99	92	98
5622	WGL -14 (RP)	101	101	103	102	91	97
Exp. Mean		106	100	104	102	92	99

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Table No. 9.16: Plant Height (cm) of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	ZONE III-EASTERN					
		ODISHA (0)	BIHAR		BIHAR(1)	JHARKHAND (0)	WEST BENGAL (1)
		@JYP	BKG	@PTN	Mean	@RCI	@PNB
5607	30296	90.75	82.55	91.17	82.55	66.33	61.40
5608	30246	85.73	88.44	88.60	88.44	67.00	65.60
5609	30263	96.07	77.33	83.53	77.33	63.67	63.80
5610	30297	85.66	92.55	88.97	92.55	68.00	60.20
5611	30298	96.36	86.55	87.33	86.55	70.00	67.60
5612	Improved Samba Mahsuri (RP)	86.79	88.11	89.50	88.11	75.00	64.80
Exp. Mean		90.23	85.92	88.18	85.92	68.33	63.90

Table No. 9.16 Contd.: Plant Height (cm) of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	ZONE III-EASTERN		ZONE-V – CENTRAL				
		UTTAR PRADESH (1)	ZONE 3 (2)	CHHATTISGARH	CHHATTISGARH (1)	MAHARASHTRA 1 (1)	MA1 (1)	
		MSD	Mean	RPR	@JDP	Mean	SKL	Mean
5607	30296	92.00	87.28	92.62	78.80	92.62	93.00	93.00
5608	30246	120.00	104.22	84.29	83.80	84.29	65.00	65.00
5609	30263	110.00	93.67	82.23	86.40	82.23	65.00	65.00
5610	30297	109.00	100.78	86.02	76.60	86.02	75.00	75.00
5611	30298	107.00	96.78	100.10	70.40	100.10	73.00	73.00
5612	Improved Samba Mahsuri (RP)	103.00	95.56	92.19	66.20	92.19	76.00	76.00
Exp. Mean		106.83	96.38	89.58	77.03	89.58	74.50	74.50

Table No. 9.16 Contd.: Plant Height (cm) of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	Zone 5 (2)	ZONE VI – WESTERN							Overall Mean (7)
			MAHARASHTRA 2 (1)	MA2 (1)	MAHARASHTRA (2)	GUJARAT		GUJARAT (2)	Z6 (3)	
			Mean	KJT	Mean	Mean	NVS	NWG	Mean	
5607	30296	92.81	94.80	94.80	93.90	102.00	126.95	114.48	107.92	97.70
5608	30246	74.65	84.60	84.60	74.80	102.40	125.65	114.03	104.22	95.77
5609	30263	73.62	84.60	84.60	74.80	103.10	118.10	110.60	101.93	91.48
5610	30297	80.51	95.00	95.00	85.00	106.50	124.30	115.40	108.60	98.34
5611	30298	86.55	95.60	95.60	84.30	102.90	128.55	115.73	109.02	99.10
5612	Improved Samba Mahsuri (RP)	84.09	91.80	91.80	83.90	106.00	125.30	115.65	107.70	97.49
Exp. Mean		82.04	91.07	91.07	82.78	103.82	124.81	114.31	106.56	96.65

Table No. 9.16 contd.: Plant Height (cm) of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						
		ANDHRA PRADESH		ANDHRA PRADESH (1)	TELANGANA		TELANGANA (2)	TAMIL NADU (1)
		@MTU	NLR	Mean	RNR	WGL	Mean	CBT
5601	30291	135.00	86.93	86.93	88.53	96.13	92.33	100.60
5602	30292	135.60	97.07	97.07	93.07	110.60	101.83	108.17
5603	30293	115.70	90.47	90.47	92.00	93.93	92.97	103.12
5604	30294	126.40	93.67	93.67	92.47	107.60	100.03	103.67
5605	30295	121.70	94.27	94.27	88.07	98.07	93.07	101.63
5606	Swarna (RP)	123.00	90.73	90.73	79.27	90.53	84.90	99.71
5607	30296	120.50	83.53	83.53	79.67	94.33	87.00	95.82
5608	30246	115.30	79.60	79.60	75.40	87.33	81.37	86.45
5609	30263	111.50	80.20	80.20	75.33	90.13	82.73	89.38
5610	30297	122.70	78.47	78.47	79.00	95.00	87.00	94.30
5611	30298	116.70	79.80	79.80	82.00	96.73	89.37	93.20
5612	Improved Samba Mahsuri (RP)	112.80	74.33	74.33	85.67	92.87	89.27	91.57
5613	30299	107.90	76.07	76.07	87.20	88.33	87.77	102.97
5614	30300	107.70	72.27	72.27	86.67	91.73	89.20	101.90
5615	29209	129.60	91.13	91.13	90.73	103.93	97.33	107.80
5616	Samba Mahsuri (RP)	107.50	78.40	78.40	79.73	93.40	86.57	93.50
5617	30301	113.70	94.67	94.67	88.60	101.07	94.83	96.23
5618	30302	104.80	71.27	71.27	81.00	88.67	84.83	86.40
5619	30303	158.00	88.80	88.80	94.60	103.40	99.00	108.10
5620	30304	120.20	87.07	87.07	94.53	96.60	95.57	101.33
5621	30305	116.10	90.27	90.27	94.07	109.53	101.80	104.13
5622	WGL -14 (RP)	128.70	91.93	91.93	94.67	105.10	99.88	110.67
Exp. Mean		120.50	85.04	85.04	86.47	97.05	91.76	99.12

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Table No. 9.16 Contd.: Plant Height (cm) of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN					
		KERALA (1)	KARNATAKA		KARNATAKA (2)	PUDUCHERRY (1)	Zone 7 (8)
		PTB	MND	GNV	Mean	KRK	Mean
5601	30291	97.96	96.45	91.50	93.98	104.93	95.38
5602	30292	87.66	98.27	109.50	103.88	113.20	102.19
5603	30293	86.20	89.67	92.00	90.83	102.80	93.77
5604	30294	96.06	98.53	109.00	103.77	117.63	102.33
5605	30295	97.96	73.27	89.00	81.13	103.20	93.18
5606	Swarna (RP)	90.60	95.20	90.50	92.85	104.70	92.66
5607	30296	92.96	78.80	86.50	82.65	100.50	89.01
5608	30246	97.00	98.80	73.00	85.90	100.00	87.20
5609	30263	100.73	85.60	77.00	81.30	100.53	87.36
5610	30297	93.53	86.00	88.50	87.25	98.20	89.12
5611	30298	88.06	77.40	84.50	80.95	112.27	89.25
5612	Improved Samba Mahsuri (RP)	100.66	78.00	80.00	79.00	97.63	87.59
5613	30299	96.34	85.20	76.50	80.85	112.33	90.62
5614	30300	88.10	68.00	94.50	81.25	98.57	87.72
5615	29209	87.53	75.60	98.50	87.05	110.57	95.72
5616	Samba Mahsuri (RP)	96.50	86.00	88.00	87.00	98.47	89.25
5617	30301	98.26	78.40	98.50	88.45	115.40	96.39
5618	30302	92.16	87.20	82.00	84.60	96.87	85.70
5619	30303	97.13	93.20	104.00	98.60	104.63	99.23
5620	30304	95.87	88.40	99.50	93.95	106.77	96.26
5621	30305	97.06	86.80	92.50	89.65	108.13	97.81
5622	WGL -14 (RP)	97.23	84.40	101.00	92.70	117.70	100.34
Exp. Mean		94.34	85.87	91.18	88.53	105.68	93.09

Table No. 9.17: Panicles/m2 of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	ZONE III-EASTERN					
		ODISHA (0)	BIHAR		BIHAR(1)	JHARKHAND (0)	WEST BENGAL (1)
		@JYP	BKG	@PTN	Mean	@RCI	@PNB
5607	30296	349	285	320	285	218	300
5608	30246	360	322	389	322	196	284
5609	30263	439	318	358	318	180	249
5610	30297	354	264	386	264	204	239
5611	30298	316	339	322	339	190	285
5612	Improved Samba Mahsuri (RP)	406	364	325	364	214	261
Exp. Mean		371	315	350	315	200	270

Table No. 9.17 Contd.: Panicles/m2 of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	ZONE III-EASTERN				ZONE-V - CENTRAL			
		UTTAR PRADESH (1)		ZONE 3 (2)	CHHATTISGARH		CHHATTISGARH (1)	MAHARASHTRA 1 (1)	MA1 (1)
		MSD	Mean	RPR	@JDP	Mean	SKL	Mean	
5607	30296	280	283	205	113	205	300	300	
5608	30246	292	307	183	114	183	195	195	
5609	30263	303	311	172	124	172	189	189	
5610	30297	295	280	181	112	181	210	210	
5611	30298	290	315	189	126	189	237	237	
5612	Improved Samba Mahsuri (RP)	305	334	230	122	230	215	215	
Exp. Mean		294	305	193	118	193	224	224	

Table No. 9.17 Contd.: Panicles/m2 of entries in AVT1- NIL (LATE) (ZONE-III, V & VI), Kharif 2021

Entry No	IET No	Zone 5 (2)	ZONE VI – WESTERN							Overall Mean (7)
			MAHARASHTRA 2 (1)	MA2 (1)	MAHARASHTRA (2)	GUJARAT		GUJARAT (2)	Z6 (3)	
			Mean	KJT	Mean	Mean	NVS	NWG	Mean	
5607	30296	252	216	216	258	340	286	313	281	273
5608	30246	189	221	221	208	300	286	293	269	257
5609	30263	181	218	218	203	224	261	243	234	241
5610	30297	195	206	206	208	272	275	273	251	243
5611	30298	213	213	213	225	196	265	231	225	247
5612	Improved Samba Mahsuri (RP)	223	213	213	214	298	265	282	259	270
Exp. Mean		209	215	215	220	272	273	272	253	255

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Table No. 9.17 contd.: Panicles/m² of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						
		ANDHRA PRADESH		ANDHRA PRADESH (1)	TELANGANA		TELANGANA (2)	TAMIL NADU (1)
		@MTU	NLR	Mean	RNR	WGL	Mean	CBT
5601	30291	319	307	307	442	409	426	393
5602	30292	321	309	309	409	410	410	372
5603	30293	317	189	189	422	376	399	380
5604	30294	304	369	369	404	422	413	397
5605	30295	328	276	276	440	400	420	403
5606	Swarna (RP)	337	302	302	447	403	425	402
5607	30296	312	409	409	436	394	415	430
5608	30246	297	344	344	398	430	414	407
5609	30263	304	338	338	422	398	410	415
5610	30297	319	380	380	411	399	405	385
5611	30298	310	296	296	409	391	400	395
5612	Improved Samba Mahsuri (RP)	315	369	369	507	376	441	397
5613	30299	310	282	282	433	365	399	425
5614	30300	332	327	327	436	398	417	437
5615	29209	315	280	280	440	398	419	420
5616	Samba Mahsuri (RP)	299	478	478	476	403	439	428
5617	30301	328	329	329	442	397	420	408
5618	30302	317	447	447	447	404	425	448
5619	30303	308	347	347	451	451	451	440
5620	30304	312	282	282	444	393	419	403
5621	30305	323	382	382	522	385	454	420
5622	WGL -14 (RP)	319	333	333	484	396	440	423
Exp. Mean		316	335	335	442	400	421	410

Table No. 9.17 Contd.: Panicles/m² of entries in AVT1- NIL (LATE) (ZONE-VII), Kharif 2021

Entry No	IET No	ZONE VII – SOUTHERN						
		KERALA (1)		KARNATAKA		KARNATAKA (2)	PUDUCHERRY (1)	Zone 7 (8)
		PTB	MND	GNV	Mean	KRK	Mean	
5601	30291	636	349	353	351	320	401	
5602	30292	595	371	318	345	320	388	
5603	30293	620	338	360	349	330	377	
5604	30294	620	340	360	350	350	408	
5605	30295	631	362	336	349	320	396	
5606	Swarna (RP)	603	376	437	406	310	410	
5607	30296	568	307	389	348	340	409	
5608	30246	628	322	340	331	280	394	
5609	30263	564	362	366	364	300	396	
5610	30297	670	373	325	349	310	407	
5611	30298	589	373	369	371	300	390	
5612	Improved Samba Mahsuri (RP)	570	331	418	375	310	410	
5613	30299	566	284	420	352	320	387	
5614	30300	618	313	369	341	310	401	
5615	29209	628	353	313	333	290	390	
5616	Samba Mahsuri (RP)	692	380	350	365	320	441	
5617	30301	652	373	321	347	292	402	
5618	30302	568	313	420	367	310	420	
5619	30303	685	313	363	338	350	425	
5620	30304	581	291	327	309	280	375	
5621	30305	601	342	348	345	330	416	
5622	WGL -14 (RP)	670	353	393	373	300	419	
Exp. Mean		616	342	363	353	313	403	

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Table No. 9.18: Grain quality characteristics of entries in AVT 1-NIL (Yield Trial- Late duration), kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
5601	30291	81.4	66.4	44.1	5.80	2.06	2.81	MS	VOC	4.0	25.52	22
5602	30292	80.5	71.0	62.1	5.48	2.24	2.44	SB	VOC	4.0	23.70	29
5603	30293	79.3	71.1	66.7	5.50	1.89	2.91	MS	A	3.0	15.40	53
5604	30294	80.3	69.2	57.3	5.20	2.27	2.29	SB	A	4.0	27.72	40
5605	30295	78.1	70.5	64.5	5.92	2.07	2.85	MS	VOC	4.0	23.29	22
5606	Swarna (RP)	80.0	68.9	61.7	4.94	1.95	2.53	MS	A	4.0	24.55	22
5607	30296	80.4	70.4	56.0	5.26	1.85	2.84	MS	VOC	4.0	22.64	36
5608	30246	79.2	69.4	48.7	5.06	1.79	2.82	MS	A	4.0	24.75	22
5609	30263	78.3	69.6	45.3	5.14	1.79	2.87	MS	A	4.0	23.93	22
5610	30297	77.5	67.3	53.8	5.29	1.89	2.77	MS	VOC	4.0	26.42	22
5611	30298	78.8	68.9	51.0	5.30	1.91	2.77	MS	A	5.0	24.55	22
5612	Improved Samba Mahsuri	79.9	69.7	58.1	5.19	1.77	2.93	MS	A	4.0	23.17	22
5613	30299	80.4	69.1	49.7	5.77	1.85	3.11	SS	VOC	4.0	26.04	43
5614	30300	81.6	69.6	50.6	5.76	1.85	3.11	SS	VOC	4.0	24.28	22
5615	29209	80.0	71.3	60.8	5.58	1.91	2.92	MS	A	4.0	25.31	45
5616	Samba Mahsuri	79.9	69.2	57.5	4.98	1.77	2.81	MS	VOC	4.0	24.64	22
5617	30301	79.5	64.6	57.0	4.89	1.83	2.67	MS	A	5.0	25.54	33
5618	30302	78.9	69.9	52.3	5.28	1.93	2.73	MS	A	5.0	23.87	22
5619	30303	79.6	73.0	34.7	5.18	1.92	2.69	MS	A	4.5	23.67	22
5620	30304	80.6	68.1	39.8	4.70	1.80	2.61	MS	A	4.0	20.88	22
5621	30305	81.0	71.5	52.7	5.23	1.86	2.81	MS	A	5.0	24.75	22
5622	WGL-14 (RP)	80.8	72.3	55.6	5.22	1.86	2.80	MS	A	5.0	23.70	22

HULL: Hulling (%); **MILL:** Milling (%); **HRR:** Head Rice Recovery (%); **KL:** Kernel Length (mm); **KB:** Kernel Breadth (mm); **L/B:** Length and breadth ratio; **Grain Chalk:** Grain Chalkiness; **VOC:** Very occasionally present; **A:** Absent **ASV:** Alkali Spreading Value; **AC:** Amylose Content(%); **GC:** Gel Consistency; **LB Long Bold;** **SB:** Short Bold; **LS:** Long Slender; **MS:** Medium Slender; **SS:** Short Slender.

ADVANCE VARIETY TRIAL-1 LOW PHOSPHORUS TOLERANCE (AVT 1-LPT)

Locations: 8 **Test Entries: 6**
Checks: Positive – Swarna and Rasi; Susceptible - Improved **Table:10.1**
Samba Mahsuri, BPT 5204

AVT 1 Low Phosphorous Tolerance trial was constituted with 6 test entries (IETs 28816, 28818, 27641, 28066 R, 28065 R, 28821 R) and two positive checks (Swarna and Rasi), two negative checks (Improved Samba Mahsuri, BPT 5204) and two Recurrent parents (MTU 1121 and MTU 1010). The trial was conducted at 8 locations (Ranchi, Varanasi, Raipur, Karjat, Vadagaon, IIRR, Gangavati and Mandya). Based on less CV and Non significance factor only 2 location data (Varanasi, Mandya) was considered for promotion under P 0 condition. The data pertaining to grain yield and quality are presented in tables 10.2 and 10.3. The data from Raipur, IIRR and Gangavati was considered based on CV, F factor under P 50% Phosphorous conditions. **Among the test entries, 3 entries IETs 28818, 28066, 28065 are NILs for Low Phosphorous Tolerance by introgressing Pup 1 QTL. Hence these entries are discussed separately in AVT 1 NIL IME and IM trial.** The performance of remaining 3 entries IETs 28816, 27641, 28821 R is discussed here.

The trial was conducted at three levels of Phosphorous P 0 (No application of phosphorous), P 50 % (50% of recommended Phosphorous) and 100% Recommended dose of Phosphorous. In all three levels, Nitrogen and Potash are applied as per recommended doses. For promotion of entries, performance under P 0 and P 50% is considered. Among the positive checks, Swarna yielded highest grain yield of 5.17 t/ha. At P 0 levels, the entries IET 28821 (29.16%), IET 27641 (26.2%) and IET 28818 (20.5%) were found to be superior over best check on over all mean basis. At P 50 % levels, the entries IET 28816 (29%), IET 28818 (12%), IET 27641 (13%) and IET 28066 (10%) were found to be promising for low phosphorous on over all mean basis. The entry IET 28821 is promoted to third year of testing.

The trial was conducted in collaboration with Crop Production department and further details of the trails may be obtained from Progress report (Crop Production), AICRIP.

INITIAL VARIETY TRIAL -LOW PHOSPHORUS TOLERANCE (IVT-LPT)

Locations: 7 **Test Entries: 36**
Checks: Positive – Swarna and Rasi; Susceptible - Improved **Table:10.4**
Samba Mahsuri, BPT 5204

IVT Low Phosphorous Tolerance trial was constituted with 36 test entries, two positive checks (Swarna and Rasi), two susceptible checks (Improved Samba Mahsuri, BPT 5204) and two Recurrent parents (MTU 1121 and IR 64). The trial was conducted at three levels of Phosphorous P 0 (No application of phosphorous), P 50 % (50% of recommended Phosphorous) and 100% Recommended dose of Phosphorous. In all three levels, Nitrogen and Potash are applied as per recommended doses. The data pertaining to grain yield are presented in table 10.5. For promotion of entries, performance under P 0 and P 50% is considered. Under P 0 condition, the trial was conducted at 5 locations viz., Varanasi, Karjat, Vadagaon, Gangavati, Mandya of which the data from Karjat, Gangavati and Mandya was considered for analysis. Under P 50%, the trial was conducted at 6 locations viz., Varanasi, Raipur, Karjat, Vadagaon, Gangavati and IIRR of which data from four locations (Raipur, Karjat, Gangavati and IIRR) was considered for analysis. **Among the test entries, 3 entries IET 29548 (IR 64+Pup1), IET 30253 (MTU 1121 + Pup1), IET 30254 (MTU 1121+ Pup 1) are NILs for Low Phosphorous Tolerance by introgressing Pup 1 QTL. Hence these entries are discussed separately in AVT 1 NIL IME and IM trial.**

The entries are promoted on the basis of CD value as decided in earlier ARGM. Under P 0 condition, 15 entries performed significantly superior to best check Swarna. Therefore these 15 entries viz., IET 29549, 29546, 30230, 29560, 29558, 30233, 30235, 30240, 30241, 30242, 30244, 30245, 30247, 30252 and 30254 are promoted to second year of testing. At P 50%, none of the test entry performed better than the best check Swarna.

The trial was conducted in collaboration with Crop Production department and further details of the trails may be obtained from Progress report (Crop Production), AICRIP.

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Table No. 10.1: Composition of entries in Advance Variety Trial 1– Low Phosphorus Tolerance Trial (AVT 1-LPT), Kharif2021

Entry No.	IET No.	Designation	Cross combination	GT
3rd Year of testing:				
5201	28816	MTU 1329 (MTU 2513-24-2-2-1)	BPT 5204 / NLR 34449	MS
5202	BPT 5204 (Sensitive Check)			
5203	28818	RP 6317-S35-BC2F4-49-25-6-21	MTU 1121*2 / Swarna	MS
5204	MTU 1121 (RP)			
5205	27641	RP Bio 4919-B-B-NSR 86	KMR3 / O. rufipogon	SB
5206	Swarna (Positive Check)			
2nd Year of testing:				
5207	28066 (R)	RP 5973-13-1-6-67-129-57	MTU 1010*2 / Swarna	MS
5208	MTU 1010 (RP)			
5209	28065 (R)	RP 5972-13-1-6-67-129-266	MTU 1010*2 / Vandana	SB
5210	Improved Samba Mahsuri (Negative Check)			
5211	Rasi (Positive Check)			
5212	28821 (R)	RP 5964-82	KMR 3R / Swarna*1	LB

Table No.10.2: Grain yield (Kg/ha) of AVT 1 - LPT (P50) Kharif 2021

Entry No	IET No	Zone 5 (1)						Zone 6	
		Jharkhand		Uttar Pradesh		Chhattisgarh		Maharashtra	
		@Ranchi		@Varanasi		Raipur		@Kariat	
5201	28816	4.84	5	4.10	8	4.36	3	3.39	9
5202	BPT 5204 (Sensitive Check)	4.60	7	4.00	9	3.26	9	3.00	10
5203	28818	4.81	6	5.53	3	4.63	1 7%	3.57	7
5204	MTU 1121 (RP)	5.14	2	5.50	4	4.41	2	4.09	2
5205	27641	5.04	3	5.40	5	4.21	5	3.54	8
5206	Swarna (Positive Check)	5.22	1	6.73	1	4.32	4	3.98	4
5207	28066 (R)	4.87	4	5.33	6	3.56	8	4.09	3
5208	MTU 1010 (RP)	4.34	9	4.77	7	2.97		3.70	5
5209	28065 (R)	4.02	10	3.60	11	2.87		3.58	6
5210	Improved Samba Mahsuri (Negative Check)	4.52	8	3.90	10	3.02	10	4.19	1
5211	Rasi (Positive Check)			0.00	12	4.00	7		
5212	28821 (R)			6.30	2	4.11	6		
Exp. Mean		4.74		4.60		3.81		3.71	
F Value		1.89(p=0.112)NS		182(p<0.0001)S		10.70(p<0.0001)S		1.67(p=0.23)NS	
CD		0.74		0.35		0.53		1.00	
CV%		9.08		4.49		8.18		11.80	

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No.10.2 Contd.: Grain yield (Kg/ha) of AVT 1 - LPT (P50) Kharif 2021

Entry No	IET No	Zone 6		Zone 7			Zone 7 (2)		Overall (3)		
		Maharashtra		Telangana		Karnataka	Mean		Mean		
		@ Vadagaon		IIRR		Gangavati					
5201	28816	4.43	2	8.59	1	4.90	3	6.74	1	5.95	1 * 29%
5202	BPT 5204 (Sensitive Check)	4.51	1	6.31	7	4.11	9	5.21	7	4.56	7
5203	28818	3.91	5	6.58	3	4.26	7	5.42	5	5.15	4 * 12%
5204	MTU 1121 (RP)	3.57	10	6.44	5	4.64	5	5.54	4	5.16	3
5205	27641	4.18	3	7.04	2	4.38	6	5.71	3	5.21	2 * 13%
5206	Swarna (Positive Check)	3.45		4.49	9	4.97	2	4.73	8	4.59	6
5207	28066 (R)	3.51		6.40	6	5.21	1	5.81	2	5.06	5 10%
5208	MTU 1010 (RP)	3.93	4	3.35	10	4.84	4	4.10	10	3.72	
5209	28065 (R)	3.72	8	6.56	4	4.01	10	5.28	6	4.48	8
5210	Improved Samba Mahsuri (Negative Check)	3.66	9	5.29	8	4.13	8	4.71	9	4.14	9
5211	Rasi (Positive Check)	3.82	7							4.00	
5212	28821 (R)	3.84	6							4.11	10
Exp. Mean		3.88		6.10		4.55		5.32		4.68	
F Value		891(p<0.0001)S		49.03(p<0.0001)S		6.16(p<0.0004)S		39.43(p<0.0001)S		49.10(p<0.0001)S	
CD		0.04		0.55		0.46		0.31		0.25	
CV%		0.56		5.27		5.87		3.4		3.13	

Table No. 10.2 contd.: Grain yield (Kg/ha) of AVT1 LPT (P0) Kharif 2021

Entry No	IET No	Zone 3				Zone 3 (1)		Zone 6			
		Jharkhand		Uttar Pradesh		Mean		Maharashtra			
		@ Ranchi		Varanasi				@ Karjat @ Vadagaon			
5201	28816	4.32	8	3.43	9	3.43	9	2.93	10	4.09	2
5202	BPT 5204 (Sensitive Check)	4.64	4	3.67	7	3.67	7	3.04	8	4.17	1
5203	28818	4.43	6	5.20	2	5.20	2	3.01	9	3.61	5
5204	MTU 1121 (RP)	5.02	2	5.03	6	5.03	6	3.22	4	3.30	10
5205	27641	4.80	3	5.10	5	5.10	5	3.10	7	3.86	3
5206	Swarna (Positive Check)	5.10	1	5.20	2	5.20	2	3.19	5	3.18	
5207	28066 (R)	4.53	5	5.13	4	5.13	4	3.45	2	3.24	
5208	MTU 1010 (RP)	4.12	9	3.50	8	3.50	8	3.32	3	3.63	4
5209	28065 (R)	3.96	10	3.23	10	3.23	10	3.17	6	3.44	8
5210	Improved Samba Mahsuri (Negative Check)	4.35	7	3.10		3.10		3.69	1	3.38	9
5211	Rasi (Positive Check)									3.53	7
5212	28821 (R)			5.80	1	5.80	1	11.54%		3.55	6
Exp. Mean		4.53		4.40		4.40		3.21		3.58	
F Value		1.50(p=0.21) NS		16.07(p<0.0001)S		16.07(p<0.0001)S		1.79(p=0.20)NS		700(p<0.0001)S	
CD		0.81		0.68		0.68		0.51		0.04	
CV%		10.50		9.06		9.06		7.03		0.65	

Table No.10.2 Contd.: Grain yield (Kg/ha) of AVT1 LPT (P0) Kharif 2021

Entry No	IET No	Zone 7			Zone 7 (1)		Overall (2)		
		Karnataka			Mean		Mean		
		Mandya	@Gangavati						
5201	28816	6.54	5	4.64	4	6.54	5 * 27%	6	
5202	BPT 5204 (Sensitive Check)	4.74	8	3.94	9	4.74	8	4.20	8
5203	28818	7.27	3	4.50	5	7.27	3 * 41%	6.24	3* 20.50%
5204	MTU 1121 (RP)	6.85	4	4.68	3	6.85	4	5.94	4
5205	27641	7.96	1	4.42	7	7.96	1 * 55%	6.53	2* 26.20%
5206	Swarna (Positive Check)	5.15	6	4.42	8	5.15	6	5.17	5
5207	28066 (R)	4.43	9	4.90	2	4.43	9	4.78	7
5208	MTU 1010 (RP)	4.84	7	5.69	1	4.84	7	4.17	9
5209	28065 (R)	3.75		3.88	10	3.75		3.49	
5210	Improved Samba Mahsuri (Negative Check)	4.29	10	4.46	6	4.29	10	3.70	10
5211	Rasi (Positive Check)								
5212	28821 (R)	7.56	2			7.56	2 * 47%	6.68	1* 29.16%
Exp. Mean		5.76		4.55		5.76		5.08	
F Value		13.22(p<0.0001)S		17.93(p<0.0001)S		13.22(p<0.0001)S		19.42(p<0.0001)S	
CD		1.12		0.32		1.12		0.70	
CV%		11.40		4.12		11.40		8.05	

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Table No. 10.3: Grain quality characteristics of entries in AVT 1-LPT, kharif 2021

Entry No.	IET No.	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
5201	28816	79.7	70.8	68.2	5.50	2.03	2.70	MS	VOC	4.0	24.17	22
5202	BPT 5204	81.3	72.9	70.5	5.14	1.87	2.74	MS	A	4.0	24.46	22
5203	28818	81.3	73.2	71.6	5.41	2.09	2.58	MS	VOC	7.0	25.25	47
5204	MTU-1121 (RP)	81.0	73.3	71.9	5.68	2.09	2.67	MS	VOC	4.0	22.82	22
5205	27641	78.1	69.7	67.5	5.47	2.49	2.19	SB	VOC	5.0	25.93	45
5206	Swarna	77.2	68.4	63.1	5.12	2.11	2.42	SB	VOC	4.0	24.11	22
5207	28066	80.5	72.1	70.8	5.38	2.12	2.53	MS	VOC	4.0	23.70	64
5208	MTU-1010	79.8	71.5	70.5	6.30	2.09	3.01	LS	VOC	4.0	23.67	62
5209	28065	78.3	68.1	63.1	4.92	2.05	2.40	SB	VOC	7.0	25.57	47
5210	Improved Samba Mahsuri	78.9	72.1	70.0	5.74	2.12	2.70	MS	A	7.0	23.58	22
5211	Rasi											
5212	28821	78.4	72.0	70.9	6.48	2.33	2.78	LB	A	7.0	24.37	22

HULL: Hulling (%); MILL: Milling (%); HRR: Head Rice Recovery (%); KL: Kernel Length (mm); KB: Kernel Breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent ASV: Alkali Spreading Value; AC: Amylose Content(%); GC: Gel Consistency; LB Long Bold; SB: Short Bold; LS: Long Slender; MS: Medium Slender; SS: Short Slender.

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Table No. 10.4: Composition of entries in Initial Variety Trial– Low Phosphorus Tolerance Trial (IVT-LPT), Kharif2021

Entry No.	IET No.	Designation	Cross combination	GT
1st Year of testing:				
5301	29547	CRR 759-1	Sahbhagidhan / IR 87707-446-B-B	LB
5302	29549	RP 5977-MS-M-112-1-9-22-4-6-3	BPT 5204 Mutant	MS
5303	29554	RP 6462-C5-2	Swarna / O. nivara 166-2 // Swarna	MB
5304	29546	Pusa 5417-15-11-9-54-17	Pusa 44 / IR64-Pup 1-F // Pusa 44*2	LB
5305	30230	RP 6112-MS-M-92-11-5-7-33-6-2	BPT 5204 Mutant	MB
5306	29560	RP 5593-83-27-1	MTU 1010 / N22	LB
5307	29558	Pusa 5417-15-11-9-50-27	Pusa 44 / IR64-Pup 1-F // Pusa 44*2	LS
5308	30231	RP 6524-MSA-16-388-16-206-1	Swarna / MTU 1010	LS
5309	30232	CR 4341-18269-6-1-4-5-4	CR Dhan 801 / CR Dhan 310	MS
5310	30233	WGL-1495	MTU 1121*2 / Swarna	MS
5311	30234	RP 6366-JBC-154-1-11-1-1-1	WGL14 / RP 5925-24	MS
5312	30235	RP 6522-MSA-16-24-16-1550	MTU 1010 / Swarna	LS
5313	30236	RP 5976-299-15-8-9	Improved Samba Mahsuri / Wazuhophek	MS
5314	30237	RP Bio 4918-B2-NPS 1	Swarna / O.nivara	LS
5315	30238	RP 6112-MS-M-132-3-7-22-4-6-3	BPT 5204 Mutant	MS
5316	30239	RP 5976-78-2-4-19	Improved Samba Mahsuri / Wazuhophek	SB
5317	29552	RP 5976-RMS-340	Improved Samba Mahsuri / Wazuhophek	MB
5318	29548	RP 5974-RMS-3-2-8-38-255-32	IR64*2 / Swarna	LS
5319	Rasi (Positive Check)			
5320	30240	RP 6524-MSA-16-399-16-332	Swarna / MTU 1010	MS
5321	30241	RP 6500-MAID-90-9-2-1-1-1-1	WGL14 / Improved Samba Mahsuri // WGL14 / Rathuheenati /// WGL14 / RP 5925-24 // WGL14 / IR 96321-1447-561-B-1 /// WGL14 / IR 81896-96-B-B-195 // WGL14 / RP Patho-3	MS
5322	30242	RP 5977-MS-M-33-4-8-3-7-5-1	BPT 5204 Mutant	LB
5323	30243	RP 5976-5-28-2-11	Improved Samba Mahsuri / Wazuhophek	SB
5324	Swarna (Positive Check)			
5325	30244	RP 6526-MSA-16-493-16-1484	IR 64 / Swarna	LB
5326	30245	RP 6499-MAID-93-12-9-2-1-1-1	WGL14 / RP Patho-3 // WGL14/ Rathuheenati // WGL14 / RP 5925-24 // WGL14 / IR 96321-1447-561-B-1 /// WGL14 / IR 81896-96-B-B-195	MB
5327	30246	RP 5970-RMS-1-3-17-65-27-41	Improved Samba Mahsuri*2 / Swarna	MS
5328	29555	RP 6112-MS-M-38-8-4-2-99-7-5	BPT 5204 Mutant	MS
5329	29563	RP 5594-103-4-1	MTU 1010 / RPHR 1005	MB
5330	Improved Samba Mahsuri (Negative Check)			
5331	30247	RP 6525-MSA-16-439-16-491	Nin 1035 / IR 64	MS
5332	29562	RP 6167-SN124	Swarna / O. nivara	MS
5333	30248	RP 6521-MSA-16-18-16-968-1	(Tadung/Sampada) / Pusa 1121	LB
5334	30249	WGL-1485	MTU 1121*2 / Swarna	MB
5335	30250	RP 5975-RMS-5	Rasi / Improved Samba Mahsuri	MS
5336	30251	RP 6523-MSA-16-397-16-1504	IR 64 / Rasi	MS
5337	30252	RP Bio 4919-B2-NSR 5	KMR 3 / O.rufipogon	SB
5338	30253	RP 6317-RMS-S35-BC2F4-49-25-8-26	MTU 1121*2 / Swarna	MB
5339	BPT 5204 (Sensitive Check)			
5340	30254	RP 6317- RMS-S35-BC2F4-49-25-5-10	MTU 1121*2 / Swarna	MB
5341	IR 64 (RP)			
5342	MTU 1121 (RP)			

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Table No.10.5: Grain yield (t/ha) of IVT- LPT P0 Kharif 2021

Entry No	IET No	ZONE III (0)		ZONE VI (1)			ZONE VI (1)			
		Uttar Pradesh		MAHARASHTRA			MAHARASHTRA (1)			
		@VARANASI		KARJAT	@ VADAGAON		Mean			
5301	29547	6.30	9	3.70		4.60	5	3.70		
5302	29549	5.37		3.48		3.71		3.48		
5303	29554	5.57		3.57		4.48	9	3.57		
5304	29546	4.27		3.78	8	3.99		3.78	8	
5305	30230	6.92	5 *			3.46				
5306	29560	5.88		3.74	9	4.25		3.74	9	
5307	29558	4.60		3.89	7	3.78		3.89	7	
5308	30231	4.40		3.48		3.98		3.48		
5309	30232	7.17	3 *	3.40		4.14		3.40		
5310	30233	3.23		3.56		3.63		3.56		
5311	30234			3.24		3.75		3.24		
5312	30235	6.07		3.69		3.90		3.69		
5313	30236	3.47		3.43		4.10		3.43		
5314	30237	5.89		3.28		4.80	2	3.28		
5315	30238	4.40		3.66		4.31		3.66		
5316	30239	3.61		3.43		3.99		3.43		
5317	29552	7.07	4 *	4.10	4	4.02		4.10	4	
5318	29548	5.42		4.03	6	4.32		4.03	6	
5319	Rasi (Positive Check)	6.15	10			4.41				
5320	30240	5.53		3.37		3.80		3.37		
5321	30241	5.12		4.37	1	4.62	4	4.37	1*	
5322	30242	7.50	1 *	3.38		4.71	3	3.38		
5323	30243	3.83		4.11	3	4.08		4.11	3	
5324	Swarna (Positive Check)			4.11	2	3.73		4.11	2	
5325	30244			4.04	5	4.36		4.04	5	
5326	30245	5.51		3.65		3.60		3.65		
5327	30246	3.13		3.24		3.66		3.24		
5328	29555	2.87		3.52		4.10		3.52		
5329	29563	5.53		3.48		3.88		3.48		
5330	Improved Samba Mahsuri (Negative Check)	4.03		3.73	10	3.82		3.73	10	
5331	30247	5.40		3.35		3.99		3.35		
5332	29562					4.01				
5333	30248	6.48	8	3.35		4.58	6	3.35		
5334	30249	6.70	6 *	3.54		3.67		3.54		
5335	30250	7.18	2 *	3.69		4.00		3.69		
5336	30251	5.47		3.26		3.78		3.26		
5337	30252	5.82		3.54		4.51	8	3.54		
5338	30253	6.59	7 *	3.35		4.99	1	3.35		
5339	BPT 5204 (Sensitive Check)	5.40		3.29		3.61		3.29		
5340	30254	4.50		3.18		3.75		3.18		
5341	IR 64 (RP)	5.70		3.37		4.42	10	3.37		
5342	MTU 1121 (RP)	4.92		3.28		4.57	7	3.28		
Exp. Mean		5.34		3.58			4.09		3.58	
F Value		69.03(p<0.0001)S		7.06(p<0.0001)S			443.17(p<0.0001)S		443.17(p<0.0001)S	
CD		0.40		0.30			0.06		0.06	
CV%		4.65		5.20			0.85		0.85	

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No.10.5 Contd.: Grain yield (t/ha) of IVT- LPT P0 Kharif 2021

Entry No	IET No	ZONE VII						Overall (3)	
		KARNATAKA				Z7(2)		Mean	
		GANGAVATHI		MANDYA		Mean			
5301	29547	4.02		5.83	*	4.93	*	4.52	
5302	29549	5.24	1	6.54	*	5.89	3 *	5.09	4 *
5303	29554	4.02		4.02		4.02		3.87	
5304	29546	3.89		6.67	9 *	5.28	*	4.78	10 *
5305	30230	3.92		6.88	6 *	5.40	9 *	5.40	1 *
5306	29560	4.58	6	6.93	4 *	5.75	4 *	5.08	5 *
5307	29558	3.40		6.77	7 *	5.08	*	4.68	*
5308	30231	3.64		6.72	8 *	5.18	*	4.61	
5309	30232	4.24		6.18	*	5.21	*	4.61	
5310	30233	4.20		6.32	*	5.26	*	4.69	*
5311	30234	4.27				4.27		3.76	
5312	30235	4.24		7.11	2 *	5.67	5	5.01	6 *
5313	30236	4.33	10	4.23	*	4.28		4.00	
5314	30237	4.28		4.61	*	4.44		4.06	
5315	30238	4.13		5.80	*	4.96	*	4.53	
5316	30239	3.97		5.75	*	4.86	*	4.38	
5317	29552	3.62		4.32	*	3.97		4.01	
5318	29548	3.95		4.85	*	4.40		4.27	
5319	Rasi (Positive Check)								
5320	30240	5.07	3	6.89	5 *	5.98	2 *	5.11	3 *
5321	30241	4.03		5.96	*	5.00	*	4.79	8 *
5322	30242	5.11	2	7.51	1 *	6.31	1 *	5.33	2 *
5323	30243	3.24		4.71	*	3.98		4.02	
5324	Swarna (Positive Check)	5.02	4	3.01		4.01		4.04	
5325	30244	3.95		6.07	*	5.01	*	4.69	*
5326	30245	4.56	7	5.93	*	5.24	*	4.71	*
5327	30246	3.57		4.39	*	3.98		3.73	
5328	29555	2.96		5.22	*	4.09		3.90	
5329	29563	3.61		6.44	*	5.03	*	4.51	
5330	Improved Samba Mahsuri (Negative Check)	4.04		4.93	*	4.48		4.23	
5331	30247	4.55	8	6.59	10 *	5.57	6 *	4.83	7 *
5332	29562								
5333	30248	4.02		5.33	*	4.68		4.23	
5334	30249	3.88		5.69	*	4.78	*	4.37	
5335	30250	3.99		4.38	*	4.18		4.02	
5336	30251	3.79		5.62	*	4.71		4.23	
5337	30252	3.81		6.93	3 *	5.37	10 *	4.76	*
5338	30253	4.15		5.59	*	4.87	*	4.36	
5339	BPT 5204 (Sensitive Check)	3.92		3.79		3.86		3.67	
5340	30254	4.55	9	6.39	*	5.47	8 *	4.71	*
5341	IR 64 (RP)	3.65		5.09	*	4.37		4.04	
5342	MTU 1121 (RP)	4.65	5	6.43	*	5.54	7 *	4.79	9 *
Exp. Mean		4.10		5.70		4.88		4.46	
F Value		1.70(p=0.0500)S		6.98(p<0.0001)S		5.84(p<0.0001)S		5.88(p<0.0001)S	
CD		1.07		1.15		0.75		0.62	
CV%		12.94		9.93		7.56		9.13	

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Table No10.5 contd.: Grain yield (t/ha) of IVT - LPT P50 Kharif 2021

Entry No	IET No	ZONE III (0)		ZONE V (1)		ZONE VI (1)											
		Uttar Pradesh (0)		Chhattisgarh (1)		MAHARASHTRA											
		@ VARANASI		RAIPUR		KARJAT		@ VADAGAON									
5301	29547	6.83	5	2.45		4.31		4.98	5								
5302	29549	4.47		3.55		3.95		4.02									
5303	29554	6.60	7	2.47		4.62	6	4.84	9								
5304	29546	3.47		3.57		4.32		4.32									
5305	30230	7.27	4	4.11	5			3.74									
5306	29560	6.77	6	3.62		4.60	8	4.60									
5307	29558	4.82		4.36	3	4.78	3	4.10									
5308	30231	4.78		3.93		4.80	2	4.31									
5309	30232	7.50	2	4.42	2	4.39		4.48									
5310	30233	1.80		4.22	4	4.07		3.93									
5311	30234			3.84		4.16		4.06									
5312	30235	4.13		2.80		4.06		4.22									
5313	30236	3.50		2.78		4.59	9	4.44									
5314	30237	5.87		4.00	9	4.68	4	5.20	2								
5315	30238	3.67		3.51		4.30		4.67									
5316	30239	3.49		3.15		4.08		4.32									
5317	29552	5.60		2.47		4.87	1	4.35									
5318	29548	5.31				4.67	5	4.67									
5319	Rasi (Positive Check)	5.57		4.45	1			4.77									
5320	30240	5.02		3.56		3.93		4.11									
5321	30241	5.15		3.30		4.44		5.00	4								
5322	30242	6.33	10	4.08	7	3.89		5.10	3								
5323	30243	3.62		3.38		4.50		4.42									
5324	Swarna (Positive Check)			3.61		4.30		4.03									
5325	30244			3.57		4.39		4.72									
5326	30245	5.70		3.23		4.28		3.89									
5327	30246	4.70		3.25		3.64		3.97									
5328	29555	3.31		3.09		4.61	7	4.44									
5329	29563	4.53		2.71		4.56		4.20									
5330	Improved Samba Mahsuri (Negative Check)	4.97		3.19		4.35		4.13									
5331	30247	6.43	9			4.10		4.31									
5332	29562			3.21				4.34									
5333	30248	7.70	1	3.27		4.28		4.96	6								
5334	30249	6.60	8	3.05		3.86		3.97									
5335	30250	7.38	3	3.67		3.84		4.33									
5336	30251	5.50		4.01	8	4.34		4.10									
5337	30252	4.98		3.94	10	4.33		4.88	8								
5338	30253	5.87		4.09	6	4.57	10	5.40	1								
5339	BPT 5204 (Sensitive Check)	5.62		3.56		4.52		3.91									
5340	30254	4.59		3.88		3.91		4.06									
5341	IR 64 (RP)	5.90		3.90		4.13		4.78	10								
5342	MTU 1121 (RP)	5.30		3.92		4.20		4.95	7								
Exp. Mean		5.28		3.53		4.31		4.43									
F Value		99.87(p<0.0001)S		12.08(p<0.0001)S		3.22(p<0.0001)S		471.34(p<0.0001)S									
CD		0.368		0.429		0.466		0.055									
CV%		4.28		7.48		6.65		0.77									
For promotion of entries																	
* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).																	
In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.																	

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Table No.10.5 Contd.: Grain yield (t/ha) of IVT - LPT P50 Kharif 2021

Entry No	IET No	ZONE VI (1)		ZONE VII			ZONE VII (2)		Overall (4)		
		MAHARASHTRA (1)		KARNATAKA			KARNATAKA (2)		Overall (4)		
		Mean		GANGAVATHI	IIRR		Mean		Mean		
5301	29547	4.31		3.81		3.32		3.56		3.47	
5302	29549	3.95		4.83	3	2.21		3.52		3.63	
5303	29554	4.62	6	4.17		2.88		3.52		3.54	
5304	29546	4.32		3.60		3.05		3.33		3.64	
5305	30230			3.60		3.96		3.78		3.89	
5306	29560	4.60	8	4.21		3.86		4.03	10	4.07	
5307	29558	4.78	3 *	3.44		4.42	6	3.93		4.25	6
5308	30231	4.80	2 *	3.35		3.11		3.23		3.80	
5309	30232	4.39		4.61	6	4.43	5	4.52	5	4.46	1
5310	30233	4.07		4.05		3.48		3.76		3.95	
5311	30234	4.16		4.28	10	3.13		3.70		3.85	
5312	30235	4.06		4.01		5.29	1 *	4.65	1	4.04	
5313	30236	4.59	9	3.91		3.14		3.52		3.61	
5314	30237	4.68	4	2.83		2.35		2.59		3.47	
5315	30238	4.30		4.33	9	4.75	3 *	4.54	3	4.22	7
5316	30239	4.08		4.03		4.05		4.04	9	3.83	
5317	29552	4.87	1 *	3.50		3.92		3.71		3.69	
5318	29548	4.67	5	3.41		1.89		2.65		3.32	
5319	Rasi (Positive Check)									4.45	2
5320	30240	3.93		5.05	2	4.00		4.52	4	4.13	10
5321	30241	4.44		2.97		3.33		3.15		3.51	
5322	30242	3.89		4.64	5	4.11	10	4.37	6	4.18	9
5323	30243	4.50		3.43		4.23	7	3.83		3.89	
5324	Swarna (Positive Check)	4.30		5.15	1	4.13	9	4.64	2	4.30	5
5325	30244	4.39		3.73		3.16		3.44		3.71	
5326	30245	4.28		4.78	4	2.90		3.84		3.80	
5327	30246	3.64		2.26		3.29		2.78		3.11	
5328	29555	4.61	7	3.55		3.14		3.34		3.59	
5329	29563	4.56		3.77		3.49		3.63		3.63	
5330	Improved Samba Mahsuri (Negative Check)	4.35		3.67		3.93		3.80		3.79	
5331	30247	4.10		3.54		4.02		3.78		3.89	
5332	29562									3.21	
5333	30248	4.28		3.77		2.28		3.02		3.40	
5334	30249	3.86		3.75		2.29		3.02		3.24	
5335	30250	3.84		3.52		3.29		3.40		3.58	
5336	30251	4.34		3.02		2.06		2.54		3.36	
5337	30252	4.33		3.71		3.99		3.85		3.99	
5338	30253	4.57	10	4.42	8	4.20	8	4.31	8	4.32	4
5339	BPT 5204 (Sensitive Check)	4.52		3.86		2.92		3.39		3.72	
5340	30254	3.91		3.52				3.52		3.77	
5341	IR 64 (RP)	4.13		3.80		4.89	2 *	4.34	7	4.18	8
5342	MTU 1121 (RP)	4.20		4.47	7	4.71	4 *			4.33	3
Exp. Mean		4.31		3.86		3.53		3.67		3.80	
F Value		3.22(p<0.0001)S		1.81(p=0.0329)S		33.12(p<0.0001)S		7.74(p<0.0001)S		11.01(p<0.0001)S	
CD		0.466		1.265		0.397		0.63		0.29	
CV%		6.65		16.23		6.92		10.65		4.67	

INITIAL VARIETY TRIAL - LOW NITROGEN TOLERANCE (IVT-LNT)

Locations: 7 **Test Entries:** 36
Checks: Positive – Varadhan, Tella Hamsa, Swarna and Rasi, **Table:**10.6
Susceptible - Improved Samba Mahsuri, BPT 5204

IVT Low Nitrogen Tolerance trial was constituted with 36 test entries, four positive checks (Varadhan, Tella Hamsa, Swarna and Rasi), two susceptible checks (Improved Samba Mahsuri, BPT 5204). Only one entry IET 28084 was in third year of testing and remaining 35 entries are in first year of testing. The data pertaining to grain yield are presented in table 10.7. The trial was conducted at three levels of Nitrogen N 0 (No application of phosphorous), N 50 % (50% of recommended Phosphorous) and 100% Recommended dose of Nitrogen. In all three levels, Phosphorous and Potash are applied as per recommended doses. For promotion of entries, performance under N 0 and N 50% is considered.

Under N 0 condition, the trial was conducted at 6 locations viz., Ludhiana, Ranchi, Karjat, Vadagaon, Mandya and IIRR; of which the data from Ludhiana, Mandya and IIRR was considered for analysis. Under P 50%, the trial was conducted at 6 locations viz., Ludhiana, Ranchi, Karjat, Vadagaon, Gangavati and IIRR; of which data from three locations (Ludhiana, Gangavati and IIRR) was considered for analysis. The entries are promoted on the basis of CD value as decided in earlier ARGM. Under P 0 condition, Rasi recorded highest grain yield on over all basis, hence none of the entries promoted under N 0 condition. At P 50%, among the checks, Tella Hamsa recorded highest grain yield of 4.85 t/ha.

Among the test entries, 14 entries viz., IETs 29573, 29576, 29577, 29564, 28084, 29579, 29584, 29581, 29574, 29578, 30261, 30269, 30270 and 30273 yielded significantly higher than best check under N 50%. Among these, IET 28084 was in third of testing and found tolerant to lower levels of nitrogen application. Remaining 13 entries are promoted to second year of testing.

Among the test entries, the entry IET 30261 (RP 6317-RMS-S35- BC2F4-49-25-12-18) derived from the cross MTU 1121 * 2 / Swarna recorded highest grain yield of 7.49 t/ha across all locations at N 50% followed by IET 30273 (CR 3516 -1-1-1-1-1) obtained from the cross Birupa / Pusa 44.

The trial was conducted in collaboration with Crop Production department and further details of the trails may be obtained from Progress report (Crop Production), AICRIP.

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Table No. 10.6: Composition of entries in Initial Variety Trial– Low Nitrogen Tolerance Trial (IVT-LNT), Kharif2021

Entry No.	IET No.	Designation	Cross combination	GT
1st Year of testing				
5401	29567	RP 6255-BV / RIL / BPT / Varadhan / 1698	BPT 5204 / Varadhan	SB
5402	29573	CR 3553-1-5-2-1-1-1	ADT 43 / Ananga	SB
5403	29576	MTU 1368 (MTU2613-33-1-1)	MTU 1075 / CR 3598-1-4-2-1	LS
5404	29577	RP 5594-71-14-2-1	MTU 1010 / RPHR 1005	MS
5405	29564	CR 3511-7-1-1-1-1-2	IR 36 / Surendra	MS
3rd Year of testing:				
5406	28084	CR 3549-6-1-1-3-1-1	ADT 43 / Annapurna	MB
1st Year of testing				
5407	29579	RP Bio 4918-B-B-166-23	Swarna / O. nivara	LS
5408	29584	RP 6112-MS-M-13-22-9-11-4-6-3	BPT5204 Mutant	LB
5409	29583	CR 3561-5-2-1-1-1	Surendra / Annapurna	MS
5410	29581	RP 6255-BV / RIL / BPT / Varadhan / 1696	BPT 5204 / Varadhan	MB
5411	29574	RP 6462-C5	Swarna / O. nivara 166-2 // Swarna	SB
5412	29568	RP 6112-MS-M-38-1-5-7-3-6-8	BPT 5204 Mutant	MS
5413	29578	CR 3756-2-4-2-1-1-1	Salivahana / Krishnaveni	MS
5414	29572	RP 6255-BV / RIL / BPT / Varadhan / 1694	BPT 5204 / Varadhan	SB
5415	30255	CR 3504-19-2-1-1-1-1	IR 36 / Birupa	LB
5416	30256	RP 6238-RV/RIL-RV 231	Rasi / Vibhava	LS
5417	Improved Samba Mahsuri (RP & Check)			
5418	30257	CR 4341-18265-6-4	CR Dhan 801 / CR Dhan 310	MS
5419	30258	RP 6112-MS-M-3-22-11-4-6-3-7	BPT 5204 Mutant	MB
5420	30259	GSR IR2-1-R6-N7-N2-N77-N94	WTR / Haoannong	MB
5421	30260	RP 6460-C3-97	166S Swarna / O.nivara // 148S Swarna / O.nivara	LS
5422	30261	RP 6317-RMS-S35-BC2F4-49-25-12-18	MTU 1121 * 2 / Swarna	LS
5423	MTU 1121 (RP)			
5424	30262	RP 5975-RMS-12	Rasi / Improved Samba Mashuri	MB
5425	30263	RP 5970-RMS-1-3-17-65-12-12	Improved Samba Mahsuri *2 / Swarna	MS
5426	Rasi (Check)			
5427	30264	RP 6501-MAID-95-14-5-3-1-1-1	WGL14 / RP Patho-3 // WGL 14 / Rathuheenati /// WGL 14 / IR 96321-1447-561-B-1 // WGL14 / IR 81896-96-B-B-195	MS
5428	30265	MTU 1383 (MTU 2615-2-1-3-1-1)	BPT 5204 / NLR 34449	MS
5429	30266	CR 3562-2-2-1-4-2-1	Surendra / N 22	MB
5430	30267	RP 6240-BP / RIL / BP 246	BPT 5204 / PTB1	MB
5431	30268	RP Bio 4918-B2-NPK 55	Swarna / O. nivara	SB
5432	30269	RP 6252-BV / RIL-BV202	BPT 5204 / Varadhan	SB
5433	Varadhan (Check)			
5434	30270	CR 4358-3-3-1-2-1	CR 3543-6-3-1-2-1-1 / CR 3510 -12-1-1-2-1-1	MS
5435	30271	RP 6238-RV / RIL-RV 270	Rasi / Vibhava	LS
5436	30272	RP 5405-JBB-631-6-4-3-1-1-1	Swarna / IRGC 4105 // Swarna	SB
5437	30273	CR 3516 -1-1-1-1-1-1	Birupa / Pusa 44	SB
5438	TellaHamsa (Check)			
5439	30274	RP 6239-IA / RIL-IA 122	IR64 / Akihikari	MB
5440	BPT 5204 (Sensitive Check)			
5441	30275	RP 6468-MAID-408-4-2-1-1-1-1	Krishna Hamsa / IRBB60 // Krishna Hamsa / IR 96321-1447-561-B-1 /// Krishna Hamsa / IR 81896-96-B-B-195 // Krishna Hamsa / Tetep	MS
5442	Swarna (Tolerant Check)			

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Table No.10.7: Grain yield (t/ha) of IVT- LNT N LOW Kharif 2021

Entry No	IET No	ZONE II (1)		ZONE III (0)		ZONE VI (0)			
		PUNJAB (1)		Jharkhand (0)		MAHARASHTRA (0)			
		LUDHIANA		@RANCHI		@KARJAT		@VADAGAON	
5401	29567	3.88		1.66		3.02		3.18	
5402	29573	2.19		1.82		2.01		2.95	
5403	29576	6.89	9 *	2.05	3	2.98		3.15	
5404	29577	5.94		1.87	6	3.21		3.22	
5405	29564	2.95		2.25	1	3.33		3.39	7
5406	28084	8.13	5 *	1.51		3.89		3.50	2
5407	29579			1.67					
5408	29584	7.26	8 *	1.95	4	3.98	7	3.45	3
5409	29583	6.76	*	1.72		4.00	6	3.41	4
5410	29581	6.22	*	1.85	7	3.33		2.88	
5411	29574			1.81					
5412	29568	2.97		2.20	2	3.03		2.91	
5413	29578	4.53		1.76		3.96	8	3.29	10
5414	29572	5.83		1.58		3.02		2.65	
5415	30255	7.74	7 *	1.73		4.41	1	3.21	
5416	30256	8.36	4 *	1.42		3.65		3.14	
5417	Improved Samba Mahsuri (RP & Check)	4.20		1.51		3.30		2.73	
5418	30257	2.32		1.80		2.99		3.04	
5419	30258	7.80	6 *	1.63		4.26	3	3.21	
5420	30259	6.31	*	1.45		3.23		2.76	
5421	30260	4.25		1.71		3.23		3.15	
5422	30261	4.83		1.64		3.46		3.12	
5423	MTU 1121 (RP)	8.39	3 *	1.52		2.76		3.03	
5424	30262	6.18	*	1.83	8	3.02		3.22	
5425	30263	4.16		1.16		3.12		2.90	
5426	Rasi (Check)			1.52					
5427	30264	4.49		1.43		2.76		2.77	
5428	30265			1.21		4.03	4	3.28	
5429	30266	6.11	*	1.92	5	3.94	9	3.39	6
5430	30267	3.55		1.47		3.41		3.03	
5431	30268			1.37		4.31	2	3.52	1
5432	30269	4.79		1.68		3.09		2.74	
5433	Varadhan (Check)	5.31		1.45		2.77		2.87	
5434	30270	10.79	1 *	1.62		4.00	5	3.41	5
5435	30271	5.59		1.83	8	3.20		3.09	
5436	30272	3.60		1.33		2.93		2.94	
5437	30273	10.18	2 *	1.56		3.84		3.32	8
5438	TellaHamsa (Check)	5.53		1.82	10	3.02		2.88	
5439	30274	4.57				2.85		2.74	
5440	BPT 5204 (Sensitive Check)	3.55				3.43		3.22	
5441	30275	6.83	10 *			3.61		3.31	9
5442	Swarna (Tolerant Check)	3.62				3.92	10	3.27	
Exp. Mean		5.58		1.67		3.39		3.11	
F Value		122.87(p<0.0001)S		2.08(p=0.0139)S		611.21(p<0.0001)S		211.71(p<0.0001)S	
CD		0.51		0.48		0.06		0.05	
CV%		5.65		14.12		1.06		0.90	

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No.10.7 Contd.: Grain yield (t/ha) of IVT- LNT NLOW Kharif 2021

Entry No	IET No	ZONE VII						Overall (3)	
		KARNATAKA (1)		TELANGANA (1)		Z7(2)		Mean	
		MANDYA		IIRR		Mean		Mean	
5401	29567	5.83		3.16	*	4.49		4.29	
5402	29573	6.47	6	3.60	6 *	5.03	5	4.08	
5403	29576	5.90		3.94	5 *	4.92	8	5.58	7
5404	29577	6.49	5	4.03	3 *	5.26	3	5.49	10
5405	29564	6.45	7	3.54	7 *	4.99	6	4.31	
5406	28084	6.64	1	3.19	10 *	4.92	9	5.99	5
5407	29579			4.20	1 *	4.20		4.20	
5408	29584	6.49	4	4.15	2 *	5.32	2	5.97	6
5409	29583	6.51	3	3.45	9 *	4.98	7	5.57	8
5410	29581	5.61		3.47	8 *	4.54		5.10	
5411	29574			2.60		2.60		2.60	
5412	29568	4.45		2.49		3.47		3.30	
5413	29578	6.14		2.04		4.09		4.24	
5414	29572	5.20		2.53		3.86		4.52	
5415	30255	6.38	9	2.50		4.44		5.54	9
5416	30256	4.71		2.30		3.51		5.13	
5417	Improved Samba Mahsuri (RP & Check)	4.14		2.53		3.34		3.63	
5418	30257	5.92		2.78	*	4.35		3.67	
5419	30258	6.25		2.29		4.27		5.45	
5420	30259	6.29		2.40		4.35		5.00	
5421	30260	4.69		1.70		3.19		3.54	
5422	30261	6.32	10	2.37		4.34		4.51	
5423	MTU 1121 (RP)	6.12		4.01	4 *	5.06	4	6.17	4
5424	30262	4.47		2.37		3.42		4.34	
5425	30263	4.39		2.16		3.27		3.57	
5426	Rasi (Check)	6.32				6.32	1	6.32	3
5427	30264			1.95		1.95		3.22	
5428	30265	6.05		2.12		4.09		4.09	
5429	30266	6.58	2	2.31		4.44		5.00	
5430	30267	5.88		2.43		4.16		3.95	
5431	30268	4.98		2.13		3.55		3.55	
5432	30269	5.66		2.42		4.04		4.29	
5433	Varadhan (Check)	5.37		2.26		3.82		4.31	
5434	30270	6.32	10	2.75	*	4.53		6.62	1
5435	30271	5.75		2.44		4.09		4.59	
5436	30272	5.61		2.80	*	4.21		4.00	
5437	30273	6.27		2.59		4.43		6.35	2
5438	TellaHamsa (Check)	5.00		2.45		3.72		4.32	
5439	30274	5.90		2.46		4.18		4.31	
5440	BPT 5204 (Sensitive Check)	3.95				3.95		3.75	
5441	30275	6.45	7	2.78	*	4.62	10	5.35	
5442	Swarna (Tolerant Check)	5.18		2.30		3.74		3.70	
Exp. Mean		5.72		2.75		4.19		4.61	
F Value		2.73(p=0.0012)S		48.40(p<0.0001)S		16.40(p<0.0001)S		29.37(p<0.0001)S	
CD		1.34		0.26		0.67		0.54	
CV%		11.57		5.86		10.98		7.44	

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Table No. 10.7 contd.: Grain yield (t/ha) of IVT - LNT N50 Kharif 2021

Entry No	IET No	ZONE II (1)		ZONE III (0)		ZONE VI (0)			
		PUNJAB (1)		Jharkhand (0)		MAHARASHTRA (0)			
		LUDHIANA		@RANCHI		@KARJAT		@VADAGAON	
5401	29567	4.53		3.65		3.80		4.07	
5402	29573	9.47	8 *	3.72		2.67		3.78	
5403	29576	8.84	10 *	4.25	1	3.77		4.04	
5404	29577	8.82	*	3.92	7	3.93		4.13	
5405	29564	7.50	*	3.56		4.15		4.35	7
5406	28084	11.40	3 *	4.01	3	4.34		4.49	2
5407	29579			3.50					
5408	29584	9.75	7 *	3.80		5.06	1	4.42	3
5409	29583	7.82	*	3.68		5.00	2	4.37	4
5410	29581	9.06	9 *	4.00	4	4.22		3.69	
5411	29574			3.46					
5412	29568	6.54		3.83		3.13		3.73	
5413	29578	7.45	*	3.35		4.82	4	4.21	10
5414	29572	8.26	*	3.62		3.89		3.40	
5415	30255	7.11		3.78		4.70	8	4.11	
5416	30256	7.58	*	3.51		4.61	9	4.03	
5417	Improved Samba Mahsuri (RP & Check)	6.15		3.71		3.39		3.50	
5418	30257	1.93		3.48		3.78		3.90	
5419	30258	7.04		3.48		4.71	7	4.12	
5420	30259	6.46		3.74		3.28		3.54	
5421	30260	5.14		3.62		4.05		4.04	
5422	30261	12.09	2 *	3.58		4.00		4.00	
5423	MTU 1121 (RP)	10.77	5 *	4.02	2	3.61		3.89	
5424	30262	7.32	*	3.95	6	3.83		4.13	
5425	30263	5.57		3.68		3.21		3.71	
5426	Rasi (Check)			3.74					
5427	30264	8.78	*	3.52		3.55		3.55	
5428	30265			3.87	9	4.57	10	4.20	
5429	30266	8.75	*	3.45		4.74	6	4.35	6
5430	30267	7.80	*	3.71		4.23		3.89	
5431	30268			3.62		4.92	3	4.52	1
5432	30269	11.07	4 *	3.86	10	3.26		3.51	
5433	Varadhan (Check)	6.22		3.52		3.41		3.67	
5434	30270	10.44	6 *	3.71		4.76	5	4.37	5
5435	30271	8.19	*	3.39		3.97		3.96	
5436	30272	5.53		4.00	4	3.78		3.77	
5437	30273	13.63	1 *	3.92	7	4.26		4.25	8
5438	TellaHamsa (Check)	6.66		3.61		3.70		3.70	
5439	30274	5.27				3.52		3.52	
5440	BPT 5204 (Sensitive Check)	5.57				4.13		4.12	
5441	30275	7.28	*			4.25		4.24	9
5442	Swarna (Tolerant Check)	3.68				4.56		4.19	
Exp. Mean		7.71		3.71		4.04		3.99	
F Value		113.58(p<0.0001)S		0.33(p=0.9995)NS		719.31(p<0.0001)S		215.57(p<0.0001)S	
CD		0.62		1.02		0.06		0.06	
CV%		4.92		13.53		0.91		0.89	

For promotion of entries

* For varietal entries: Yield of entry should be superior over yield of BVC+CD (at 5% level of significance).

In locations where the F variance ratio between treatments is non-significant, data from such locations was not considered in analysis.

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Table No. 10.7 Contd.: Grain yield (t/ha) of IVT - LNT N50 Kharif 2021

Entry No	IET No	ZONE VII						Overall (3)	
		KARNATAKA (1)		TELANGANA (1)		Z7(2)			
		GANGAVATHI		IIRR		Mean		Mean	
5401	29567	4.16	4	3.82		3.99		4.17	
5402	29573	3.58		6.07	8 *	4.83		6.37	6 *
5403	29576	4.01	9	5.83	10	4.92	9	6.23	9 *
5404	29577	3.88		6.23	5 *	5.05	6	6.31	8 *
5405	29564	3.28		6.07	8 *	4.67		5.61	*
5406	28084	4.07	8	5.30		4.68		6.92	4 *
5407	29579			6.14	6 *	6.14	1 *	6.14	*
5408	29584	4.55	1	5.15		4.85	10	6.48	5 *
5409	29583	3.50		7.30	1 *	5.40	3	6.21	10
5410	29581	3.73		4.84		4.29		5.88	*
5411	29574			5.47		5.47	2	5.47	*
5412	29568	3.10		5.43		4.26		5.02	
5413	29578	3.27		6.08	7 *	4.67		5.60	*
5414	29572	2.75		3.33		3.04		4.78	
5415	30255	3.08		5.70		4.39		5.30	
5416	30256	3.30		3.51		3.41		4.80	
5417	Improved Samba Mahsuri (RP & Check)	2.63		4.43		3.53		4.40	
5418	30257	2.69		3.42		3.06		2.68	
5419	30258	3.73		4.44		4.08		5.07	
5420	30259	3.10		5.50		4.30		5.02	
5421	30260	3.28		3.67		3.47		4.03	
5422	30261	4.13	5	6.24	4 *	5.18	4	7.49	1 *
5423	MTU 1121 (RP)	3.63		6.38	3 *	5.01	7	6.93	3 *
5424	30262	3.45		4.47		3.96		5.08	
5425	30263	1.98		4.40		3.19		3.98	
5426	Rasi (Check)								
5427	30264	2.86		4.63		3.74		5.42	
5428	30265	3.69		6.51	2 *	5.10	5	5.10	
5429	30266	3.65		3.34		3.49		5.25	
5430	30267	4.01	10	4.20		4.11		5.34	
5431	30268	3.30		3.44		3.37		3.37	
5432	30269	2.60		3.92		3.26		5.86	*
5433	Varadhan (Check)	3.12		4.22		3.67		4.52	
5434	30270	3.08		5.58		4.33		6.37	7 *
5435	30271	4.11	6	2.78		3.45		5.03	
5436	30272	4.07	7	2.75		3.41		4.12	
5437	30273	3.27		5.30		4.29		7.40	2 *
5438	TellaHamsa (Check)	3.55		4.35		3.95		4.85	
5439	30274	2.43		3.29		2.86		3.66	
5440	BPT 5204 (Sensitive Check)	3.57				3.57		4.57	
5441	30275	4.42	3	3.45		3.93		5.05	
5442	Swarna (Tolerant Check)	4.51	2	5.43		4.97	8	4.54	
Exp. Mean		3.46		4.81		4.18		5.28	
F Value		4.04(p<0.0001)S		31.48(p<0.0001)S		12.03(p<0.0001)S		35.21(p<0.0001)S	
CD		0.87		0.58		0.74		0.59	
CV%		12.36		7.36		10.39		6.54	

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AICRIP

RAINFED TRIALS

ICAR-NRRI, Cuttack

RAINFED UPLAND

Rice in a typical upland ecology are usually grown as a direct seeded crop with limited input use with short duration rice cultivars that come to 50% flowering in around 80 days and matures in 105-110 days. This ecology is basically *rainfed* in nature and spread throughout the country but concentrated more areas are in Eastern India cultivated by resource poor farmers. Hence the quantity of rainfall received and its distribution during the crop growth determines the success of the crop as often the crop faces drought spell at various stages of growth starting from sowing, early to late vegetative, primordial initiation, flowering and maturity stage. Besides that, crop faces various abiotic stresses like poor supply of major nutrient and sometime iron deficiency whereas biotic stresses like weeds, termites, nematode and other disease pests as it is grown in *rainfed* upland situations in marginal soil. Therefore, this ecology requires genotypes with short duration of around 105-110 days (seed to seed), early vigour, weed competitiveness to have good stand establishment and drought tolerance ability for vegetative and reproductive stage. Hence the genotypes promoted should have short duration of 105-110 days, drought tolerance and yield advantage over checks. Two experiments were conducted i.e. AVT 1- E DS and IVT –E DS during *kharif* 2021 at specified locations to identify genotypes with these characteristics for which results are presented below.

ADVANCE VARIETY TRIAL 1 – EARLY DIRECT SEEDED (AVT 1 – E DS)

Locations:	11	Test Entries:	21
Checks:	Sahbhagidhan and Vandana (RP) - National, Govind (Northern), Narendra 97 (Eastern), Samaleswari (Central), Varalu (Western), Tulasi (Southern), Anjali (RP and All zones), IR 64 (Sensitive) and Local Check		

Table:11.1

The trial was constituted with 21 test entries and all of those were varietal entries out of which three entries were in third year of testing, thirteen entries in second year of testing and five NILs entries, where three were repeat entries and two were in first year of testing. Among the NILs, two were in the background of Anjali and one in the background of Vandana for drought from drought NILs and were repeat entries and two in the background of Sahabhagidhan in first year of testing, basically from NIL herbicide tolerance from herbicide tolerant donor Robin. Two national checks (Sahbhagidhan and Vandana and also RP), six zonal checks (Govind, Narendra 97, Samaleswari, Varalu, Tulasi and Anjali), Sensitive check IR 64 and Local check were used. Vandana and Sahabhagidhan were used as national checks whereas Anjali as zonal check, respectively and also as recurrent parent across test locations. All together twenty-seven genotypes were evaluated including national, zonal, recurrent parent, sensitive and local checks across the locations. The trial was sent to thirteen test locations but data were received from eleven locations only. At NRRI, Cuttack, Jeypore, Hatwara and Hazaribag (Zone III), Jagdalpur, Raipur and Rewa (Zone V), Parbhani and Vyara (Zone VI), Kampasagar and Coimbatore (Zone VII) this trial was conducted under *rainfed* direct seeded conditions, spread over the states of Odisha, West Bengal, Jharkhand,

Chattisgarh, M.P., Maharashtra, Gujrat, Andhra Pradesh and Tamilnadu of the country. The trial was sown during 4th week of June to 2nd week of July in various testing sites except Coimbatore which was seeded in 2nd week of September 2021.

Based on total amount of rainfall received and its distribution during crop growth stages, only two centres viz., Hazaribag in Jharkhand and Rewa in M.P.were classified as stress centre for moisture (drought); while other locations received sufficient rainfall and there was no moisture stress (drought) occurred during crop growth stages.

General information on drought situations in different locations

Location	Drought situation	Expt. yield (kg/ha)	C.V. (%)
NRRI, Cuttack	Normal rainfall	2801.9	15.03
Jeypore	Normal rainfall	3050.9	16.04
Hatwara	Normal rainfall	3321.1	3.09
Sabour	-	Data not received	
Jagdapur	Normal rainfall	4398.1	18.76
Raipur	Normal rainfall	3242	16.25
Parbhani	Normal rainfall	3100.4	8.41
Vyara	Normal rainfall	3749.1	17.29
Kampasagar	Normal rainfall	5719.6	10.97
Mugad	Normal rainfall	Data late received and not in order	
Coimbatore	Normal rainfall	4858.8	10.48
Hazaribag	Drought – at flowering and grain filling	1693.8	12.74
Rewa	Drought	484.7 Very poor yield	44.48

Performance of entries under drought situation

At eleven different locations the entries were evaluated across four zones (III, V, VI and VII) and the drought occurred only in Hazaribag, Jharkhand in zone III and in Rewa, M.P. in zone V, but since the experimental mean was very low i.e.484.7 kg/ha only with a high C.V.of 44.48% at Rewa, data cannot be considered as per the set norms. Therefore, only the performance of entries at Hazaribag in zone III under drought stress will be discussed. The drought was very severe in Rewa, M.P. (zone V) where very low experimental mean yield was obtained as indicated earlier. As, the grain yield < 1000.0 kg/ha and CV was high, the data was not considered for analysis. The performance of NILs under drought is discussed separately since NILs are to be compared with their respective recurrent parent for the trait of interest. The data pertaining to yield, days to 50% flowering, plant height, number of panicles/m² and quality are presented in tables 11.2, 11.3, 11.4, 11.5 and 11.6.

Zone III

Only one location i.e. Hazaribag in Jharkhand in this zone qualifies for analysis under drought situation and therefore the grain yield, days to 50% flowering, plant height and no. of panicles / m² are presented. For trait verification, especially NIL drought and NIL herbicide tolerance, the trials were conducted separately, where tolerant checks and recurrent parents Sahbhagidhan, Vandana and

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Anjali and drought sensitive check IR 64 were there. In this zone, grain yield of entries varied from 313 kg/ha (IET 29039) to 3701 kg / ha (IET 27523, CRR 514-6-1-1-1-6) with a zonal mean grain yield of 1693.8 kg/ha; days to 50% flowering ranged from 62 (IET 28834) to 101(IET 29054 and 29052) with a mean DFF of 82.15, plant height from 54 cm (Narendra 97, ZC) to 94 cm (IET 28248) with a zonal mean of 70 cm and no. of panicles / m² from 116 (IET 29054) to 273 (IET 28248) with a mean of 205.48.

The highest grain yield of 3701 kg/ha was obtained in IET 27523(CRR 514-6-1-1-1-6) (2590 kg/ha) followed by IET 29038 (CRR 523-2-2-1-3) (3166 kg/ha), IET 28836 (CRR 677-1) with 2986 kg/ha and IET 28241(CRR 797-71-2-1-2). In this zone, Sahbhagidhan recorded highest grain yield (2590 kg/ha) among the checks, followed by Anjali (2476 kg/ha) and Vandana (2313 kg/ha) and drought sensitive check IR 64 yielded 1090 kg/ha whereas local check CR Dhan 40 registered a yield of 1993 kg/ha.

Performance of promising entries of AVT 1 –E DS under drought condition in Zone III during *Kharif*2021

IET No./ Designation/ Cross combination	GY/ FD/ GT	Yield adv. (%) over NC ZC LC SC	% increase over best check			
			State	Rank	Yield	% BC
27523 CRR 514-6-1-1-1-6 Brown gora / N 22 // CR 143-2-2	3701 74 LS	43 49.47 85.70 240	JH	1	3701	43
29038 CRR523-2-2-1-3 Kalinga III/Bhupen	3166 74 LS	23 28 59 190	JH	2	3166	23
28836 CRR 677-1 IR 79971-B-102-B- B/3*Vandana	2986 64 LB	15 20.6 49.8 174	JH	3	2986	15
28241 CRR 797-71-2-1-2 Vandana/ IR 9385-123-B	2868 70 LS	11 15.8 43.9 163	JH	4	2868	11
Sahbhagidhan NC	2590 78					
Zonal check	2476 70					
<i>Local check</i>	1993 70					
IR 64 (Sensitive check)	1090 88					

Entries completed three years of testing

IET 27523 (CRR 514 -6-1-1-1-6) is a derivative line of cross between Brown gora/ N22 and CR 143-2-2 was promoted, on overall basis with grain yield of 2281 kg/ha having yield advantage of 11% over the best check under moderate stress category in 2018 and stood 2nd in the state of Jharkhand with grain yield of 2250 kg/ha that was 40.62% increase over best check Narendra 97(ZC). During 2019, it performed only in zone III with a grain yield of 1962 kg/ha that was 26% higher than the best check under drought situation. During 2020, it

didn't perform well than the best check Anjali (ZC, 3242 kg/ha) although yielded 2705 kg/ha in zone III under drought condition. But, it outperformed best check Sahbhagidhan (NC) by 36% and was the top yielder in zone VI with grain a yield of 2666 kg/ha. Also on overall basis over four drought locations, it showed 14% superiority in grain yield over best check (local check) with a grain yield of 2685 kg/ha. In 4th year this entry registered a yield advantage of 43% over best check Sahbhagidhan and ranked 1st with a grain yield 3701 kg/ha although it was a single location. Under normal rainfall locations, (IET 27523) showed marginally better performance (3886 kg/ha) than best the check Sahbhagidhan (3756 kg/ha) that was 3.5% more which was at par with best check When the pooled data of all three qualified locations were taken together it yielded 3824 kg/ha which is 9.7% higher than the best check Sahbhagidhan (NC) with a grain yield of 3487 kg/ha. Moreover, this entry also performed well in zone V and stood 2nd with 4889 kg/ha that was 7% higher than best check (LC) with 4560 kg/ha. It possessed long slender grain with HRR (56.9%), intermediate AC (20.57%), ASV (3.5) and GC (45.5 mm) as desired grain quality traits (pooled over 2020 and 2021). **Therefore, this entry is identified for Jharkhand state.**

Performance of IET 27523 under drought condition over the years

IET No	Year/ Trial	Overall mean	% yield over NC/ZC /LC	Zone			State		
				Zone rank	Yield (kg/ha)	% increase over best check	State rank	Yield (kg/ha)	% increase over best check
27523	2018/ IVT- E DS	2281	11	Z III -	1853	-	JH-2 nd	2250	40.62
				Z V - 7 th	2479	-			
				Z VI - 6 th	2980	-			
	2019 AVT 1 -E DS	-	-	Z III -1 st	1962	26	JH -2 nd	2188	33
	2020 AVT1- EDS	2685	14	Z VI-1 st	2666	36	GU -1 st	2666	36
	2021 AVT1- EDS	3701	43	Z III-1st	3701	43	JH-1st	3701	43

Similarly, IET 28241 has completed three years of testing is discussed below.

IET 28241 (CRR 797-71-2-1-2), a cross derivative of Vandana/IR 9385-123-B stood 4th among the test entries in zone III and out yielded the best check Sahbhagidhan by 11% during 3rd year of testing (2021) under drought situation which was a single location. Also it didn't register any yield advantage in zone III under normal rainfall. During 2nd year of testing in *kharif* 2020, this entry outperformed the best check by 7% on overall basis and stood 2nd over four drought environments spread over zone III and VI. During 1st year of testing in *Kharif* 2019 under drought situations, it was the top yielder and stood 1st among the test entries with 36% yield advantage than the best check in zone III. If the state wise performance is considered, it was promising in 1st and 3rd year in Jharkhand in a single location and promising during 2nd year in Odisha with 16% yield advantage (single location), although drought situation prevailed in Hazaribag, Jharkhand. This indicated that its performance was inconsistent over the years. When the grain yield is considered in normal

rainfall locations in Zone III and other zone, it didn't register any yield advantage. Even if the grain yield of IET 28241 (2191.3 kg/ha) over drought and normal rainfall environments (1853 kg/ha) is considered together in zone III, then also it didn't register any yield advantage over the best check Sahbhagidhan that yielded 3487 kg/ha. **Therefore, this entry is discontinued.**

IET 29038 (CRR 523-2-2-1-3) a derivative of Kalinga III and Bhupen, ranked 2nd among the entries. It recorded a yield advantage of 22% over the best check Sahbhagidhan (NC). It possessed long slender grain with 74 days to 50% flowering duration. The entry had high HRR of 60%, intermediate AC of 23.02%, ASV of 3 and GC of 38mm as desired grain quality traits. During *Kharif* 2020 also, this entry outperformed best check by 18% under drought situation in zone III, However, **it is repeated because of single location.**

Performance of entries under normal rainfall situations

Normal rainfall situation prevailed at 11 location *viz.* NRRI, Cuttack and Jeypur (Odisha), Hatawara (WB), Sabour (Bihar) under zone III; Jagdalpur and Raipur (CG) in Zone V and Parbhani (Maharashtra) and Vyara (Gujrat) under zone VI and Kampasagar (Telangana), Mugad (Karnataka), and Coimbatore (TN) in Zone VII; out of those, data were not received or late received from Sabour and Mugad while Hathwara data was not considered because of low CV (3.09%). So altogether, eight centres data were pooled under normal rainfall situation.

Overall performance of entries under normal rainfall situation

On overall basis 8 locations are coming under normal rainfall situation where the mean grain yield varies from 2538 kg/ha (IET 28836) to 4777 kg/ha (IET 29036) with an overall mean grain yield of 3893 kg/ha, 50 % flowering duration from 67 days (Anjali), IET 28836) to 92 days (IET29063) with mean of 79.76 days, plant height ranged between 85 cm (IR 64) to 111 cm (IET 27523) with a mean height of 102 cm and no. of panicle/m² from 251 (IET 28248) to 318 (IET 30437) with a mean of 277.46 panicle /m².

Three entries *viz.*, **IET 29036**, **IET 30438** and **IET 29052** showed yield superiority to the tune of 8%, 6% and 6 %, over the best check, respectively; hence found promising under normal rainfall condition.

Zone III

In this zone two location data are considered (NRRI, Cuttack and Jeypore). The data from Hathwara was not considered because of low CV of 3.09%.

Grain yield varies from 1385 kg/ha (IET 28834) to 4748 kg/ha (IET 29052) with a mean yield of 2993 kg/ha. Days to 50% flowering ranged from 69 days (IET 28835) to 99 days (IET 29047) with a mean of 81.5 days; plant height from 91 cm (IR 64, SC) to 127 cm (IET 28836) with a mean of 114 cm and no. of panicles/m² ranged from 210 (LC) to 305 (IET 30437) with a mean of 248.39.

Based on the grain yield performance, two entries *i.e.* **IET 29052** with 4748 kg/ha that registered 26% yield superiority over best check Sahbhagidhan (NC) with grain yield of

3756 kg/ha found promising. Similarly, IET 29047 with grain yield of 4006 kg/ha was also found superior to best check Sahabgaidhan (NC) by 7%. Hence, **IET 29052** and **IET 29047** were found to be promising. However, these entries did not record the required yield advantage over the best check in drought situation, therefore will be repeated.

Zone V

In zone V, the data were received from two centers viz. Jagdalpur and Raipur which had normal rainfall during *kharif* 2021. The mean grain yield ranged from 2487 kg/ha (IET 28836) to 4976 kg/ha (IET 29036) with a mean grain yield of 3846.4 kg/ha, days to 50% flowering varied from 67days (Anjali, ZC) to 98days (IET 29047 and IET 29052) with a mean of 82.91 days; plant height from 79 cm (IR 64, SC) to 107 cm (IET 28248 and IET 29038) with a mean of 97 cm and no. of panicles/m² varied from 132 (IET 29044) to 313 (IET 30437) with a mean panicles number/m² to 209.49.

Based on grain yield superiorly over the best check Sahabgaidhan (NC, 4304 kg/ha) two entries were found promising i. e. **IET 29036**(4976 kg/ha) by 9% over best check and **IET 27523**(4889 kg/ha) by 7%. Therefore, these were found promising under normal rainfall in zone V. However, these entries did not record the required yield advantage over the best check in drought situation, therefore will be repeated.

Zone VI

In zone VI, the data were received from two centers viz. Vyara in Gujarat and Parbhani (Maharashtra) where normal rainfall prevailed.

The grain yield in this zone varied from 2334 kg/ha (Vandana, NC & RP) to 5127 kg/ha (IET 30438) with a mean grain yield of 3424.8 kg/ha; days to 50% flowering from 67days (IET 28834 and IET 28836) to 91days (IET 29054 and IET 29039) with mean of 80.43days; plant height from 67 cm (IET 29044) to 105 cm (Local Check) with a mean of 90 cm and no. of panicles/m² from 134 (Varalu, ZC) to 219 (IET 29054) with a mean of 162.44.

Based on yield advantage over best check Sahabgaidhan (NC with 3435 kg/ha), many entries were found to be superior viz., **IET 30438**(5127 kg/ha) with 49%, **IET 29052**(4543kg/ha) with 32%, **IET 29060**(4251 kg/ha) with 24%, **IET 29048** (4200 kg/ha) with 22%, **IET 29036** (4077 kg/ha) with 19%, **IET 29039** (3076kg/ha) with 7% and **IET 29047** (3633kg/ha) with 6% over the best Check Sahabgaidhan, respectively. However, these entries did not record the required yield advantage over the best check in drought situation, therefore will be repeated.

Zone VII

In this zone the data were received from two centers viz., Kammasagar (Telangana) and Coimbatore (Tamilnadu) under normal rainfall during *kharif* 2021.

The mean grain yield in this zone ranged from 3611 kg/ha (IET 28836) to 6499 kg/ha (IET 29036) with a zonal mean grain yield of 5289.2 kg/ha, days to 50% flowering varied from 62 days (IET 28836) to 90 days (IET 29054) with a mean of 75.5 days, plant height from 93 cm (IR 64, SC) to 122cm (IET 27523) with a mean of 107cm and no. of panicles/m²

ranged from 417 (IET 29052) to 579 (Vandana, NC &RP) with a mean panicle number/m² of 489.3.

None of the test entries in this zone had shown any yield advantage over the best check, hence none of them were found promising.

The promising entries under normal rainfall environments are to be repeated as their performance under drought was not ascertained in multi-location drought environments.

Near Isogenic Lines (NILs)

Five Near Isogenic Lines were tested in AVT 1 -E DS trial during Kharif 2021. Out of five NILs, three NILs (IET 28834, 28835 and 28836) were introgressed with drought QTLs, two in the background of Anjali and one in the background of Vandana, the popular drought tolerant cultivars and these NILs were repeat entries. Whereas, another two NILs (IET 30437 and 30438) were introgressed with herbicide tolerant gene from Robin, a mutant line of N 22 showing herbicide tolerant against Imazethapyr and Bispyribac sodium into the background of Sahbhagidhan.

From the trait verification table of AVT 1- NIL (Drt) trial 2021, it was evident that the line IET 28834 and IET 28835 performed better both with grain yield of 2157 kg/ha whereas RP Anjali yielded 1542 kg/ha which is significantly higher (39.4%) than their recurrent parent (RP)Anjali at Hazaribagh location where tested under controlled condition in rain out shelter, hence promising. On the other hand, IET 28836 with grain yield of 1765 kg/ha did not register yield advantage than recurrent parent Vandana with grain yield of 1857 kg/ha, but it was at par when CD value of 627.2 of the experiment is considered. However, as per the norm it should be superior in trait verification trial, hence this NIL didn't qualify. From, AVT 1- NIL (Drt) trial, it was also evident that Anjali RP, Vandana RP and Sensitive Drought Check (IR 64) were at par when CD value was considered. However, drought tolerant Sahbhagidhan and IET 28834 and IET 28835 were statistically superior, while drought tolerant variety N 22 was inferior than those entries when grain yield is concerned [ref AVT 1-NIL (Drt) table].

Similarly, from **trait verification** trial of AVT 1 -NIL (Herbicide Tolerance), it was evident that IET 30437 and IET 30438 both of RP Sahbhagidhan completely survived the spray of Imazethapyr, while RP Sahbhagidhan died completely; whereas tolerant check Robin showed significant yield reduction as compared to Sahbhagidhan NIL (HT). The weed free plot produced higher yield (4.22.t/ha) followed by imazethapyr treated plot (4.01 t/ha) followed by bispyribac-sodium treated plot (3.62 t/ha). This indicated that both the HT-NILs performed convincingly. Comparison can be made with recurrent parent Sahbhagidhan in AVT 1 - E DS for their performance in the state where it was released (Odisha and Jharkhand).

Performance of Near Isogenic Lines (NILs) under droughtsituation

As per the norm, the NILs were supposed to be considered in those zone and states, where the recurrent parent is released and notified. Anjali was released for zone III (Bihar, Jharkhand and Odisha) and zone IV (Assam and Tripura); Vandana in zone III (Undivided Bihar including Jharkhand and Odisha) and Sahbhagidhan in zone III (Jharkhand and Odisha).

Performance of Near Isogenic lines (NILs) under drought situation (AVT1 EDS)

NIL	Grain yield (Kg/ha)	% increase over RP	Trait verification under AVT 1-NIL(Drt) cultivars	Remarks
IET 28834 (RP-Anjali)	2327	-	Qualified	At par yield with Anjali in EDS and better yield during trait verification. Data from one location of the state.
IET 28835 (RP-Anjali)	2172	-	Qualified	At par yield with Anjali in EDS and better yield during trait verification. Data from one location of the state.
IET 28836 (RP-Vandana)	2986	20.60	Not qualified	Dropped
Anjali (RP)	2476	-		
Vandana (RP)	2313	-		
CD Value (5%)	353			

RP- Recurrent parent

Entries IET 28834, IET 28835 and IET 28836 yielded 2327 kg/ha, 2172 kg/ha and 2986 kg/ha, respectively under drought situation in a single location, whereas their recurrent parent Anjali yielded 2476 kg/ha and Vandana 2313 kg/ha). So, the performance of IET 28834 and IET 28835 were on par to Anjali RP. The entries are not dropped based only on the single location drought performance during kharif 2021 trial, hence repeated. However, these NILs in the Anjali background (IET 28834 and IET 28835) performed significantly superior to the recurrent parent in the trait verification trial. IET 28836 registered yield advantage of 20.6% over RP Vandana (2313 kg/ha). However, it did not qualify the trait verification trial of AVT 1-NIL (Drt), hence **discontinued**. When the data of zone III was pooled over 3 qualified locations comprising both drought and normal rainfall situations, IET 28834, IET 28835 and IET 28836 yielded 1699 kg/ha, 2040.7 kg/ha and 2008 kg/ha, respectively while Anjali RP yielded 1846.7 kg, Vandana RP 1968.3 kg/ha and Sahbhagidhan (NC and RP) yielded 3367 kg/ha. So the NILs (IET 28834, IET 28835 and 28836) didn't register required yield advantage of 5% over the RP and best check Sahabhagidhan.

NILs for Herbicide tolerance

Two NILs i.e. IET 30437 and IET 30438 were introgressed with herbicide tolerant genes in the background of Sahabhagidhan were evaluated in the zone III where Sahbhagidhan was released and notified (Jharkhand and Odisha). Since these NILs were not for drought rather for herbicide tolerance, the yield data from drought and normal rainfall environments were pooled together to assess its performance against RP. When pooled, IET 30347 yielded 3014 kg/ha, IET 30348 yielded 2977 kg/ha, while Sahbhagidhan (RP and NC) yielded 3367 kg/ha which are comparable. But, under the normal rainfall situation in zone III (over 2 locations in Odisha), the yield of these NILs and RP were 3455 kg/ha (IET 30437), 3646 kg/ha (IET 30438) and 3756 kg/ha (Sahbhagidhan, RP and NC) respectively. When the CD values of the zone was considered (558.87) all the NILs are at par with RP. **So these may be considered for promotion in Odisha.**

‘Performance of NIL –HT Cultivars in Zone III (Jharkhand and Odisha) pooled over 3 locations (drought and normal rainfall)

NIL	Grain yield (kg/ha) (JH +Od)	% increase over RP	Grain yield (kg/ha) JH(1)	Grain yield (kg/ha) Od (2)	Trait verification in AVT 1 – NIL (HT) cultivars	Remark
IET 30437 (RP-Sahbhagi Dhan)	3014	-	2132	3455	Qualified	Promoted for Odisha (As the yield is on par with RP)
IET-30438 (RP-Sahbhagi Dhan)	2977	-	1639	3646	Qualified	Promoted for Odisha (As the yield is on par with RP)
SahbhagiDhan(RP)	3487	-	2590	3756		
Mean			1693.8	2993.1		
CD			353.6	558.7		

Since the RP of these five NILs evaluated were not released in other zones of the country their performances were not discussed.

Promising entries**Zone III:**

- **IET 27523 (Promising for Jharkhand)**
- **IET 30437 and 30438 (NIL –HT cultivars) promoted (for Odisha only)**

Repetition: IET 29036, 29038, 29039, 29047, 29052 and 29060.

NILs: IET 28834 (RP-Anjali), IET 28835 (RP-Anjali)

Table No. 11.1: Composition of entries in Advance Variety Trial 1–Early Direct Seeded (AVT 1 - EDS), Kharif 2021

Entry No.	IET No.	Designation	Cross Combination	Grain Type
3rd year of testing:				
101	28241	CRR 797-71-2-1-2	Vandana / IR 9385-123-B	LS
102	28248	CRR 716-4-8	IR 78933-B-24 / Anjali	LB
103	Shabthagidhan (NC)			
104	27523	CRR 514-6-1-1-1-6	Brown gora / N 22 // CR 143-2-2	LS
2nd year of testing:				
105	29054	CR 4116-3-2-1-1-1	CR 4043-3-1-1-1/CR DHAN 204	LS
106	29036	RCPR-68-IR-83929-B-B-291-2-1-1-2	IR78878-53-2-2-2 / CT6510-24-1-2	LB
107	29039	CR 4115-2-5-3-2-1	CR 4042-1-2-1-1-1/ CR DHAN 201	LS
108	Govind (Northern), Narendra 97 (Eastern), Samaleshwari (Central), Varalu (Western) and Tulasi (Southern)—ZC			
109	29047	CR 4114-2-4-1-1-2-1	CR 3848-1-1-2-1-1/VANDAN	MS
110	29048	CR 4121-1-2-1-1-1	CR DHAN203/CR 2706	LS
111	29060	CR 4032-2-4-2-1-1	CR DHAN 201/CR DHAN 203	LS
112	29063	CR 4033-3-2-2-3-1	CR DHAN 203/CR 2706	LS
113	29038	CRR523-2-2-1-3	Kalinga III/Bhupen	LS
114	29044	HUR-9-sarjoo52-sub-1	Sarjoo-52/IR-64-Sub-1	MB
115	Anjali (ZC for all zones & RP)			
116	29052	CR-2889-208-1	Apo/CR 143-2-2	MS
117	29046	CRR 759-B-36-B-1	Sahabthagidhan/IR 87707-446-B-B	LS
118	29067	CB 16680	CB 08504/CO 41	MS
119	29040	CR 3845-5-1-5-2-1	GOTRAVIDHAN/SRIMATI	LS
120	Vandana (NC & RP)			
NIL				
121	28834 (R)	CRR 809-11-1-9-B	IR 84984-83-15-481-B / 3*Anjali // IR 81896-B-B-195 / 3* Anjali	SB
122	28836 (R)	CRR 677-1	IR 79971-B-102-B-B / 3* Vandana	LB
123	28835 (R)	CRR 752-3-1-B	Anjali*3 / IR 81896-B-195	SB
124	IR 64 (Sensitive check)			
1st year of testing:				
125	30437	CR 4333-181-1-2-1	Sahabthagidhan*3 / Robin	LB
126	30438	CR 4333-35-2-2-1	Sahabthagidhan*4 / Robin	LB
127	Local Check			

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Table No. 11.2: Grain Yield (Kg/ha) of entries in AVT-1 E DS under Drought Condition Kharif 2021

Entry No	IET NO	Zone III		Zone V		Overall(1)	
		JH		MP		mean	
		HZB		REW@			
101	28241	2868	4 11%	1020	3	2868	4 11%
102	28248	2674	5	75		2674	5
103	Shabhagidhan (NC)	2590	6	434	9	2590	6
104	27523	3701	1 * 43%	586	6	3701	1 * 43%
105	29054	382				382	
106	29036	2348	8	694	5	2348	8
107	29039	313				313	
108	Zonal Check	882		703	4	882	
109	29047	604				604	
110	29048	708		65		708	
111	29060	1007				1007	
112	29063	500				500	
113	29038	3166	2 * 22%	1628	1 *	3166	2 * 22%
114	29044	1285		386	10	1285	
115	Anjali (ZC for all zones & RP)	2476	7	458	8	2476	7
116	29052	937				937	
117	29046	1465		1346	2 *	1465	
118	29067	562		57		562	
119	29040	611				611	
120	Vandana (NC & RP)	2313	10	467	7	2313	10
121	28834 (R)	2327	9	242		2327	9
122	28836 (R)	2986	3 * 15%	266		2986	3 * 15%
123	28835 (R)	2172		340		2172	
124	IR 64 (Sensitive check)	1090		236		1090	
125	30437	2132		291		2132	
126	30438	1639		301		1639	
127	Local Check	1993		99		1993	
	Exp. Mean	1693.81		484.73		1693.81	
	CD	353.62		356.39		353.62	
	CV%	12.74		44.48		12.74	
	D/S	06.07.2021		30.06.2021			
	Local Check	CR Dhan 40					

***Superior to best check % superior over best check**

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Table No. 11.2 contd.: Grain Yield (Kg/ha) of entries in AVT-1 E DS under Normal Condition, Zone-III, Kharif 2021

Entry No	IET NO	Zone III								Zone III(2)	
		OD				OD(2)		WB		mean	
		CTK		JYP		mean		HTW@			
101	28241	1267		2439		1853		3435		1853	
102	28248	2356		2785		2571		5629	3 *	2571	
103	Shabhagidhan (NC)	3856	6	3655	6	3756	6	2984		3756	6
104	27523	3257	8.5	4514	2	3886	3	4641	4 *	3886	3
105	29054	3913	4	3483	9	3698	7	3574	9	3698	7
106	29036	3847	7	3264		3556	9	5918	1 *	3556	9
107	29039	3906	5	3625	7	3766	5	2553		3766	5
108	Zonal Check	3257	8.5	3102		3180		2330		3180	
109	29047			4006	4	4006	2 7%	3431		4006	2 7%
110	29048	3114	10	3589	8	3352		2383		3352	
111	29060	2700		2967		2834		2130		2834	
112	29063			3254		3254		2462		3254	
113	29038	2034		1758		1896		3567	10	1896	
114	29044	2660		2915		2788		2650		2788	
115	Anjali (ZC for all zones & RP)	1489		1575		1532		3595	8	1532	
116	29052			4748	1	4748	1 * 26%	3751	7	4748	1 * 26%
117	29046	2579		3468		3024		3827	6 *	3024	
118	29067	2560		2613		2587		2830		2587	
119	29040	4121	2	3477	10	3799	4	5759	2 *	3799	4
120	Vandana (NC & RP)	777		2814		1796		2370		1796	
121	28834 (R)	1700		1070		1385		3987	5 *	1385	
122	28836 (R)	1816		1222		1519		2344		1519	
123	28835 (R)	1680		2270		1975		2547		1975	
124	IR 64 (Sensitive check)	2953		3959	5	3456		2769		3456	
125	30437	4657	1 *	2253		3455		2589		3455	
126	30438	3980	3	3311		3646	8	2382		3646	8
127	Local Check	2766		4239	3	3503	10	3237		3503	10
	Exp. mean	2801.92		3050.94		2993.14		3321.12		2993.14	
	CD	733.79		801.74		558.78		168.25		558.78	
	CV%	15.93		16.04		11.39		3.09		11.39	
	D/S	29.06.2021		09.07.2021				15.07.2021			
	Local Check Name	Sabhagidhan		Mandakini				Lalat			

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Table No. 11.2 Contd.: Grain Yield (Kg/ha) of entries in AVT-1 E DS under Normal Condition, Zone-V, Kharif 2021

Entry No	IET NO	Zone V						Zone V (2)	
		CG				CG(2)		mean	
		JDP		RPR		mean			
101	28241	4116		2732		3424		3424	
102	28248	4968	7	3210		4089		4089	
103	Shabhagidhan (NC)	4719	9	3888	7	4304	6	4304	6
104	27523	4618		5159	1	4889	2 7%	4889	2 7%
105	29054	4898	8	3472		4185	8	4185	8
106	29036	5035	6	4917	3	4976	1 9%	4976	1 9%
107	29039	5497	3	3742		4620	4	4620	4
108	Zonal Check	5225	4	2307		3766		3766	
109	29047	4498		3831	8	4165	10	4165	10
110	29048	4167		4092	5	4130		4130	
111	29060	5101	5	3023		4062		4062	
112	29063	4009		4124	4	4067		4067	
113	29038	4479		3803	9	4141		4141	
114	29044	4103		2678		3391		3391	
115	Anjali (ZC for all zones & RP)	3085		1905		2495		2495	
116	29052	5772	1	2806		4289	7	4289	7
117	29046	5571	2	2751		4161		4161	
118	29067	3689		2547		3118		3118	
119	29040	4444		3903	6	4174	9	4174	9
120	Vandana (NC & RP)	3475		1705		2590		2590	
121	28834 (R)	3598		2568		3083		3083	
122	28836 (R)	3584		1390		2487		2487	
123	28835 (R)	3494		2151		2823		2823	
124	IR 64 (Sensitive check)	3948		2736		3342		3342	
125	30437	4666	10			4666	3	4666	3
126	30438	3953		3771	10	3862		3862	
127	Local Check	4038		5081	2	4560	5	4560	5
	Exp. mean	4398.1		3242		3846.42		3846.42	
	CD	1351.72		864.09		880		880	
	CV%	18.76		16.25		13.96		13.96	
	D/S	01.07.2021		03.07.2021					
	Local Check Name	Danteshwari		Indira Aerobic 1					

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Table No.11.2 Contd.: Grain Yield (Kg/ha) of entries in AVT-1 E DS under Normal Condition, Zone-VI, Kharif 2021

Entry No	IET NO	Zone VI				Zone VI(2)	
		GU		MH		mean	
		VYR		PBN			
101	28241	2432		2468		2450	
102	28248	3473		2551		3012	
103	Shabhagidhan (NC)	3975		2895		3435	
104	27523	3772		2270		3021	
105	29054	3803		3144		3474	
106	29036	4094		4059	1 11%	4077	6 * 19%
107	29039	4832	4 16%	2519		3676	8 7%
108	Zonal Check	4165	10	2619		3392	
109	29047	4380	9 5%	2886		3633	9 6%
110	29048	5348	2 * 28%	3052		4200	4 * 22%
111	29060	4629	7 11%	3873	2 6%	4251	3 * 24%
112	29063	4650	6 12%	3680	6	4165	5 * 21%
113	29038	2856		2764		2810	
114	29044	3543		2545		3044	
115	Anjali (ZC for all zones & RP)	2252		3136		2694	
116	29052	5328	3 * 28%	3757	3	4543	2 * 32%
117	29046	3516		3728	4	3622	10 5%
118	29067	3089		3707	5	3398	
119	29040	4669	5 12%	3318	10	3994	7 16%
120	Vandana (NC & RP)	1654		3013		2334	
121	28834 (R)	2434		3411	9	2923	
122	28836 (R)	2171		2898		2535	
123	28835 (R)	2360		2711		2536	
124	IR 64 (Sensitive check)	3831		2978		3405	
125	30437	4519	8 8%	2643		3581	
126	30438	6816	1 * 64%	3437	8	5127	1 * 49%
127	Local Check	2633		3650	7	3142	
	Exp. mean	3749.12		3100.41		3424.77	
	CD	1062.06		427.22		578.26	
	CV%	17.29		8.41		10.31	
	D/S	28.06.2021		15.07.2021			
	Local Check Name	Purna		PBNR 03-2			

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Table No. 11.2 Contd.: Grain Yield (Kg/ha) of entries in AVT-1 E DS under Normal Condition, Zone-VII, Kharif 2021

Entry No	IET NO	Zone VII				Zone VII (2)	
		AP		TN		mean	
		KMP		CBT			
101	28241	5593		5514	4	5554	10
102	28248	4970		4508		4739	
103	Shabhagidhan (NC)	7500	2	4849		6175	3
104	27523	5908		5842	2	5875	8
105	29054	6007		4938		5473	
106	29036	7796	1	5202	7	6499	1
107	29039	6200	8	5782	3	5991	5
108	Zonal Check	6185	9	5017	9	5601	9
109	29047	5670		4818		5244	
110	29048	6644	6	4264		5454	
111	29060	5648		4903		5276	
112	29063	5985		4460		5223	
113	29038	5629		4933		5281	
114	29044	6015	10	4581		5298	
115	Anjali (ZC for all zones & RP)	4393		4933		4663	
116	29052	5255		5058	8	5157	
117	29046	5830		4906		5368	
118	29067	5048		4283		4666	
119	29040	6593	7	5202	7	5898	7
120	Vandana (NC & RP)	3408		4939	10	4174	
121	28834 (R)	5582		4346		4964	
122	28836 (R)	3548		3674		3611	
123	28835 (R)	5037		3700		4369	
124	IR 64 (Sensitive check)	3115		4429		3772	
125	30437	7148	3	4799		5974	6
126	30438	6911	4	5359	5	6135	4
127	Local Check	6811	5	5949	1	6380	2
	Exp. mean	5719.59		4858.8		5289.2	
	CD	1027.56		834.56		658.18	
	CV%	10.97		10.48		7.6	
	D/S	10.07.2021		13.09.2021			
	Local Check Name	KNM-118		CO 53			

Table No.11.2 Contd.: Grain Yield (Kg/ha) of entries in AVT-1 E DS under Normal Condition, overall, *Kharif* 2021

Entry No	IET NO	Overall (8)	
		mean	
101	28241	3320	
102	28248	3603	
103	Shabhagidhan (NC)	4417	7
104	27523	4418	6
105	29054	4207	
106	29036	4777	1 8%
107	29039	4513	4
108	Zonal Check	3985	
109	29047	4298	
110	29048	4284	
111	29060	4106	
112	29063	4309	10
113	29038	3532	
114	29044	3630	
115	Anjali (ZC for all zones & RP)	2846	
116	29052	4675	3 6%
117	29046	4044	
118	29067	3442	
119	29040	4466	5
120	Vandana (NC & RP)	2723	
121	28834 (R)	3089	
122	28836 (R)	2538	
123	28835 (R)	2925	
124	IR 64 (Sensitive check)	3494	
125	30437	4384	9
126	30438	4692	2 6%
127	Local Check	4396	8
	Exp. mean	3893	
	CD	373.39	
	CV%	5.85	
	D/S		
	Local Check Name		

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TableNo.11.3. Days to 50% flowering of entries in AVT-1 E DS under Drought Condition, Kharif 2021

Entry No	IET NO	Zone III	Zone V	Overall(1)
		JH	MP	mean
		HZB	REW@	
101	28241	70	86	70
102	28248	75	95	75
103	Shabhagidhan (NC)	78	94	78
104	27523	74	91	74
105	29054	101		101
106	29036	83	97	83
107	29039	99		99
108	Zonal Check	81	99	81
109	29047	98		98
110	29048	92	104	92
111	29060	87		87
112	29063	101		101
113	29038	74	85	74
114	29044	80	88	80
115	Anjali (ZC for all zones & RP)	70	72	70
116	29052	101		101
117	29046	80	91	80
118	29067	90	104	90
119	29040	93		93
120	Vandana (NC & RP)	67	80	67
121	28834 (R)	62	79	62
122	28836 (R)	64	76	64
123	28835 (R)	63	69	63
124	IR 64 (Sensitive check)	88	101	88
125	30437	84	97	84
126	30438	93	102	93
127	Local Check	70	99	70
	Exp. Mean	82.15	90.43	82.15
	CD	1.69	6.74	1.69
	CV%	1.25	4.51	1.25

Table No.11.3: Days to 50% Flowering of entries in AVT-1 E DS under Normal Condition, Zone III & Zone V, Kharif 2021

Entry No	IET NO	Zone III				Zone III	Zone V			Zone V(2)
		OD		OD(2)	WB	(2)	CG		CG(2)	mean
		CTK	JYP	mean	HTW@	mean	JDP	RPR	mean	
101	28241	65	83	74	69	74	70	75	73	73
102	28248	77	91	84	71	84	70	83	77	77
103	Shabhagidhan (NC)	74	83	79	73	79	77	81	79	79
104	27523	73	85	79	72	79	80	76	78	78
105	29054	84	92	88	78	88	69	95	82	82
106	29036	80	87	84	73	84	72	94	83	83
107	29039	82	98	90	88	90	93	94	94	94
108	Zonal Check	68	83	76	90	76	91	90	91	91
109	29047		99	99	82	99	99	96	98	98
110	29048	80	96	88	78	88	92	92	92	92
111	29060	80	86	83	80	83	91	92	92	92
112	29063		98	98	74	98	99	97	98	98
113	29038	69	86	78	72	78	73	78	76	76
114	29044	74	87	81	91	81	83	82	83	83
115	Anjali (ZC for all zones & RP)	65	76	71	66	71	65	69	67	67
116	29052		98	98	89	98	90	105	98	98
117	29046	73	81	77	73	77	76	80	78	78
118	29067	74	89	82	77	82	83	89	86	86
119	29040	80	82	81	74	81	94	90	92	92
120	Vandana (NC & RP)	63	76	70	68	70	72	71	72	72
121	28834 (R)	64	78	71	66	71	72	72	72	72
122	28836 (R)	63	78	71	68	71	70	69	70	70
123	28835 (R)	64	74	69	66	69	70	65	68	68
124	IR 64 (Sensitive check)	70	89	80	77	80	89	86	88	88
125	30437	78	96	87	85	87	88		88	88
126	30438	78	94	86	77	86	89	88	89	89
127	Local Check	75	90	83	76	83	77	86	82	82
	Exp. mean	73.13	87.14	81.52	75.98	81.52	81.26	84.42	82.91	82.91
	CD	1.86	1.74	1.5	1.8	1.5	0	6	2.94	2.94
	CV%	1.55	1.22	1.12	1.45	1.12	0	4.33	2.16	2.16

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Table No. 11.3. Days to 50% Flowering of entries in AVT-1 E DS under Normal Condition, Zone VI & Zone VII, Kharif 2021

Entry No	IET NO	Zone VI		Zone VI(2)	Zone VII		Zone VII(2)	Overall mean(8)
		GU	MH		AP	TN		
		VYR	PBN	mean	KMP	CBT	mean	
101	28241	78	66	72	68	65	67	71
102	28248	86	72	79	80	72	76	79
103	Shabhagidhan (NC)	80	74	77	76	68	72	77
104	27523	81	74	78	75	72	74	77
105	29054	94	87	91	89	90	90	88
106	29036	85	82	84	81	69	75	81
107	29039	94	88	91	87	77	82	89
108	Zonal Check	85	87	86	88	82	85	84
109	29047	92	87	90	90	77	84	91
110	29048	90	84	87	85	75	80	87
111	29060	92	81	87	86	86	86	87
112	29063	94	88	91	80	89	85	92
113	29038	78	72	75	71	68	70	74
114	29044	80	76	78	79	67	73	79
115	Anjali (ZC for all zones & RP)	71	66	69	68	59	64	67
116	29052	101	70	86	91	84	88	91
117	29046	83	72	78	72	67	70	76
118	29067	80	81	81	78	75	77	81
119	29040	88	84	86	86	76	81	85
120	Vandana (NC & RP)	71	67	69	68	58	63	68
121	28834 (R)	71	63	67	69	59	64	69
122	28836 (R)	70	63	67	67	57	62	67
123	28835 (R)	71	88	80	69	61	65	70
124	IR 64 (Sensitive check)	85	84	85	81	73	77	82
125	30437	86	83	85	80	71	76	83
126	30438	90	82	86	86	72	79	85
127	Local Check	75	73	74	77	79	78	79
	Exp. mean	83.22	77.63	80.43	78.8	72.1	75.45	79.96
	CD	3.17	1.73	1.72	1.95	2.38	1.44	1.04
	CV%	2.32	1.36	1.3	1.51	2.01	1.17	0.79

Table No. 11.4. Plant Height (cm) of entries in AVT-1 E DS under Drought Condition, Kharif 2021

Entry No	IET NO	Zone III	Zone V	Overall(1)
		JH	MP	
		HZB	REW@	
101	28241	90	93	90
102	28248	94	84	94
103	Shabhagidhan (NC)	76	75	76
104	27523	85	101	85
105	29054	65		65
106	29036	74	90	74
107	29039	71		71
108	Zonal Check	54	78	54
109	29047	62	71	62
110	29048	68	71	68
111	29060	64	71	64
112	29063	59	77	59
113	29038	88	107	88
114	29044	59	71	59
115	Anjali (ZC for all zones & RP)	74	76	74
116	29052	78		78
117	29046	73	96	73
118	29067	59	66	59
119	29040	59	66	59
120	Vandana (NC & RP)	67	89	67
121	28834 (R)	69	78	69
122	28836 (R)	69	93	69
123	28835 (R)	59	73	59
124	IR 64 (Sensitive check)	62	61	62
125	30437	70	81	70
126	30438	76	77	76
127	Local Check	82	90	82
	Exp. Mean	70	81	70

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Table No. 11.4 Contd.: Plant Height (cm) of entries in AVT-1 E DS under Normal Condition, Zone III & Zone V, Kharif 2021

Entry No	IET NO	Zone III				Zone III(2)	Zone V			Zone V (2)
		OD		OD(2)	WB		CG		CG(2)	
		CTK	JYP	mean	HTW@	mean	JDP	RPR	mean	mean
101	28241	118	103	111	93	111	90	110	100	100
102	28248	130	121	126	114	126	96	118	107	107
103	Shabhagidhan (NC)	113	107	110	89	110	89	101	95	95
104	27523	135	117	126	97	126	90	111	100	100
105	29054	131	113	122	110	122	95	112	104	104
106	29036	133	115	124	116	124	86	119	102	102
107	29039	135	105	120	69	120	99	97	98	98
108	Zonal Check	96	96	96	69	96	91	106	99	99
109	29047		110	110	104	110	92	109	101	101
110	29048	128	105	117	94	117	81	109	95	95
111	29060	123	107	115	91	115	98	120	109	109
112	29063		111	111	86	111	93	109	101	101
113	29038	115	122	119	89	119	105	109	107	107
114	29044	106	95	101	72	101	88	89	89	89
115	Anjali (ZC for all zones & RP)	117	116	117	79	117	84	100	92	92
116	29052		116	116	83	116	103	108	106	106
117	29046	120	119	120	95	120	103	103	103	103
118	29067	107	104	106	90	106	81	100	90	90
119	29040	120	99	109	110	109	77	112	94	94
120	Vandana (NC & RP)	119	110	115	82	115	84	102	93	93
121	28834 (R)	117	119	118	106	118	91	106	99	99
122	28836 (R)	134	121	127	94	127	86	107	96	96
123	28835 (R)	116	106	111	85	111	89	95	92	92
124	IR 64 (Sensitive check)	96	86	91	72	91	69	88	79	79
125	30437	117	102	109	92	109	80		80	80
126	30438	120	113	117	84	117	88	106	97	97
127	Local Check	118	119	119	98	119	82	105	93	93
	Exp. Mean	119	110	114	91	114	89	106	97	97

Table No. 11.4 Contd.: Plant Height (cm) of entries in AVT-1 E DS under Normal Condition, Zone VI & Zone VII, Kharif 2021

Entry No	IET NO	Zone VI		Zone VI(2)	Zone VII		Zone VII(2)	Overall mean(8)
		GU	MH		AP	TN		
		VYR	PBN	mean	KMP	CBT	mean	
101	28241	111	61	86	100	116	108	101
102	28248	124	66	95	117	110	114	110
103	Shabhagidhan (NC)	111	61	86	112	100	106	99
104	27523	124	65	95	125	119	122	111
105	29054	121	55	88	125	98	111	106
106	29036	125	58	91	124	114	119	109
107	29039	117	55	86	101	99	100	101
108	Zonal Check	114	58	86	127	106	116	99
109	29047	120	57	88	93	101	97	98
110	29048	118	59	88	102	99	100	100
111	29060	116	72	94	110	101	105	106
112	29063	121	49	85	106	101	104	99
113	29038	116	57	86	118	117	118	107
114	29044	95	38	67	100	90	95	88
115	Anjali (ZC for all zones & RP)	109	64	87	126	116	121	104
116	29052	153	68	111	119	105	112	110
117	29046	119	74	97	110	109	109	107
118	29067	105	58	82	112	95	103	95
119	29040	109	58	84	113	102	107	99
120	Vandana (NC & RP)	108	65	86	102	108	105	100
121	28834 (R)	117	71	94	112	95	104	104
122	28836 (R)	109	78	94	100	106	103	105
123	28835 (R)	111	70	91	106	104	105	100
124	IR 64 (Sensitive check)	100	57	79	99	88	93	85
125	30437	117	68	93	99	102	100	98
126	30438	124	76	100	103	101	102	104
127	Local Check	125	85	105	104	111	108	106
	Exp. Mean	116	63	90	110	104	107	102

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Table No.11.5: No. of Panicles/m² of entries in AVT-1 E DS under Drought Condition, Kharif 2021

Entry No	IET NO	Zone III	Zone V	Overall(1) mean
		JH	MP	
		HZB	REW	
101	28241	245	176	245
102	28248	273	81	273
103	Shabhagidhan (NC)	220	107	220
104	27523	242	101	242
105	29054	116		116
106	29036	220	103	220
107	29039	127		127
108	Zonal Check	213	86	213
109	29047	125	57	125
110	29048	168	50	168
111	29060	212	55	212
112	29063	142	55	142
113	29038	268	193	268
114	29044	154	116	154
115	Anjali (ZC for all zones & RP)	253	103	253
116	29052	147		147
117	29046	209	143	209
118	29067	192	47	192
119	29040	188		188
120	Vandana (NC & RP)	244	112	244
121	28834 (R)	239	181	239
122	28836 (R)	223	113	223
123	28835 (R)	221	145	221
124	IR 64 (Sensitive check)	223	109	223
125	30437	247	82	247
126	30438	219	138	219
127	Local Check	218	138	218
	Exp. Mean	205.48	112.34	205.48
	CD	39.29	77.35	39.29
	CV%	11.67	41.84	11.67

Table No. 11.5 Contd.: No. of Panicles/m² of entries in AVT-1 E DS under Normal Condition, Zone III, Kharif 2021

Entry No	IET NO	Zone III				Zone III (2) mean
		OD		OD (2)	WB	
		CTK	JYP	mean	HTW@	
101	28241	208	228	218	228	218
102	28248	172	263	218	319	218
103	Shabhagidhan (NC)	231	297	264	183	264
104	27523	203	225	214	233	214
105	29054	259	280	270	161	270
106	29036	264	233	249	260	249
107	29039	237	288	263	116	263
108	Zonal Check	233	249	241	120	241
109	29047		261	261	221	261
110	29048	227	279	253	159	253
111	29060	221	264	243	153	243
112	29063		264	264	145	264
113	29038	215	247	231	210	231
114	29044	226	245	236	163	236
115	Anjali (ZC for all zones & RP)	218	244	231	166	231
116	29052		282	282	150	282
117	29046	204	299	252	222	252
118	29067	186	319	253	201	253
119	29040	322	263	293	322	293
120	Vandana (NC & RP)	188	283	236	140	236
121	28834 (R)	216	302	259	234	259
122	28836 (R)	225	247	236	141	236
123	28835 (R)	163	279	221	169	221
124	IR 64 (Sensitive check)	271	241	256	134	256
125	30437	308	301	305	180	305
126	30438	248	262	255	157	255
127	Local Check	136	284	210	224	210
	Exp. mean	224.15	267.63	248.39	189.26	248.39
	CD	20.94	37.37	21.18	29.56	21.18
	CV%	5.68	8.52	5.2	9.53	5.2

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Table No. 11.5 Contd.: No. of Panicles/m² of entries in AVT-1 E DS under Normal Condition, Zone V, Kharif 2021

Entry No	IET NO	Zone V			Zone V(2)
		CG		CG(2)	
		JDP	RPR	mean	mean
101	28241	222	116	169	169
102	28248	194	180	187	187
103	Shabhagidhan (NC)	292	183	238	238
104	27523	232	180	206	206
105	29054	264	174	219	219
106	29036	250	203	227	227
107	29039	308	208	258	258
108	Zonal Check	223	160	192	192
109	29047	197	165	181	181
110	29048	225	167	196	196
111	29060	248	167	208	208
112	29063	275	174	225	225
113	29038	227	140	184	184
114	29044	280	196	238	238
115	Anjali (ZC for all zones & RP)	146	117	132	132
116	29052	277	132	205	205
117	29046	271	183	227	227
118	29067	214	210	212	212
119	29040	286	169	228	228
120	Vandana (NC & RP)	199	75	137	137
121	28834 (R)	231	197	214	214
122	28836 (R)	201	58	130	130
123	28835 (R)	235	138	187	187
124	IR 64 (Sensitive check)	272	217	245	245
125	30437	313		313	313
126	30438	277	214	246	246
127	Local Check	261	259	260	260
	Exp. mean	245.07	168.55	209.49	209.49
	CD	114.35	49.38	63.08	63.08
	CV%	28.48	17.86	18.38	18.38

Table No. 11.5 Contd.: No. of Panicles/m² of entries in AVT-1 E DS under Normal Condition, Zone VI, Kharif 2021

Entry No	IET NO	Zone VI		Zone VI(2)
		GU	MH	
		VYR	PBN	mean
101	28241	175	185	180
102	28248	178	146	162
103	Shabhagidhan (NC)	163	135	149
104	27523	142	143	143
105	29054	162	276	219
106	29036	169	135	152
107	29039	199	217	208
108	Zonal Check	161	135	148
109	29047	137	131	134
110	29048	225	141	183
111	29060	138	137	138
112	29063	143	177	160
113	29038	167	146	157
114	29044	186	148	167
115	Anjali (ZC for all zones & RP)	140	155	148
116	29052	183	180	182
117	29046	127	161	144
118	29067	150	150	150
119	29040	186	171	179
120	Vandana (NC & RP)	161	144	153
121	28834 (R)	161	138	150
122	28836 (R)	140	149	145
123	28835 (R)	138	133	136
124	IR 64 (Sensitive check)	163	147	155
125	30437	162	161	162
126	30438	231	189	210
127	Local Check	124	232	178
	Exp. mean	163.4	161.48	162.44
	CD	49.79	9.63	25.8
	CV%	18.6	3.64	9.69

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Table No. 11.5 Contd.: No. of Panicles/m² of entries in AVT-1 E DS under Normal Condition, Zone VII, Kharif 2021

Entry No	IET NO	Zone VII		Zone VII(2) mean	Overall mean(8)
		AP	TN		
		KMP	CBT		
101	28241	633	297	465	258
102	28248	517	360	439	251
103	Shabhagidhan (NC)	600	308	454	276
104	27523	633	403	518	270
105	29054	700	327	514	305
106	29036	648	373	511	284
107	29039	580	357	469	299
108	Zonal Check	620	325	473	263
109	29047	580	383	482	265
110	29048	687	333	510	286
111	29060	700	370	535	281
112	29063	642	288	465	280
113	29038	643	385	514	271
114	29044	493	397	445	271
115	Anjali (ZC for all zones & RP)	613	390	502	253
116	29052	540	293	417	270
117	29046	660	326	493	279
118	29067	607	287	447	265
119	29040	700	348	524	306
120	Vandana (NC & RP)	790	367	579	276
121	28834 (R)	563	312	438	265
122	28836 (R)	675	395	535	261
123	28835 (R)	580	378	479	256
124	IR 64 (Sensitive check)	617	383	500	289
125	30437	627	352	490	318
126	30438	607	368	488	300
127	Local Check	640	422	531	295
	Exp. mean	625.74	352.83	489.28	277.46
	CD	82.26	45.17	49.28	20.84
	CV%	8.02	7.81	6.15	4.58

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Table No. 11.6: Grain quality characteristics of entries in AVT-1 E DS, Kharif 2021

Grain quality characteristics of entries in AVT-1 E DS, Kharif 2021																	
Entry No	IET No	HULL %	MILL %	HRR %	MOIS %	CHALKI	KL (mm)	KB(mm)	L/B	ASV	WU	VER	ER	KLAL(mm)	AC%	GC	Grain Type
101	28241	73	65	60	12.3	A	5.62	2.17	2.58	3	75	3.75	1.6	9	23.92	41	MS
102	28248	72	64	54	12.1	VOC	5.8	1.78	3.25	7	65	3.75	1.72	10	24.75	37	SS
103	Shabhagidhan (NC)	73	67	55	12.2	A	5.8	1.83	3.16	7	65	3.75	1.72	10	22.72	46	SS
104	27523	70	67	60	12.4	A	5.68	1.6	3.55	3	70	3.75	1.67	9.5	19.05	57	SS
105	29054	72	63	43	12.3	A	6.58	1.7	3.87	3	105	3.75	1.36	9	21.15	46	LS
106	29036	74	65	61	12.3	VOC	5.6	1.63	3.43	6	85	4	1.78	10	21.07	47	SS
107	29039	71	63	55	12.2	VOC	6.34	1.68	3.77	5	75	3.75	1.57	10	22.35	44	LS
108	Zonal Check	74	65	60	12.6	A	5.6	1.52	3.68	7	130	3.75	1.78	10	20.17	48	SS
109	29047	67	51	35	12.1	A	6.36	1.58	4.02	3	105	4	1.72	11	25.35	35	LS
110	29048	68	54	43	12.2	A	6.41	1.6	4	4	75	3.75	1.71	11	23.92	42	LS
111	29060	70	66	50	12.5	A	6.65	1.56	4.26	3	105	3.75	1.65	11	20.02	49	LS
112	29063	71	63	50	12.6	A	6.62	1.59	4.16	3	100	3.75	1.51	10	24.22	38	LS
113	29038	75	67	60	12.1	A	6.34	1.5	4.22	3	60	3.75	1.57	10	23.02	38	LS
114	29044	70	65	60	12.3	VOC	5.55	1.73	3.2	3	70	3.75	1.62	9	23.02	39	SS
115	Anjali (ZC for all zones & RP)	75	65	62	12.1	VOC	5.3	2.26	2.34	3	85	3.75	1.69	9	23.92	44	SB
116	29052	74	62	60	12.1	A	5.37	2.22	2.41	3	75	3.75	1.86	10	24	39	SB
117	29046	74	65	60	12.5	A	5.4	1.59	3.39	3	85	3.75	1.66	9	22.12	46	SS
118	29067	71	65	60	12.4	A	5.28	1.59	3.32	3	80	3.75	1.51	8	24.15	42	SS
119	29040	69	62	55	12.6	A	6.31	1.37	4.6	7	55	3.75	1.58	10	24.37	38	LS
120	Vandana (NC & RP)	69	60	47	12.2	VOC	6.4	1.59	4.02	3	105	3.75	1.4	9	21.9	48	LS
121	28834 (R)	73	66	62	12.7	A	5.17	2.21	2.33	5	145	3.75	1.54	8	21.37	47	SB
122	28836 (R)	76	67	64	12.1	VOC	5.41	1.79	3.02	3	80	3.75	1.66	9	20.7	53	SS
123	28835 (R)	76	66	63	12.6	VOC	5.36	2.33	2.3	3	105	3.75	1.49	8	22.42	47	SB
124	IR 64 (Sensitive check)	71	67	60	12.4	A	5.57	1.53	3.64	3	65	3.75	1.61	9	19.72	55	SS
125	30437	71	62	54	12.2	VOC	5.13	2.18	2.35	5	95	3.75	1.75	9	24.75	37	SB
126	30438	71	67	60	12.3	VOC	5.29	2.14	2.47	7	45	3.75	1.7	9	24.22	37	SB
127	Local Check	71	65	60	12.1	A	5.37	1.7	3.15	5	65	3.75	1.67	9	23.1	39	SS

INITIAL VARIETY TRIAL-EARLY DIRECT SEEDED (IVT-EDS)

Locations: 13

**Test Entries: 45
(Varetal-44,
Hybrid-1**

Checks: Sahbhagidhan and Vandana – National, Govind (Northern-II), Narendra 97 (Eastern-III&IV), Samaleshwari (Central-V), Varalu (Western-VI) and Tulasi (Southern-VII) & Anjali - Zonal, US 314 – Hybrid, IR64 (Sensitive) and Local check

Table:11.7

The trial was constituted with 52 entries, including 7 checks, national (Sahbhagidhan and Vandana), zonal (Govind, Narendra 97, Samaleshwari, Varalu and Tulasi– Early), all zone check (Anjali), hybrid check (US 314), sensitive check (IR64) and local check. The trial was sent to 13 locations but data from two locations (Mugad and Vyara) was not received. The trial was evaluated at 11 locations under rainfed direct seeded condition covering states of Odisha, West Bengal, Chhattisgarh, Telangana, Tamil Nadu, Bihar, Jharkhand and Madhya Pradesh in zone II, zone III, zone IV, zone V, zone VI and zone VII. In the 11 locations, the trial was sown in the month of June (Jagdalpur, Raipur), July (Cuttack, Hathwara, Jeypore, Kampasagar, Parbhani, Rewa and Sabour), August (Hazaribagh) and September (Coimbatore). The data from three centres *viz.*, Hathwara (low CV: 3.17%), Jagdalpur (non-significant *F*-value) and Rewa (high CV: 32.16%) were not considered for analysis. In light of the situation, the centres were classified as drought or normal rainfall sites for data analysis and the performance of entries was discussed accordingly. Drought situation was experienced at 2 locations *viz.*, Hazaribagh and Rewa, during flowering and grain filling stage whereas rest of the 9 locations experienced normal rainfall. The entries are evaluated based on their performance under drought as well as normal conditions. The information on drought and general performance at different location is given below.

General information on drought situation in different locations

Location	Drought situation	Average Expt. Yield (Kg/ha)	CV (%)
Coimbatore	Normal	5085.81	11.11
Cuttack	Normal	3112.16	9.16
Hathwara	Normal	3325.21	3.17
Hazaribagh	Drought	1668.97	14.62
Jagdalpur	Normal	3641.97	15.22
Jeypore	Normal	2787.24	19.66
Kampasagar	Normal	6200.48	10.96
Parbhani	Normal	3071.32	8.42
Raipur	Normal	3386.59	16.49
Rewa	Drought	362.63	32.16
Sabour	Normal	3663.33	11.74

PERFORMANCE OF ENTRIES UNDER DROUGHT CONDITION

Drought condition was experienced at one location in Zone III *viz.*, Hazaribagh and one location in Zone V *viz.*, Rewa. The experimental mean grain yield at Hazaribagh and Rewa was 1668.97 kg/ha, 362.63 kg/ha and CV was 14.62% and 32.16%, respectively. Since the CV for the trial conducted at the Rewa centre is beyond the acceptable limit, the data from the centre is not considered for further analysis and interpretations.

Zone III

Overall grain yield under drought condition ranged from 66 kg/ha (IET 30311) to 3036 kg/ha (IET 30334). Among the varietal entries, none of the entries recorded a significant yield advantage (CD at 5% level of significance) over the best varietal check (BVC) (Sahbhagidhan-2810 kg/ha). However, the performance of 11 entries was at par (CD at 5% level of significance) with the best varietal check. The entries are: IET 30334: 3036kg/ha; IET 30313: 2917 kg/ha; IET 30351: 2798kg/ha, IET 30321: 2798 kg/ha; IET 30328: 2679kg/ha, IET 30343: 2524kg/ha; IET 30332: 2441kg/ha; IET 30335: 2405 kg/ha; IET 30346: 2381kg/ha; IET 30330: 2381kg/ha and IET 30336: 2322kg/ha. The mean yield of hybrid entry (IET 30353: 905 kg/ha) was lower, compared to the hybrid check (US-314: 1905kg/ha). Days to 50% flowering ranged from 65 days (IET 30335) to 102 days (IET 30316); plant height ranged from 33 cm (IET 30333) to 110 cm (IET 30343) and number of panicles per m² ranged from 58 (IET 30352) to 292 (IET 30312).

The data pertaining to yield (kg/ha), days to 50% flowering, plant height (cm) and number of panicles/m² of all the entries under drought condition are presented in Tables 11.8, 11.9, 11.10 and 11.11.

PERFORMANCE OF ENTRIES UNDER NORMAL CONDITION

The data pertaining to yield (kg/ha), days to 50% flowering, plant height (cm) and number of panicles/m² under normal rainfall conditions are presented in Tables 8 to 11. The zone wise and overall performance of entries under normal rainfall condition is discussed below.

Zone III

The mean grain yield of entries in Zone III under normal condition ranged from 1430 kg/ha (Vandana, National Check) to 4517 kg/ha (IET 30353) with experimental mean of 3173.87 kg/ha. The hybrid entry IET 30353, recorded the highest yield of 4517 kg/ha, but it was not significantly (CD at 5% level of significance) better than the hybrid check (US-314: 4138 kg/ha). Among the varietal entries, 12 entries (IET 30312: 3834 kg/ha, IET 30339: 3875kg/ha, IET 30322: 3890kg/ha, IET 30317: 3936kg/ha, IET 30334: 4001kg/ha, IET 30310: 4052kg/ha, IET30328: 4084kg/ha, IET 30348: 4095kg/ha, IET 30332: 4181kg/ha, IET 30350: 4247kg/ha, IET 30329: 4348kg/ha, and IET 30351: 4355kg/ha) performed significantly better (CD at 5% level of significance) than the best varietal check (Local check, CR Dhan 40: 3346kg/ha). Days to 50% flowering ranged from 69 days (Anjali, all zone check) to 92 days (IET 30316), plant height ranged from 70 cm (IET 30333) to 127 cm (IET 30325) and number of panicles/m² ranged from 174 (IET 30343) to 319 (IET 30345).

Zone V

The mean grain yield of entries in Zone V under normal condition ranged from 561 kg/ha (IET 30316) to 5403 kg/ha (IET 30334) with experimental mean of 3386.59 kg/ha. The hybrid entry IET 30353 recorded lower mean grain yield (4033 kg/ha) compared to the hybrid check (US-314: 5138 kg/ha). Among the varietal entries, none of the entries recorded a significant yield advantage over the best varietal check (Indira Aerobic-1, Local check: 4668 kg/ha). Days to 50% flowering ranged from 66 days (IET 30333) to 106 days (IET 30311), plant height ranged from 41 cm (IET 30333) to 142 cm (IET 30325) and number of panicles/m² ranged from 68 (IET 30349) to 261 (IET 30351).

In Zone V, none of the test entries (varieties/hybrid) have a significant yield advantage (CD at 5% level of significance) over their respective best check, hence no entry is promoted for further advanced trials.

Zone VI

The mean grain yield of entries in Zone VI under normal condition ranged from 2191 kg/ha (IET 30318) to 4191 kg/ha (IET 30320) with experimental mean of 3071.32 kg/ha. The mean grain yield of the hybrid entry (IET 30353) was lower than the hybrid check (US-314: 2862 kg/ha). Among the varietal entries, no entry recorded significant yield superiority over the best varietal check (Varalu, Zonal Check: 3929 kg/ha). Days to 50% flowering ranged from 75 days (IET 30325) to 102 days (IET 30344), plant height ranged from 53 cm (Anjali, all zone check) to 93 cm (US-314, Hybrid Check) and number of panicles/m² ranged from 169 (IET 30331) to 292(IET 30348).

In Zone VI, none of the test entries (varieties/hybrid) have a significant yield advantage (CD at 5% level of significance) over their respective best checks, hence no entry is promoted for further testing in advanced trials.

Zone VII

The mean grain yield of entries in Zone VII under normal condition ranged from 4106 kg/ha (IET 30342) to 7231 kg/ha (US-314, Hybrid check) with experimental mean of 5643.14 kg/ha. The mean grain yield of the hybrid entry (IET 30353: 5995 kg/ha) was lower than the hybrid check (US-314: 7231 kg/ha). Among the varietal entries, no entry recorded significant yield superiority over the best varietal check (Sahbhagidhan, National Check: 6312 kg/ha). Days to 50% flowering ranged from 63 days (Vandana, National Check) to 89 days (IET 30352), plant height ranged from 62 cm (IET 30353) to 166 cm (IET 30328) and number of panicles/m² ranged from 357(IET 30324) to 597(IET 30313).

In Zone VII, none of the test entries (varieties/hybrid) have a significant yield advantage (CD at 5% level of significance) over their respective best check, hence no entry is promoted for further advanced trials.

Overall Performance of entries under normal condition

On overall mean basis under normal condition, grain yield ranged from 2562 kg/ha (IET 30324) to 4982 kg/ha (US-314, the hybrid check) with experimental mean of 3897.96 kg/ha. The mean grain yield of the hybrid entry (IET 30353: 4628 kg/ha) was lower than the hybrid check (US-314: 4982 kg/ha). Among the varietal entries, 9 entries (IET 30330: 4475 kg/ha, IET 30317: 4534kg/ha, IET 30336: 4557kg/ha, IET 30326: 4584 kg/ha, IET 30312: 4614kg/ha, IET 30328: 4691kg/ha, IET 30332: 4705kg/ha, IET 30351: 4749kg/ha and IET 30334: 4779kg/ha) recorded significant yield superiority (CD at 5% level of significance) over the best varietal check (Local Check: 4132 kg/ha). Days to 50% flowering ranged from 72 days (Anjali, all zone check) to 91 days (IET 30345), plant height ranged from 68 cm (IET 30333) to 120 cm (IET 30325) and number of panicles/m² ranged from 224 (IET 30324) to 352 (IET 30331).

PROMOTION/DELETION OF ENTRIES

The promotion of entries in the IVT-EDS is based on how well they perform under drought situation. In the present trial, drought was experienced only in one location *i.e.*, Hazaribagh in Zone III. As a result, the proper evaluation of test entries and the identification of promising test entries have been hampered. None of the test entries (variety/hybrid) performed significantly (CD at 5% level of significance) better than their respective best check under drought conditions. However, the performance of 11 entries was at par (CD at 5% level of significance) with the best varietal check. The entries are: IET 30334: 3036kg/ha; IET 30313: 2917 kg/ha; IET 30351: 2798kg/ha, IET 30321: 2798 kg/ha; IET 30328: 2679kg/ha, IET 30343: 2524kg/ha; IET 30332: 2441kg/ha; IET 30335: 2405 kg/ha; IET 30346: 2381kg/ha; IET 30330: 2381kg/ha and IET 30336: 2322kg/ha.

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Under normal condition in Zone III, 12 varietal entries (IET 30312, IET 30339, IET 30322, IET 30317, IET 30334, IET 30310, IET 30328, IET 30348, IET 30332, IET 30350, IET 30329 and IET 30351) recorded significant yield advantage (CD at 5% level) over the best varietal check. Similarly, across all the zones under normal condition, 9 entries (IET 30330, IET 30317, IET 30336, IET 30326, IET 30312, IET 30328, IET 30332, IET 30351 and IET 30334) recorded significant yield superiority (CD at 5% level of significance) over the best varietal check.

Table 2 lists the test entries that performed statistically on par with the BVC (Sahbhagidhan-2810 kg/ha) under drought conditions along with the test entries that had a significant yield advantage (CD at 5% level) compared to the BVC under normal conditions (Zone III and across all zones). Among these, the **common six test entries viz., IET 30334, IET 30351, IET 30328, IET 30332, IET 30330, and IET 30336, which performed well under both drought and normal conditions, are promoted for further evaluation in advanced trials.**

The best performing entries under drought condition and test entries with significant yield difference compared to the BVC under normal condition

Sl. No.	Entries statistically at par with the BVC under Drought (Overall/Zone III)		Entries with significant yield advantage (CD at 5%) over the BVC under normal condition			
	Entry	Yield (kg/ha)	Normal (Zone III)		Normal (Overall)	
			Entry	Yield (kg/ha)	Entry	Yield (kg/ha)
1	IET 30334	3036	IET 30351	4355	IET 30334	4779
2	IET 30313	2917	IET 30329	4348	IET 30351	4749
3	IET 30351	2798	IET 30350	4247	IET 30332	4705
4	IET 30321	2798	IET 30332	4181	IET 30328	4691
5	IET 30328	2679	IET 30348	4095	IET 30312	4614
6	IET 30343	2524	IET 30328	4084	IET 30326	4584
7	IET 30332	2441	IET 30310	4052	IET 30336	4557
8	IET 30335	2405	IET 30334	4001	IET 30317	4534
9	IET 30346	2381	IET 30317	3936	IET 30330	4475
10	IET 30330	2381	IET 30322	3890	-	-
11	IET 30336	2322	IET 30339	3875	-	-
12	-	-	IET 30312	3834	-	-
BVC	Sahbhagidhan	2810	Local check	3346	Local check	4132
CD (5%):	489.88		461.45		341.62	

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Table No. 11.7: Composition of entries in Initial Variety Trial 1–Early Direct Seeded (IVT-EDS), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	Grain type
201	30310	RCPR 83-IR90257-B-577-1-1-B	CT 9993-5-10-1-M/2*SAMBHA MAHSURI	LS
202	30311	CRAC 3998-128-1	Doubled haploid of 27P63	MB
203	30312	CR4119-2-1-1-2-1	CR Dhan201/IR84852-B-12-2	LS
204	30313	CRR 635-254	Vandana / Poornima	LS
205	30314	CR4121-3-1-2-1-1	CR3846-2-1-2-1-1/CR Dhan203	LS
206	30315	NVSR 3031	GR-7 / GR-5	LS
207	Sahbhagidhan (NC)			
208	30316	CRAC 3998-193-1	Doubled haploid of 27P63	MB
209	30317	NVSR 2842	Gurjari xVaralu	MS
210	30318	CR 4118-1-1-2-2-1	CR Dhan 201/IR84549-B-183-13-1-1-2	LS
211	30319	CR4116-1-2-1-1-3	CR4043-3-1-1-1/CRDhan204	LS
212	30320	CRAC 3998-253	Doubled haploid of 27P63	MB
213	30321	CRR 759-11-B-1	SahbhagiDhan / IR 87707-446-B-B	LS
214	30322	CRAC 3998-221	Doubled haploid of 27P63	MB
215	30323	CR 4121-1-2-1-1-1	CR Dhan203/ CR2706	LS
216	Anjali (all zones)			
217	30324	JDP-0320	Selection from IR-84887-B-15	SB
218	30325	CRR 668-20	Anjali / Sukhawan	LB
219	30326	CR 4057-1427-3-4-5-6	Pyari/Satari	LB
220	30327	BRR0164	NDR 359/PAU 201	LS
221	30328	CR 4059-1312-1-1-4	IET 22729 / PR 118	LB
222	30329	CR 4369-3-IR-143508-61-22-9-5-1-B	NAVEEN*2/IR 96321-1447-561-B-1//NAVEEN/IR 87707-445-B-B///NAVEEN/IRBL9/ /NAVEEN/ AGANNI/6//NAVEEN/IRBB 60	LS
223	Vandana (NC)			
224	30330	RCPR 84-IR14L 155	IR 81039-B-173-U 3-3/IR 81063-B-94-U 3-1	LS
225	30331	CR 3996-1415-4-5-1-2-1	IR 20/Mahulatha	LB
226	30332	BRR0163	SWARNA/AD 09379	LS
227	30333	CR 4013-5(ODR 55-5)	Zhu 11-26 / DDR 121	SB
228	30334	ORJ-1347	IR 10L128/IR 09N520	MB
229	30335	CRR 667-19	Poornima/ Salumpikit	LS
230	30336	ORJ-1356	Sampada/IRGC 25966//RP Bio 226	LB
231	Govind (Northern-II), Narendra 97 (Eastern-III and IV), Samaleshwari (Central- V), Varalu (western-VI) andTulasi (Southern-VII)—ZC			
232	30337	CR 4368-3-IR-143505-161-154-11-44-B	LALAT*2/IR 96321-1447-561-B-1//LALAT/IRBB 60///LALAT/IR11L101//LALAT/IRBL9	MS
233	30338	CRR 661-11	Vandana / CR 143-2-2	LS
234	30339	CR 4075-1341-3-3-2-2-1-4-1	Jaya /PKV HMT	LS
235	30340	CRR 783-B-B-4	RR 51-1/TJP 48 // RR 51-1	LS
236	IR 64 – Sensitive Check			
237	30341	CR 3842-60-1-2-1-1	Gontra Bidhan3/CR Dhan203	SB
238	30342	CB 16656	CB 08504/IET 21588	MS
239	30343	CRR 449-5-1-2	Black gora/ IR64	LB
240	30344	CR 4368-6-IR-143505-134-154-27-3-B	LALAT*2/IR 96321-1447-561-B-1//LALAT/IRBB 60///LALAT/IR11L101//LALAT/IRBL9	MB
241	30345	CRAC 3998-129-1	Doubled haploid of 27P63	SB
242	30346	CR 4369-3-IR-143508-21-20-12-1-1-B	NAVEEN*2/IR 96321-1447-561-B-1//NAVEEN/IR 87707-445-B-B/// NAVEEN/IRBL9/ /NAVEEN/ AGANNI/6//NAVEEN/IRBB 60	MS
243	30347	CRR 759-12-B-1	SahbhagiDhan / IR 87707-446-B-B	LS
244	30348	CR 3842-50-2-1-2-1	Gontra Bidhan3/CR Dhan203	SB
245	30349	CRR 586-17-1-2-4	RR 166-645/ CH 45	LS
246	30350	CR 3843-6-1-1-1-2	Gontra Bidhan3/CR Dhan202	MB
247	30351	R 2341-142-1-122-1	Mahamaya/ IR BL-5	LS
248	30352	CR 3543-4-3-1-1-2-1	Prasad/Divya	SB
249	30353	US-395	Hybrid	LB
250	30354	R 1877-41-1-13-1	Danteswari / F7-10	LS
251	US-314 (Hybrid check)			
252	Local check			

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Table No. 11.8: Grain yield (Kg/ha) of entries in IVT-EDS Drought, Kharif 2021

Entry No.	IET No.	Zone III			Zone V		Overall mean (1)	
		JH (1)	Zone III mean (1)		MP (1) @Rewa	Zone mean	Yield	Rank
		HZB	Yield	Rank				
201	30310	1786	1786				1786	
202	30311	66	66				66	
203	30312	1608	1608				1608	
204	30313	2917	2917	2	489	489	2917	2
205	30314	1012	1012				1012	
206	30315	1155	1155				1155	
207	Sahbhagidhan (NC)	2810	2810	3			2810	3
208	30316	107	107				107	
209	30317	833	833				833	
210	30318	595	595				595	
211	30319	1738	1738				1738	
212	30320	1357	1357				1357	
213	30321	2798	2798	5	137	137	2798	5
214	30322	399	399				399	
215	30323	774	774				774	
216	Anjali (all zones)	2381	2381		359	359	2381	
217	30324	2084	2084				2084	
218	30325	2060	2060		117	117	2060	
219	30326	952	952				952	
220	30327	1012	1012				1012	
221	30328	2679	2679	6			2679	6
222	30329	2203	2203				2203	
223	Vandana (NC)	2524	2524	8	130	130	2524	8
224	30330	2381	2381				2381	
225	30331	1786	1786				1786	
226	30332	2441	2441	9	85	85	2441	9
227	30333	197	197				197	
228	30334	3036	3036	1			3036	1
229	30335	2405	2405	10	411	411	2405	10
230	30336	2322	2322				2322	
231	Narendra 97	2084	2084				2084	
232	30337	1655	1655				1655	
233	30338	1846	1846		651	651	1846	
234	30339	1143	1143				1143	
235	30340	1905	1905		59	59	1905	
236	IR64: Sensitive Check	2084	2084				2084	
237	30341	964	964				964	
238	30342	1465	1465		117	117	1465	
239	30343	2524	2524	7	1563	1563	2524	7
240	30344	1727	1727				1727	
241	30345	89	89				89	
242	30346	2381	2381		59	59	2381	
243	30347	2203	2203		78	78	2203	
244	30348	1739	1739				1739	
245	30349	2167	2167		684	684	2167	
246	30350	441	441				441	
247	30351	2798	2798	4			2798	4
248	30352	524	524				524	
249	30353	905	905				905	
250	30354	1750	1750				1750	
251	US-314 (Hybrid check)	1905	1905				1905	
252	Local check	2084	2084				2084	
	Exp. Mean	1668.97	1668.97		362.63	362.63	1668.97	
	CD (5%)	489.88	489.88		251.97	251.97	489.88	
	CD (10%)	408.79	408.79		210.26	210.26	408.79	
	CV%	14.62	14.62		32.16	32.16	14.62	
	D/S	06.07.2021	06.07.2021		01.07.2021	01.07.2021	06.07.2021	
	Local Check	CR Dhan 40	CR Dhan 40				CR Dhan 40	

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Table No. 11.9: Days to 50% flowering of entries in IVT-EDS Drought, Kharif 2021

Entry No.	IET No.	Zone III		Zone V		Overall mean (1)
		JH (1)	Zone III mean (1)	MP (1)	Zone mean (1)	
		HZB		@ Rewa		
201	30310	85	85	99	99	85
202	30311	101	101			101
203	30312	92	92			92
204	30313	70	70			70
205	30314	96	96	107	107	96
206	30315	87	87	107	107	87
207	Sahbhagidhan (NC)	76	76	96	96	76
208	30316	102	102			102
209	30317	96	96	107	107	96
210	30318	100	100			100
211	30319	85	85			85
212	30320	90	90			90
213	30321	76	76	87	87	76
214	30322	93	93			93
215	30323	94	94			94
216	Anjali (all zones)	70	70	66	66	70
217	30324	83	83	105	105	83
218	30325	71	71	88	88	71
219	30326	96	96	105	105	96
220	30327	95	95			95
221	30328	80	80	99	99	80
222	30329	90	90			90
223	Vandana (NC)	66	66	86	86	66
224	30330	83	83	90	90	83
225	30331	86	86	106	106	86
226	30332	87	87			87
227	30333	81	81	66	66	81
228	30334	78	78	89	89	78
229	30335	65	65	70	70	65
230	30336	86	86	107	107	86
231	Narendra 97 (III)/Samaleshwari (V)	81	81	105	105	81
232	30337	86	86			86
233	30338	72	72	72	72	72
234	30339	91	91			91
235	30340	85	85	89	89	85
236	IR64: Sensitive Check	81	81	99	99	81
237	30341	88	88	106	106	88
238	30342	82	82	90	90	82
239	30343	70	70	79	79	70
240	30344	75	75	91	91	75
241	30345	101	101			101
242	30346	77	77	87	87	77
243	30347	78	78	86	86	78
244	30348	85	85	105	105	85
245	30349	68	68	73	73	68
246	30350	92	92			92
247	30351	82	82			82
248	30352	101	101			101
249	30353	93	93	107	107	93
250	30354	80	80	98	98	80
251	US-314 (Hybrid check)	85	85	106	106	85
252	Local check	67	67			67
	Exp. Mean	84	84	93	93	84

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Table No. 11.10: Plant height (cm) of entries in IVT-EDS Drought, Kharif 2021

Entry No.	IET No.	Zone III		Zone V		Overall mean (1)
		JH (1) HQB	Zone III mean (1)	MP (1) @ Rewa	Zone mean (1)	
201	30310	76	76	88	88	76
202	30311	52	52			52
203	30312	64	64			64
204	30313	96	96	97	97	96
205	30314	79	79	91	91	79
206	30315	62	62	100	100	62
207	Sahbhagidhan (NC)	84	84	85	85	84
208	30316	70	70			70
209	30317	75	75	87	87	75
210	30318	81	81	94	94	81
211	30319	85	85			85
212	30320	64	64			64
213	30321	74	74	92	92	74
214	30322	74	74			74
215	30323	71	71			71
216	Anjali (all zones)	70	70	76	76	70
217	30324	85	85	83	83	85
218	30325	99	99	106	106	99
219	30326	59	59	71	71	59
220	30327	77	77			77
221	30328	76	76	82	82	76
222	30329	70	70			70
223	Vandana (NC)	81	81	83	83	81
224	30330	80	80	96	96	80
225	30331	64	64	74	74	64
226	30332	75	75			75
227	30333	33	33	39	39	33
228	30334	75	75	101	101	75
229	30335	75	75	106	106	75
230	30336	59	59	58	58	59
231	Narendra 97 (III)/ Samaleshwari (V)	64	64	67	67	64
232	30337	68	68			68
233	30338	65	65	52	52	65
234	30339	71	71	75	75	71
235	30340	73	73	93	93	73
236	IR64: Sensitive Check	60	60	65	65	60
237	30341	66	66	87	87	66
238	30342	89	89	95	95	89
239	30343	110	110	115	115	110
240	30344	59	59	78	78	59
241	30345	36	36			36
242	30346	85	85	93	93	85
243	30347	79	79	84	84	79
244	30348	73	73	58	58	73
245	30349	90	90	95	95	90
246	30350	78	78			78
247	30351	85	85	82	82	85
248	30352	68	68			68
249	30353	58	58	70	70	58
250	30354	75	75	73	73	75
251	US-314 (Hybrid check)	68	68	75	75	68
252	Local check	85	85			85
	Exp. Mean	73	73	83	83	73

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Table No. 11.11: Panicles/m² of entries in IVT-EDS Drought, Kharif 2021

Entry No.	IET No.	Zone III		Zone V		Overall mean (1)
		JH (1)	Zone III mean (1)	MP (1)	Zone mean (1)	
		HZB		@ Rewa		
201	30310	228	228	98	98	228
202	30311	114	114			114
203	30312	292	292			292
204	30313	269	269	194	194	269
205	30314	172	172	35	35	172
206	30315	189	189	42	42	189
207	Sahbhagidhan (NC)	208	208	215	215	208
208	30316	135	135			135
209	30317	152	152	88	88	152
210	30318	125	125	129	129	125
211	30319	232	232			232
212	30320	154	154	148	148	154
213	30321	215	215	315	315	215
214	30322	204	204			204
215	30323	138	138			138
216	Anjali (all zones)	228	228	140	140	228
217	30324	194	194			194
218	30325	273	273	168	168	273
219	30326	219	219	95	95	219
220	30327	171	171			171
221	30328	235	235	204	204	235
222	30329	228	228			228
223	Vandana (NC)	207	207	227	227	207
224	30330	213	213	202	202	213
225	30331	202	202	50	50	202
226	30332	214	214			214
227	30333	149	149	134	134	149
228	30334	280	280	110	110	280
229	30335	266	266	231	231	266
230	30336	203	203	71	71	203
231	Narendra 97 (III)/ Samaleshwari (V)	197	197	70	70	197
232	30337	227	227			227
233	30338	249	249	226	226	249
234	30339	171	171	37	37	171
235	30340	208	208	103	103	208
236	IR64: Sensitive Check	235	235	69	69	235
237	30341	211	211	76	76	211
238	30342	184	184	86	86	184
239	30343	263	263	191	191	263
240	30344	213	213	162	162	213
241	30345	63	63			63
242	30346	238	238	125	125	238
243	30347	235	235	147	147	235
244	30348	195	195	98	98	195
245	30349	215	215	240	240	215
246	30350	254	254			254
247	30351	246	246	135	135	246
248	30352	58	58			58
249	30353	211	211	65	65	211
250	30354	199	199	178	178	199
251	US-314 (Hybrid check)	180	180	58	58	180
252	Local check	254	254			254
	Exp. Mean	203.86	203.86	142.37	142.37	203.86
	CD	44.73	44.73	181.89	181.89	44.73
	CV%	10.93	10.93	62.99	62.99	10.93

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Table No. 11.8: Grain yield of entries in IVT-EDS Normal, Kharif 2021

Entry No.	IET No.	Zone III					Zone III (3)		Zone V			Zone V	Zone VI		Zone VII		Zone VII (2)	Overall (7)	Rank (Overall)
		OD		OD (2)	WB	BI	mean	Rank	CG		CG (1)	(1)	MH	AP	TN	mean	mean		
		CTK	JYP		HTW@	SBR			JDP@	RPR	mean	mean	PBN	KMP	CBT				
201	30310	3822	3625	3724	3586	4709	4052	7*	3620	4020	4020	4020	2805	6500	5456	5978	4420	10	
202	30311	2922	1937	2430	2741	3438	2766		3197	1150	1150	1150	3111	6417	4522	5470	3357		
203	30312	4250	3271	3761	4215	3980	3834		3106	3933	3933	3933	4018	7000	5844	6422	4614	5*	
204	30313	2183	1971	2077	3194	2726	2293		3646	2779	2779	2779	3845	6009	5260	5635	3539		
205	30314	3028	3053	3041	3972	4425	3502		3451	3455	3455	3455	2760	6267	4449	5358	3920		
206	30315	3783	3057	3420	4400	3613	3484		4760	3252	3252	3252	2405	6709	5294	6002	4016		
207	Sahbhagidhan (NC)	3067	2692	2880	2883	3334	3031		3763	3135	3135	3135	2396	7775	4849	6312	3893		
208	30316	3989	2264	3127	3814	4005	3419		3138	561	561	561	2654	8292	4427	6360	3742		
209	30317	4028	4064	4046	3821	3715	3936	9*	3542	3273	3273	3273	2920	7817	5923	6870	4534	8*	
210	30318	3828	2433	3131	2958	4466	3576		3288	3298	3298	3298	2191	6659	4719	5689	3942		
211	30319	3028	2512	2770	3659	3856	3132		3581	4016	4016	4016	3067	6825	5260	6043	4081		
212	30320	1683	2935	2309	3803	3872	2830		3281	1184	1184	1184	4191	6025	3651	4838	3363		
213	30321	2378	3381	2880	2384	3250	3003		3490	2666	2666	2666	2413	4634	5558	5096	3469		
214	30322	3489	4151	3820	2983	4031	3890	10*	3392	4066	4066	4066	2507	5600	5103	5352	4135		
215	30323	2356	2819	2588	5149	4688	3288		3750	4568	4568	4568	2916	7133	5668	6401	4307		
216	Anjali (all zones)	2678	1930	2304	2198	2438	2349		3496	2218	2218	2218	3232	5584	5375	5480	3351		
217	30324	1806	1242	1524	1787		1524		3301	997	997	997	2547	3942	4838	4390	2562		
218	30325	2422	2792	2607	2236	2943	2719		3607	5121	5121	5121	3227	5133	5536	5335	3882		
219	30326	2111	2746	2429	3983	4695	3184		3601	4959	4959	4959	3823	7392	6363	6878	4584	6*	
220	30327	3750	1184	2467	4366	4806	3247		4486	4062	4062	4062	3800	5217	3572	4395	3770		
221	30328	3411	4318	3865	3615	4523	4084	6*	4141	4668	4668	4668	3587	7225	5107	6166	4691	4*	
222	30329	4372	4104	4238	4211	4568	4348	2*	3496	4087	4087	4087	3231	5859	4710	5285	4419		
223	Vandana (NC)	1150	1055	1103	1777	2084	1430		3470	2513	2513	2513	2831	6084	5676	5880	3056		
224	30330	2389	4085	3237	3409	4283	3586		3842	4846	4846	4846	3467	6900	5353	6127	4475	9*	
225	30331	4039	3089	3564	4677	3794	3641		4401	3198	3198	3198	3356	5508	5266	5387	4036		
226	30332	4022	3037	3530	3159	5483	4181	4*	4238	3730	3730	3730	3124	7792	5745	6769	4705	3*	
227	30333	1339	1240	1290	1951	1941	1507		3340	1919	1919	1919	2711	4834	4228	4531	2602		
228	30334	3678	3500	3589	4318	4825	4001	8*	4454	5403	5403	5403	2769	7900	5381	6641	4779	1*	
229	30335	3422	1494	2458	1816	3693	2870		3190	3252	3252	3252	3120	5808	4896	5352	3669		
230	30336	4539	3219	3879	4201	3524	3761		3659	2654	2654	2654	3827	8709	5426	7068	4557	7*	
231	Zonal Check	3111	1966	2539	1797	2899	2659		4356	3617	3617	3617	3929	6334	5719	6027	3939		
232	30337	4600	2089	3345	3276	3135	3275		3549	4821	4821	4821	2809	5358	4388	4873	3886		
233	30338	2139	1217	1678	1885	1966	1774		3640	1412	1412	1412	2369	6967	4982	5975	3007		
234	30339	4239	4478	4359	3545	2907	3875		3548	2575	2575	2575	2640	5750	5999	5875	4084		
235	30340	2828	1600	2214	2424	3228	2552		3106	4477	4477	4477	3142	4467	5366	4917	3587		
236	IR 64 – Sensitive Check	2478	2759	2619	3025	2825	2687		3386	2259	2259	2259	2209	6242	4694	5468	3352		
237	30341	3928	2980	3454	3434	4028	3645		3229	4132	4132	4132	3036	6583	5143	5863	4261		
238	30342	2539	2568	2554	3833	3017	2708		3509	2716	2716	2716	3898	4384	3828	4106	3279		
239	30343	2234	1656	1945	3228	1474	1788		3471	2675	2675	2675	2511	4242	4645	4444	2777		
240	30344	2689	2920	2805	2852	3054	2888		3705	2812	2812	2812	2591	4409	5826	5118	3472		

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(Table Contd.)

Entry No.	IET No.	Zone III					Zone III (3)		Zone V			Zone V (1)	Zone VI		Zone VII		Zone VII (2)	Overall (7)	Rank (Overall)
		OD		OD (2)	WB	BI	mean	Rank	CG		CG (1)	mean	MH	AP	TN	mean	mean		
		CTK	JYP	mean	HTW@	SBR			JDP@	RPR	PBN		KMP	CBT					
241	30345	3289	1655	2472	2908	3908	2951		3171	1379	1379	1379	2778	5717	4933	5325	3380		
242	30346	3300	2033	2667	2589	2922	2752		3809	4494	4494	4494	3116	5484	5283	5384	3805		
243	30347	2750	2963	2857	3419	2603	2772		3841	5274	5274	5274	3783	6033	5649	5841	4151		
244	30348	2939	4198	3569	4210	5148	4095	5*	3991	3584	3584	3584	3774	6650	4632	5641	4418		
245	30349	1539	1231	1385	1946	1980	1583		3757	2143	2143	2143	2889	3908	4904	4406	2656		
246	30350	4372	3982	4177	3559	4386	4247	3*	3424	4294	4294	4294	2400	5734	4310	5022	4211		
247	30351	4550	4276	4413	2789	4240	4355	1*	4271	4801	4801	4801	3231	6792	5353	6073	4749	2*	
248	30352	2394	3101	2748	3610	4231	3242		3171	2152	2152	2152	3920	6108	3926	5017	3690		
249	30353	4044	4365	4205	4787	5141	4517		3666	4033	4033	4033	2827	6167	5822	5995	4628		
250	30354	2889	2226	2558	3233	3099	2738		3190	3680	3680	3680	2551	7184	4919	6052	3793		
251	US-314 (Hybrid check)	3300	4265	3783	5460	4849	4138		4772	5138	5138	5138	2862	8542	5919	7231	4982		
252	Local check	2722	3219	2971	3836	4097	3346		3106	4668	4668	4668	3605	5834	4779	5307	4132		
Exp. Mean		3112.16	2787.24	2950	3325.21	3663.33	3173.87		3641.97	3386.59	3386.59	3386.59	3071.32	6200.48	5085.81	5643.14	3897.96		
CD (5%)		572.19	1100	601.71	211.51	863.73	461.45		1112.71	1121.24	1121.24	1121.24	519.41	1364.51	1134.51	816.49	341.62		
CD (10%)		477.48	917.93	502.11	176.5	720.76	385.07		928.53	935.65	935.65	935.65	433.44	1138.65	946.72	681.34	285.07		
CV%		9.16	19.66	10.16	3.17	11.74	7.24		15.22	16.49	16.49	16.49	8.42	10.96	11.11	7.21	4.37		
D/S		09.07.2021	16.07.2021		02.07.2021	10-07-2021			27.06.2021	09.07.2021			16.07.2021	10.07.2021	13.09.2021				
Local Check		Sahbhagidhan	Mandakini		Sahbhagidhan	Sabour Deep			Danteshwari	Indira Aerobic-1			PBNR 03-2	KNM-118	CO 53				

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Table No. 11.9: Days to 50% flowering of entries in IVT-EDS Normal, Kharif 2021

Entry No.	JET No.	Zone III				Zone III (3)	Zone V			Zone V (1)	Zone VI		Zone VII		Zone VII (2)	Overall (7)
		OD		WB	BI		CG	CG (1)	MH		AP	TN				
		CTK	JYP										mean	HTW@		
201	30310	77	89	83	71	85	84	80	83	83	83	85	84	71	78	82
202	30311	76	92	84	83	93	87	89	106	106	106	94	87	89	88	91
203	30312	80	85	83	82	88	84	88	90	90	90	97	84	73	79	85
204	30313	71	79	75	65	101	84	70	78	78	78	87	69	67	68	79
205	30314	73	105	89	86	92	90	89	99	99	99	89	89	72	81	88
206	30315	75	85	80	78	86	82	83	90	90	90	86	81	72	77	82
207	Sahbhagidhan (NC)	72	86	79	83	78	79	74	84	84	84	83	77	70	74	79
208	30316	74	107	91	94	95	92	90	79	79	79	88	88	68	78	86
209	30317	75	84	80	88	84	81	88	93	93	93	94	83	78	81	84
210	30318	77	103	90	87	92	91	88	95	95	95	91	89	76	83	89
211	30319	75	87	81	84	94	85	79	88	88	88	94	79	67	73	83
212	30320	72	85	79	79	87	81	86	96	96	96	96	80	66	73	83
213	30321	73	81	77	70	77	77	74	80	80	80	84	76	68	72	77
214	30322	75	92	84	77	85	84	84	91	91	91	86	84	75	80	84
215	30323	73	93	83	89	94	87	84	91	91	91	82	83	73	78	84
216	Anjali (all zones)	72	77	75	62	58	69	70	75	75	75	95	69	61	65	72
217	30324	71	83	77	79		77	84	90	90	90	85	80	72	76	80
218	30325	73	85	79	68	76	78	73	80	80	80	75	69	67	68	75
219	30326	75	98	87	83	88	87	91	88	88	88	92	83	74	79	85
220	30327	79	94	87	85	95	89	89	98	98	98	99	89	64	77	88
221	30328	73	86	80	77	83	81	78	84	84	84	93	79	66	73	81
222	30329	75	99	87	79	93	89	84	93	93	93	96	83	84	84	89
223	Vandana (NC)	68	82	75	65	95	82	70	71	71	71	92	62	63	63	76
224	30330	75	86	81	81	84	82	78	84	84	84	99	80	71	76	83
225	30331	76	95	86	90	85	85	82	86	86	86	85	80	75	78	83
226	30332	74	93	84	88	89	85	88	96	96	96	96	85	81	83	88
227	30333	64	90	77	64	69	74	62	66	66	66	84	78	63	71	73
228	30334	76	89	83	86	85	83	76	85	85	85	84	76	68	72	80
229	30335	73	81	77	70	93	82	70	72	72	72	88	69	61	65	77
230	30336	77	92	85	82	93	87	84	89	89	89	90	81	64	73	84
231	Zonal Check	71	82	77	67	73	75	83	88	88	88	85	87	76	82	80
232	30337	73	88	81	81	77	79	79	85	85	85	86	76	78	77	80
233	30338	70	81	76	65	64	72	70	75	75	75	84	72	65	69	73
234	30339	76	86	81	75	85	82	79	92	92	92	82	83	68	76	82
235	30340	77	91	84	73	84	84	78	82	82	82	86	80	64	72	81
236	IR 64 – Sensitive Check	70	85	78	77	83	79	78	84	84	84	94	79	72	76	81
237	30341	71	87	79	72	84	81	85	85	85	85	96	81	77	79	83
238	30342	74	90	82	77	81	82	76	84	84	84	86	77	71	74	80
239	30343	71	79	75	70	67	72	70	72	72	72	83	65	70	68	72
240	30344	71	88	80	68	70	76	75	80	80	80	102	71	69	70	79
241	30345	77	97	87	92	94	89	75	101	101	101	88	87	91	89	91
242	30346	78	93	86	69	71	81	77	78	78	78	78	76	75	76	78
243	30347	71	83	77	69	76	77	70	77	77	77	95	70	72	71	78
244	30348	75	93	84	85	80	83	80	86	86	86	101	78	77	78	84
245	30349	69	79	74	66	65	71	70	67	67	67	87	72	63	68	72
246	30350	78	97	88	78	62	79	83	91	91	91	95	84	72	78	83
247	30351	75	86	81	78	85	82	79	85	85	85	86	80	72	76	81
248	30352	77	92	85	96	93	87	88	99	99	99	95	89	88	89	90
249	30353	76	93	85	84	80	83	84	88	88	88	99	83	78	81	85
250	30354	72	75	74	81	80	76	78	85	85	85	86	77	72	75	78
251	US-314 (Hybrid check)	74	82	78	76	84	80	80	82	82	82	82	77	66	72	78
252	Local check	70	89	80	84	80	80	79	83	83	83	76	77	79	78	79
Exp. Mean		73.54	88.24	80.89	77.76	82.78	81.48	79.63	85.27	85.27	85.27	88.79	79.05	71.54	75.29	81.31
CD		2.09	2.07	1.52	1.87	1.67	1.14	0	2.62	2.62	2.62	1.85	2.22	2.62	1.69	0.93
CV%		1.41	1.17	0.94	1.19	1.01	0.7	0	1.53	1.53	1.53	1.04	1.4	1.83	1.12	0.57

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Table No. 11.10: Plant height (cm) of entries in IVT-EDS Normal, Kharif 2021

Entry No.	IET No.	Zone III					Zone III (3)	Zone V			Zone V (1)	Zone VI		Zone VII		Zone VII (2)	Overall (7)
		OD		WB	BI	CG		CG (1)	MH	AP		TN					
		CTK	JYP										mean	HTW@	SBR		
201	30310	104	110	107	113	127	114	123	103	103	103	67	114	106	110	104	
202	30311	80	91	85	78	76	82	79	66	66	66	71	101	98	100	83	
203	30312	106	99	102	101	94	100	90	92	92	92	86	110	90	100	97	
204	30313	105	105	105	96	97	102	124	98	98	98	82	135	88	111	101	
205	30314	96	96	96	109	110	101	111	99	99	99	79	120	85	103	98	
206	30315	90	97	94	95	91	93	108	87	87	87	76	118	98	108	94	
207	Sahbhagidhan (NC)	108	96	102	95	93	99	97	98	98	98	74	159	98	128	104	
208	30316	100	87	93	87	92	93	75	98	98	98	74	109	90	99	93	
209	30317	98	103	101	116	103	102	88	98	98	98	62	125	101	113	98	
210	30318	96	97	96	105	110	101	108	103	103	103	69	142	113	128	104	
211	30319	93	100	97	110	119	104	102	103	103	103	77	140	89	114	103	
212	30320	102	99	100	109	105	102	123	78	78	78	73	118	116	117	99	
213	30321	98	114	106	114	106	106	96	101	101	101	84	115	87	101	101	
214	30322	123	108	115	101	114	115	102	103	103	103	63	122	100	111	105	
215	30323	105	105	105	108	105	105	93	103	103	103	65	82	90	86	93	
216	Anjali (all zones)	96	119	107	105	89	101	106	82	82	82	53	122	97	110	94	
217	30324	108	94	101	97	.	101	94	92	92	92	60	128	98	113	97	
218	30325	124	125	124	134	134	127	118	142	142	142	72	141	102	122	120	
219	30326	87	103	95	94	105	99	112	93	93	93	67	117	84	100	94	
220	30327	85	98	91	98	104	95	94	98	98	98	87	123	87	105	97	
221	30328	91	103	97	91	94	96	87	97	97	97	79	241	91	166	114	
222	30329	123	105	114	118	124	117	99	111	111	111	71	141	96	119	110	
223	Vandana (NC)	106	115	111	108	108	110	78	102	102	102	90	124	90	107	105	
224	30330	103	109	106	107	112	108	97	95	95	95	75	105	88	96	98	
225	30331	94	97	95	86	94	95	79	83	83	83	73	120	91	106	93	
226	30332	119	93	106	116	120	111	107	111	111	111	90	135	95	115	109	
227	30333	69	85	77	64	58	70	45	41	41	41	68	59	98	78	68	
228	30334	100	104	102	97	109	104	80	97	97	97	75	101	85	93	96	
229	30335	121	120	120	111	109	117	101	97	97	97	56	117	103	110	103	
230	30336	99	104	102	99	104	102	117	88	88	88	66	117	92	104	96	
231	Zonal Check	79	83	81	81	78	80	123	87	87	87	82	118	90	104	88	
232	30337	108	89	98	91	100	99	91	91	91	91	77	121	83	102	96	
233	30338	91	82	86	80	79	84	85	84	84	84	76	85	86	86	83	
234	30339	95	102	98	98	106	101	113	81	81	81	67	108	87	98	92	
235	30340	101	95	98	98	105	100	107	114	114	114	53	115	109	112	99	
236	IR 64 – Sensitive Check	93	93	93	86	81	89	89	82	82	82	84	135	41	88	87	
237	30341	101	105	103	109	101	103	93	96	96	96	63	120	50	85	91	
238	30342	120	101	111	108	106	109	101	104	104	104	83	124	55	90	99	
239	30343	108	119	113	117	123	117	111	110	110	110	53	119	56	87	98	
240	30344	96	83	90	103	98	93	93	91	91	91	60	131	45	88	86	
241	30345	94	83	89	77	76	85	61	70	70	70	72	95	37	66	75	
242	30346	98	104	101	118	103	102	106	114	114	114	67	129	50	89	95	
243	30347	116	100	108	105	108	108	108	99	99	99	72	137	48	93	97	
244	30348	112	99	106	98	103	105	132	97	97	97	86	123	46	85	95	
245	30349	87	96	91	101	110	97	92	98	98	98	71	112	46	79	89	
246	30350	121	111	116	112	114	115	103	103	103	103	90	124	47	86	101	
247	30351	103	97	100	95	110	103	120	101	101	101	75	136	42	89	95	
248	30352	97	107	102	105	116	107	103	107	107	107	86	137	41	89	99	
249	30353	96	90	93	104	102	96	95	89	89	89	64	77	47	62	81	
250	30354	101	81	91	96	92	92	82	97	97	97	70	146	40	93	90	
251	US-314 (Hybrid check)	106	96	101	102	100	101	101	96	96	96	93	97	45	71	90	
252	Local check	102	115	108	97	109	109	93	91	91	91	90	146	53	99	101	
	Exp. Mean	101.0	100.2	100.6	100.9	102.4	101.2	98.8	95.4	95.4	95.4	73.2	121.8	78.6	100.2	96.1	

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Table No. 11.11: .Panicles/m² of entries in IVT-EDS Normal, Kharif 2021

Entry No.	IET No.	Zone III					Zone III (3)	Zone V			Zone V (1)	Zone VI (1)	Zone VII (1)	Zone VII (2)	Overall (7)	
		OD		WB	BI	CG		CG (1)	MH	AP						TN
		CTK	JYP													
201	30310	334	236	285	232	228	266	327	179	179	179	220	625	298	462	303
202	30311	300	345	323	142	217	287	373	154	154	154	238	525	245	385	289
203	30312	260	255	258	253	219	245	300	177	177	177	273	688	348	518	317
204	30313	188	320	254	207	168	225	334	187	187	187	263	850	343	597	331
205	30314	220	290	255	188	243	251	235	174	174	174	233	475	320	398	279
206	30315	313	323	318	276	246	294	358	213	213	213	183	575	345	460	314
207	Sahbhagidhan (NC)	219	268	244	170	224	237	316	175	175	175	200	400	318	359	258
208	30316	271	273	272	218	222	255	348	71	71	71	207	450	319	385	259
209	30317	305	300	303	171	235	280	244	187	187	187	249	675	325	500	325
210	30318	261	253	257	201	179	231	242	152	152	152	242	625	393	509	301
211	30319	332	243	288	184	234	270	331	216	216	216	262	500	323	412	301
212	30320	197	226	212	224	226	216	288	117	117	117	288	500	305	403	266
213	30321	283	217	250	160	263	254	290	202	202	202	205	575	308	442	293
214	30322	254	263	259	130	218	245	307	211	211	211	197	700	323	512	309
215	30323	250	267	259	234	265	260	381	225	225	225	242	600	320	460	310
216	Anjali (all zones)	298	247	273	150	236	260	308	111	111	111	218	550	340	445	286
217	30324	141	237	189	129		189	114	72	72	72	178	400	313	357	224
218	30325	158	257	208	149	183	199	345	189	189	189	218	475	310	393	256
219	30326	205	265	235	237	263	244	309	253	253	253	266	600	308	454	309
220	30327	159	235	197	244	280	225	382	192	192	192	240	500	323	412	276
221	30328	243	227	235	222	238	236	368	258	258	258	253	600	308	454	304
222	30329	321	246	284	278	271	279	390	191	191	191	227	675	360	518	327
223	Vandana (NC)	295	210	253	163	152	219	360	137	137	137	198	625	283	454	271
224	30330	326	230	278	231	272	276	339	245	245	245	178	550	318	434	303
225	30331	386	261	324	250	288	312	347	230	230	230	169	775	355	565	352
226	30332	300	241	271	204	227	256	261	210	210	210	180	525	355	440	291
227	30333	253	264	259	133	225	247	323	76	76	76	179	550	313	432	266
228	30334	268	283	276	256	228	259	355	209	209	209	197	650	340	495	311
229	30335	303	258	281	127	205	255	312	169	169	169	237	625	290	458	298
230	30336	377	220	299	240	260	286	279	207	207	207	276	575	308	442	318
231	Zonal Check	415	230	323	116	220	288	389	229	229	229	267	525	345	435	319
232	30337	395	227	311	161	222	281	382	182	182	182	190	550	298	424	295
233	30338	310	270	290	131	138	239	324	195	195	195	171	550	300	425	276
234	30339	403	258	331	210	181	281	349	188	188	188	172	600	318	459	303
235	30340	247	247	247	139	220	238	365	198	198	198	240	575	315	445	292
236	IR 64 – Sensitive Check	394	217	306	225	159	256	319	192	192	192	172	525	335	430	285
237	30341	233	207	220	239	191	210	368	218	218	218	222	700	355	528	304
238	30342	225	250	238	231	253	243	409	167	167	167	261	625	323	474	301
239	30343	197	216	207	204	110	174	402	106	106	106	191	600	328	464	250
240	30344	193	228	211	138	153	191	382	176	176	176	196	500	315	408	252
241	30345	326	356	341	209	276	319	253	145	145	145	206	600	353	477	323
242	30346	325	257	291	215	228	270	367	149	149	149	224	675	328	502	312
243	30347	285	170	228	217	235	230	243	208	208	208	272	675	325	500	310
244	30348	261	250	256	271	289	267	344	206	206	206	292	700	323	512	332
245	30349	220	180	200	118	130	177	364	68	68	68	224	675	308	492	258
246	30350	375	210	293	159	312	299	380	198	198	198	172	625	323	474	316
247	30351	359	319	339	184	246	308	363	261	261	261	240	725	310	518	351
248	30352	240	237	239	260	209	228	267	228	228	228	272	625	323	474	305
249	30353	241	222	232	241	242	235	317	218	218	218	234	550	323	437	290
250	30354	210	225	218	210	246	227	371	174	174	174	207	500	335	418	271
251	US-314 (Hybrid check)	206	263	235	268	217	229	344	193	193	193	229	525	343	434	282
252	Local check	118	266	192	221	194	193	382	258	258	258	270	525	458	492	298
Exp. Mean		272.82	250.97	261.89	199.19	222.96	248.71	329.54	183.38	183.38	183.38	223.57	588.22	325.51	456.87	295.35
CD		44.97	47.57	33.12	27.75	104.39	41.73	120.16	61.97	61.97	61.97	20.3	116.86	34.78	58.55	29.06
CV%		8.21	9.44	6.3	6.94	23.31	8.36	18.16	16.83	16.83	16.83	4.52	9.9	5.32	6.38	4.9

ADVANCE VARIETY TRIAL 1 -RAINFED SHALLOW LOWLAND (AVT1 -RSL)

Locations: 13

Test Entries: 22

Checks: Swarna-Sub1 (National), Zonal checks: Pooja (Eastern), Bahadur (North Eastern), Savitri (Southern); CR Dhan 801 (yield check) and Local Check Table:12.1

Advanced Variety Trial-Rainfed Shallow Lowland (AVT-1-RSL) was constituted with 22 test entries (five inbred, and eight NIL entries, five recipient parents of corresponding NILs, and four checks viz., National check (Swarna-Sub1), Zonal check (Pooja for Eastern zone, Bahadur for North eastern zone and Savitri for Southern zone), yield check (CR Dhan 801) and a local check. Out of the 22 test entries, two were in the third year of testing i.e. IET 28281 and IET 27547. Seven entries, including three inbreds and four NILs were in second year of testing and four entries (NILs) were in first year of testing. The trial was sent to 13 locations, data was received from all the locations. Experimental mean yield ranged from 2838.8 Kg/ha at Ghaghraghat to 6133 Kg/ha at Maruteru. CV % ranged from 5.37 (Chinsurah) to 13.37 (Mugad). The data pertaining to yield, days to 50% flowering, plant height, no. of panicles/m² and quality are presented in tables 12.2, 12.3, 12.4, 12.5 and 12.6.

On the basis of overall mean, none of the entries showed superiority than best varietal check.

Zone wise performance of entries during Kharif2021

Eastern zone (Zone III)

In Zone III, the trial was conducted, at 09 locations namely Cuttack, Jeypore (Odisha), Bhubaneswar, Bankura, Chinsurah, Bikramganj, Pusa, Ghaghraghat and Masodha. However, only 8 location data were considered, once location Masodha showed low CV, thus rejected. The data from 8 locations were considered for analysis and their CV were ranged between 5.37% (Chinsurah) and 13.27% (Bankura). The mean yield of the entries ranged from 3317kg/ha (IET 30410) to 5010 kg/ha (IET 30411), days to 50% flowering ranged from 97 days (IET 30411) to 123 days (Gayatri); plant height ranged from 95 cm (Swarna Sub1) to 140 cm (IET 29026) and mean panicles/m² varied from 243 (Varshadhan) to 301 (Gayatri). Among all the entries, none of the entries registered >5% yield advantage over the best check Swarna-Sub1 (NC).

North Eastern (Zone IV)

In Zone IV, the trial was conducted at one location (Titabar). The data was not considered due to <5% CV.

Southern zone (Zone VII)

In Zone VII, the trial was conducted at three locations Maruteru (MTU), Sirsi (SRS) and Mugad (MGD). Two location data were considered for analysis and one location data of

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(Sirsi) not considered due to non-significant F-Test value. Mean yield of the entries in Zone VII ranged from 3437 kg/ha (IET 30408) to 6271 kg/ha (IET 29026); days to 50% flowering ranged from 102 days (IET 30411) to 129 days (IET 30409); plant height ranged from 95 cm (IET 30411) to 148 cm (IET 29026) and mean panicles/m² varied from 275 (IET 30410) to 381 (Zonal Check). Among checks, Local check recorded the highest grain yield of 5421 kg/ha. Among the test entries, IET 29026 (6271 Kg/ha) registered >5% grain yield than the local check in Zone VII.

IET 29026 (CR 2538-42-17-32-3-3) derived from cross Varshadhan*3/IR49830-7 ranked 1st based on grain yield (6271 kg/ha). It possessed long bold grains with 115 days flowering duration, 148 cm plant height, and 297 No. of Panicles/m². However, this entry is a NIL derived from the Varshadhan as a recurrent parent and this parent was released for the state of Odisha. Thus, although this entry performed well in the southern zone but, not had superior performance than best check in Odisha.

IET 27538(BRR 2110) was in third year of testing and did not register required yield superiority over BVC in this zone. It was tested in IVT in 2018 and AVT1 in 2019. It had required yield advantage in 2019 but was not promoted to AVT2 in 2019 on the basis of inferiority in quality performance. However, it was repeated in 2020 in 2nd year of testing and promoted to AVT2 and tested in 2021. In 2021 it did not have required yield advantage over BVC. However, it will be repeated again in 2022 based on its earlier performance.

None of the entries showed superiority over best check for the yield. The entries IET 28281, and IET 27547 were in the third year of testing; and the entries IET 28276, , IET 29100 were in the second year of testing also, were not promising than the best check.

Performance of NIL entries during *Kharif*, 2021

Eight NILs (IET 26744, IET 29031, IET 29026, IET 29032, IET 30408, IET 30409, IET 30410 and IET 30411) were tested across 13 locations. Data from Titabar (CV<5), Masodha (CV<5), and Sirsa (none significance F test), were not considered for analysis. For trait verification entries were tested at Advance variety trial 1- NIL (Submergence) (AVT-1-NIL-Sub).

For trait verification entries were tested at four locations, viz. Cuttack, Maruteru, Bikramganj and Mugad. Data from Bikramganj was not considered in the analysis due to very high percentage of seedling survival of the sensitive check (Swarna) as this trial is meant for trait verification. Data from Mugad was not considered in the analysis as data for adaptability parameters such as seedling survival and submergence tolerance was not available. The performance of the entries under submergence conditions is presented in NIL trials (AVT-1 Nil- Sub).

Based on mean yield over two locations (Cuttack and Maruteru) under submergence stress conditions, all the NILs performed better than their respective recurrent parents except two entries (IET 30408, IET 30411) derived from Gayatri and Ciherang. With respect to mean seedling survival percentage under submergence stress, all tested NILs derived from Pooja, Varshadhan, Gayatri and Sarala performed better than their respective recurrent parents. But, one NIL derived from Ciherang (IET 30411) was found to be inferior with respect to seedling survival percentage as compared to its recurrent parent. IET 30411

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derived from Ciherang is inferior with respect to both traits. Although IET 30408 derived from Gayatri gave less yield than the recurrent parent, its seedling survival percentage is better under submergence stress.

The NILs derived from Pooja (One NIL) and Varshadhan (3 NILs) were in the second year of testing.

The IET 26744 derived from the cross Pooja*3/Swarna-Sub1 showed the yield superiority over the corresponding recurrent parent in the state of Bihar and at par with the recurrent parent in the states of Uttar Pradesh, Karnataka. The IET 29031 derived from the cross Varshadhan*3/IR49830-7 showed the yield superiority over the corresponding recurrent parent in the state of Bihar, and at par with the recurrent parent in the states of West Bengal, Karnataka. The IET 29026 and IET 29032 derived from the cross Varshadhan*3/IR49830-7 showed yield at par with the recurrent parent in the states of West Bengal, Bihar, Andhra Pradesh, and Karnataka.

However, the NIL should perform better than or at par with a recurrent parent in the state for which the recurrent parent was released.

Among the test centers of AICRIP (13 centers, 2021) the recurrent parent, Pooja was released for the states of Odisha and West Bengal. In such case, IET26744, a NIL derived from the cross Pooja*3/Swarna-Sub1 was under performed in the states of Odisha and West Bengal as compared to the recurrent parent, thus discontinued.

IET 29031, IET 29032 and IET 29026 were derived from the same cross of Varshadhan*3/IR49830-7. Varshadhan was released for the state of Odisha only. The NILs IET 29031, IET 29031 and IET 29026 were under performed in the state of Odisha as compared to the recurrent parent. Since Varshadhan was released for the semi-deep-water ecology, the Varshadhan NILs (IET 29031, IET 29026 and IET 29032) are shifted to AVT-2 SDW to confirm their yielding ability as per the decision of chairman, Pre-ARGM meeting held on 18.04.2022 .

The NILs derived from Gayatri (two NILs), Sarala (one NIL) and Cihrang (one NIL) were in the first year of testing.

The IET 30408 derived from the cross Gayatri*3/IR49830-7 and IET 30411 derived from the cross IR 49830-7-1-2-3/ CIHRANG*3, were failed in trait verification trial (AVT-1-NIL-Sub). Thus both the entries were discontinued.

The IET 30409 derived from the cross Gayatri*3/IR49830-7 showed the yield superiority over the corresponding recurrent parent in the state Andhra Pradesh and at par with the recurrent parent in the states of Odisha, Bihar and Karnataka. The IET 30410 derived from the cross Sarala*3/IR49830-7 showed the yield at par with the recurrent parent in the states of Odisha, Bihar, Andhra Pradesh and Karnataka. The IET 30409 and IET30410 were good yield performers, and verified submergence stress as compared the recurrent parent in the state of Odisha. The recurrent parent Gayatri and Sarala also were released for the same states, Odisha. Thus both the entries are promoted to the second year of NIL trial.

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The details of superiority over recurrent parents and overall mean as mentioned in the table below.

Performance of NIL entries possessing *Sub 1* QTL in AVT-1-RSLKharif, 2021- Normal Conditions, Zone III

IET No	Designation	Cross combination	Zone III								Zone III(8)	
			OD(3)		WB(2)		BI(2)		UP(1)		Yield (kg/ha) /DFP/PH/PAN	Stat us
			Yield (kg/ha) /DFP/PH/PAN	Stat us	Yield (kg/ha) /DFP/PH/PAN	Stat us	Yield (kg/ha) /DFP/PH/PAN	Stat us	Yield (kg/ha) /DFP/PH/PAN	Stat us		
26744 (R)	CR 3932-7	Pooja*3 / Swarna-Sub1	4101		5058		5639	Superior than RP	3260	At par with RP	4620	At par with RP
			114		111		109		101		111	
			110		107		100		118		107	
			280		329		309		167		286	
Pooja (RP)		RP	4405		5956		3743		3683		4537	
			117		111		119		123		106	
			101		100		117		106		108	
			224		352		326		136		270	
29031	CR 2538-42-17-32-3-2	Varshadhan*3/I R49830-7	3624		4127	At par with RP	4290	Superior than RP			3958	At par with RP
			221		114		129				121	
			118		144		138				136	
			227		277		279				256	
29026	CR 2538-42-17-32-3-3	Varshadhan*3/I R49830-7	3770		3987	At par with RP	2845	At par with RP			3568	
			112		112		123				119	
			132		136		153				140	
			264		300		263				270	
29032	CR 2538-20-14-24-2	Varshadhan*3/I R49830-7	3634		4314	At par with RP	3019	At par with RP			3652	
			122		115		125				121	
			127		146		119				133	
			150		244		241				245	
Varshadhan (RP)		RP	4358		4485		2767				3939	
			120		119		123				120	
			126		147		146				138	
			221		267		253				243	
30408	CR2531-72-6-19-4	Gayatri*3/IR49830-7	3899	At par with RP	4158	At par with RP	8021		2387		4805	Superior than RP
			134		100		111		118		118	
			95		106		102		104		101	
			253		314		294		112		261	
30409	CR2531-72-6-19-3	Gayatri*3/IR49830-7	3572	At par with RP	3908		3490		1977		3369	
			124		105		114		124		118	
			98		95		107		104		97	
			283		445		279		155		287	
Gayatri (RP)		RP	3794		4541		4726				4273	
			126		118		125				123	
			98		112		112				100	
			314		316		265				301	
30410	CR 2532-9-21-35-3	Sarala*3/IR49830-7	3224	At par with RP	3806		2967				3317	
			122		116		124				119	
			98		109		107				105	
			230		387		297				294	
Sarala (RP)		RP	3483		4395		2761				3537	
			122		116		123				120	
			100		108		87				99	
			267		323		309				295	
30411	CIHRAN G-Sub 1	IR 49830-7-1-2-3/ CIHRANG*3	3947	Superior than RP	4945		8091	Superior than RP	2169	At par with RP	5010	Superior than RP
			103		103		103		82		97	
			97		98		95		115		99	
			245		312		222		164		263	
Cihrang(RP)		RP	3461		6063		4046		2360		4120	
			115		106		102		97		106	
			110		123		115		123		116	
			276		368		225		170		273	
CD			293.94		517.9		292.92		595.41		196.2	

* Data from AVT-1-RSL, 2021; DFF: Days to 50% flowering; PH: Plant height; PAN:No. of Panicles/m²; RP: Recurrent parent

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Performance of NIL entries possessing *Sub 1* QTL in AVT-1-RSLKharif, 2021- Normal Conditions, Zone VII and overall of both the Zone III and VI

IET No	Designation	Cross combination	Zone VII				Zone VII(2)		Overall(10) (Zone III, VII)	
			AP		KA		Yield (kg/ha) /DFF/PH/PAN	Status	Yield (kg/ha) /DFF/PH/PAN	Status
			Yield (kg/ha) /DFF/PH/PAN	Status	Yield (kg/ha) /DFF/PH/PAN	Status				
26744 (R)	CR 3932-7	Pooja*3 / Swarna-Sub1	4393 111 127 306		3950 114 83 346	At par with RP	4172 113 105 326		4530 111 107 294	At par with RP
Pooja (RP)		RP	6043 109 127 323		4332 103 74 410		5188 106 100 364		4667 115 106 367	
29031	CR 2538-42-17-32-3-2	Varshadhan*3/IR4983 0-7	5550 128 187 232		5188 103 106 299	At par with RP	5369 116 147 316	At par with RP	4271 120 138 269	At par with RP
29026	CR 2538-42-17-32-3-3	Varshadhan*3/IR4983 0-7	7760 130 187 319	At par with RP	4782 100 109 274	At par with RP	6271 115 148 297	At par with RP	4168 118 141 276	At par with RP
29032	CR 2538-20-14-24-2	Varshadhan*3/IR4983 0-7	7463 130 179 315	At par with RP	4210 100 112 333	At par with RP	5837 116 146 324	At par with RP	4138 120 135 268	
Varshadhan (RP)		RP	7013 128 179 304		4576 100 116 290		5795 114 147 297		4352 119 140 255	
30408	CR2531-72-6-19-4	Gayatri*3/IR49830-7	3910 116 130 293		2963 106 84 346	At par with RP	3437 111 107 320		4531 116 102 279	Superior than RP
30409	CR2531-72-6-19-3	Gayatri*3/IR49830-7	7810 116 138 315	Superior than RP	3970 132 68 388	At par with RP	5890 129 103 352	At par with RP	3929 121 98 301	At par with RP
Gayatri (RP)		RP	6593 124 138 334		3677 124 80 296		5135 124 104 315		4465 123 101 304	
30410	CR 2532-9-21-35-3	Sarala*3/IR49830-7	6997 117 152 308	At par with RP	3057 112 88 242	At par with RP	5027 115 120 275	At par with RP	3697 118 108 290	
Sarala (RP)		RP	6983 126 141 321		3897 105 91 380		5440 116 116 351		3960 119 103 307	
30411	CIHRANG-Sub 1	IR 49830-7-1-2-3/ CIHRANG*3	5117 99 114 326		4987 104 75 347	Superior than RP	5052 102 114 337		5018 98 75 278	Superior than RP
Cihrang(RP)		RP	8227 105 137 336		3513 107 79 327		5870 106 116 332		4470 106 103 284	
CD			962.3		1120.30		816.64		199.41	

* Data from AVT-1-RSL, 2021; DFF: Days to 50% flowering; PH: Plant height; PAN:No. of Panicles/m²; RP: Recurrent parent

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The NILs were compared with recurrent parent with respect to morphological traits for similarities and the information is tabulated as below.

Confirmation of NILs with respect to similarity with recurrent parent under normal condition in AVT-1RSL, *Kharif*2021, of Odisha state*.

Yield (kg/ha) /DFF/PH/PAN of IET 30409 Gayatri*3/IR49830-7	Yield (kg/ha) /DFF/PH/PAN of recurrent parent (Gayatri)	Yield (kg/ha) /DFF/PH/PAN of IET 30410 Sarala*3/IR49830-7	Yield (kg/ha) /DFF/PH/PAN of recurrent parent (Sarala)
3572	3741	3224	3483
124	126	119	122
98	98	98	105
283	314	230	267

* The Critical Difference (CD) value of grain [yield was 293.94 at 5%](#) level of significance.

Entries promoted to AVT-2-RSL

Overall basis: Nil

Zone III: Nil

Zone VII: Repeat- IET 27538

NILs:

Promotion: IET 30409 and IET 30410 to second year of trial.

Shift: IET 29031, IET 29026 and IET 29032) to AVT-2SDW

Table No. 12.1: Composition of entries in Advance Variety Trial 1–Rainfed Shallow Lowland (AVT 1-RSL), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	Grain Type
3rd Year of testing:				
301	28281	CR 3987-3-1-1-1-1	Pooja / CR 3820-1-5-2-1-1	MS
302	27547	OR 2757	Upahar / CN 1231-11-7	LS
304	27538	BRR 2110	AD 12173-Sel	MS
2nd year of testing				
303	28276 (R)	CR 3967-8-3-2-2-1-1	IR 73895-33-1-3-2 / Pratikshya	MS
305	29100	CR 3549-3-5-2-1-1-1	ADT 43/AnnapurnaZ	MB
306	Swarna Sub 1 (NC)			
NIL entries				
2nd Year of testing:				
307	Pooja (RP)			
308	26744 (R)	CR 3932-7	Pooja*3 / Swarna-Sub1	SB
309	29031	CR 2538-42-17-32-3-2	Varshadhan*3/IR49830-7	LB
310	29026	CR 2538-42-17-32-3-3	Varshadhan*3/IR49830-7	LB
311	29032	CR 2538-20-14-24-2	Varshadhan*3/IR49830-7	LB
312	Varshadhan (RP)			
313	Pooja (Eastern), Bahadur (North Eastern), Savitri (Southern)- ZC			
1st Year of testing:				
314	30408	CR2531-72-6-19-4	Gayatri*3/IR49830-7	SB
315	30409	CR2531-72-6-19-3	Gayatri*3/IR49830-7	SB
316	30410	CR 2532-9-21-35-3	Sarala*3/IR49830-7	MS
317	Gayatri (RP)			
318	30411	CIHRANG-Sub 1	IR 49830-7-1-2-3/ CIHRANG*3	LS
319	Sarala (RP)			
320	Cihrang(RP)			
321	CR Dhan 801 (Yield check)			
322	Local Check			

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Table No.12.2: Grain Yield (Kg/ha) of entries in AVT1-RSL Kharif 2021

Entry No	IET No	Zone III																									
		OD						OD(3)			WB			WB(2)		BI			BI(2)		UP		UP(1)				
		CTK		JYP		BBN		mean			BNK	CHN		mean		BKG	PSA		mean		GGT	MSD@	mean				
301	28281	4954	2	3419	7	4074	10	4149	6	3488		5259	8	4374		4669		5726		5198	7	2932	7	4010		2932	7
302	27547	4853	3	3644	5	4519	6	4339	4	3114		5222	9	4168		6003	6	2188		4096		3205	5	4064		3205	5
303	28276 (R)	4748	4	2590		4370	7	3903		3385		5852	3	4619	10	3759		2342		3051				4419	9		
304	27538	4343		2976	11	4741	5	4020	8	4141		4926		4534		3844		2060		2952		3478	3	4610	5 *	3478	3
305	29100	4512		2571		3704		3596		5504	4	4852		5178	5	6596	3	2286		4441	9	2523	9	3410		2523	9
306	Swarna Sub 1 (NC)	5500	1	2628		5185	3	4438	1	4877	7	5593	7	5235	4	5995	7	6214	5	6105	4	2973	6	3982		2973	6
307	Pooja (RP)	4356		3877	4	4981	4	4405	2	6059	3	5852	3	5956	2	5113	10	2372	10	3743		3683	2	4446	7.5	3683	2
308	26744 (R)	4393		3946	2 *	3963		4101	7	4412	9	5704	6	5058	7	4878		6400	3	5639	6	3260	4	3191		3260	4
309	29031	4545	10	2142		4185	9	3624		3068		5185	10	4127		3380		5200	9	4290	10			4664	4 *		
310	29026	4569	9	2798		3944		3770		3159		4815		3987		3462		2227		2845				4965	2 *		
311	29032	4353		2770		3778		3634		3702		4926		4314		3853		2184		3019				3628			
312	Varshadhan (RP)	4449		2976	11	5648	1	4358	3	4302	0	4667		4485		3401		2132		2767				4446			
313	Zonal Check	4714	5	2695		5333	2	4247	5	6247	2	5148		5698	3	5476	9	2342		3909		3887	1	4228	11	3887	1
314	30408	3935		3965	1 *	3796		3899		3204		5111		4158		8089	2 *	7953	1 *	8021	2 *	2387	10	4228	11	2387	10
315	30409	4633	7	2214		3870		3572		3908				3908		4971		2009		3490				1977			
316	30410	4339		2500		2834		3224		2648		4963		3806		3806		2128		2967				4501	6		
317	Gayatri (RP)	4599	8	3041	9	3741		3794		3340		5741	5	4541		3451		6000	6	4726	8			3246			
318	30411	4686	6	3913	3	3241		3947	0	4890	6	5000		4945	8	8283	1 *	7898	2 *	8091	1 *	2169	26%	3791		2169	
319	Sarala (RP)	4279		3300	8	2871		3483		2900		5889	1	4395		3419		2103		2761				4965	2 *		
320	Cihrang(RP)	4439		2834		3111		3461		6273	1	5852	3	6063	1	5886	8	2205		4046		2360		3546		2360	
321	CR Dhan 801 (Yield check)	4207		2942		3981		3710		4561	8	4741		4651	9	6048	5	5818	7	5933	5	2728	8	4010		2728	8
322	Local Check	4203		3533	6	4222	8	3986	9	5375	5	4926		5151	6	6488	4	6346	4	6417	3	2182		3928		2182	
	Exp. mean	4527.7		3057.8		4095.1		3893.5		4207.2		5248.6		4697.4		5039.6		3915.1		4477.4		2838.8		4147.4		2838.8	
	CD	466.99		406.8		559.74		293.94		920.02		465.41		517.9		503.97		531		292.92		595.41		300.59		595.41	
	CV%	6.26		8.07		8.3		4.58		13.27		5.37		6.69		6.07		8.23		3.97		12.5		4.4		12.5	
	D/S	15.07.21		17.07.21		08.07.2021				06.08.2021		06.07.21				09.07.2021		06.07.21				08.07.2021		10.07.2021			
	D/P	31.08.21		17.08.21		01.08.2021				01.09.2021		18.08.21				30.07.2021		22.07.21				Direct Seeded		10.08.2021			
	Local Check Name	CR DHAN-410(MAHAMANI)		Hasanta		Mrunalini				Sampriti		Sujala(IET20235)				R.Mahsuri - 1		Rajendra Mahsuri (457)				Sambha Sub-1		Sambha Mahsuri-Sub 1			

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Table No.12.2 contd.: Grain Yield (Kg/ha) of entries in AVT1-RSL Kharif2021

Entry No	IET No	Zone IV		Zone VII						Zone VII(2)		Overall (10)			
		AS		AP	KA		KA(1)		mean						
		TTB@	MTU	SRS@	MGD	mean		mean							
301	28281	7950		5627		5917	1	3441		3441		4534		4359	
302	27547	7750		6643	9	5073	3	4451	7	4451	7	5547	7	4384	
303	28276 (R)			5210		3854		3930		3930		4570		4021	
304	27538	7850		5467		3854		3012		3012		4240		3899	
305	29100	11050	1 *	5437		3000		4488	6	4488	6	4963		4247	
306	Swarna Sub 1 (NC)	8500	9	5933		3500		3465		3465		4699		4836	2
307	Pooja (RP)	10650	3 *	6043		4458	9	4332	8	4332	8	5188		4667	4
308	26744 (R)	8600	8	4393		3959		3950		3950		4172		4530	8
309	29031	9650	5.5	5550		3646		5188	1	5188	1 10%	5369	10	4271	
310	29026	8250		7760	3	3750		4782	3	4782	3	6271	1 10%	4168	
311	29032	9950	4	7463	5	3521		4210	9	4210	9	5837	4	4138	
312	Varshadhan (RP)	9650	5.5	7013	6	4646	6	4576	5	4576	5	5795	5	4352	
313	Zonal Check	7200		5930		4313		4205	10	4205	10	5068		4598	6
314	30408	8450	10	3910		3771		2963		2963		3437		4531	7
315	30409			7810	2	4604	7	3970		3970		5890	2	3929	
316	30410	5850		6997	7	4282		3057		3057		5027		3697	
317	Gayatri (RP)			6593	10	4709	5	3677		3677		5135		4465	10
318	30411	7700		5117		3771		4987	2	4987	2 6%	5052		5018	1
319	Sarala (RP)	7700		6983	8	5459	2	3897		3897		5440	8	3960	
320	Cihrang(RP)	10950	2 *	8227	1 9%	4563	8	3513		3513		5870	3	4470	9
321	CR Dhan 801 (Yield check)	9350	7	7547	4	4375	10	3863		3863		5705	6	4644	5
322	Local Check	8100		6133		5063	4	4709	4	4709	4	5421	9	4812	3
	Exp. mean	8692.11		6263		4276.55		4030.07		4030.07		5495.99		4377.08	
	CD	715.65		962.25		1553.70		1120.30		1120.30		816.64		199.41	
	CV%	4.97		9.32		17.47		13.37		13.37		9.02		2.76	
	D/S	19.07.2021		09.07.2021		07.07.2021		29.07.2021							
	D/P	19.08.2021		17.08.2021		28.07.2021		2.09.2021							
	Local Check Name	Ranjit Sub 1		MTU 1223		Asha		PSB_68							

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Table No. 12.3: Days to 50% flowering of entries in AVT 1-RSL, Kharif 2021

Entry No	IET No	Zone III													Zone III(8)	Zone IV		Zone VII				Zone VII(2)	Overall(10)
		OD			OD(3)	WB		VB(2)		BI		BI(2)	UP		UP(1)	AS	AP	KA		KA(1)	mean	mean	
		CTK	JYP	BBN	mean	BNK	CHN	mean	BKG	PSA	mean	GGT	MSD@	mean	mean	TTB@	MTU	SRS@	MGD	mean	mean	mean	
301	28281	130	113	114	119	105	119	112	116	116	116	114	111	114	116	109	120	111	112	112	116	116	
302	27547	129	124	109	121	105	132	119	112	115	114	105	116	105	116	113	124	111	108	108	116	116	
303	28276 (R)	130	112	129	124	108	133	121	128	114	121		117		122		126	120	105	105	116	121	
304	27538	130	122	108	120	106	121	114	125	107	116	115	121	115	117	112	120	111	113	113	117	117	
305	29100	130	119	97	115	100	115	108	106	101	104	98	118	98	108	106	109	103	104	104	107	108	
306	Swarna Sub 1 (NC)	130	124	103	119	107	127	117	115	104	110	110	121	110	115	111	114	110	120	120	117	115	
307	Pooja (RP)	129	110	112	117	103	119	111	117	120	119	123	119	123	117	105	109	111	103	103	106	115	
308	26744 (R)	125	113	103	114	103	118	111	114	104	109	108	116	108	111	108	111	110	114	114	113	111	
309	29031	129	111	123	121	105	122	114	128	130	129		111		121	113	128	117	103	103	116	120	
310	29026	130	111	124	122	102	122	112	115	130	123		118		119	112	130	114	100	100	115	118	
311	29032	130	113	123	122	104	126	115	118	131	125		121		121	111	128	114	103	103	116	120	
312	Varshadhan (RP)	125	113	122	120	104	133	119	116	130	123		121		120	114	128	117	100	100	114	119	
313	Zonal Check	130	104	109	114	103	113	108	117	120	119	119	118	119	114	115	118	115	111	111	115	114	
314	30408	130	126	146	134	104	96	100	115	106	111	118	121	118	118	110	116	114	106	106	111	116	
315	30409	130	127	115	124	105		105	107	120	114	124	118	124	118		126	114	132	132	129	121	
316	30410	131	104	122	119	105	127	116	122	125	124		114		119	119	117	111	112	112	115	118	
317	Gayatri (RP)	126	127	124	126	108	127	118	129	120	125		112		123		124	117	124	124	124	123	
318	30411	115	111	82	103	77	102	90	115	91	103	82	116	82	97	94	99	97	104	104	102	98	
319	Sarala (RP)	130	109	126	122	106	126	116	117	129	123		118		120	120	126	119	105	105	116	119	
320	Cihrang(RP)	130	108	97	112	102	110	106	105	99	102	97	120	97	106	108	105	103	107	107	106	106	
321	CR Dhan 801 (Yield check)	129	118	98	115	104	117	111	104	98	101	100	118	100	109	107	107	113	116	116	112	109	
322	Local Check	130	111	111	117	120	112	116	116	101	109	105	113	105	113	113	120	112	108	108	114	113	
	Exp. mean	128.61	115.02	113.53	119.05	103.91	119.92	111.58	116.27	114.02	115.14	108.4	117.18	108.4	115.51	110.6	118.44	111.73	109.42	109.42	115.5	115.4	
	CD	1.01	1.42	16.25	5.46	0	2.11	1.03	1.39	3.41	1.86	1.91	2.19	1.91	2.2	2.72	1.65	5.96	4.76	4.76	5.74	1.96	
	CV%	0.48	0.75	8.69	2.78	0	1.06	0.56	0.72	1.82	0.98	1.05	1.13	1.05	1.15	1.49	0.85	2.57	2.09	2.09	3.02	1.03	

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Table No.12.4.Plant Height of entries in AVT 1- RSL, Kharif 2021

Entry No	IET No	Zone III													Zone III(8)	Zone IV	Zone VII					Zone VII(2)	Overall(1 1)
		OD			OD(3)	WB		WB(2)	BI		BI(2)	UP		UP(1)			AS	AP	KA		KA(1)		
		CTK	JYP	BBN	mean	BNK	CHN	mean	BKG	PSA	mean	GGT	MSD@	mean					TTB@	MTU	SRS @		
301	28281	112	95	120	109	105	107	106	103	97	100	112	110	112	106	100	140	97	84	84	112	108	
302	27547	113	115	136	121	125	108	117	100	106	103	123	115	123	116	115	151	115	97	97	124	118	
303	28276 (R)	110	98	164	124	130	126	128	108	115	111	120	121	120	121	.	168	120	94	94	131	123	
304	27538	103	96	106	102	105	103	104	99	105	102	106	109	106	103	97	125	94	84	84	104	103	
305	29100	105	111	108	108	120	106	113	132	99	116	120	131	120	113	131	145	117	96	96	120	114	
306	Swarna Sub 1 (NC)	114	94	93	100	80	98	89	93	95	94	96	135	96	95	88	128	78	65	65	97	96	
307	Pooja (RP)	102	96	104	101	100	100	100	158	96	127	106	126	106	108	113	127	85	74	74	100	106	
308	26744 (R)	96	107	126	110	105	108	107	105	94	100	118	120	118	107	118	127	96	83	83	105	107	
309	29031	116	104	163	128	140	147	144	141	136	138	143	136	143	136	156	187	134	106	106	147	138	
310	29026	112	114	170	132	130	140	135	162	144	153	145	121	145	140	156	187	140	109	109	148	141	
311	29032	111	109	160	127	140	152	146	129	110	119	151	140	151	133	149	179	136	112	112	146	135	
312	Varshadhan (RP)	109	104	165	126	160	133	147	156	137	146	139	120	139	138	152	179	136	116	116	147	140	
313	Zonal Check	109	93	118	107	100	118	109	94	101	97	103	123	103	104	107	127	89	75	75	101	104	
314	30408	98	94	92	95	100	112	106	110	95	102	104	96	104	101	105	130	91	84	84	107	102	
315	30409	102	91	102	98	95	.	95	106	80	93	104	103	104	97	.	138	95	68	68	103	98	
316	30410	104	91	100	98	100	118	109	111	103	107	113	99	113	105	110	152	105	88	88	120	108	
317	Gayatri (RP)	106	93	96	98	115	108	112	85	87	86	112	105	112	100	.	128	96	80	80	104	101	
318	30411	98	98	94	97	95	100	98	112	79	95	115	118	115	99	109	114	90	75	75	95	98	
319	Sarala (RP)	104	89	108	100	105	111	108	91	82	87	105	123	105	99	99	141	106	91	91	116	103	
320	Cihrang(RP)	105	95	130	110	120	125	123	116	114	115	123	129	123	116	112	137	106	79	79	108	114	
321	CR Dhan 801 (Yield check)	103	97	112	104	100	97	99	125	88	106	106	124	106	103	101	123	94	70	70	97	102	
322	Local Check	116	110	125	117	110	122	116	105	103	104	100	79	100	111	116	130	100	95	95	113	112	
	Exp. mean	106.7	99.8	122.4	109.6	112.7	116.1	114.0	115.4	103.0	109.2	116.5	117.4	116.5	111.5	117.6	143.8	105.4	87.5	87.5	115.6	112.3	

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Table No. 12.5: Panicle/m² of entries in AVT 1- RSL Kharif2021

Entry No	IET NO	Zone III														Zone III(8)	Zone IV	Zone VII					Zone VII(3)	Overall(11)
		OD			OD(3)	WB		WB(2)	BI		BI(2)	UP		UP(1)		AS	AP	KA		KA(1)				
		CTK	JYP	BBN	mean	BNK	CHN	mean	BKG	PSA	mean	GGT	MSD@	mean	mean	TTB@	MTU	SRS@	MGD	mean	mean	mean		
301	28281	247	278	274	266	419	264	342	238	195	217	132	233	132	256	252	323	426	431	431	377	280		
302	27547	210	354	259	274	333	308	321	324	186	255	139	247	139	264	277	310	363	355	355	333	278		
303	28276 (R)	205	368	200	258	320	231	276	310	203	257		256		262		321	327	296	296	309	273		
304	27538	191	511	341	348	298	242	270	336	195	266	124	264	124	280	263	308	317	306	306	307	285		
305	29100	194	266	302	254	249	275	262	313	251	282	123	223	123	247	280	308	350	351	351	330	263		
306	Swarna Sub 1 (NC)	188	287	235	237	234	242	238	378	253	316	155	246	155	247	273	317	396	424	424	371	271		
307	Pooja (RP)	187	255	230	224	429	275	352	406	245	326	136	252	136	270	305	323	439	410	410	367	290		
308	26744 (R)	212	311	318	280	295	363	329	377	241	309	167	211	167	286	297	306	330	346	346	326	294		
309	29031	223	242	216	227	289	264	277	334	224	279		268		256	250	332	281	299	299	316	269		
310	29026	222	307	233	254	336	264	300	288	238	263		274		270	242	319	307	274	274	297	276		
311	29032	220	266	264	250	245	242	244	280	201	241		212		245	240	315	297	333	333	324	263		
312	Varshadhan (RP)	227	235	201	221	281	253	267	312	193	253		266		243	242	304	301	290	290	297	255		
313	Zonal Check	215	332	230	259	394	330	362	368	242	305	153	233	153	283	260	313	360	449	449	381	303		
314	30408	214	334	211	253	342	286	314	345	242	294	112	208	112	261	310	293	380	346	346	320	273		
315	30409	240	359	250	283	445		445	322	236	279	155	259	155	287		315	357	388	388	352	301		
316	30410	234	255	202	230	443	330	387	364	229	297		263		294	215	308	383	242	242	275	290		
317	Gayatri (RP)	220	429	294	314	313	319	316	312	218	265		223		301		334	323	296	296	315	304		
318	30411	212	317	207	245	382	242	312	358	222	290	164	242	164	263	298	326	317	347	347	337	278		
319	Sarala (RP)	236	316	249	267	348	297	323	372	246	309		263		295	262	321	380	380	380	351	307		
320	Cihrang(RP)	228	273	326	276	438	297	368	261	187	224	170	218	170	273	223	336	324	327	327	332	284		
321	CR Dhan 801 (Yield check)	209	321	244	258	416	286	351	323	205	264	120	244	120	266	285	328	337	298	298	313	275		
322	Local Check	218	357	235	270	288	319	304	288	200	244	116	233	116	253	260	332	363	331	331	332	268		
	Exp. mean	216.05	317.06	250.97	261.36	342.55	282.33	316.14	327.73	220.53	274.13	140.5	242.64	140.5	268.16	264.91	317.85	347.77	341.45	341.45	325.44	278.6		
	CD	32.59	42.11	17.99	17.93	46.23	60.16	42.1	21.75	19.94	14.79	22.03	16.65	22.03	14.69	46.7	22.64	103.0	84.2	84.2	35.04	14.97		
	CV%	9.16	8.06	4.35	4.16	8.19	12.91	8.08	4.03	5.49	3.27	9.34	4.16	9.34	3.32	10.65	4.32	14.2	11.9	11.9	6.53	3.26		

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Table No. 12.6: Quality analysis of Entries in AVT 1-RSL Kharif-2021

Entry No	IET No	HULL %	MILL %	HRR %	MOIS %	CHALKI	KL (mm)	KB(mm)	L/B	ASV	WU	VER	ER	KLAC(mm)	AC%	GC
301	28281	78	70	66	11.4	A	5.29	2.05	2.58	4	75	3.75	1.7	9	21.6	43
302	27547	33	29	28	11.2	A	6.37	1.6	3.98	5	35	4	1.56	10	19.2	51
303	28276 (R)	78	66	56	12.1	A	5.44	2.41	2.25	4	40	3.75	1.65	9	21.75	42
304	27538															
305	29100	72	63	55	12.2	A	6.31	1.67	3.77	4	120	3.75	1.58	10	23.25	35
306	Swarna Sub 1 (NC)	27	22	21	11.4	A	5.45	1.69	3.22	4	80	3.75	1.65	9	20.02	48
307	Pooja (RP)															
308	26744 (R)	76	67	61	11.7	A	5.4	1.66	3.25	5	60	3.75	1.66	9	19.12	50
309	29031	77	66	59	12.2	A	5.53	1.69	3.27	4	105	3.75	1.62	9	19.35	51
310	29026	70	58	51	12.5	A	6.45	1.42	4.54	4	75	4	1.55	10	22.42	41
311	29032	69	57	52	12.1	A	5.7	1.48	3.85	4	85	3.75	1.57	9	12.37	89
312	Varshadhan (RP)	79	66	60	12.5	A	5.65	1.42	3.99	5	95	4	1.76	10	20.77	45
313	ZC															
314	30408															
315	30409	79	71	65	12.2	A	4.64	2.38	1.99	4	55	3.75	1.72	8	19.42	48
316	30410	76	65	56	12.3	A	4.56	2.27	2	4	65	3.75	1.75	8	21	42
317	Gayatri (RP)	78	70	65	12.5	A	4.57	2.46	1.85	4	55	3.75	1.75	8	22.05	41
318	30411	79	68	63	12.1	A	6.18	1.54	4.01	4	95	4	1.61	10	21.37	43
319	Sarala (RP)	79	70	65	12.4	VOC	5.49	1.34	4.09	4	85	3.75	1.63	9	18.37	53
320	Cihrang(RP)	78	68	65	11	VOC	5.5	1.41	3.9	4	50	3.75	1.63	9	21.37	43
321	CR Dhan 801 (YC)	76	68	66	11.3	VOC	5.66	1.54	3.67	4	70	3.75	1.59	9	21.6	42
322	Local Check	82	71	65	11.8	VOC	6.45	1.42	4.54	4	60	4	1.55	10	23.4	34

Abbreviations: Hull% : Hulling; M ill% : Milling; HRR :Head Rice Recovery; KL : Kernel length; KB : Kernel Breadth; L/B : Length Breadth ratio; ASV : Alkali spreading value; WU: Water uptake; VER : Volume expansion ratio; KLAC : Kernel length after cooking; ER ; Elongation ratio; AC : Apparent amylose content; GC: Gel consistency.

*Mean quality data from two centers, NRRRI and IIRR

INITIAL VARIETY TRIAL-RAINFED SHALLOW LOWLAND (IVT-RSL)

Locations: 12

Test Entries: 53

Checks: Swarna Sub-1 (National), Pooja (Eastern), Bahadur (North Eastern), Savitri (Southern) and Local Check Table:12.7

The trial was constituted with 53 test entries and four checks viz., National check (Swarna-Sub1), Zonal check (Pooja for the Eastern zone, Bahadur for North eastern zone, Savitri for the Southern zone), CR Dhan 801 (yield check) and a local check.

The trial was conducted at 13 locations, while data was received from 12 locations excluding **Bhubaneswar**. It was observed that direct seeded method of planting was followed at Ghaghraghat center instead of the usual transplanting method.

Data from 12 locations were analyzed for evaluating the performance of test entries. The data pertaining to yield, days to 50% flowering, plant height and number of panicles/m² are presented in Table 4.1- 4.4. The mean grain yield of the locations ranged from 2994.03 kg/ha (Ghaghraghat) to 5649.88 kg/ha (Chinsurah). The CV% at different locations ranged from 5.51 (Chinsurah) to 16.5 (Jeypore), which was within the acceptable limits and therefore, the data received from all the 12 centres have been subjected to analysis.

On overall basis, mean grain yield of the entries varied from 3451 kg/ha (IET 30357) to 5483 kg/ha (**Zonal Check**), days to 50% flowering ranged from 102 days (IET 30383, IET 30396) to 123 days (IET 30368), plant height ranged from 95cm (**National Check**) to 122 cm (IET 30384) and mean panicles/m² varied from 256 (IET 30357) to 333 (**CR Dhan 801**). Among checks, the Zonal checks recorded the highest mean grain yield of 5483 kg/ha with 113 days to 50% flowering. **None of the entries showed required yield superiority over the best check across the zones (Zonal check), hence not promoted for further evaluation in AVT-1 on overall basis.**

The eastern region (Zone III) was represented by nine locations (Cuttack, Jeypore, Bhubaneswar, Bikramganj, Pusa, Chinsurah, Bankura, Ghaghraghat and Masodha) spread across five states viz. Odisha (3), Bihar (2), West Bengal (2) and Uttar Pradesh (2). However, the data from Bhubaneswar center was not received. The mean grain yield of the entries in Zone III varied from 2703 kg/ha (IET 30357) to 5596 kg/ha (Zonal check), days to 50% flowering ranged from 99 days (IET 30383) to 124 days (IET 30368, IET 30397), plant height ranged from 96.00 cm (**National check**) to 121.00 cm (IET 30384) and mean panicles/m² varied from 252 (IET 30357) to 362 (IET 30389). Among checks, the Zonal check (Pooja) recorded the highest mean grain yield of 5596 kg/ha with 113 days to 50% flowering. **None of the entries showed required yield superiority over the best check (Zonal check), hence has not been promoted for further evaluation under Zone III.**

The north eastern region (Zone IV) was represented by single location (Titabar) in Assam. The mean grain yield of the entries in Zone IV varied from 1845 kg/ha (IET 30368) to 6705 kg/ha (IET 30367). Days to 50% flowering ranged from 93 days (IET 30355) to 123 days (IET 30368, IET 30388 and IET 30398), plant height ranged from 82.00 cm (IET 30389) to 146.00 cm (IET 30399) and mean panicles/m² varied from 165 (IET 30365) to 380

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(IET 30363). Among checks, the Zonal check (Bahadur) recorded highest grain yield of 5940 kg/ha with 108 days to 50% flowering. The entry IET 30367 (6705 kg/ha) and IET 30356 (6570 kg/ha) out yielded the best check *i.e.* the Zonal check (5940 kg/ha) by 765 kg/ha and 630kg/ha respectively. The yield difference (765 kg/ha and 630 kg/ha) for the two genotypes was found to be significantly higher (at $p < 0.05$) than the yield of the best check (zonal check) at the zone, when the CD value is 629.09 kg/ha. **Therefore, the entries IET 30367 and IET 30356 are promoted for evaluation in AVT-1 under Zone IV.**

The southern region (Zone VII) was represented by three locations; Maruteru, Sirsi and Mugad which are spread across two states, Andhra Pradesh and Karnataka. The mean grain yield of the entries in Zone VII varied from 3402 kg/ha (IET 30398) to 5687 kg/ha (IET 30366). Days to 50% flowering ranged from 101 days (IET 30395) to 122 days (IET 30388), plant height ranged from 88.00 cm (IET 30357) to 123.00 cm (IET 30384) and mean panicles/m² varied from 247 (IET 30386) to 348 (**Local Check**). Among checks, the local check recorded highest grain yield of 5462 kg/ha with 114 days to 50% flowering. The yield check (**CR Dhan 801**) outperformed the local check *i.e.*, the best check and recorded mean grain yield of 5589 kg/ha with 110 days to 50% flowering and plant height of 99 cm. The entry IET 30366, out yielded the local check by 225 kg/ha in Zone VII, however it was not promoted as the yield difference (225 kg/ha) between the entry and best check was found less than the CD value (646.13 kg/ha) and is statistically not significant. **Therefore, none of the entries were found to record significant yield superiority over the best check and hence not promoted for further evaluation under Zone VII.**

Thus, only two entries, **IET 30367** and **IET 30356** were found to yield significantly higher than the best check (mean yield of local checks) and have been promoted for evaluation in AVT-1 under Zone IV.

IET 30367 (BRR-2010; RAU-724-48-23-Sel.) recorded a yield of 6705 kg/ha, plant height of 109 cm with 114 days to 50% flowering and 248 panicles/m.²

IET 30356 (CR 4328-18-2-1-1; Tapaswin / Kalachampa) recorded a yield of 6570 kg/ha, plant height of 110 cm with 106 days to 50% flowering and 255 panicles/m² in Zone IV.

Hence, the entries IET 30367 and IET 30356 are promoted for 2nd year testing in Zone IV.

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Table No. 12.7 Composition of entries in the Initial Varietal Trial- Rainfed Shallow Lowland (IVT-RSL), Kharif-2021

Entry No.	IET No.	Designation	Cross combination	Grain Type
1st year of testing				
401	30355	RCPR90-IR09L342	IR 72022-46-2-3-3-2/IR 57514-PMI	
402	30356	CR 4328-18-2-1-1	Tapaswini/Kalachampa	SB
403	30357	SRS 21-01(RP5490-06-6)	Swarna/IRGC39111//Sampada	
404	30358	TTB 1058-408	IRGC 47216 /Ranjit	MS
405	30359	CR3987-1-5-3-1-2	Ac.38562/Niraj//Pooja	SB
406	30360	TTB 1209-4-1	Kolabtguti/Ranjit/Tadukan	MS
407	30361	BRR-2186	CRL22/MTU1071/TCN-188	MS
408	30362	OROI-2-IR 87092-26-3-1-3	IR 49830-7-1-2-3/2*IR 07F101	MS
409	30363	SRS21-02(F03-01-21)	Swarna X Ranbir Basmati	
410	30364	OROI-13-IR 88760-SUB 93-3-3-3	IRRI 154/BR 11-Sub 1	MS
411	30365	OR 2765-1	Prachi/CN 1039-9	MS
412	Swarna Sub 1 (NC)			
413	30366	OR 2412-5-1	Indravati / IR 65629-22-1	MS
414	30367	BRR-2010	RAU-724-48-23-Sel.	MS
415	30368	CR 3411-142-3-1-1	Satabdi / IET 16952	LS
416	30369	CR 2916-68-2-1-1	Tapaswini/IET16952	MS
417	30370	CR 3411-53-2-1-1	Satabdi / IET 16952	LS
418	30371	TTB 1384	Luit/Swarna Sub 1/Ranjit	MS
419	30372	CR4050-121-28-13-4	Swarna-Sub1*3/IRBB60	MS
420	CR Dhan 801 (check)			
421	Pooja (Eastern), Bahadur (North Eastern), Savitri (Southern)-- ZC			
422	30373	ORB-2	Ranidhan/ Pateni	MB
423	30374	CR 3987-2-1-2-2-1	Pooja/CR3820-1-5-2-1-1	SB
424	30375	MTU-1372	MTU 1121/MTU 3626	MS
425	30376	CR 3933-39-2-1-2-2-1	Pratikshya / Swarna Sub1	SB
426	30377	CR2531-72-6-19-5-1	Gayatri*3/IR49830-7	SB
427	30378	NDR 9075	NDR 9730018/SWARNA	LS
428	30379	CR3985-1-1-1-3-1	Reeta/Swarna-Sub1	MS
429	30380	CR 3856-44-22-2-1-11-4-1-4-1	IR 73963-86-1-5-2-2/CR 2324-1	LB
430	30381	CR4050-121-28-13-2	Swarna-Sub1*3/IRBB60	MS
431	30382	OR 2607-1	CRMA31A /OR 2310-33	MS
432	30383	RCPR91-IR11F195	IR06N156/IR07F290	
433	30384	CR3828-13-2-1-1-1	CR Dhan 500/ Varshadhan	SB
434	30385	BRR-2128	RajendraSweta/Sita	MB
435	30386	CR 3505-1-7-2-2-1-1	IR 36/Vijetha	MB
436	30387	OROI-1-IR 85086-SUB 33-3-2-1	PSBRc 68/IR 02A 464	MS
437	30388	CR 4207-25-2-1-1	Swarna Sub-1 / Kedargouri // Swarna MAS	SB
438	30389	CR 4346-15-2-2-1	Pooja / Jasmine 85	MS
439	30390	CR 3856-44-22-2-11-4-3-2	IR 73963-86-1-5-2-2/CR 2324-1	LB
440	30391	PSR 101	Pratikshya X IR 64	LS
441	30392	CR 3856-44-22-2-11-4-4-5-1	IR 73963-86-1-5-2-2/CR 2324-1	SB
442	30393	CR 3494-1-2-1-1-3-1-1	Lalat /IR 36	MB
443	30394	OROI-4-IR 87118-39-1-1-6	IR 75417-R-R-246-4/IR07F101//IR 06F148	MS
444	30395	CR 4357-1-1-1-1-2-1	CR 3580-7-3-1-2-1/CR 3504-7-2-2-1-1-1	MS
445	30396	CN 1317-557-56-BNKR 42-2-4	VIKRAMARYA / MAHSURI	
446	30397	MTU 1371	MTU 2077/NLR 3042	MS
447	30398	CR 4373-1-IR 103350-B-B-81	IRRI 181/IR05F102	LS
448	30399	NDR 8010	IR72014-8-NDR-28-1-41-B-1(BKP246/SABITA//IR 40931-33-1-3-2)	SB
449	30400	ORR 1812	Pratiksha/CR 1009	SS
450	30401	CR3988-3-1-1-2-1	Pooja/Ac.38687	MS
451	30402	PRR 111	Pureline Selection from Landrace Borasail	SB
452	30403	Sahyadripanchamukhi	Variant Selection from IRGA-318-11-6-9-2B (IRRI Material)	MB
453	30404	CR 3856-44-22-2-1-7-1-4-2	IR 73963-86-1-5-2-2/CR 2324-1-1	LB
454	30405	CN2229	Rajdeep/IR 85810-407	MS
455	30406	CR 3145-4-1-2-3-3-2	IR 49830-7 / Gayatri / FL 496	MB
456	30407	CR 3856-44-22-2-11-4-1-6	IR 73963-86-1-5-2-2/CR 2324-1	LB
457	Local Check			

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Table No.12.8: Grain Yield (kg/ha) of entries in IVT RSL, Kharif 2021

Entry No	IET No.	Zone III									
		OD		OD(2)		WB		WB(2)			
		CTK	JYP	mean		BNK	CHN	mean			
401	30355	2996	4123	3560		6470	7		6470	4	
402	30356	4218	3258	3738		4017		5965	4991		
403	30357		2758	2758							
404	30358	5276	3659	4468		5189		5439	5314		
405	30359	4020	1398	2709		4300		5322	4811		
406	30360	7258	1 *	2614	4936	2	12%	5265	5731	5498	
407	30361	4011		4892	7	4452		4829	6199	2.5	
408	30362	4579		4746	8	4663	8	6%	4633	5790	
409	30363			3648		3648		5419		5419	
410	30364	4530		5144	2	4837	3	9%	4385	5614	
411	30365	6206	3 *	3700	4953	1	12%	6317	10	5848	
412	Swarna Sub 1 (NC)	4493		3819	4156			4658		5614	
413	30366	5841	6 *	1832	3837			4753		5386	
414	30367	6032	4 *	2949	4491			4094		5673	
415	30368	5216		4101	4659	9	5%	4214		5614	
416	30369	5000		4543	4772	7	8%	4291	6141	6.5	
417	30370	4503		5134	4	4819	5	9%	5650	5497	
418	30371	4085		5516	1	4801	6	9%	5496	4561	
419	30372	4109		5140	3	4625	10		5086	5439	
420	CR Dhan 801 (check)	4393		3709	4051			4317		5614	
421	Zonal Check	3738		4642	10	4190		7564	1	5673	
422	30373	4458		2195	3327			3692		5731	
423	30374	3994		2267	3131			5274		6024	
424	30375	5321	10	3719	4520			4778		5497	
425	30376	4077		3594	3836			5086		6199	
426	30377	5013		3801	4407			5633		4971	
427	30378	2470		2614	2542			5616		5731	
428	30379	4705		2482	3594			5581		6141	
429	30380	4121		5107	5	4614		5590		6082	
430	30381	3131		3708	3420			6419	8	5380	
431	30382	6346	2 *	1974	4160			4334		5790	
432	30383	2926		1380	2153			6402	9	5263	
433	30384	3811		2379	3095			4753		4269	
434	30385	4119		2865	3492			4752		5848	
435	30386	3069		3703	3386			6675	5	5205	
436	30387	3943		1612	2778			6539	6	6082	
437	30388	5461	9	2520	3991			4248		6199	
438	30389	5871	5 *	2752	4312			4684		5322	
439	30390	3500		2266	2883			4641		6024	
440	30391	3144		2657	2901			6128		4912	
441	30392	4690		1504	3097			7325	2	6082	
442	30393	3619		1835	2727			4488		5731	
443	30394	5622	8 *	2904	4263			4727		4328	
444	30395	3859		4345	4102			4906		6082	
445	30396	2294		2855	2575			6214		5614	
446	30397	5786	7 *	2312	4049			4701		5907	
447	30398	2439		2119	2279			7112	4	5263	
448	30399	3954		1856	2905			4351		5790	
449	30400	4651		1172	2912			5624		6024	
450	30401	4681		1603	3142			5205		6199	
451	30402	4373		1204	2789			3752		6141	
452	30403	4440		4662	9	4551		5530		5322	
453	30404	4693		4954	6	4824	4	9%	5051	5790	
454	30405	4169		1686	2928			7222	3	6141	
455	30406	2836		2373	2605			5248		5965	
456	30407	4196		3675	3936			5402		5380	
457	Local Check	4302		4535	4419			5889		5556	
Exp. mean		4374.1		3166.6	3750			5259		5649.88	
CD		1108.61		1046.45	752.96			853.33		624.4	
CV%		12.64		16.5	10.02			8.1		5.51	
Sowing date		16.07.2021		20.07.21				06.08.2021		13.07.21	
Planting date		19.08.2021		20.08.21				01.09.2021		18.08.21	
Local Check Name		Sumit		Hasanta				Sampriti		Sujala (IET20235)	

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Table No.12.8 Contd.: Grain Yield (kg/ha) of entries in IVT RSL, Kharif 2021

Entry No	IET No.	Zone III										Zone III (8)			
		BI		BI (2)		UP		UP (2)		mean		mean			
		BKG	PSA	mean		GGT	MSD	mean							
401	30355	4307		5487		4897		2095		3125		2610		4086	
402	30356	5210		2475		3843		2992		3059		3026		3899	
403	30357			2103		2103		2161		3790		2976		2703	
404	30358	4045		6872		5459		2826		4588	5	3707		4737	9
405	30359	4519		2026		3273		3159		2926		3043		3459	
406	30360	3657		6443		5050		3491		3457		3474		4740	8
407	30361	6130	9	2052		4091		3989	5	3989		3989	7 8%	4511	
408	30362	4709		2148		3429		3590	9	2394		2992		4074	
409	30363	5133		2257		3695				3856		3856	10.5	4063	
410	30364	7247	3	2026		4637		4122	4			4122	4.5 11%	4724	
411	30365	3397		2180		2789								4608	
412	Swarna Sub 1 (NC)	6365	7	2058		4212		3324		3198		3261		4191	
413	30366	4347		5026		4687				3923		3923	8 6%	4444	
414	30367	4684		3513		4099		3956	6	2128		3042		4129	
415	30368	3513		2077		2795				2261		2261		3857	
416	30369	5543		5487		5515		2328		2461		2395		4474	
417	30370	4992		7757	5	6375	6	1895		3324		2610		4844	4
418	30371	4546		2154		3350		3590	9	3989		3790		4242	
419	30372	6487	5	2231		4359		2826		2328		2577		4206	
420	CR Dhan 801 (check)	6450	6	1949		4200		3491		3923		3707		4231	
421	Zonal Check	6078	10	7987	2	7033	2	3491				3491		5596	1
422	30373	5370		2218		3794		3159				3159		3832	
423	30374	4400		2052		3226		4322	2 *			4322	3 17%	4048	
424	30375	3979		2052		3016		2992				2992		4048	
425	30376	4636		2334		3485		1895		4056		2976		3985	
426	30377	4013		2276		3145		2926		3989		3458		4078	
427	30378	6009		2167		4088		4156	3	3125		3641		3986	
428	30379	4536		6347		5442		3158		3657		3408		4576	
429	30380	6220	8	7269	8	6745	4	3158		4255		3707		5225	2
430	30381	5633		2064		3849		2328		2660		2494		3915	
431	30382	5197		2013		3605		3059		3457		3258		4021	
432	30383	4826		5616		5221		2328		3524		2926		4033	
433	30384			2026		2026				4122		4122	4.5 11%	3560	
434	30385	4514		6975	9.5	5745		3657	7	2394		3026		4391	
435	30386	4971		2334		3653		2893		3989		3441		4105	
436	30387	5091		7827	4	6459	5	4555	1 *			4555	1 * 23%	5093	3
437	30388	3884		7667	6.5	5776	10			3125		3125		4729	10
438	30389			5365		5365				3856		3856	10.5	4642	
439	30390	5270		4834		5052		2195		4455	9.5	3325		4148	
440	30391	5908		4846		5377		3026		3059		3043		4210	
441	30392	5609		6975	9.5	6292	7	2327		3590		2959		4763	7
442	30393	7707	1 *	7667	6.5	7687	1 * 9%	2992		4122		3557		4770	6
443	30394	3937		7846	3	5892	9	2826		4521	7	3674		4589	
444	30395	5354		2064		3709		2088		4654	3.5	3371		4169	
445	30396	4238		5628		4933		2494		4987	1.5	3741		4291	
446	30397	4105		2064		3085				2926		2926		3972	
447	30398	5331		2090		3711				3125		3125		3926	
448	30399	4862		8654	1	6758	3	2693		4987	1.5	3840		4643	
449	30400	5519		6552		6036	8	2161		2660		2411		4295	
450	30401	5379		5756		5568		3258		4521	7	3890	9	4575	
451	30402	7599	2 *	3821		5710		3590	9	4521	7	4056	6 9%	4375	
452	30403	5976		2673		4325		2128		2660		2394		4174	
453	30404	6627	4	2212		4420		2992		4654	3.5	3823		4622	
454	30405	5328		2052		3690		2660		2727		2694		3998	
455	30406	3619		2026		2823				2328		2328		3485	
456	30407	5732		2084		3908				4388		4388	2 * 18%	4408	
457	Local Check	5210		6289		5750		2394		4455	9.5	3425		4829	5
Exp. mean		5146.9		4053.1		4547.8		2994.03		3565.19		3326.19		4286.1	
CD		909.86		811.71		569.11		774.53		546.12		616.02		353.62	
CV%		8.81		10		6.25		12.84		7.62		9.24		4.12	
Sowing date		16.07.2021		6.07.2021				09.07.2021		10.07.2021					
Planting date		11.08.2021		22.07.2021				Direct Seeded		10.08.2021					
Local Check Name		R.Mahsuri -1		R.Mahsuri				Sambha Sub-1		Sambha Mahsuri-Sub 1					

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Table No.12.8 contd.: Grain yield (kg/ha) of entries in IVT RSL, Kharif 2021

Entry No	IET No.	ZONE IV				Zone VII						Zone VII (3)		Overall (12)	
		AS		AP		KA			KA(2)			Mean		Mean	
		TTB		MTU		SRS		MGD		Mean			Mean		Mean
401	30355	2745		7555	5 18%	3034		3784		3409		4791		4156	
402	30356	6570	2 11%	5680		2134		4848		3491		4221		4202	
403	30357	4230				4267		4848		4558		4558		3451	
404	30358	6435	4 8%	5802		3567		5268	8	4418		4879		4914	6
405	30359	4725		5439		3900		4572		4236		4637		3859	
406	30360	5490		7925	2 * 24%	4334	10.5	3869		4102		5376	4	4961	5
407	30361	5490		5264		3534		5270	7	4402		4689		4637	
408	30362	5130		5046		3434		4432		3933		4304		4219	
409	30363	4005				4000		4848		4424		4424		4146	
410	30364	5805	9.5	4985		4600	6	5145		4873	6	4910		4873	7
411	30365	4950		5066		4134		5049		4592		4750		4685	
412	Swarna Sub 1 (NC)	5265		4946		4434	7.5	3585		4010		4322		4313	
413	30366	4275		8538	1 * 33%	3967		4556		4262		5687	1	4768	10
414	30367	6705	1 * 13%	6125		4334	10.5	5099		4717	10	5186	9	4608	
415	30368	1845		3985		3400		3818		3609		3734		3640	
416	30369	5985	7	7688	4 20%	3334		4778		4056		5267	7	4798	9
417	30370	3780		4524		3667		2455		3061		3549		4432	
418	30371	6480	3 9%	5550		3834		4681		4258		4688		4540	
419	30372	6030	6	4500		4700	5	4756		4728	9	4652		4469	
420	CR Dhan 801 (check)	4230		6185		6167	1	4414		5291	2	5589	2	4570	
421	Zonal Check	5940	8	4345		5567	2	5285	5	5426	1	5066		5483	1
422	30373	4095		4620		4200		4914		4557		4578		4059	
423	30374	4455		4435		4834	4	4812		4823	7	4694		4261	
424	30375	3555		4661		2534		5281	6	3908		4159		4034	
425	30376	3780		5110		3900		3386		3643		4132		4004	
426	30377	5085		5477		3967		4471		4219		4638		4302	
427	30378	5220		4615		3967		5322	4	4645		4635		4251	
428	30379	4815		5107		3134		3807		3471		4016		4456	
429	30380	5715		4753		3334		4480		3907		4189		5007	3
430	30381	5130		5655		3500		3450		3475		4202		4088	
431	30382	3825		7495	7 17%	3084		4918		4001		5166	10	4291	
432	30383	2880		6660	9	3300		3191		3246		4384		4025	
433	30384	5265		4515		2967		4851		3909		4111		3896	
434	30385	4905		4830		2400		5254	9	3827		4161		4376	
435	30386	5265		4668		4034		5441	3	4738	8	4714		4354	
436	30387	5130		5125		4200		5767	2	4984	4	5031		5079	2
437	30388	3645		4525		4434	7.5	4230		4332		4396		4540	
438	30389	3060		5504		3934		4361		4148		4600		4471	
439	30390	5805	9.5			4267		4446		4357		4357		4337	
440	30391	5400		7505	6 17%	3800		4656		4228		5320	5	4587	
441	30392	4770		5055		3467		5072		4270		4531		4706	
442	30393	6075	5	4965		2967		3769		3368		3900		4661	
443	30394	5355		4940		3500		3565		3533		4002		4506	
444	30395	4680		4754		3067		5119		4093		4313		4248	
445	30396	2115		4907		4400	9	3102		3751		4136		4071	
446	30397	3780		6575	10	2100		4602		3351		4426		4078	
447	30398	3195		4979		900		4326		2613		3402		3716	
448	30399	5220		7185	8 12%	3934		4442		4188		5187	8	4827	8
449	30400	5355		4625		3534		6217	1	4876	5	4792		4508	
450	30401	4725		5550		3050		4455		3753		4352		4532	
451	30402	4230		5127		3700		4653		4177		4493		4393	
452	30403	3465		4549		2600		3527		3064		3559		3961	
453	30404	3870		4614		3567		4672		4120		4284		4475	
454	30405	4680		6280		3167		5200	10	4184		4882		4276	
455	30406	3780		7876	3 * 23%	3267		4811		4039		5318	6	4012	
456	30407	4905		4441		3967		5040		4504		4483		4474	
457	Local Check	4680		6405		5134	3	4848		4991	3	5462	3	4975	4
Exp. mean		4702.1		5504.2		3691.8		4557.9		4124.88		4566.1		4395.5	
CD		629.09		1341.85		482.25		1145.74		636.56		646.13		327.14	
CV%		6.7		12.15		6.52		12.55		7.7		7.06		3.72	
Sowing date		14.07.2021		13.07.2021		09-07-21		29.07.2021							
Planting date		14.08.2021		17.08.2021		02-08-21		31.08.2021							
Local Check Name		Ranjit Sub 1		MTU 1223		Asha		PSB_68							

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Table No. 12.9: Days to 50% flowering of entries in IVT RSL, Kharif 2021

Entry No	IET No.	ZONE III												Zone III (8)
		OD		OD(2)	WB		WB(2)	BI		BI(2)	UP		UP(2)	
		CTK	JYP	mean	BNK	CHN	mean	BKG	PSA	mean	GGT	MSD	mean	
401	30355	120	105	113	110		110	98	79	89	108	118	113	105
402	30356	117	111	114	88	125	107	106	110	108	118	122	120	112
403	30357		111	111					96	96	114	115	115	109
404	30358	129	122	126	110	125	118	106	113	110	113	118	116	117
405	30359	123	119	121	114	112	113	127	106	117	106	113	110	115
406	30360	129	125	127	114	124	119	118	117	118	115	117	116	120
407	30361	130	123	127	109	125	117	105	111	108	115	113	114	116
408	30362	124	119	122	114	129	122	106	107	107	110	110	110	115
409	30363		116	116	114		114	105	97	101		116	116	110
410	30364	128	115	122	113	116	115	106	111	109	104		104	113
411	30365	124	110	117	114	134	124	127	106	117				119
412	Swarna Sub 1 (NC)	125	118	122	111	121	116	108	104	106	112	104	108	113
413	30366	130	127	129	117	129	123	125	119	122		112	112	123
414	30367	125	114	120	112	122	117	104	113	109	118	113	116	115
415	30368	130	122	126	113	134	124	128	131	130		110	110	124
416	30369	125	124	125	117	114	116	107	107	107	110	122	116	116
417	30370	124	127	126	107	114	111	103	93	98	111	115	113	112
418	30371	127	128	128	114	114	114	118	114	116	125	117	121	120
419	30372	114	106	110	108	117	113	105	103	104	97	114	106	108
420	CR Dhan 801 (check)	125	113	119	109	114	112	106	101	104	100	110	105	110
421	Zonal Check	110	105	108	112	116	114	107	119	113	122		122	113
422	30373	111	117	114	115	124	120	112	111	112	106		106	114
423	30374	110	112	111	108	118	113	112	117	115	117		117	113
424	30375	129	112	121	110	129	120	119	123	121	121		121	120
425	30376	108	111	110	113	104	109	102	50	76	101	116	109	101
426	30377	125	127	126	111	123	117	105	117	111	120	118	119	118
427	30378	114	106	110	113	110	112	112	89	101	93	122	108	107
428	30379	110	114	112	83	121	102	113	115	114	113	118	116	111
429	30380	128	125	127	110	123	117	105	105	105	106	119	113	115
430	30381	119	110	115	80	118	99	102	96	99	100	116	108	105
431	30382	129	111	120	114	115	115	112	106	109	103	120	112	114
432	30383	116	100	108	79	95	87	101	79	90	108	115	112	99
433	30384	129	117	123	117	129	123		99	99		117	117	118
434	30385	125	114	120	108	125	117	104	106	105	106	114	110	113
435	30386	127	114	121	111	110	111	106	103	105	101	110	106	110
436	30387	111	113	112	109	127	118	118	105	112	106		106	113
437	30388	127	104	116	88	129	109	131	119	125		122	122	117
438	30389	123	118	121	77	130	104		105	105		115	115	111
439	30390	123	113	118	109	115	112	105	104	105	103	118	111	111
440	30391	120	111	116	111	126	119	106	105	106	104	113	109	112
441	30392	122	115	119	111	110	111	104	104	104	99	117	108	110
442	30393	122	113	118	111	108	110	100	91	96	94	113	104	107
443	30394	128	120	124	111	133	122	111	118	115	114	118	116	119
444	30395	123	117	120	116	104	110	107	104	106	105	121	113	112
445	30396	117	101	109	107	84	96	103	91	97	92	118	105	102
446	30397	130	128	129	116	125	121	122	123	123		121	121	124
447	30398	111	101	106	112	98	105	97	79	88		120	120	103
448	30399	122	117	120	107	119	113	100	104	102	101	116	109	111
449	30400	126	113	120	114	116	115	101	105	103	97	111	104	110
450	30401	128	103	116	111	113	112	103	107	105	111	118	115	112
451	30402	125	116	121	109	114	112	106	104	105	111	121	116	113
452	30403	111	115	113	88	107	98	101	97	99	94	122	108	104
453	30404	126	101	114	108	110	109	102	105	104	103	119	111	109
454	30405	123	111	117	112	107	110	113	107	110	104	121	113	112
455	30406	127	119	123	121	127	124	127	105	116		119	119	121
456	30407	123	112	118	111	110	111	108	104	106		115	115	112
457	Local Check	126	110	118	122	111	117	109	105	107	104	111	108	112
Exp. mean		122.3	114.2	118.1	108.5	117.3	112.8	109	104.3	106.4	107.1	116	112.2	112.43
CD		2.58	2.49	1.87	0	2.09	1.03	2.44	15.37	7.94	2.93	2.2	1.77	2.12
CV%		1.05	1.09	0.79	0	0.89	0.45	1.12	7.35	3.73	1.36	0.94	0.79	0.94

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Table No.12.9 Contd.: Days to 50% flowering of entries in IVT RSL, Kharif 2021

Entry No	IET No.	ZONE IV		ZONE VII			Zone VII (3)	Overall (12)
		AS	AP	KA		KA(2)		
		TTB	MTU	SRS	MGD	Mean	mean	mean
401	30355	93	95	94	117	106	102	103
402	30356	106	112	111	109	110	111	111
403	30357	121		118	109	114	114	112
404	30358	121	123	106	116	111	115	117
405	30359	109	113	118	118	118	116	115
406	30360	122	121	109	115	112	115	119
407	30361	120	115	109	118	114	114	116
408	30362	109	114	101	110	106	108	113
409	30363	121		106	109	108	108	111
410	30364	114	119	115	120	118	118	115
411	30365	121	125	109	115	112	116	119
412	Swarna Sub 1 (NC)	115	108	129	117	123	118	114
413	30366	122	124	115	116	116	118	121
414	30367	114	116	109	105	107	110	114
415	30368	123	130	111	116	114	119	123
416	30369	108	114	106	112	109	111	114
417	30370	102	103	125	112	119	113	111
418	30371	122	122	101	117	109	113	118
419	30372	106	97	109	104	107	103	107
420	CR Dhan 801 (check)	107	103	115	111	113	110	110
421	Zonal Check	108	112	115	119	117	115	113
422	30373	120	114	108	123	116	115	115
423	30374	108	108	115	114	115	112	113
424	30375	122	117	101	120	111	113	118
425	30376	102	102	115	112	114	110	103
426	30377	115	118	109	117	113	115	117
427	30378	106	99	115	117	116	110	108
428	30379	108	115	111	101	106	109	110
429	30380	120	108	108	112	110	109	114
430	30381	106	105	104	104	104	104	105
431	30382	115	115	94	117	106	109	113
432	30383	98	95	120	112	116	109	102
433	30384	122	131	111	118	115	120	119
434	30385	106	113	95	118	107	109	111
435	30386	110	108	109	114	112	110	110
436	30387	121	121	118	124	121	121	116
437	30388	123	121	118	127	123	122	119
438	30389	122	124	108	115	112	116	114
439	30390	108		101	107	104	104	110
440	30391	109	107	104	108	106	106	110
441	30392	116	104	104	116	110	108	110
442	30393	105	103	118	108	113	110	107
443	30394	121	122	111	113	112	115	118
444	30395	115	107	91	105	98	101	110
445	30396	94	97	111	105	108	104	102
446	30397	122	124	90	116	103	110	120
447	30398	123	92	108	109	109	103	105
448	30399	107	105	115	111	113	110	110
449	30400	105	101	108	117	113	109	110
450	30401	107	107	109	112	111	109	111
451	30402	109	112	104	100	102	105	111
452	30403	104	103	101	110	106	105	104
453	30404	108	108	101	113	107	107	109
454	30405	114	115	133	113	123	120	114
455	30406	122	128	109	105	107	114	119
456	30407	119	106	115	100	108	107	111
457	Local Check	116	119	115	109	112	114	113
Exp. mean		112.68	111.6	109.4	112.5	111	111.11	112.15
CD		5.73	2.25	0	4.82	2.41	1.98	1.64
CV%		2.54	1.01	0	2.14	1.09	0.89	0.73

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Table No.12.10: Plant height (cm) of entries in IVT RSL, Kharif 2021

Entry No	IET No.	ZONE III												Zone III (8)
		OD		OD(2)	WB		WB(2)	BI		BI(2)	UP		UP(2)	
		CTK	JYP	mean	BNK	CHN	mean	BKG	PSA	mean	GGT	MSD	mean	
401	30355	95	84	90	105	.	105	113	103	108	110	125	118	105
402	30356	100	102	101	105	115	110	99	105	102	111	131	121	108
403	30357	.	88	88	.	.	.	.	106	106	118	141	130	113
404	30358	116	96	106	105	117	111	104	112	108	112	132	122	112
405	30359	97	75	86	105	109	107	112	99	106	106	121	114	103
406	30360	115	99	107	105	105	105	105	128	117	110	123	117	111
407	30361	95	74	84	95	107	101	96	116	106	110	134	122	103
408	30362	100	80	90	80	108	94	93	104	98	107	123	115	99
409	30363	.	83	83	115	.	115	105	108	107	.	132	132	109
410	30364	124	109	116	90	128	109	111	100	106	122	.	122	112
411	30365	120	85	102	100	112	106	97	117	107	119	.	119	107
412	Swarna Sub 1 (NC)	90	75	83	95	80	88	90	115	102	99	120	110	96
413	30366	112	106	109	105	114	110	97	99	98	114	126	120	109
414	30367	115	83	99	80	119	100	109	102	105	107	141	124	107
415	30368	107	94	101	105	104	105	80	129	104	109	123	116	106
416	30369	109	86	97	105	100	103	116	121	118	105	136	121	110
417	30370	104	78	91	100	107	104	93	122	107	106	152	129	108
418	30371	102	93	98	92	119	106	98	106	102	114	129	122	107
419	30372	95	76	86	85	104	95	89	107	98	106	141	124	100
420	CR Dhan 801 (check)	89	77	83	90	102	96	92	104	98	113	122	118	99
421	Zonal Check	95	85	90	120	88	104	102	105	103	106	.	106	100
422	30373	110	79	95	95	128	112	102	107	104	120	.	120	106
423	30374	116	110	113	95	112	104	97	113	105	111	.	111	108
424	30375	115	79	97	105	123	114	91	101	96	113	.	113	104
425	30376	94	86	90	90	107	99	92	99	96	105	132	119	101
426	30377	112	97	105	85	126	106	95	110	102	107	141	124	109
427	30378	100	91	96	95	118	107	112	98	105	117	89	103	103
428	30379	140	95	117	120	131	126	94	104	99	109	121	115	114
429	30380	125	79	102	105	131	118	109	117	113	118	123	121	113
430	30381	90	88	89	105	89	97	98	99	98	109	136	123	102
431	30382	116	108	112	100	116	108	110	119	115	116	133	125	115
432	30383	88	93	90	80	120	100	104	106	105	114	152	133	107
433	30384	149	109	129	90	130	110	113	131	122	116	129	123	121
434	30385	101	91	96	100	117	109	109	100	104	116	141	129	109
435	30386	102	92	97	110	140	125	103	116	110	116	122	119	113
436	30387	112	99	106	105	140	123	111	97	104	117	.	117	112
437	30388	105	81	93	105	102	104	70	90	80	127	131	129	101
438	30389	98	77	88	100	90	95	103	92	97	121	141	131	103
439	30390	103	86	94	100	124	112	103	103	103	113	132	123	108
440	30391	103	74	89	110	93	102	96	100	98	112	121	117	101
441	30392	115	89	102	105	124	115	113	108	111	112	123	118	111
442	30393	96	104	100	120	140	130	121	125	123	121	134	128	120
443	30394	108	86	97	90	105	98	87	103	95	104	115	110	100
444	30395	111	109	110	95	124	110	109	120	114	107	121	114	112
445	30396	97	80	89	110	111	111	108	123	115	109	109	109	106
446	30397	115	91	103	115	114	115	86	104	95	113	131	122	109
447	30398	82	72	77	90	111	101	101	102	102	.	135	135	99
448	30399	80	116	98	100	123	112	140	118	129	150	126	138	119
449	30400	102	88	95	110	104	107	107	114	111	115	120	118	108
450	30401	105	85	95	115	100	108	102	123	112	109	136	123	109
451	30402	94	89	91	80	98	89	113	100	106	105	121	113	100
452	30403	112	78	95	85	98	92	97	111	104	111	140	126	104
453	30404	104	114	109	105	128	117	104	120	112	106	120	113	113
454	30405	119	95	107	100	130	115	109	118	113	116	117	117	113
455	30406	106	128	117	115	143	129	96	119	108	109	121	115	117
456	30407	115	91	103	115	124	120	111	108	110	108	132	120	113
457	Local Check	114	101	107	108	120	114	94	128	111	100	89	95	107
Exp. mean		106.1	90.5	97.9	100.6	114.3	107.4	101.9	109.7	105.8	112.3	127.7	119.6	107.6

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Table No. 12.10. contd.: Plant height (cm) of entries in IVT RSL, Kharif 2021

Entry No	IET No.	ZONE IV		ZONE VII			Zone VII (3) mean	Overall (12) mean
		AS	AP	KA		KA(2)		
		TTB	MTU	SRS	MGD	mean		
401	30355	116	131	101	78	89	103	105
402	30356	110	131	79	87	83	99	106
403	30357	114	.	90	87	88	88	106
404	30358	114	141	83	85	84	103	110
405	30359	112	139	91	72	82	101	103
406	30360	113	143	91	81	86	105	110
407	30361	103	116	80	92	86	96	101
408	30362	102	125	110	80	95	105	101
409	30363	126	.	109	87	98	98	108
410	30364	129	148	102	104	103	118	115
411	30365	111	154	78	87	82	106	107
412	Swarna Sub 1 (NC)	98	119	92	62	77	91	95
413	30366	108	141	87	104	95	111	109
414	30367	109	113	89	82	86	95	104
415	30368	91	118	79	85	82	94	102
416	30369	120	125	92	81	86	99	108
417	30370	103	113	99	69	84	94	104
418	30371	117	139	85	85	85	103	106
419	30372	107	118	80	79	79	92	99
420	CR Dhan 801 (check)	103	123	89	84	86	99	99
421	Zonal Check	110	117	106	72	89	98	101
422	30373	112	150	89	94	91	111	108
423	30374	112	134	94	83	88	103	107
424	30375	97	132	83	100	91	105	104
425	30376	103	111	87	81	84	93	99
426	30377	97	120	93	74	84	96	105
427	30378	112	106	91	91	91	96	102
428	30379	107	129	93	89	91	104	111
429	30380	112	133	83	80	82	99	110
430	30381	107	126	101	71	86	99	101
431	30382	112	142	104	87	95	111	114
432	30383	117	137	110	68	89	105	107
433	30384	132	181	93	97	95	123	122
434	30385	122	134	92	86	89	104	109
435	30386	128	135	107	86	97	110	113
436	30387	112	129	90	92	91	104	109
437	30388	90	121	88	81	84	97	99
438	30389	82	123	100	76	88	100	100
439	30390	110	.	98	91	94	94	106
440	30391	110	133	98	79	88	103	102
441	30392	110	135	96	91	94	107	110
442	30393	127	143	90	79	85	104	117
443	30394	101	114	98	85	92	99	100
444	30395	121	144	96	88	92	109	112
445	30396	115	142	93	81	87	105	107
446	30397	97	134	87	73	80	98	105
447	30398	107	117	81	100	90	99	100
448	30399	146	154	94	99	97	116	120
449	30400	112	123	93	85	89	101	106
450	30401	117	138	92	86	89	105	109
451	30402	104	133	84	76	80	98	100
452	30403	114	118	93	72	83	94	102
453	30404	110	137	99	79	89	105	110
454	30405	113	145	108	86	97	113	113
455	30406	127	149	102	104	103	118	118
456	30407	111	136	102	79	90	106	111
457	Local Check	116	124	100	87	94	104	107
Exp. mean		111.1	131.8	93.2	84.1	88.6	102.3	106.6

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Table No.12.11 Panicle/m² of entries in IVT RSL, Kharif 2021

Entry No	IET No.	ZONE III												Zone III (8)
		OD		OD(2)	WB		WB(2)	BI		BI(2)	UP		UP(2)	
		CTK	JYP	mean	BNK	CHN	mean	BKG	PSA	mean	GGT	MSD	mean	
401	30355	241	389	315	520		520	379	247	313	85	204	145	295
402	30356	252	255	254	483	363	423	322	251	287	102	216	159	281
403	30357		417	417					240	240	100	249	175	252
404	30358	382	261	322	517	396	457	335	255	295	143	248	196	317
405	30359	279	289	284	391	380	386	240	238	239	100	212	156	266
406	30360	292	416	354	476	512	494	299	221	260	134	227	181	322
407	30361	228	250	239	432	380	406	270	261	266	133	236	185	274
408	30362	339	317	328	459	462	461	353	240	297	163	204	184	317
409	30363		378	378	392		392	373	227	300		239	239	322
410	30364	312	426	369	456	314	385	346	255	301	123		123	319
411	30365	343	406	375	481	297	389	330	242	286				350
412	Swarna Sub 1 (NC)	268	417	343	341	462	402	252	218	235	141	253	197	294
413	30366	328	433	381	437	545	491	236	240	238		244	244	352
414	30367	297	339	318	444	314	379	326	256	291	159	200	180	292
415	30368	270	401	336	410	512	461	321	231	276		200	200	335
416	30369	331	239	285	481	413	447	280	231	256	150	208	179	292
417	30370	308	450	379	390	347	369	345	249	297	149	229	189	308
418	30371	292	356	324	444	561	503	259	251	255	144	250	197	320
419	30372	295	411	353	238	627	433	373	255	314	177	204	191	323
420	CR Dhan 801 (check)	228	472	350	362	693	528	371	243	307	164	237	201	346
421	Zonal Check	239	439	339	423	281	352	336	254	295	130		130	300
422	30373	262	338	300	421	330	376	303	255	279	115		115	289
423	30374	262	345	304	267	347	307	287	245	266	140		140	270
424	30375	269	278	274	387	363	375	381	246	314	117		117	292
425	30376	249	339	294	430	248	339	380	248	314	172	253	213	290
426	30377	338	317	328	368	347	358	339	261	300	104	260	182	292
427	30378	222	239	231	488	413	451	322	223	273	118	207	163	279
428	30379	337	288	313	395	363	379	346	243	295	142	230	186	293
429	30380	287	262	275	247	363	305	302	236	269	111	246	179	257
430	30381	225	362	294	481	380	431	226	242	234	138	206	172	283
431	30382	394	311	353	444	314	379	328	247	288	149	238	194	303
432	30383	259	415	337	505	380	443	225	179	202	106	229	168	287
433	30384	295	289	292	371	347	359		239	239		250	250	299
434	30385	296	428	362	400	314	357	246	227	237	170	204	187	286
435	30386	261	239	250	451	347	399	353	241	297	172	237	205	288
436	30387	247	355	301	469	347	408	372	199	286	152		152	306
437	30388	363	353	358	483	347	415	315	266	291		216	216	335
438	30389	389	355	372	459	479	469		239	239		249	249	362
439	30390	248	342	295	289	380	335	249	243	246	108	248	178	263
440	30391	221	266	244	410	512	461	325	246	286	166	212	189	295
441	30392	273	417	345	365	314	340	350	223	287	135	227	181	288
442	30393	252	361	307	408	363	386	290	231	261	151	236	194	287
443	30394	331	356	344	478	380	429	237	243	240	147	246	197	302
444	30395	238	278	258	311	314	313	305	218	262	147	253	200	258
445	30396	198	350	274	473	314	394	325	212	269	104	258	181	279
446	30397	365	428	397	476	347	412	312	227	270		217	217	339
447	30398	229	372	301	441	413	427	370	236	303		243	243	329
448	30399	224	350	287	269	578	424	326	217	272	119	258	189	293
449	30400	273	407	340	406	512	459	320	237	279	191	217	204	320
450	30401	269	389	329	419	363	391	317	214	266	162	243	203	297
451	30402	269	323	296	412	347	380	361	266	314	100	245	173	290
452	30403	269	416	343	407	330	369	277	261	269	161	217	189	292
453	30404	316	261	289	392	314	353	279	259	269	120	260	190	275
454	30405	313	294	304	348	314	331	347	239	293	159	229	194	280
455	30406	251	566	409	391	347	369	306	250	278		204	204	331
456	30407	315	317	316	395	314	355	300	222	261		253	253	302
457	Local Check	277	278	278	445	314	380	324	236	280	94	267	181	279
Exp. mean		283.6	351.3	319.4	413.6	387.8	401.88	314.4	238.7	274.6	136	232.1	187	299.43
CD		51.8	62.82	42.89	34.66	62.36	32.76	22.9	18.89	14.77	20.12	15.39	14.75	15.3
CV %		9.11	8.93	6.7	4.18	8.02	4.07	3.63	3.95	2.68	7.35	3.3	3.94	2.55

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Table No.12.11 contd.: Panicle/m² of entries in IVT RSL, Kharif 2021

Entry No	IET No.	ZONE IV		ZONE VII			Zone VII (3) mean	Overall (12) mean
		AS	AP	KA		KA(2)		
		TTB	MTU	SRS	MGD	mean		
401	30355	258	317	355	282	319	318	298
402	30356	255	314	289	269	279	291	281
403	30357	203		312	269	291	291	256
404	30358	253	310	292	266	279	289	305
405	30359	250	304	355	269	312	309	276
406	30360	273	320	322	243	283	295	311
407	30361	200	287	386	295	341	323	280
408	30362	263	304	281	227	254	271	301
409	30363	380		350	269	310	310	326
410	30364	220	317	322	271	297	303	306
411	30365	165	320	345	282	314	316	321
412	Swarna Sub 1 (NC)	253	307	375	237	306	306	294
413	30366	255	330	297	244	271	290	326
414	30367	248	297	403	268	336	323	296
415	30368	170	254	309	247	278	270	302
416	30369	228	300	371	237	304	303	289
417	30370	220	297	391	266	329	318	303
418	30371	228	317	348	268	308	311	310
419	30372	285	311	305	238	272	285	310
420	CR Dhan 801 (check)	265	327	385	248	317	320	333
421	Zonal Check	290	287	307	299	303	298	299
422	30373	200	287	330	295	313	304	285
423	30374	248	297	404	266	335	322	283
424	30375	210	314	312	225	269	284	282
425	30376	200	297	385	248	317	310	287
426	30377	250	310	345	248	297	301	291
427	30378	265	317	259	281	270	286	280
428	30379	265	307	233	233	233	258	282
429	30380	230	281	401	225	313	302	266
430	30381	253	320	391	264	328	325	291
431	30382	168	307	401	275	338	328	298
432	30383	227	284	305	244	275	278	280
433	30384	215	310	386	284	335	327	299
434	30385	248	304	342	231	287	292	284
435	30386	225	284	238	219	229	247	272
436	30387	235	311	324	258	291	298	297
437	30388	188	310	363	246	305	306	314
438	30389	205	297	243	246	245	262	316
439	30390	223		368	297	333	333	272
440	30391	250	320	266	237	252	274	286
441	30392	228	320	317	229	273	289	283
442	30393	263	337	403	219	311	320	293
443	30394	243	304	312	264	288	293	295
444	30395	205	304	332	288	310	308	266
445	30396	210	314	330	217	274	287	275
446	30397	255	294	286	266	276	282	316
447	30398	258	301	332	223	278	285	311
448	30399	228	317	376	241	309	311	292
449	30400	258	344	268	268	268	293	308
450	30401	245	317	404	251	328	324	299
451	30402	195	304	322	294	308	307	287
452	30403	235	314	297	250	274	287	286
453	30404	240	310	263	225	244	266	270
454	30405	230	284	256	239	248	260	271
455	30406	203	314	327	294	311	312	314
456	30407	185	324	393	196	295	304	292
457	Local Check	193	320	456	269	363	348	289
Exp. mean		233.84	307.2	334.4	255	294.7	298.9	293.3
CD		32.34	29.19	37.6	52.92	31.67	23.99	11.27
CV %		6.9	4.74	5.61	10.36	5.37	4.01	1.92

ADVANCE VARIETY TRIAL 1- SEMI DEEP WATER (AVT-1 SDW)

Locations: 09

Test Entries: 15

Checks: CR Dhan 506 (National), CR Dhan 510 (Eastern, North Eastern), MTU 1172 (Southern) -(Zonal Check) and Local Checks

Table:12.12

The trial was constituted with 15 entries including 12 test entries and three checks viz., CR Dhan 506 (National check), CR Dhan 510/ MTU 1172 (Zonal Check) and Local Check. Out of the fifteen test entries, Six test entries (IET 28311, IET 28296, IET 28299, IET 28313, IET 28291, IET 28315) were in third year and remaining six entries (IET 29114, IET 29132, IET 29115, IET 29121, IET 29122, IET 29135) were in the second year of testing. The trial was sent to 09 locations and data was received from 06 locations except Kumta, Mugad and Ghaghraghat. In Zone III, data from five locations and Zone VII data from one location was considered for evaluating the performance of test entries. Overall mean yield of entries varied from 3501 kg/ha (National check) to 5616 kg/ha (IET 28313). Mean days to 50% flowering ranged from 114 days (IET 28296) to 132 days (IET 28315 and Zonal check); plant height ranged from 114cm (IET 28313) to 161cm (IET 29132); mean panicles/m² ranged from 251 (IET 29114) to 293 (IET 28299). The data pertaining to yield, days to 50% flowering, plant height, no. of panicles/m² and qualities are presented in (Tables 5.1-5.5). On overall mean yield basis, three entries (IET 28313, IET 28299 and IET 29121) showed yield superiority of 21%, 20% and 13% over the best check. In Zone III five entries (IET 28313, IET 28299, IET 28296, IET 29121 and IET 29122) outperformed best check (National check) with yield advantage of 36%, 30%, 22%, 32% and 15%. In Zone VII, trial was conducted only at single location Maruteru in Andhra Pradesh and none of the entries showed > 15% yield superiority over the best check (Local check).

Identification of superior genotypes in SDW trial:

IET 28313 (MTU 1325 (MTU 2243-9-1-1-1-1) derived from a cross between (MTU 1061 / MTU 1121) with short slender, 114 cm plant height and 121 days to 50% flowering. It ranked 1st (5609 kg/ha) with yield advantage of 36% in Eastern zone over the best check. Over all yield, it ranked 1st (5616 kg/ha) with yield advantage of 21% over the best check. The entry recorded good HRR (70%), intermediate ASV (4) and AC (19.95) as grain quality parameters. However, due to improper adaptability parameter i.e., plant height<120 cm the genotype was shifted to AVT-2 RSL.

IET 28299 (CR 4039-2-1-2-1-1) derived from a cross between (Varshadhan /Warda1) with short bold grain, 150 cm plant height and 131 days to 50% flowering. It ranked 3rd (5371 kg/ha) with yield advantage of 30% in Eastern zone over the best check. Over all yield it ranked 2nd (5602 kg/ha) with yield advantage of 20% over the best check. The entry recorded good HRR (62%), intermediate ASV (3) and AC (22.27) as desirable grain quality parameters. It is promising for the Zone III.

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IET 28296 (CN 1758-2-TTB 7) derived from a cross between (CN 1216 / CN 1131-4-1-4) with short slender grain, 127 cm plant height and 114 days to 50% flowering. It ranked 4th (5013kg/ha) with yield advantage of 22% in overall mean of five locations of Zone III over the best check. The entry recorded HRR (66 %), intermediate ASV (7) and AC (23.7) as desirable grain quality parameters. The entry recorded good seedling survival, submergence tolerance, good elongation ability, desirable phenotypic acceptability score and low grain shattering at Chinsurah and Masodha. Although IET 29296 is reported with desirable yield advantage over BVC in AVT-II-SDW in Zone-III and Zone-VII, it is **repeated** for testing for one more year due to DFF<120 days.

IET29121 (CR 3838-2-2-1-1-2) derived from a cross between (Savitri/AC 38562//Varshadhan) with short slender grain, 144cm plant height and 127 days to 50% flowering. It ranked 3rd (5269kg/ha) with yield advantage of 13% over the best check in overall mean and 2nd (5455 kg/ha) in Zone III with yield advantage of 32% over the best check. The entry recorded HRR (55 %), intermediate ASV (6) and AC (20.77) as desirable grain quality parameters. The entry recorded good seedling survival, submergence tolerance, good elongation ability, desirable phenotypic acceptability score and low grain shattering at Chinsurah and Maruteru. Hence IET 29121 is promoted to 3rd year of testing.

IET29122 (OR 2752) derived from a cross between (Salivahan/Basamanik) with short slender grain, 128cm plant height and 123 days to 50% flowering. It ranked 5th (4744kg/ha) with yield advantage of 15% in Eastern Zone (Zone-III) over the best check. The entry recorded good HRR (65%), intermediate ASV (7) and AC (21.75) as desirable grain quality parameters. The entry recorded good seedling survival, submergence tolerance, good elongation ability, desirable phenotypic acceptability score and low grain shattering at Chinsurah. Hence IET 29122 is promoted to 3rd year of testing.

The results could be summarised as below.

- **IET 28299 is found promising for zone III**
- **Overall and Zone III basis: IET 29121 and IET29122 are promoted for 3rd year of testing**
- **Repeat: IET 28296 in AVT-2**
- **Shift : IET 28313 to AVT-2 RSL**

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Details of water regime (cm) at different centers in AVT-1- SDW, Kharif 2021

Location	Week	June	July	August	September	October	November	December
Bhubaneswar	1st	-	-	10	50	20	-	-
	2nd	-	-	10	50	20	-	-
	3rd	-	-	37	30	20	-	-
	4th	-	-	41	25	20	-	-
Chinsura	1st	0	20	30	70	50	15	-
	2nd	0	35	50	80	30	15	-
	3rd	0	25	60	90	30	10	-
	4th		15	60	50	30	-	-
Cuttack	1st	0	0	5	20	65	30	10
	2nd	0	0	10	100	50	25	5
	3rd	0	5	20	80	35	20	0
	4th	0	5	20	55	35	15	0
Ghagrahat	1st	-	--	-	-	-	-	-
	2nd	-	-	-	-	-	-	-
	3rd	-	-	-	-	-	-	-
	4th	-	-	-	-	-	-	-
Kumta	1st	-	-	-	-	-	-	-
	2nd	-	-	-	-	-	-	-
	3rd	-	-	-	-	-	-	-
	4th	-	-	-	-	-	-	-
Maruteru	1st	-	-	-	56	52	52	-
	2nd	-	-	-	54	48	50	-
	3rd	-	-	46	58	50	50	-
	4th	-	-	54	58	56	46	-
Masoda	1st	-	-	20.6	40.2	30.8	20.2	-
	2nd	-	-	50.2	42.4	32.2	19.8	-
	3rd	-	-	45.8	35.6	25.7	17.7	-
	4th	-	-	43.2	32.8	23.2	10.6	-
Mugad	1st	-	-	-	-	-	-	-
	2nd	-	-	-	-	-	-	-
	3rd	-	-	-	-	-	-	-
	4th	-	-	-	-	-	-	-
Pusa	1st	-	8	30	45	-	-	-
	2nd	-	15	35	40	-	-	-
	3rd	-	20	45	30	-	-	-
	4th	-	25	45	10	-	-	-

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Adaptability Parameters of entries in AVT-1-SDW, Kharif 2021

Entry No.	IET No.	Kneeing ability					
		Bhubaneswar	Chinsura	Cuttack	Maruteru	Masoda	Pusa
501	28311	-	3	5	5	0	-
502	28296	-	1	5	5	0	-
503	28299	-	3	3	3	0	-
504	28313	-	3	3	5	0	-
505	CR Dhan 506(NC)	-	3	5	5	0	-
506	28291	-	3	5	3	0	-
507	28315	-	1	3	5	0	-
508	29114	-	1	5	5	0	-
509	CR Dhan 510(E,NE),MTU 1172(s)	-	3	5	5	0	-
510	29132	-	1	5	5	0	-
511	29115	-	3	5	5	0	-
512	29121	-	3	5	5		-
513	29122	-	3	5	5	0	-
514	29135	-	3	5	5	0	-
515	Local Check	-	3	5	3	0	-

(Contd.) Adaptability Parameters of entries in AVT-1-SDW, Kharif 2021

Entry No.	IET No.	Grain Shattering					
		Bhubaneswar	Chinsurah	Cuttack	Maruteru	Masoda	Pusa
501	28311	-	3	5	5	3	
502	28296	-	3	5	5	3	-
503	28299	-	5	5	3		-
504	28313	-	3	5	3	1	-
505	CR Dhan 506(NC)	-	3	5	5	1	-
506	28291	-	3	5	3		-
507	28315	-	3	5	3	1	-
508	29114	-	3	5	3	3	-
509	CR Dhan 510(E,NE), MTU 1172(s)	-	3	5	3	3	-
510	29132	-	3	5	3	1	-
511	29115	-	5	5	3	3	-
512	29121	-	3	5	5		-
513	29122	-	3	5	7	1	-
514	29135		3	5	3	1	
515	Local Check		3	5	3	1	

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(Contd.) Adaptability Parameters of entries in AVT-1-SDW, Kharif 2021

Entry No.	IET No.	Phenotypic acceptability					
		Bhubaneswar	Chinsurah	Cuttack	Maruteru	Masoda	Pusa
501	28311	-	3	3	5	3	-
502	28296	-	1	3	7	1	-
503	28299	-	3	3	3		-
504	28313	-	3	3	5	1	-
505	CR Dhan 506(NC)	-	1	3	7	7	-
506	28291	-	1	3	5		-
507	28315	-	3	3	5	9	-
508	29114	-	1	5	5	5	-
509	CR Dhan 510(E,NE), MTU 1172(s)	-	3	5	5	7	-
510	29132	-	3	3	5	9	-
511	29115	-	5	3	3	1	-
512	29121	-	3	3	7		-
513	29122	-	5	5	7	5	-
514	29135	-	5	3	3	1	-
515	Local Check	-	1	5	3	3	-

(Contd.) Adaptability Parameters of entries in AVT-1-SDW, Kharif 2021

Entry No.	IET No.	Seedling Survival Score					
		Bhubaneswar	Chinsurah	Cuttack	Maruteru	Masoda	Pusa
501	28311	-	5	1	7	3	
502	28296	-	3	1	5	3	
503	28299	-	5	1	5		
504	28313	-	5	1	5	4	
505	CR Dhan 506(NC)	-	3	1	5	3	
506	28291	-	3	1	5		
507	28315	-	3	1	7	3	
508	29114	-	3	1	7	4	
509	CR Dhan 510 (E,NE),MTU 1172(S)	-	5	1	7	4	
510	29132	-	5	1	7	3	
511	29115	-	5	1	5	2	
512	29121	-	5	1	7		
513	29122	-	5	1	9	3	
514	29135	-	3	1	7	2	
515	Local Check	-	3	1	9	3	

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(Contd.) Adaptability Parameters of entries in AVT-1-SDW, Kharif 2021

Entry No.	IET No.	Survival under Submergence (%)					
		Bhubaneswar	Chinsura	Cuttack	Maruteru	Masoda	Pusa
501	28311	-	77	92	78.5	78	-
502	28296	-	97	85	73.2	91	-
503	28299	-	80	95	91		-
504	28313	-	91	98	84.5	72	-
505	CR Dhan 506(NC)	-	96	93	77	81	-
506	28291	-	95	90	92.8		-
507	28315	-	96	96	89.5	86	-
508	29114	-	96	89	90	79	-
509	CR Dhan 510(E,NE),MTU 1172(S)	-	91	83	91	79	-
510	29132	-	88	94	91.2	84	-
511	29115	-	85	93	95.5	92	-
512	29121	-	89	90	78.2		-
513	29122	-	85	87	74.2	83	-
514	29135	-	95	94	90	91	-
515	Local Check	-	96	86	94.8	86	-

(Contd.) Adaptability Parameters of entries in AVT-1-SDW, Kharif 2021

Entry No.	IET No.	Elongation Ability					
		Bhubaneswar	Chinsurah	Cuttack	Maruteru	Masoda	Pusa
501	28311	-	3	5	5	9	-
502	28296	-	3	5	7	9	-
503	28299	-	3	3	3		-
504	28313	-	1	3	5	9	-
505	CR Dhan 506(NC)	-	3	5	7	7	-
506	28291	-	1	5	5		-
507	28315	-	1	3	5	5	-
508	29114	-	1	5	5	7	-
509	CR Dhan 510 (E,NE),MTU 1172(S)	-	3	5	5	9	-
510	29132	-	1	5	5	7	-
511	29115	-	3	5	3	9	-
512	29121	-	1	5	5		-
513	29122	-	3	5	7	7	-
514	29135	-	3	5	5	7	-
515	Local Check	-	3	5	3	7	-

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Superior genotypes identified in AVT-1-SDW during *Kharif* 2021 in Zone (III & VII)

Entry No	IET No/Designation/Cross	Zone III (5) Mean		Zone VII (1)		Overall (6) Mean	Remarks
		GY(Kg/ha) DFF PH (cm)	% over best check	GY(Kg/ha) DFF PH (cm)	% over best check		
512	29121 CR 3838 -2-2-1-1-2 Savitri/AC 38562//Varshadhan	5455 128 139	32%	4527 127 162		13%	Promoted to 3 rd year of testing
513	29122 OR 2752 Salivahan/Basamanik	4744 123 128	15%	3157 128 149			Promoted to 3 rd year of testing
502	28296 CN 1758-2-TTB 7 CN 1216 / CN 1131-4-1-4	5013 115 123	22%	3813 146 108			Repeat for one more year
503	28299 CR 4039-2-1-2-1-1 Varshadhan / Warda1	5371 144 131	30%	6527 130 173		20%	promising for Zone III
504	28313 MTU 1325 MTU 1061 / MTU 1121	5609 122 109	36%	650 119 140		21%	Repeat for one more year
505	CR Dhan 506 (NC)	3397 132 133		4020 122 161			
509	Zonal Check [CR Dhan 510 (Eastern and North Eastern), MTU 1172 (Southern)]	3376 132 119		6570 132 133			
515	Local Check	4124 120 128		7333 114 139			

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Three years performance of IET 28299 in SDW trials

IET No/Designation/Cross combination	Year	Zone		State		Over all	Remarks	
		Zone	%BC Rank Kg/ha PH (cm)	State	%BC Rank Kg/ha PH(cm)			
IET 28299 CR 4039-2-1-2-1-1 Varshadhan / Wardal	2019	Z-III	-	Odisha	-	10% 5 4720 139	Promising for Zone III	
			8					
			4393					
			119					
			West Bengal					
			UP		-			
		Bihar		-1				
		Z-VII	16 %	AP	16 %			
			-		-			
			5046		5046			
			179		179			
	2020	Z-III	9%	Odisha	18 %	- 6 4910 119		
			1		2			
			5370		5161			
115				123				
		West Bengal		-				
				6				
			6388					
			110					
			UP		-			
					10			
					3750			
					109			
			Bihar					
	Z-IV	-	Assam	-				
		-		-				
		2613		2613				
		105		105				
	Z-VII		AP					
2021	Z-III	30%	Odisha	-	20% 2 5602 150			
		3		5				
		5371		4071				
		144		136				
		West Bengal		-				
				9				
				5592				
				155				
			UP					
			Bihar		71%			
					2			
					7748			
					150			
	Z-VII	-	AP	-				
		5		5				
		6527		6527				
		173		173				

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Three years performance of IET 28296 in SDW trials

IET No/Designation/Cross Combination	Year	Zone		State		Over all	Remarks		
		Zone	%BC Rank Kg/ha PH (cm) DF	State	%BC Rank Kg/ha PH(cm) DF				
IET 28296 (CN 1758-2-TTB 7) CN 1216 / CN 1131-4-1-4	2019	Z-III	-	Odisha	-	6% 8 4539 177 109	Repeat due to DFF <120 days		
			9						
			4321					4431	
			189					120	
			111					123	
				West Bengal	-				
				UP	16% 4 4265 223 105				
				Bihar	-				
		Z-VII	19% 9 5195 143 105	AP	19% 9 5195 143 105				
	2020	Z-III	5% 6 5174 102 113	Odisha	11% 5 4825 108 119	6% 5 4961 114 109			
				West Bengal	- 7 6385 84 109				
				UP	- - 3450 125 107				
				Bihar	-				
				Z-IV				Assam	- 3 3895 103 110
				Z-VII				AP	-
2021	Z-III	22% 4 5013 123 115	Odisha	- 6 4025 107 115	- 4 4813 114				
			West Bengal	- 7 5704 129 115					
			UP	41% 1 3655 128 124					
			Bihar	69% 4 7658 144 107					
			Z-VII				AP	- - 3813 146 108	

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Three years performance of IET 28313 in SDW trials

IET No/Designation/Cross Combination	Year	Zone		State		Over all	Remarks
		Zone	%BC Rank Kg/ha PH (cm)	State	%BC Rank Kg/ha PH(cm)		
IET 28313 MTU 1325 (MTU 2243-9-1-1-1-1) MTU 1061 / MTU 1121	2019	Z-III	5% 6 4501 106	Odisha	- - 4007 113	9% 7 4641 115	Repeat due to semi-dwarf stature.
				West Bengal@			
				UP	29% 2 4748 102.5		
				Bihar	-		
		Z-VII	16% 10 5063 142	AP	16% 10 5063 142		
	2020	Z-III	9% 2 5364 103	Odisha	18% 3 5129 119	8% 3 5074 101	
				West Bengal	- - 6139 85		
				UP	- 8 4283 105		
				Bihar	-		
		Z-IV	6 3628 86	Assam	- 6 3628 86		
		Z-VII		AP	-		
	2021	Z-III	36% 1 5609 109	Odisha	32% 1 5217 108	21% 1 5616 114	
				West Bengal	21% 1 6741 115		
				UP	21% 4 3137 98		
				Bihar	71% 3 7735 117		
Z-VII			AP	- 10 5650 140	-		

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Table No. 12.12: Composition of entries in Advance Variety Trial 1-Semi Deep Water (AVT 1-SDW), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	Grain Type
3 rd Year of testing:				
501	28311	CR 3145-4-1-3-2-1-2	IR 49830-7 / Gayatri / FL 496	MB
502	28296	CN 1758-2-TTB 7	CN 1216 / CN 1131-4-1-4	LB
503	28299	CR 4039-2-1-2-1-1	Varshadhan / Warda1	SB
504	28313	MTU 1325 (MTU 2243-9-1-1-1-1)	MTU 1061 / MTU 1121	MS
505	CR Dhan 506 (NC)			
506	28291	CR 4021-5-34-1-3	IR 42 / IC 258990	MS
507	28315	CR 3933-39-2-1-2-1	Pratikshya / Swarna Sub1	SB
2 nd year of testing				
508	29114	CR 2538-42-17-32-15	Varshadhan*3/IR 49830-7	LB
509	Zonal Check [CR Dhan 510 (Eastern and North Eastern), MTU 1172 (Southern)]			
510	29132	CR 2538-42-17-32-13	Varshadhan*3/IR 49830-7	LB
511	29115	CR 3936-11-1-1-1-1-1	IR-72967-12-2-3/ MTU 1001	LB
512	29121	CR 3838 -2-2-1-1-2	Savitri/AC 38562//Varshadhan	MS
513	29122	OR 2752	Salivahan/Basamanik	MB
514	29135	CR 3838-1-2-1-1-2	Savitri/AC 38562//Varshadhan	SB
515	Local Check [Upahar (BBN), CR Dhan 508 (CTK), Rajshree (PSA), Rajdeep (CHN), Sampriti (BNK), JalPriya (MSD), Dhansiri (TTB) and MTU 1140 (MTU)]			

Table No. 12.13: Grain Yield (Kg/ha) of entries in AVT-1 SDW Kharif 2021

Entry No	IET NO	Zone III													
		OD				OD (2)			WB		BI		UP		
		CTK		BBN		Mean			CHN		PSA		MSD		
501	28311	4139	8	4215	5	4177	3	6%	4370		2462		2046	6	
502	28296	3788		4262	4	4025	6		5704	7	7658	4 *	69%	3655	1 * 41%
503	28299	4454	3	3688	9	4071	5		5592	9	7748	2 *	71%		
504	28313	4926	1 *	5508	1 *	5217	1 *	32%	6741	1 *	7735	3 *	71%	3137	4 * 21%
505	CR Dhan 506 (NC)	4160	7	3568		3864			5185		2872	9.5		1200	
506	28291	4084	9	3664	10	3874	10		6222	3	2735				
507	28315	4795	2 *	2993		3894	9		5037		2051			1364	9.5
508	29114	3752		3544		3648			6592	2 *	3282	8		1718	7
509	Zonal Check	3068		4598	3	3833			5445	10	2598			1173	
510	29132	4446	4	3233		3840			5741	6	2872	9.5		1364	9.5
511	29115	4161	6	3113		3637			4815		5816	6 *	28%	3437	2 * 33%
512	29121	4027	10	4142	6	4085	4		6000	4	7650	5 *	69%		
513	29122	3572		4933	2	4253	2	8%	5852	5	7863	1 *	73%	1500	8
514	29135	4233	5	3688	9	3961	7		5222		2462			3164	3 * 22%
515	Local Check	3785		4119	7	3952	8		5593	8	4534	7		2591	5
Exp. Mean		4092.69		3951.09		4021.89			5607.47		4689.24			2195.7	
CD		619.63		501.4		462.21			785.63		902.84			356.12	
CV%		9.05		7.59		6.87			8.38		11.51			9.58	
D/S		14.07.2021		08.07.2021					02.07.2021		25.06.2021			25.06.2021	
D/P		28.08.2021		07.08.2021					04.08.21		16.07.2021			26.07.2021	
Local Check Name		CR DHAN-410 (Mahamani)		Upahar					Rajdeep (IET 17713)		Sudha (515)			NDR 9930111	

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Table No. 12.13 contd.: Grain Yield (Kg/ha) of entries in AVT-1 SDW Kharif 2021

Entry No	IET NO	Zone III(5)		Zone VII		Overall (6)	
		Mean		AP		Mean	
		Mean		MTU		Mean	
501	28311	3446		4347		3597	
502	28296	5013	4 * 22%	3813		4813	4
503	28299	5371	3 * 30%	6527	5	5602	2 * 20%
504	28313	5609	1 * 36%	5650	10	5616	1 * 21%
505	CR Dhan 506 (NC)	3397		4020		3501	
506	28291	4176	7	6273	7	4596	7
507	28315	3248		5750	9	3665	
508	29114	3778	9	5833	8	4120	10
509	Zonal Check	3376		6570	4	3909	
510	29132	3531		6423	6	4013	
511	29115	4268	6	7357	1	4783	5
512	29121	5455	2 * 32%	4527		5269	3 * 13%
513	29122	4744	5 * 15%	3157		4480	8
514	29135	3754	10	6683	3	4242	9
515	Local Check	4124	8	7333	2	4659	6
Exp. Mean		4219.4		5617.6		4457.6	
CD		345.5		880.49		324.89	
CV%		4.9		9.37		4.36	
D/S				09.07.2021			
D/P				13.08.2021			
Local Check Name				MTU 1140			

Table No. 12.14: Days to 50 % Flowering of entries in AVT-I SDW Kharif 2021

Entry No	IET No	Zone III						Zone III(5)	Zone VII	Overall(6)
		OD		OD(2)	WB	BI	UP		AP	
		CTK	BBN	Mean	CHN	PSA	MSD	Mean	MTU	Mean
501	28311	124	118	121	123	136	128	126	113	124
502	28296	128	102	115	115	107	124	115	108	114
503	28299	131	129	130	137	126		131	130	131
504	28313	130	110	120	123	122	123	122	119	121
505	CR Dhan 506 (NC)	130	123	127	131	146	130	132	122	130
506	28291	125	122	124	129	143		130	128	129
507	28315	128	123	126	134	146	130	132	129	132
508	29114	131	124	128	133	144	122	131	129	131
509	Zonal Check	128	122	125	132	146	130	132	132	132
510	29132	126	116	121	128	143	131	129	129	129
511	29115	132	114	123	122	112	124	121	112	119
512	29121	125	127	126	132	126		128	127	127
513	29122	133	109	121	121	123	129	123	128	124
514	29135	123	113	118	122	122	127	121	118	121
515	Local Check	132	113	123	119	119	116	120	114	119
Exp. Mean		128.3	117.7	123	126.7	130.7	126.2	126.05	122.51	125.45
CD		2.85	0.86	1.35	4.55	1.87	2.01	1.27	1.61	1.07
CV%		1.33	0.44	0.66	2.15	0.86	0.94	0.6	0.79	0.51

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Table No. 12.15. Plant Height of Entries in AVT 1-SDW Kharif 2021

Entry No	IET No	Zone III						Zone III(5)	Zone VII AP	Overall(6)
		OD		OD(2)	WB	BI	UP			
		CTK	BBN	Mean	CHN	PSA	MSD	Mean	MTU	Mean
501	28311	117	113	115	112	125	121	117	134	120
502	28296	119	95	107	129	144	128	123	146	127
503	28299	119	153	136	155	150	.	144	173	150
504	28313	121	95	108	115	117	98	109	140	114
505	CR Dhan 506 (NC)	114	115	115	144	145	145	133	161	137
506	28291	123	142	133	168	164	.	149	190	157
507	28315	128	120	124	153	176	167	149	186	155
508	29114	126	118	122	155	165	152	143	181	149
509	Zonal Check	108	122	115	111	122	133	119	133	121
510	29132	126	164	145	158	174	164	157	182	161
511	29115	118	152	135	130	125	142	133	156	137
512	29121	121	151	136	140	146	.	139	162	144
513	29122	115	131	123	126	145	124	128	149	132
514	29135	117	136	127	134	134	132	131	167	137
515	Local Check	115	119	117	117	151	136	128	139	129
Exp. Mean		119.1	128.4	123.8	136.2	145.5	136.8	133.5	159.9	138.1

Table No. 12.16:No. of Panicles/m2 of entries in AVT-1 SDW Kharif 2021

Entry No	IET No	Zone III						Zone III(5)	Zone VII AP	Overall(6)
		OD		OD(2)	WB	BI	UP			
		CTK	BBN	Mean	CHN	PSA	MSD	Mean	MTU	Mean
501	28311	323	305	314	352	151	195	265	341	278
502	28296	316	352	334	341	210	216	287	315	292
503	28299	326	289	308	308	210		283	332	293
504	28313	332	279	306	297	217	222	269	350	283
505	CR Dhan 506 (NC)	295	257	276	264	225	194	247	312	258
506	28291	309	190	250	253	212		241	339	261
507	28315	323	240	282	253	180	212	242	326	256
508	29114	290	205	248	253	189	216	231	350	251
509	Zonal Check	225	294	260	341	179	195	247	330	261
510	29132	303	270	287	352	224	231	276	361	290
511	29115	305	281	293	264	224	224	260	365	277
512	29121	301	270	286	286	210		267	330	279
513	29122	231	271	251	330	192	190	243	321	256
514	29135	305	347	326	297	212	213	275	310	281
515	Local Check	294	265	280	275	196	223	251	339	265
Exp. Mean		298.5	274.4	286.46	297.7	202.1	211	258.86	334.78	271.98
CD		61.04	28.67	32.77	78.49	18.84	14.03	19.51	51.11	18.91
CV%		12.23	6.25	6.84	15.76	5.57	3.93	4.51	9.13	4.16

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Table No. 12.17 Grain quality characteristics of entries in AVT-1 SDW, Kharif 2021

Entry No	IET No	HULL %	MILL %	HRR %	MOIS %	CHAL KI	KL (mm)	KB (mm)
501	28311	76	68	65	12.1	A	5.47	2.14
502	28296	79	69	66	12.2	A	5.42	1.21
503	28299	80	65	62	12.6	A	4.57	2.29
504	28313	78	73	70	11.7	A	5.44	1.42
505	CR Dhan 506 (NC)	81	70	64	12.2	A	5.81	1.59
506	28291	79	66	58	11.7	VOC	5.61	2.46
507	28315	68	60	55	12.7	A	6.25	2.11
508	29114	67	56	53	11.4	A	5.62	1.6
509	Zonal Check	78	69	65	11.3	A	5.45	1.7
510	29132	77	67	63	12.6	A	6.12	2.17
511	29115	68	61	56	12.1	VOC	6.51	1.59
512	29121	65	58	55	12.5	A	5.37	1.57
513	29122	78	68	65	12.1	A	5.44	1.46
514	29135	77	67	57	12.3	A	5.15	1.6
515	Local Check	68	55	47	12.6	A	5.72	1.57

Table No. 12.17 Contd.: Grain quality characteristics of entries in AVT-1 SDW, Kharif 2021

Entry No	IET No	L/B	ASV	WU	VER	ER	KLAC (mm)	AC%	GC	Grain Type
501	28311	2.55	4	80	3.75	1.64	9	21.37	44	MS
502	28296	4.47	7	70	4	1.66	9	23.7	40	SS
503	28299	1.99	3	80	4	2.18	10	22.27	42	SB
504	28313	3.83	4	70	3.75	1.65	9	19.95	53	SS
505	CR Dhan 506 (NC)	3.65	4	90	4	1.72	10	21.37	42	SS
506	28291	2.31	5	70	4	1.78	10	20.85	43	SB
507	28315	2.96	5	80	4	1.6	10	22.12	42	LB
508	29114	3.51	4	65	4	1.77	10	21	43	SS
509	Zonal Check	3.2	4	55	3.75	1.65	9	18.37	57	SS
510	29132	2.84	4	80	4	1.61	10	20.32	53	LB
511	29115	4.09	7	85	4	1.84	12	21.67	44	LS
512	29121	3.55	6	65	3.75	2.04	11	20.77	53	SS
513	29122	3.72	7	80	3.75	1.83	10	21.75	43	SS
514	29135	3.21	6	75	3.75	1.74	9	19.35	59	SS
515	Local Check	3.64	6	65	4	1.74	10	22.5	38	SS

INITIAL VARIETY TRIAL-SEMI DEEP WATER (IVT-SDW)

Locations: 09

Test Entries: 35

Checks: CR Dhan 506 –National check; CR Dhan 510 (Eastern & North Eastern) and MTU 1172 (Southern) – Zonal check; Sumit, Upahar, Rajdeep, Sudha, NDR 9930111,MTU 1140-Local check Table:12.18

The IVT-SDW trial comprised thirty-five entries including three checks, CR Dhan 506 (National Check), CR Dhan 510 (Eastern and North Eastern-Zonal Check), MTU 1172 (Southern-Zonal Check) and local checks. The trial was sent to 9 locations viz., Bhubaneswar, Cuttack, Chinsurah, Pusa, Ghaghraghat, Masodha, Kumta, Mugadand Maruteru. Data received from 07 locations except Kumta and Mugad. However, owing to non-flowering in 80% of the entries, data of Ghaghraghat was not included in analysis. All locations maintained required average water level (**41-50 cm**). The data pertaining to seedling survival, submergence tolerance, kneeing ability, grain shattering, and phenotypic acceptability were received from four locations, Masodha, Cuttack, Maruteru and Chinsurah. The data on yield, days to 50 % flowering, plant height and no. of panicles/m² are presented in Tables 12.18 to 12.22. Results of the experiment are discussed below.

In overall basis, the experimental mean grain yield ranged from 3760 Kg/ha (IET 30430) to 6078.0 Kg/ha (IET 30414) while days to 50 % flowering ranged from 109 days (IET 30434) to 134 days (IET 30429) plant height from 109.0 cm (IET 29111) to 165.0 cm (IET 30429). Among the checks, local check recorded highest grain yield of 5102.0 Kg/ha with 118 days to 50 % flowering and 121cm plant height. Among the test entries, only one entry, IET 30414 recorded yield superiority over best check (best check + C.D) with 130cm plant height, 120 days to 50 % flowering and moderate kneeing and elongation ability.

In Zone III, data from Cuttack, Bhubaneswar, Chinsurah, Pusa and Masodha were considered for analysis. Mean grain yield ranged from 3318 Kg/ha (IET 30430) to 5524 kg/ha (IET 30414), while days to 50% flowering ranged from 111 days (IET 30434) to 135 days (IET 30429) and plant height from 103.0 cm (IET 29111) to 158.0cm (IET 30429). Among the checks, local check was recorded highest grain yield of 4923 Kg/ha with 118 days to 50 % flowering and 118.0 cm plant height. Among the test entries, no one could record minimum yield superiority.

In Zone VII, data from Maruteru were received and considered for analysis. Mean grain yield ranged from 3543 Kg/ha (IET 30416) to 8294 Kg/ha (IET 30414), while days to 50% flowering ranged from 104 days (IET 30434) to 132 days (IET 30412) and plant height from 116.0 cm (IET 30426) to 186.0 cm (IET 30429). Among the checks, Local Check was recorded highest grain yield of 5102 Kg/ha with 114 days to 50% flowering and 138.0 cm plant height. Among the test entries, two entries, IET 30414 and IET30423 recorded yield superiority over best check(best check + C.D), but only IET30414 could meet bench mark plant height, duration and adaptability parameters.

OR 2767 (IET 30414) recorded 1nd rank (6078kg/ha) with 19.1% yield advantage over BC with medium bold (MB) grains, 120 days to 50% flowering and 130cm plant height

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and moderate kneeing (3-5) and elongation ability (0-5). Based on its superior performance over BC the entry is promoted to the next year of testing.

Details of water regime (cm) at different centres in IVT-SDW, Kharif 2021

Location	Week	June	July	August	September	October	November	December
Maruteru	1 st	0	0	0	52	50	42	0
	2 nd	0	0	0	56	54	48	0
	3 rd	0	0	42	58	48	42	0
	4 th	0	0	44	58	44	44	0
Chinsurah	1 st	0	20	30	70	50	15	0
	2 nd	0	35	50	80	30	15	0
	3 rd	0	25	60	90	30	10	0
	4 th	0	15	60	50	30	0	0
Bhubaneswar	1 st	0	0	5-10	41-50	15-20	0	0
	2 nd	0	0	5-10	50	15-20	0	0
	3 rd	0	0	20-37	20-30	15-20	0	0
	4 th	0	0	38-41	20-25	15-20	0	0
Cuttack	1 st	0	0	0	30	40	30	0
	2 nd	0	0	0	100	40	25	0
	3 rd	0	0	20	80	35	20	0
	4 th	0	0	20	50	35	20	0
Masodha	1 st	0	0	20.6	40.2	30.8	20.2	0
	2 nd	0	0	50.6	42.4	32.2	19.8	0
	3 rd	0	0	45.8	35.6	25.7	17.7	0
	4 th	0	0	43.2	32.8	23.2	10.6	0
Pusa	1 st	0	8	30	45	0	0	0
	2 nd	0	15	35	40	0	0	0
	3 rd	0	20	45	30	0	0	0
	4 th	0	25	45	10	0	0	0

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Adaptability parameters of entries in IVT-SDW, Kharif 2021

Entry No.	IETNO.	Seedling Survival (%)				Phenotypic Acceptability				Kneeing ability			
		CTC	MTU	CHN	MSD	CTC	MTU	CHN	MSD	CTC	MTU	CHN	MSD
601	29111 (R)	100	3	7	92	5	5	7	1	5	5	3	0
602	CR Dhan 506 (NC)	100	3	7	93	5	5	7	1	5	5	3	0
603	29116 (R)	100	3	5	0	3	5	3	0	3	5	3	0
604	29118 (R)	100	3	5	0	3	5	3	0	5	5	3	0
605	29119 (R)	100	3	3	0	3	3	1	0	5	5	3	0
606	Zonal Check	100	3	3	89	3	3	3	3	5	5	3	0
607	29128 (R)	100	3	5	0	5	3	5	0	7	5	3	0
608	29129 (R)	100	3	5	78	3	5	5	3	3	5	3	0
609	29134 (R)	100	3	5	0	3	5	3	0	5	5	3	0
610	29137 (R)	100	3	5	0	3	3	3	0	5	5	3	0
611	30412	100	3	5	89	3	5	3	3	5	5	3	0
612	30413	100	3	3	0	3	7	1	0	5	5	1	0
613	30414	100	3	5	0	3	3	3	0	5	3	3	0
614	30415	0	0	0	92	0	0	0	3	0	0	3	0
615	30416	100	5	3	78	3	7	1	1	5	5	1	0
616	30417	100	3	5	81	5	7	3	3	7	5	3	0
617	30418	100	3	5	0	3	5	3	0	5	5	3	0
618	30419	0	0	0	63	0	0	0	7	0	0	0	0
619	30420	100	3	5	0	3	5	3	0	5	5	3	0
620	30421	100	3	5	61	3	3	3	5	5	5	1	0
621	30422	100	3	5	89	3	5	3	1	5	5	3	0
622	30423	100	3	5	92	3	3	3	1	5	3	3	0
623	30424	100	3	5	81	7	7	3	3	7	5	3	0
624	30425	100	3	5	82	7	5	3	3	7	5	3	0
625	30426	100	3	5	63	5	7	3	5	7	5	3	0
626	30427	100	3	3	78	5	5	1	5	5	5	1	0
627	Local Check	100	3	3	89	5	5	1	1	5	3	3	0
628	30428	100	5	0	0	5	3	0	0	7	5	0	0
629	30429	100	5	0	0	3	5	0	0	5	5	0	0
630	30430	100	3	0	78	3	5	0	7	5	5	0	0
631	30431	100	3	0	0	3	5	0	0	5	5	0	0
632	30432	100	3	0	0	7	3	0	0	7	5	0	0
633	30433	100	5	0	82	7	5	0	7	7	5	0	0
634	30434	100	5	0	81	7	5	0	5	7	5	0	0
635	30435	100	3	0	0	5	5	0	0	3	5	0	0

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(Contd.) Adaptability parameters of entries in IVT-SDW, Kharif 2021

Entry No.	IETNO.	Elongation Ability				Submergence Tolerance				Grain Shattering			
		CTC	MTU	CHN	MSD	CTC	MTU	CHN	MSD	CTC	MTU	CHN	MSD
601	29111 (R)	5	5	5	9	75	95.5	70	89	5	3	3	1
602	CR Dhan 506 (NC)	5	5	5	9	77	96.6	74	92	5	3	3	1
603	29116 (R)	3	5	3	0	95	97.1	92	0	5	3	5	0
604	29118 (R)	5	5	1	0	89	97.9	94	0	5	3	3	0
605	29119 (R)	5	3	3	0	90	98.2	98	0	5	3	3	0
606	Zonal Check	5	5	3	9	88	96.6	97	92	5	3	3	3
607	29128 (R)	5	5	3	0	72	97.7	94	0	5	3	3	0
608	29129 (R)	3	5	1	9	81	98.4	85	81	5	3	3	3
609	29134 (R)	5	5	3	0	78	96.4	90	0	5	5	3	0
610	29137 (R)	3	5	3	0	79	98	92	0	5	3	3	0
611	30412	3	5	3	9	96	96.1	94	84	3	5	3	3
612	30413	5	5	3	0	91	97.7	98	0	5	7	3	0
613	30414	5	3	3	0	93	97.7	85	0	5	3	3	0
614	30415	0	0	0	9	0	0	0	88	0	0	0	3
615	30416	5	7	3	7	90	92.5	97	81	5	7	3	1
616	30417	5	7	1	7	71	96.4	84	83	5	7	3	3
617	30418	5	5	3	0	89	95.2	90	0	5	5	3	0
618	30419	0	0	0	5	0	0	0	61	0	0	0	7
619	30420	5	5	3	0	82	97.1	88	0	5	3	3	0
620	30421	3	5	1	7	100	95.5	90	65	5	3	3	5
621	30422	3	7	3	7	93	95.9	86	92	5	5	5	1
622	30423	5	3	3	7	88	95.2	90	89	5	3	3	1
623	30424	7	7	3	7	65	96.8	92	83	5	7	3	3
624	30425	7	5	3	9	62	96.6	85	84	5	5	3	3
625	30426	7	7	5	7	70	97.3	80	71	5	7	5	5
626	30427	5	5	3	9	85	97.9	96	69	5	5	3	5
627	Local Check	5	5	3	9	84	97.5	96	88	5	5	3	1
628	30428	7	3	0	0	68	93.9	0	0	5	3	0	0
629	30429	3	5	0	0	97	93.8	0	0	5	3	0	0
630	30430	5	5	0	9	92	96.1	0	72	5	3	0	7
631	30431	3	7	0	0	96	94.8	0	0	5	5	0	0
632	30432	5	5	0	0	78	96.3	0	0	5	3	0	0
633	30433	3	5	0	9	76	94.3	0	81	5	5	0	7
634	30434	5	5	0	9	70	93.6	0	78	5	5	0	5
635	30435	7	5	0	0	87	97.3	0	0	5	5	0	0

Performance of promising entries in IVT-SDW, Kharif2021

IET No./ Designation/ Cross combination	GT	Zone III (5)		Zone VII (1)		Overall (6)		Remarks
		GY(Kg/ha)/ FD/PH (cm)	% BC- CD	GY(Kg/ha)/ FD/PH (cm)	% BC- CD	GY(Kg/ha)/ FD/PH (cm)	% BC- CD	
IET 30414	MB	-	-	8294 120 142	28.7	6078 120 130	19.1	Promoted
IET 30423	LB	-	-	7540 109 159	17.0	-	-	Shifted to IVT-RSL
CR Dhan 506 (NC)		-	-	3907 121 160	-	4153 124 130	-	
Zonal Check		-	-	6444 127 131	-	5006 126 112	-	
Local check		-	-	5995 114 138	-	5102 118 121	-	
CD (0.05)		851.13		1049.30		754.37		
BVC+ CD (0.05)		5774.13		7493.30		5856.37		

In IVT-SDW, out of 35 test entries evaluated, one test entries namely IET 30414 has achieved required yield advantage over the best check and desirable plant type, hence, promoted to second year of testing.

- On overall basis of the trial, IET30414 is promoted to second year of testing.
- On zonal basis, no entry could record minimum yield superiority over best check in Zone –III.
- *IET 30423 has yield advantage over the best check but has undesirable flowering duration (<120 days) in Zone-VII, thus shifted to IVT-RSL.*

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Table No. 12.18: Composition of entries in Initial Variety Trial–Semi Deep Water (IVT-SDW), Kharif-2021

Entry No.	IET No.	Designation	Cross combination	Grain Type
1st year of testing (Repeat)				
601	29111(R)	OR 2748-1	IR 74355-CN 3/Swarna	MB
602	CR Dhan 506 (NC)			
603	29116(R)	OR 2754	SBIR6745-N-2-1-1-1/IR 80409-B-37-4	MB
604	29118(R)	OR 2751	Santepheap3/IR 85260// RajendraMahsuri	MB
605	29119(R)	CR 3967-40-3-1-1-2	IR 73895-33-1-3-2/Pratikhya	LS
606	CR Dhan 510 (Eastern & North Eastern) and MTU 1172 (Southern) (ZC)			
607	29128(R)	CR 3900-193-9-11-1	Savitri/R. Mahusuri-1// IR 71700-247-1-1-2	MS
608	29129(R)	CR 3838-2-2-1-2-2	Savitri/AC 38562//Varshadhan	SB
609	29134(R)	CR 3903-161-1-2-2	Santepheap/IR 82810-407//IR-71700-247-1-1-2	MS
610	29137(R)	CR 4039-1-1-2-1-3	Varshadhan/Warda 1	SB
1st year of testing (new entries)				
611	30412	OR 2434-13	Indravati / CR780-1937	MB
612	30413	BRR-2228	BRR 2028*S Shree	MB
613	30414	OR 2767	Gayatri /FL 496 // IR 49830-7	MB
614	30415	NDGR-1547	PS 46/NDR-8002-07-GHT-4	LB
615	30416	OR 2609-2	CRMS 31A / OR2339-8	MS
616	30417	CR3856-44-22-2-1-4-1-10	IR 73963-86-1-5-2-2/CR 2324-1	SB
617	30418	OR 2611-1	CRMS32A / Mahalaxmi	MS
618	30419	NDGR-1546	PS 46/CR 780-1937-07-GHT-9	LB
619	30420	OR 2606	CRMS31A /Manika	MS
620	30421	CR4039-3-1-1-2-1	Varshadhan/Ac.38687	MS
621	30422	OR 2766	Savitri / CRLC899	MS
622	30423	GB-4	Mutant of Sabita	LB
623	30424	CR 4121-36-24-3-41	CR3856-44-22-2-1-11*3/IRBB 60/Swarna Sub1	LB
624	30425	NDR8066	IR77768-10-NDR-B-94-24(IR 49830-7-1-2-3/Sabita //CR333-10)	LB
625	30426	MTU-1373	Swarna/III10-9-1-1-1-1//*3 Swarna	MS
626	30427	NDR 9025	IR76229-1-NDR-B-2-17(BKP246/Sabita//IR 40931-33-1-3-2)	LB
627	Local Check			
628	30428	CR2667-4-1-2-2-1	Gayatri/AC.38599	SB
629	30429	CR2682-5-1-1-1-1	CRLC 899/AC 38606	SB
630	30430	CR3145-4-1-2-1-3-1	IR 49830-7 / Gayatri / FL 496	MB
631	30431	CR4039-1-2-3-1-2-1	Varshadhan/Warda1	SB
632	30432	NDR 99300 LD	IR 70810-14-NDR-1-3-9 (CN 1035-36 / IR 55040-B2-5-3-3-2 // IR 55040-B2-25-1-3-2-1)	SB
633	30433	CR2837-1-5-B-B-2-B-37-B-5-2	Swarna / FL 378	MS
634	30434	CR 3993-51-3-7-22	CR1009/O.brachyantha//CR1009	SB
635	30435	RMS-1697-35-24-16	Swarna*2/ST6//ST12	MS

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Table No 12.19: Grain Yield (kg/ha) of entries in IVT-SDW, Kharif 2021

Entry No.	IET NO	Zone III											Zone III (5) Mean	Zone VII AP (1)	Overall (6) mean				
		OD		OD (2) Mean		WB (1)		BI (1)		UP (1)									
		CTK	BBN			CHN	PSA	MSD				MTU							
602	CR Dhan 506 (NC)	3914		2778		3346		4963		5236		4122	3	4203		3907		4153	
603	29116 (R)	5772	*3	4356	4	5064	3	4111		7674	6	-		5478	2	5885		5560	4
604	29118 (R)	4414		4546	3	4480	7	4963		7549	8	-		5368	4	5413		5377	5
605	29119 (R)	4798	10	3410		4104		5296	5	7785	5	-		5322	6	7193	4	5696	3
606	Zonal Check	4301		4672	2	4487	6	6481	1	5035		3103		4718		6444	8	5006	10
607	29128 (R)	3877		3220		3549		4963		5438		-		4375		6783	7	4856	
608	29129 (R)	4678		3662		4170		4926		4834		3413	8	4303		5483		4499	
609	29134 (R)	4132		3031		3582		4333		6646		-		4536		5196		4668	
610	29137 (R)	4467		3978	7	4223		5667	3	2417		-		4132		6790	6	4664	
611	30412	5961	*2	4546	3	5254	2	6296	2	6848		3085		5347	5	5253		5332	6
612	30413	4922	7	2841		3882		4111		6750		-		4656		4067		4538	
613	30414	5062	6	3788		4425	9	5259	6	7986	2	-		5524	1	8294	*1	6078	*1
614	30415	-		-		-		-		7493	9	3147		5320	7	-		5320	7
615	30416	4867	9	3472		4170		4000		2819		3900	5	3812		3543		3767	
616	30417	3239		2462		2851		5222	7	7563	7	3590	7	4415		3560		4273	
617	30418	4640		3346		3993		5037		6889		-		4978	9	4270		4836	
618	30419	-		-		-		-		8306	1	2327		5317	8	-		5317	8
619	30420	4395		3978	7	4187		4296		2014		-		3671		6383	9	4213	
620	30421	8665	*1	3283		5974	*1	4741		2049		2771		4302		6973	5	4747	
621	30422	4917	8	3094		4006		3889		6333		4743	*2	4595		4573		4592	
622	30423	4197		4735	1	4466	8	5667	3	7855	4	4920	*1	5475	3	7540	*2	5819	2
623	30424	2956		3599		3278		5111	8	5438		3059		4033		4074		4040	
624	30425	2710		3283		2997		5037	9	6042		4033	4	4221		5349		4409	
625	30426	3767		4041	6	3904		4000		4431		2438		3735		4203		3813	
626	30427	4326		3031		3679		4444		6243		3191		4247		5077		4385	
627	Local Check	4234		3283		3759		5593	4	7917	3	3590	7	4923	10	5995		5102	9
628	30428	3602		3473		3538		-		4834		-		3970		7284	3	4798	
629	30429	5119	5	4104	5	4612	5	-		3625		-		4283		5527		4594	
630	30430	4675		3788		4232	10	-		2014		2793		3318		5531		3760	
631	30431	5291	4	4104	5	4698	4	-		3625		-		4340		4474		4374	
632	30432	2516		2652		2584		-		6042		-		3737		6284	10	4374	
633	30433	2674		2589		2632		-		7160		3324		3937		5302		4210	
634	30434	2733		2652		2693		-		5438		3612	6	3609		5281		3943	
635	30435	4046		3220		3633		-		7493	9	-		4920		5067		4957	
Exp. mean		4355.98		3569.91		4079.43		4914.11		5797.81		3453.12		4413.78		5530.55		4685.44	
CD		1437.87		942.7		1144.67		874.11		1926.29		421.95		851.13		1049.3		754.37	
CV%		20.24		12.96		17.2		10.84		20.39		7.39		11.84		11.63		9.88	
D/S		16.07.21		08.07.21				02.07.21		01.07.21		30.06.21				13.07.21			
D/P		19.08.21		07.08.21				04.08.21		23.07.21		03.08.21				23.08.21			
Local Check		Sumit		Upahar				Rajdeep		Sudha		NDR 9930111				MTU 1140			

** -Highly Significant; * -significant; ns -not significant

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Table No. 12.20: Days to 50% flowering of entries in IVT-SDW, Kharif 2021

Entry No	IET No	Zone III						Zone III(5)	Zone VII	Overall(6)
		OD		OD(2)	WB (1)	BI (1)	UP (1)		AP (1)	
		CTK	BBN	mean	CHN	PSA	MSD	mean	MTU	mean
601	29111 (R)	111	114	113	128	133	119	121	113	120
602	CR Dhan 506 (NC)	118	122	120	126	139	116	124	121	124
603	29116 (R)	126	119	123	127	114	-	122	124	122
604	29118 (R)	128	111	120	128	111	-	120	123	120
605	29119 (R)	123	102	113	118	109	-	113	110	112
606	Zonal Check	118	122	120	130	140	116	125	127	126
607	29128 (R)	125	112	119	124	115	-	119	113	118
608	29129 (R)	118	124	121	118	140	118	124	121	123
609	29134 (R)	122	115	119	126	114	-	119	115	118
610	29137 (R)	127	125	126	116	145	-	128	110	125
611	30412	131	123	127	135	119	121	126	132	127
612	30413	121	106	114	120	106	-	113	113	113
613	30414	127	114	121	128	111	-	120	120	120
614	30415	-	-	-	-	106	119	113	-	113
615	30416	116	122	119	132	142	124	127	121	126
616	30417	120	104	112	116	110	118	114	111	113
617	30418	126	112	119	130	124	-	123	123	123
618	30419	-	-	-	-	108	120	114	-	114
619	30420	115	123	119	136	138	-	128	117	126
620	30421	129	129	129	132	146	124	132	130	132
621	30422	127	114	121	132	117	119	122	128	123
622	30423	123	114	119	124	131	119	122	109	120
623	30424	126	104	115	116	108	118	114	113	114
624	30425	118	123	121	117	99	119	115	108	114
625	30426	116	110	113	116	112	118	114	110	114
626	30427	119	105	112	115	102	118	112	110	112
627	Local Check	123	118	121	118	113	119	118	114	118
628	30428	125	128	127	-	132	-	128	122	127
629	30429	130	131	131	-	144	-	135	129	134
630	30430	125	126	126	-	145	124	130	127	129
631	30431	125	129	127	-	138	-	131	123	129
632	30432	109	106	108	-	124	-	113	106	111
633	30433	122	103	113	-	123	123	118	106	115
634	30434	109	99	104	-	112	122	111	104	109
635	30435	117	103	110	-	123	-	114	105	112
Exp. mean		121.66	115.35	119.6	124.27	122.49	119.72	121.07	116.96	120
CD		19.44	8.86	4.46	3.63	13.87	2.1	4.56	1.39	3.68
CV%		9.8	4.71	2.29	1.78	6.95	1.06	2.31	0.73	1.88

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Table No. 12.21: Plant height (cm) of entries in IVT-SDW, Kharif 2021

Entry No	IET No	Zone III						Zone III(5)	Zone VII	Overall(6)
		OD		OD(2)	WB (1)	BI (1)	UP (1)			
		CTK	BBN	mean	CHN	PSA	MSD	mean	MTU	mean
601	29111 (R)	119	95	107	96	111	95	103	139	109
602	CR Dhan 506 (NC)	132	101	117	112	138	139	125	160	130
603	29116 (R)	122	106	114	119	119	-	116	148	123
604	29118 (R)	136	116	126	148	136	-	134	158	139
605	29119 (R)	123	101	112	126	137	-	122	151	128
606	Zonal Check	115	91	103	123	111	100	108	131	112
607	29128 (R)	121	85	103	127	108	-	110	138	116
608	29129 (R)	136	130	133	140	129	145	136	171	142
609	29134 (R)	124	143	134	136	137	-	135	152	138
610	29137 (R)	135	127	131	155	147	-	141	166	146
611	30412	122	118	120	129	115	111	119	159	126
612	30413	117	129	123	121	132	-	125	148	129
613	30414	123	122	123	126	135	-	126	142	130
614	30415	-	-	-	-	130	156	143	-	143
615	30416	123	139	131	134	134	118	130	158	135
616	30417	120	118	119	143	125	137	129	149	132
617	30418	122	120	121	123	122	-	122	159	129
618	30419	-	-	-	-	135	119	127	-	127
619	30420	112	120	116	125	118	-	119	141	123
620	30421	157	140	149	144	134	115	138	181	145
621	30422	128	121	125	114	131	137	126	150	130
622	30423	107	121	114	134	133	123	124	159	130
623	30424	92	119	106	132	128	115	117	143	121
624	30425	92	117	105	126	119	86	108	140	114
625	30426	92	191	142	100	100	136	124	116	122
626	30427	116	131	124	134	128	123	126	149	130
627	Local Check	118	129	124	114	107	120	118	138	121
628	30428	98	129	114	-	117	-	115	155	125
629	30429	159	153	156	-	161	-	158	186	165
630	30430	115	153	134	-	125	122	129	168	137
631	30431	146	152	149	-	127	-	142	184	152
632	30432	108	141	125	-	113	-	121	134	124
633	30433	166	153	160	-	133	123	144	174	150
634	30434	106	115	111	-	144	132	124	180	135
635	30435	97	131	114	-	135	.	121	151	128
Exp. mean		121.2	126.0	123.6	127.3	127.3	122.6	125	153.9	130.0

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Table No. 12.22: No. of panicles/m² of entries in IVT-SDW, Kharif 2021

Entry No	IET No	Zone III						Zone III(5)	Zone VII	Overall(6)
		OD		OD(2)	WB (1)	BI (1)	UP (1)				AP (1)
		CTK	BBN	mean	CHN	PSA	MSD	mean	MTU	mean
601	29111 (R)	272	231	252	374	218	214	262	291	267
602	CR Dhan 506 (NC)	274	285	280	341	178	221	260	301	267
603	29116 (R)	320	273	297	253	204	-	263	343	279
604	29118 (R)	293	205	249	319	188	-	251	326	266
605	29119 (R)	318	271	295	308	124	-	255	301	264
606	Zonal Check	278	191	235	253	210	221	231	341	249
607	29128 (R)	263	204	234	264	166	-	224	319	243
608	29129 (R)	289	227	258	308	223	220	253	319	264
609	29134 (R)	268	270	269	308	180	-	257	319	269
610	29137 (R)	282	293	288	231	183	-	247	317	261
611	30412	323	205	264	286	170	218	240	315	253
612	30413	300	172	236	319	206	-	249	260	251
613	30414	307	296	302	341	207	-	288	369	304
614	30415	-	-	-	-	210	233	222	-	222
615	30416	301	265	283	253	211	230	252	317	263
616	30417	237	291	264	374	212	216	266	306	273
617	30418	289	241	265	242	210	-	246	303	257
618	30419	-	-	-	-	219	203	211	-	211
619	30420	278	354	316	330	174	-	284	292	286
620	30421	354	244	299	297	166	214	255	334	268
621	30422	274	183	229	396	193	243	258	310	267
622	30423	259	297	278	297	177	246	255	279	259
623	30424	205	201	203	242	124	203	195	303	213
624	30425	200	223	212	297	203	225	230	330	246
625	30426	336	231	284	308	138	222	247	319	259
626	30427	271	396	334	297	253	211	286	306	289
627	Local Check	266	333	300	275	170	218	252	288	258
628	30428	249	315	282	-	155	-	240	328	262
629	30429	248	221	235	-	147	-	205	326	236
630	30430	275	245	260	-	211	196	232	354	256
631	30431	277	218	248	-	269	-	255	348	278
632	30432	194	228	211	-	191	-	204	321	234
633	30433	194	280	237	-	143	206	206	332	231
634	30434	194	268	231	-	240	211	228	310	245
635	30435	249	269	259	-	227	-	248	282	257
Exp. mean		270.8	255.0	265.6	300.5	191.1	218.4	244.48	315.45	258.56
CD		39.9	49.1	43.1	63.5	35.6	15.6	29.34	25.54	22.27
CV%		9.03	11.8	9.95	12.87	11.4	4.35	7.19	4.96	5.17

INITIAL VARIETY TRIAL–DEEP WATER (IVT-DW)

Locations: 03 **Test Entries: 05**
Checks: CR Dhan 500 (National), CR Dhan 502 (Zonal) and Local Check. **Table:12.23**

Initial Variety Trial-Deep water (IVT-DW) was constituted with five test entries and three checks viz., CR Dhan 500 (National), CR Dhan 502 (Zonal) and Local Check. Among the five test entries, two entries were in first year of testing, two in second year of testing and one was in 3rd year of testing. The trial was sent to six locations and data was received from three locations. Among the three locations, the required water level (75 - 120cm) was maintained at Cuttack and Chinsurah, while the water level at Pusa, Bihar was not maintained for during experiment for deep water condition. Data analysis results of Cuttack and Chinsurah centers exhibited non-significant 'F' value and hence data of these two locations were not included in the evaluation of entries. Also, due to non-maintenance of water table at Pusa, the data were not considered for deep water stress condition analysis. Data on adaptability parameters was received all the 3 centers. In this context, all the entries will be repeated for one year more.

The data pertaining to yield, days to 50% flowering, plant height, no. of panicles/m² and qualities are presented in Tables 12.23 to 12.25.

Details of water regimes at different centres in IVT-DW, Kharif 2021(in cm)

Location	Week	June	July	August	September	October	November	December
Cuttack	1 st	---	---	---	40	50	30	---
	2 nd	---	---	---	100	40	30	---
	3 rd	---	---	---	80	40	25	---
	4 th	---	---	30	60	40	20	---
Chinsurah	1 st	---	---	---	40	120	35	---
	2 nd	---	---	15	65	90	25	---
	3 rd	---	---	20	82	70	15	---
	4 th	---	---	30	100	50	---	---
Pusa	1 st	---	8	30	45	---	---	---
	2 nd	---	15	40	40	---	---	---
	3 rd	---	20	50	30	---	---	---
	4 th	---	25	50	10	---	---	---

Table No. 12.23: Composition of entries in Initial Variety Trial–Deep Water (IVT-DW), Kharif 2021

Entry No.	IETNo.	Designation	Cross combination	GrainType
3rd year of testing				
701	26741(R)	NDGR 706	Pankaj/Jalnidhi	SB
2nd year of testing				
702	CR Dhan 500 (NC)			LB
703	28318	CR3993-13-58-3	CR1009/O. brachyantha// CR1009	SB
704	28319 (R)	NDGR709	NDR-207/IR49906-B-B-B-10-GHT-2	LB
705	CR Dhan 502 (ZC)			
1st year of testing				
706	28320 (R)	CR3993-14-13-24	CR1009 /O.brachyantha // CR1009	SB
707	30436	NDR8024 (IR377769-59-NDR-B-286-28)	IR49830-7-1-1-2-3/sabita//IR69502-6-SRN-3-UBN-1-3-1-3-2	MB
708	Local Check			

Table No. 12.24: Grain Yield (Kg/ha) of entries in IVT-DW Kharif 2021

Entry No	IET NO	Zone III						Zone III (1) Mean	
		OD		WB		BI			
		CTK@		CHN@		PSA			
701	26741(R)					4404	1 14%	4404	1 14%
702	CR Dhan 500 (NC)	3313	4	5340	1	2122	6	2122	6
703	28318	3481	3	4956	3	3300	5	3300	5
704	28319 (R)					3851	4	3851	4
705	CR Dhan 502 (ZC)	3524	2	4739	5	1984	8	1984	8
706	28320 (R)	3224	5	4870	4	1991	7	1991	7
707	30436	3736	1	4959	2	4067	2 5%	4067	2 5%
708	Local Check	3481	3	4321	6	3867	3	3867	3
	Exp. Mean	3459.6		4864.17		3198.33		3198.33	
	CD	779.19		737.88		828.93		828.93	
	CV%	14.94		10.07		17.62		17.62	
	F Value	NS		NS		p<0.05			
	D/S	14.07.2021		29.06.2021		25-06-2021			
	D/P	25.08.2021		14.08.2021		7/16/2021			
	Local Check Name	CR Dhan 508		SABITA		Sudha			

Table No. 12.25: Grain quality characteristics of entries in IVT-DW, Kharif 2021

Entry No	IET No	HULL %	MILL %	HRR %	MOIS %	CHALKI	KL (mm)	KB (mm)	L/B	ASV	WU	VER	ER	KLAC (mm)	AC%	GC	Grain Type
701	26741(R)	78	68	61	12.9	A	5.92	2.8	2.84	3	75	3.75	1.52	9	24.97	37	MS
702	CR Dhan 500 (NC)	79	71	68	12.1	A	5.74	1.91	3	3	145	4	1.73	10	20.55	42	MS
703	28318	79	72	69	12.9	A	4.76	2.22	2.14	3	105	3.75	1.68	8	20.02	43	SB
704	28319 (R)	82	70	67	12.1	A	5.19	2.1	2.47	3	105	3.75	1.73	9	21.15	39	SB
705	CR Dhan 502 (ZC)	75	67	65	12.4	A	5.94	1.32	4.5	5	125	4	1.68	10	19.2	61	SS
706	28320 (R)	74	71	69	12.8	A	4.41	2.39	1.84	3	125	3.75	1.81	8	18.3	62	SB
707	30436	80	73	71	12.1	A	5.47	2.28	2.39	5	125	3.75	1.64	9	17.1	65	SB
708	Local Check	81	74	70	12.6	A	5.85	2.57	2.27	3	125	3.75	1.53	9	20.1	43	SB

**ADVANCE VARIETY TRIAL 1- NIL (SUBMERGENCE)
(AVT-1-NIL-SUB)**

Locations: 04

Test Entries: 15

**Checks: Entries: NILs: 08; RPs: 05; DP: 01;
Sensitive Checks (1): Swarna
Parents/ Checks: Recurrent Parents (5): Pooja,
Varshadhan, Gayatri, Sarala, Ciherang
Donor Parent (1): Swarna Sub1**

Table:13.1

This trial includes 08 NILs along with their respective recurrent parents (5). The IETs 26744, 29031, 29026 and 29032 were in the second year of testing and rest 04 entries were in the first year of testing. IETs 29031, 29026 and 29032 are sister lines from the cross Varshadhan*3 / IR 49830-7; IET 30408 and 30409 are sister lines of the cross Gayatri*3/IR49830-7. The data pertaining to yield, days to 50% flowering, plant height, panicles/m² are presented in Tables 13.1 to 13.4

Yield performance of entries under normal condition: The entries of AVT1-NIL-Submergence were tested for their yield performance under normal condition in the trials of their respective ecologies of the states for which the recurrent parents were gazette notified.

Trait verification: For trait verification entries were tested at four locations, viz. Cuttack, Maruteru, Bikramganj and Mugad. Data from Bikramganj was not considered in the analysis due to very high percentage of seedling survival of the sensitive check (Swarna) as this trial is meant for trait verification. Data from Mugad was not considered in the analysis as data for adaptability parameters such as seedling survival and submergence tolerance was not available. The performance of the entries under submergence condition is presented in the Table 1.

Based on mean yield over two locations (Cuttack and Maruteru) under submergence stress condition, all the NILs performed significantly better than their respective recurrent parents except two entries i.e., derived from Gayatri (IET 30408) and Ciherang (IET 30411). With respect to mean seedling survival percentage under submergence stress, all tested NILs derived from Pooja, Varshadhan, Gayatri and Sarala performed better than their respective recurrent parents. But, one NIL derived from Ciherang (IET 30411) was found to be inferior with respect to seedling survival percentage as compared to its recurrent parent. IET 30411 derived from Ciherang is inferior with respect to both the traits. Although IET 30408 derived from Gayatri gave less yield than the recurrent parent, its seedling survival percentage is better under submergence stress.

Summary of two years performance of entries found promising in AVT-1 NIL-Submergence:

IET 26744 (CR 3932-7) derived from the cross Pooja*3 / Swarna-Sub1 performed significantly better than the recurrent parent Pooja in both the years (2020 and 2021) with respect to yield under submergence stress. It also performed better than its recurrent parent Pooja with regard to seedling survival percentage under submergence condition in both 2020 (76.2%) and 2021 (69.19%).

IET 29031 (CR 2538-42-17-32-3-2), IET 29026 (CR 2538-42-17-32-3-3) and IET 29032 (CR 2538-20-14-24-2) derived from the cross Varshadhan*3/IR49830-7 were in the second year of testing.

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IET 29031 performed significantly better than the recurrent parent Varshadhan in both the years (2020 and 2021) with respect to yield under submergence stress. It also performed better than its recurrent parent Varshadhan with regard to seedling survival percentage under submergence condition in both 2020 (6.14%) and 2021 (56.14%).

IET 29026 performed significantly better than the recurrent parent Varshadhan in both the years (2020 and 2021) with respect to yield under submergence stress. It also performed better than its recurrent parent Varshadhan with regard to seedling survival percentage under submergence condition in both 2020 (2.82%) and 2021 (53.43%).

IET 29032 performed significantly better than the recurrent parent Varshadhan in both the years (2020 and 2021) with respect to yield under submergence stress. It also performed better than its recurrent parent Varshadhan with regard to seedling survival percentage under submergence condition in both 2020 (57.84%) and 2021 (52.75%).

All the three NILs derived from Varshadhan performed better than the recurrent parent with regard to yield and seedling survival under submergence stress over both the years. However, IET 29031 was the best performing entry with regard to yield and IET 29032 was the best performing entry with regard to seedling survival percentage under submergence stress over the years.

All the four entries performed consistently better than the respective recurrent parents, over two years of testing under submergence stress.

Table No. 13.1: Composition of entries in Advance Variety Trial 1- Near Isogenic Lines -Submergence (AVT 1-NIL SUB), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	Grain Type
2nd Year of testing:				
6301	26744 (R)	CR 3932-7	Pooja*3 / Swarna-Sub1	SB
6302	Pooja (RP)			
6303	29031	CR 2538-42-17-32-3-2	Varshadhan*3/IR49830-7	LB
6304	29026	CR 2538-42-17-32-3-3	Varshadhan*3/IR49830-7	LB
6305	Varshadhan (RP)			
6306	29032	CR 2538-20-14-24-2	Varshadhan*3/IR49830-7	LB
6307	Gayatri (RP)			
1st Year of testing:				
6308	30409	CR2531-72-6-19-3	Gayatri*3/IR49830-7	SB
6309	Swarna Sub 1 (DP)			
6310	30408	CR2531-72-6-19-4	Gayatri*3/IR49830-7	SB
6311	30410	CR 2532-9-21-35-3	Sarala*3/IR49830-7	MS
6312	Sarala (RP)			
6313	30411	CIHRANG-Sub 1	IR 49830-7-1-2-3/ CIHRANG*3	LS
6314	Ciherang (RP)			
6315	Swarna (Sensitive check)			

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Grain yield (Kg/ha) of NIL entries in AVT-1 NIL- SUB along with their recurrent parents under submergence stress condition, *kharif*, 2021

IET NO.	CTK	BKG@	MTU	MGD@	Mean
26744 (Pooja-NIL)	3903	5004	3277	4281	3590*
Pooja (RP)	1435	5836	3547	3773	2491
29031 (Varshadhan -NIL)	4635	2979	8557	3311	6596*
29026 (Varshadhan -NIL)	3827	2678	8023	5386	5925*
29032 (Varshadhan -NIL)	4218	1912	5563	3514	4891*
Varshadhan (RP)	1137	1899	6807	5412	3972
30409 (Gayatri -NIL)	4233	NG	7000	3768	5617*
30408 (Gayatri -NIL)	1851	3530	3663	5806	2757
Gayatri (RP)	1229	2649	7737	3361	4483
30410 (Sarala-NIL)	3460	3529	6957	4364	5209*
Sarala (RP)	1789	2626	7267	5530	4528
30411 (Ciherang -NIL)	2060	4517	8790	3964	5425
Ciherang (RP)	4055	7815	7913	3478	5984
Exp. Mean	2804.02	3961.38	6369.56	4286.27	4586.79
CD	1022.33	429.72	1027.31	828.09	610.76

*Significantly(p<0.05)superior over the recurrent parent

Seedling Survival percentage of NIL entries in AVT-1 NIL- SUB over their recurrent parents under submergence stress condition, *kharif*, 2021

Recurrent Parent	NIL-IET no.	NIL-Seedling Survival (%)					RP- Seedling Survival (%)					% Over RP
		CTK	BKG@	MTU	MGD@	Mean	CTK	BKG@	MTU	MGD@	Mean	
Pooja	26744	95	95	89.7	-	92.35	35	95	73.1	-	54.05	70.86
Varshadhan	29031	98	80	86.1	-	92.05	30	75	87.9	-	58.95	56.15
	29026	95	80	85.9	-	90.45	30	75	87.9	-	58.95	53.44
	29032	94	75	86.1	-	90.05	30	75	87.9	-	58.95	52.76
Gayatri	30409	92	NG	68.1	-	80.05	33	80	70.8	-	51.9	54.24
	30408	40	80	91	-	65.5	33	80	70.8	-	51.9	26.20
Sarala	30410	45	80	85.2	-	65.1	30	75	87.8	-	58.9	10.53
Ciherang	30411	28	90	66.2	-	47.1	38	95	86.8	-	62.4	-24.52

Two years performance of NILs those are in the second year of testing in AVT 1-NIL-Sub

IET No./ Designation / Cross combination of NIL	Grain Yield under submergence condition											
	2020						2021					
	CTK		MTU		MEAN		CTK		MTU		MEAN	
26744 (CR 3932-7)												
Pooja*3 / Swarna-Sub1	2456	252	4566	3563	3511*	1908	3903	1435	3277	3547	3590*	2491
29031 (CR 2538-42-17-32-3-2) Varshadhan*3/IR49830-7	3409	252	3198	3198	3304*	1725	4635	1137	8557	6807	6596*	3972
29026 (CR 2538-42-17-32-3-3) Varshadhan*3/IR49830-7	3259	252	4427	3198	3843*	1725	3827	1137	8023	6807	5925*	3972
29032 (CR 2538-20-14-24-2) Varshadhan*3/IR49830-7	3643	252	4788	3198	4216*	1725	4218	1137	5563	6807	4891*	3972
Exp. Mean	1781.67		3462.6		2622.13		2804.02		6369.56		4586.79	
CD	429.96		481.62		322.41		1022.33		1027.31		610.76	

*Significantly(p<0.05) superior over the recurrent parent

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Two years performance in seedling survival percentage of NILs those are in the second year of testing in AVT 1-NIL-Sub

IET No./ Designation / Cross combination	Year	Seedling Survival (%) under submergence condition		
		RP survival	NIL survival	% over RP
26744 (CR 3932-7) Pooja*3 / Swarna-Sub1	2021	CTK 35 MTU 73.1 Overall 54.05	CTK 95 MTUP 87.9 Overall 91.45	CTK 171.42 MTU 20.24 Overall 69.19
	2020	CTK 6.1 MTU 47.7 Overall 26.9	CTK 46.1 MTU 48.7 Overall 47.4	CTK 655.7 MTUP 2.1 Overall 76.2
29031 (CR 2538-42-17-32-3-2) Varshadhan*3/IR49830-7	2021	CTK 30 MTU 87.9 Overall 58.95	CTK98 MTU 86.1 Overall 92.05	CTK 226.66 MTU -2.04 Overall 56.14
	2020	CTK 5 MTU 97.8 Overall 51.4	CTK 62.22 MTU 46.9 Overall 54.56	CTK1144.4 MTU -52.04 Overall 6.14
29026 (CR 2538-42-17-32-3-3) Varshadhan*3/IR49830-7	2021	CTK30 MTU 87.9 Overall 58.95	CTK 95 MTU 85.9 Overall 90.45	CTK 216.66 MTU -2.27 Overall 53.43
	2020	CTK 5 MTU 97.8 Overall 51.4	CTK 60 MTU 45.7 Overall 52.85	CTK 1100 MTU -53.27 Overall 2.82
29032 (CR 2538-20-14-24-2) Varshadhan*3/IR49830-7	2021	CTK30 MTU 87.9 Overall 58.95	CTK94 MTU 86.1 Overall 90.05	CTK 213.33 MTU -2.04 Overall 52.75
	2020	CTK 5 MTU 97.8 Overall 51.4	CTK 66.67 MTU 95.6 Overall 81.13	CTK 1233.4 MTU -2.24 Overall 57.84

Table No. 13.2: Grain yield (Kg/ha) of entries in AVT 1-NIL-Sub, kharif, 2021

Entry No.	IET No.	Zone III (1)		Zone VII		Overall (2) Mean
		OD	BI	AP	KA	
		CTK	BKG@	MTU	MGD@	
6301	26744	3903	5004	3277	4281	3590
6302	Pooja(RP)	1435	5836	3547	3773	2491
6303	29031	4635	2979	8557	3311	6596
6304	29026	3827	2678	8023	5386	5925
6305	Varshadhan (RP)	1137	1899	6807	5412	3972
6306	29032	4218	1913	5563	3514	4891
6307	Gayatri (RP)	1229	2649	7737	3361	4483
6308	30409	4233	-	7000	3768	5617
6309	Swarna Sub1(DP)	3239	5153	6383	5160	4811
6310	30408	1851	3530	3663	5806	2757
6311	30410	3460	3529	6957	4364	5209
6312	Sarala (RP)	1789	2626	7267	5530	4528
6313	30411	2060	4517	8790	3964	5425
6314	Ciherang (RP)	4055	7815	7913	3478	5984
6315	Swarna (Sensitive check)	989	5331	4060	3186	2525
Exp. Mean		2804.02	3961.38	6369.56	4286.27	4586.79
CD		1022.33	429.72	1027.31	828.09	610.76
CV%		21.8	6.46	9.64	9.01	7.96
D/S		14.07.2021	02.07.2021	09.07.2021	25.06.2021	
D/P		20.08.2021	12.08.2021	12.08.2021	03.07.2021	

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Table No. 13.3: Days to 50% flowering of entries in AVT 1-NIL-Sub, *kharif*, 2021

Entry No.	IET No.	Zone III (1)		Zone VII		Overall (2)
		OD	BI	AP	KA	
		CTK	BKG@	MTU	MGD@	Mean
6301	26744	123	115	112	116	118
6302	Pooja (RP)	124	125	109	111	117
6303	29031	124	135	120	120	122
6304	29026	130	135	130	106	130
6305	Varshadhan (RP)	128	136	126	100	127
6306	29032	129	136	129	123	129
6307	Gayatri (RP)	127	128	118	115	123
6308	30409	120	-	114	120	117
6309	Swarna Sub1(DP)	127	114	125	109	126
6310	30408	124	121	112	120	118
6311	30410	124	125	126	122	125
6312	Sarala (RP)	130	138	125	106	128
6313	30411	123	101	99	112	111
6314	Ciherang (RP)	123	109	102	106	113
6315	Swarna (Sensitive check)	122	110	115	118	119
Exp. Mean		125.18	123.43	117.36	113.47	121.27
CD		4.27	0	1.56	4.44	2.14
CV%		2.04	0	0.8	1.82	1.05

Table No. 13.4: Plant height (cm) of entries in AVT 1-NIL-Sub, *kharif*, 2021

Entry No.	IET No.	Zone III (1)		Zone VII		Overall (2)
		OD	BI	AP	KA	
		CTK	BKG@	MTU	MGD@	Mean
6301	26744	99	110	153	121	126.1
6302	Pooja (RP)	80	94	132	151	106.1
6303	29031	108	138	177	121	142.5
6304	29026	123	141	191	112	157.0
6305	Varshadhan (RP)	111	136	182	133	146.3
6306	29032	117	128	174	161	145.7
6307	Gayatri (RP)	77	94	133	147	104.8
6308	30409	82	.	131	112	106.3
6309	Swarna Sub1(DP)	72	154	113	134	92.4
6310	30408	73	88	142	124	107.4
6311	30410	102	95	157	129	129.3
6312	Sarala (RP)	90	91	142	135	116.2
6313	30411	71	106	120	122	95.5
6314	Ciherang (RP)	95	113	148	157	121.3
6315	Swarna (Sensitive check)	72	94	118	132	95.2
Exp. Mean		91.5	113.1	147.5	132.7	119.5

Table No. 13.5: Panicles/m² of entries in AVT 1-NIL-Sub, *kharif*, 2021

Entry No.	IET No.	Zone III (1)		Zone VII		Overall (2)
		OD	BI	AP	KA	
		CTK	BKG@	MTU	MGD@	Mean
6301	26744	225	292	266	421	246
6302	Pooja (RP)	276	285	280	380	278
6303	29031	223	302	326	352	275
6304	29026	223	315	271	462	247
6305	Varshadhan (RP)	245	315	275	381	260
6306	29032	221	267	290	451	256
6307	Gayatri (RP)	389	272	271	388	330
6308	30409	300	-	277	364	289
6309	Swarna Sub1(DP)	223	253	288	382	256
6310	30408	285	303	299	439	292
6311	30410	245	326	292	430	269
6312	Sarala (RP)	217	305	317	442	267
6313	30411	240	282	330	431	285
6314	Ciherang (RP)	274	274	260	429	267
6315	Swarna (Sensitive check)	305	286	290	471	298
Exp. Mean		259.42	291.24	288.78	414.57	274.1
CD		69.79	17.93	39.77	45.36	37.16
CV%		16.08	3.67	8.23	5.1	8.11

ADVANCE VARIETY TRIAL 1-NEAR ISOGENIC LINES-DROUGHT (AVT1-NIL-DRT)

Locations: 08

Test Entries: 16

Checks: Recurrent parents (RP): 8 (Swarna, Pusa Basmati 1, Vandana, Anjali, WGL 14, Krishna Hamsa, Varalu, IR64); Donor parents: 1 (Nagina 22); Sensitive Check: 1 (IR64); HYV Check: 1 (MTU 1010); Tolerant Check: 1 (Sahbhagidhan).

Advance variety trial 1-NIL (drought) was conducted across 8 locations (three zones: Zone III, V and VII) to evaluate the performance of 16 nominated drought tolerant near isogenic lines (NILs) in comparison to the seven recurrent parents (RP), one donor parents (Nagina 22), one sensitive check cum recurrent parent (IR 64) and one tolerant check (Sahbhagidhan) along with one High Yielding Check (MTU 1010) during *Kharif* season, 2021.

Data of seven centres were not considered due to very highest or very high grain yield of sensitive check IR64 (Table 64.1- 64.5) besides low yield of tolerant check Sahbhagidhan at certain locations. Data from Hazaribagh centre was only considered for this report. At Hazaribagh, the overall experimental mean grain yield was 1562.99 kg/ha, while the yield of entries varied from 174 kg/ha (IET30301) to 2680 kg/ha (IET28032). Sahbhagidhan, the tolerant check (BTC) in the experiment, showed a mean yield of 2320

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kg/ha under stress condition. The sensitive check (BSC) IR 64 recorded grain yield of 1590 kg/ha. The high yielding check, MTU1010, yielded 1743 kg/ha. The trial at Hazaribagh was carried out in rain out shelters under controlled condition.

Seven nominated drought tolerant NILs viz., IET29069, IET30439, IET28787, IET28788, IET28032, IET28834, and IET28835 performed better (significantly higher) when compared to their recurrent parent (RP) in the AVT1 NIL (Drt) trial of *Kharif* 2021.

A NIL of IR64, IET28032 (repeat) was the most promising among all test entries as evidenced from its performance compared to RP, BSC & BRC under drought stress. Two NILs of Pusa Basmati 1, i.e., IET 28787 and IET28788 also performed significantly better than the RP. Two NILs of Anjali, IET28834 (Repeat) and IET28835 (Repeat) performed significantly better than the RP. Two NILs of Swarna, viz. IET29069 and IET30439, were also found promising based on the significantly superior performance of the NILs over the RP under the stress conditions.

Stress situation in different centres

Sl. No.	Center Name	Condition of Drought Stress	Remarks
1	Cuttack, Odisha	The sensitive check IR 64 recorded highest grain yield of 1003 kg/ha in this centre which was significantly higher than the resistant check Sahbhagidhan.	Data not considered for analysis under stress due to insufficient stress. (Rejected)
2	Jeypore, Odisha	The sensitive check IR 64 recorded highest grain yield of 2762 kg/ha in this centre which was significantly higher than the resistant check Sahbhagidhan.	Data not considered for analysis under stress due to insufficient stress. (Rejected)
3	Bikramganj, Bihar	The sensitive check IR 64 recorded unusually high grain yield of 5106 kg/ha in this centre.	Data not considered for analysis under stress due to insufficient stress. (Rejected)
4	Hazaribag, Jharkhand	Stress imposed at 60 DAS with Rainout shelter and continued till maturity. Moderate level of moisture stress from booting to maturity. Sensitive check and tolerant check performance were as per the experimental standards.	Data considered for analysis. (STRESS)
5	Raipur, Chattisgarh	Four drought spells (9 days, 6 days, 25 days, and 7 days). The sensitive check IR 64 recorded unusually high grain yield of 4647 kg/ha in this centre.	Data not considered for analysis (Rejected)
6	Rewa, MP	Unusually low grain yield of all genotypes	Data not considered for analysis. (Rejected)
7	Coimbatore, Tamilnadu	The sensitive check IR 64 recorded unusually high grain yield of 3164 kg/ha in this centre which was at par with the highest yielding entry in the trial. The tolerant check Sahbhagidhan yielded only 620 kg/ha.	Data not considered for analysis. (Rejected)
8	Mugad, KA	There were 8 drought spells during cropping season. The sensitive check IR 64 recorded unusually high grain yield of 4213 kg/ha in this centre which was at par with the highest yielding entry in the trial.	Data not considered for analysis. (Rejected)

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Seven nominated drought tolerant NILs viz., IET29069, IET30439, IET28787, IET28788, IET28032, IET28834, and IET28835 were found promising in this trial based on their performance at Hazaribagh location.

Performance of the NILs compared to recurrent parent, sensitive check, and tolerant check in AVT 1-NIL-Drt trial, 2021.

Entry No.	IET No./ Designation (Cross combination)	Yield (Kg/ha)	Difference with RP	%RP	%BSC	%BTC	Remarks
6402	Swarna (RP)	1285	-				
6401	29069/ R-RF-120/ (Swarna/IR 90019-17-159 B/Swarna*3)	1874 [#]	589	45.84	17.86	-19.22	Performance of the NIL significantly superior to the recurrent parent.
6417	30439/ R-RF-156 (Swarna*3/ IR 90019-17-159-B)	2048 [#]	763	59.38	28.81	-11.72	Performance of the NIL significantly superior to the recurrent parent.
6403	Pusa Basmati 1 (RP)	850					
6404	28787/ Pusa-1882-12-111-7 (PB 1/N22// PB1*3)	1373 [#]	523	61.53	-13.65	-40.82	Performance of the NIL significantly superior to the recurrent parent.
6406	28788/ Pusa-1882-12-111-20 (PB 1/N22// PB1*3)	1481 [#]	631	74.23	-6.86	-36.16	Performance of the NIL significantly superior to the recurrent parent.
6405	IR 64 (Sensitive Check/RP)	1590					
6407	28032/CRR 751-1-7-B-B (IR 64 Sub1*4 /IR 88287-367-B-B)	2680 [#]	1090	68.55	68.55	15.52	Performance of the NIL significantly superior to the recurrent parent and BTC.
6408	28033/ CRR 751-1-12-B-B (IR 64 Sub1*4/ IR 88287-367-B-B)	1677	87	5.47	5.47	-27.72	Not promising
6411	Vandana (RP)	1852					
6412	28836 (R)/CRR 677-1 (IR 79971-B-102-B-B /Vandana*3)	1765	-87	-4.70	11.00	-23.92	Not promising
6416	Anjali (RP)	1547	-				
6410	28834 (R)/ CRR 809-11-1-9-B (IR 84984-83-15-481-B / Anjali*3 // IR 81896-B-B-195 / Anjali*3)	2157 [#]	610	39.43	35.66	-7.03	Performance of the NIL significantly superior to the recurrent parent and at-par to BTC.
6413	28835 (R)/CRR 752-3-1-B (Anjali*3/IR 81896-B-195)	2157 [#]	610	39.43	35.66	-7.03	Performance of the NIL significantly superior to the recurrent parent and at-par to BTC.
6414	29024 (R)/ CRR 753-5-1-B (Anjali*3/IR 84984-83-15-18-B-B-93)	1329	-218	-14.09	-16.41	-42.72	Not promising
6419	WGL 14 (RP)	1111	-				
6418	30302/ RP 6498-MAID-451-51-45-5-4-1-1 (WGL14/Rathuheen ati//WGL14/RP5925 -23//WGL14/RP5925-24// WGL14/ IR	1089	-22	-1.98	-31.5094	-53.0603	Not promising

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Entry No.	IET No./ Designation (Cross combination)	Yield (Kg/ha)	Difference with RP	%RP	%BSC	%BTC	Remarks
	96321-1447-561-B-1///WGL14/ RP Bio Patho-1)						
6420	30301/ RP 6497-MAID-344-44-34-4-3-1-1 (WGL 14/Improved Samba Mahsuri//WGL 14/ RP Bio Patho-1/// WGL14/ RP 5925-24// WGL14/ RP 5925-23/// WGL14/ IR 96321-1447-561-B-1// WGL14/ IR 81896-96-B-B-195//// WGL14/ IR74371-46-1-1-13)	174	-937	- 84.3384	-89.0566	-92.5	Not promising
6424	Varalu (RP)	1438	-				
6422	30440/MSM 55-BIO-62-4-15 (Varalu*3/Vandana NIL(contains qyld 12.1)/ Sambha mahsuri NIL(contains Pi1+Pi54))	1547	109	7.579972	-2.7044	-33.319	Not promising
6426	30441/ MSM 56-BIO-62-4-15 (Varalu*3/Vandana NIL(contains qyld 12.1)	1503	65	4.520167	-5.4717	-35.2155	Not promising
6421	Krishna Hamsa (RP)	2527	-				
6423	30287/ RP 6496-MAID-241-45-24-3-2-1-1 (Krishna Hamsa/IRBB60//Krishna Hamsa/Tetep///Krishna Hamsa/ IR 81896-96-B-B-195)	1133	-1394	- 55.1642	-28.7421	-51.1638	Not promising
6425	30288/ RP 6496-MAID-246-24-6-3-1-1-1 (Krishna Hamsa/IRBB60//Krishna Hamsa/Tetep///Krishna Hamsa/IR 81896-96-B-B-195)	991	-1536	- 60.7835	-37.673	-57.2845	Not promising
	Experimental mean (Kg/ha)	1562.99					
	CD value (Kg/ha)	318.64					

RP, Recurrent parent; BSC, sensitive check; BTC, tolerant check) (#, Significantly superior from RP based on CD value).

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Two years performance of entries of NILs which are in second year of testing in AVT1-NIL-DRT

IET number/Designation (Cross combination)	Yield performance under drought			
		%RP	%BSC	%BTC
29069/ R-RF-120/ (Swarna/IR 90019-17-159 B/Swarna*3)	2020	105.92	79.41	11.10
	2021	45.84	17.86	-19.22
28787/ Pusa-1882-12-111-7 (PB 1/N22//PB1*3)	2020	-21.32	44.70	-10.39
	2021	61.53	-13.65	-40.82
28788/ Pusa-1882-12-111-20 (PB 1/N22//PB1*3)	2020	-34.59	20.30	25.50
	2021	74.23	-6.86	-36.16
28032/CRR 751-1-7-B-B (IR 64 Sub1*4/IR 88287-367-B-B)	2020	81.45	81.46	12.37
	2021	68.55	68.55	15.52
28033/ CRR 751-1-12-B-B (IR 64 Sub1*4/IR 88287-367-B-B)	2020	72.04	72.05	6.54
	2021	5.47	5.47	-27.72
29024 (R)/ CRR 753-5-1-B (Anjali*3/IR 84984-83-15-18-B-B-93)	2020	-40.53	-34.76	-59.59
	2021	-14.09	-16.41	-42.72

Table No. 13.6: Composition of entries in Advance Variety Trial 1- Near Isogenic Lines-Drought (AVT 1-NIL DRT), Kharif 2021.

Entry No.	IET No.	Designation	Cross combination	Grain Type
2nd Year of testing:				
6401	29069	R-RF-120	Swarna / IR 90019-17-159-B/Swarna/Swarna/Swarna	SB
6402	Swarna (RP)			
6403	Pusa Basmati 1 (RP)			LS
6404	28787	Pusa-1882-12-111-7	PB 1/N22//PB1*3	LS
6405	IR 64 (Sensitive Check cum RP)			
6406	28788	Pusa-1882-12-111-20	PB 1/N22//PB1*3	LS
6407	28032	CRR 751-1-7-B-B (Repeat)	IR 64 Sub1*4/IR 88287-367-B-B	LS
6408	28033	CRR 751-1-12-B-B (Repeat)	IR 64 Sub1*4/IR 88287-367-B-B	LS
6409	Nagina 22 (DP)			
6410	28834 (R)	CRR 809-11-1-9-B	IR 84984-83-15-481-B / 3*Anjali // IR 81896-B-B-195 / 3* Anjali	SB
6411	Vandana (RP)			
6412	28836 (R)	CRR 677-1	IR 79971-B-102-B-B / 3* Vandana	LB
6413	28835 (R)	CRR 752-3-1-B	Anjali*3 / IR 81896-B-195	SB
6414	29024 (R)	CRR 753-5-1-B	Anjali*3/IR 84984-83-15-18-B-B-93	SB
6415	MTU 1010 (check)			
6416	Anjali (RP)			
1st year of testing				
6417	30439	R-RF-156	Swarna*3/ IR 90019-17-159-B	SB
6418	30302	RP 6498-MAID-451-51-45-5-4-1-1	WGL14/Rathuheenati//WGL14/RP5925-23///WGL14/RP5925-24// WGL14/IR 96321-1447-561-B-1///WGL14/ RP Bio Patho-1	MS
6419	WGL 14 (RP)			
6420	30301	RP 6497-MAID-344-44-34-4-3-1-1	WGL 14/Improved Samba Mahsuri//WGL 14/ RP Bio Patho-1/// WGL14/ RP 5925-24// WGL14/ RP 5925-23/// WGL14/ IR 96321-1447-	MS

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Entry No.	IET No.	Designation	Cross combination	Grain Type
			561-B-1// WGL14/ IR 81896-96-B-B-195///// WGL14/ IR74371-46-1-1-13	
6421	Krishna Hamsa (RP)			
6422	30440	MSM 55-BIO-62-4-15	Varalu*3/Vandana NIL(contains qyld 12.1)/ Sambha mahsuri NIL(contains Pi1+Pi54)	MS
6423	30287	RP 6496-MAID-241-45-24-3-2-1-1	Krishna Hamsa/IRBB60//Krishna Hamsa/Tetep///Krishna Hamsa/ IR 81896-96-B-B-195	LS
6424	Varalu (RP)			
6425	30288	RP 6496-MAID-246-24-6-3-1-1-1	Krishna Hamsa/IRBB60//Krishna Hamsa/Tetep///Krishna Hamsa/IR 81896-96-B-B-195	LS
6426	30441	MSM 56-BIO-62-4-15	Varalu*3/Vandana NIL(contains qyld 12.1)	MS
6427	SahbhagiDhan (Check)			

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Table No. 13.7: Grain yield (kg/ha of entries in AVT 1-NIL (Drought) Kharif 2021

Entry No.	IET No.	Zone III										Zone III(4)		Zone V		Zone V(1)	Zone VII		Zone VII(2)	Overall (7)							
		OD					OD(2)		BI		JH			CG	MP	TN	KA	mean	mean								
		CTK		JYP		mean		BKG		HZB			mean	RPR	REWA	mean	CBT	MGD	mean	mean							
6401	29069	614		1931	5	1273	7	5053	6	1874	7	2368	7	3505		192	5	3505		1649		3384		2517		2573	8
6402	Swarna (R)	502		1852	6	1177	8	4781	9	1285		2105	9	2506		0		2506		2678		3440		3059		2435	
6403	Pusa Basma	479		626		553		4082		850		1509		1869		47		1869		2311		3201		2756		1917	
6404	28787	414		761		588		3750		1373		1575		1650		23		1650		3008		3667	6	3338	7	2089	
6405	IR 64 (Sens)	1003	1	2762	1	1883	1	5106	3	1590		2615	1	4647	2	231	2	4647	2	3164	6	4213	4	3689	3	3212	1
6406	28788	454		1477		966		4121		1481		1883		1124		57		1124		3250	4	4546	1	3898	1	2350	6%
6407	28032	886	5	1939	4	1413	4	3938		2680	1 *	2361	8	4311	3	195	4	4311	3	3117	7	4336	3	3727	2	3030	2
6408	28033	908	4	2443	3	1676	3	3223		1677		2063	10	3066		67		3066		1611		4370	2	2991		2471	
6409	Nagina 22 (R)	162		760		461		2833		959		1179		3624	7	564	-2	3624	7	679		2763		1721		1683	
6410	28834 (R)	57		984		521		3135		2157	4.5	1583		3026		329	1	3026		398		2898		1648		1808	
6411	Vandana (R)	250		1820	9	1035	10	5663	1	1852	8	2396	6	3078		58		3078		3247	5	3365		3306	9	2754	4
6412	28836 (R)	153		763		458		3127		1765	9	1452		2416		152	8	2416		614		2842		1728		1669	
6413	28835 (R)	365		662		514		3430		2157	4.5	1654		2479		217	3	2479		1092		2918		2005		1872	
6414	29024 (R)	558		1080		819		2772		1329		1435		2072		130	9	2072		2112		3033		2573		1851	
6415	MTU 1010	927	2.5	2760	2	1844	2	4436		1743	10	2467	3	4042	5	114		4042	5	3057	9	3399		3228	10	2909	3
6416	Anjali (RP)	456		1082		769		3397		1547		1621		2890		122	10	2890		648		2763		1706		1826	
6417	30439	805	8	1831	8	1318	6	4947	8	2048	6	2408	5	2580		97		2580		1951		3316		2634		2497	
6418	30302	181		1203		692		5043	7	1089		1879		894		48		894		3070	8	3096		3083		2082	
6419	WGL 14 (R)	401		1156		779		4699		1111		1842		1500		0		1500		1216		3175		2196		1894	
6420	30301	282		1739	10	1011		4141		174		1584				0				1343		3443		2393		1854	
6421	Krishna Ha	858	6	1278		1068	9	5250	2	2527	2	2478	2	4078	4	163	7	4078	4	2200		3042		2621		2748	5
6422	30440	669	10	609		639		5100	4	1547		1981		4683	1	488	-1	4683	1	2795		3281		3038		2669	6
6423	30287	927	2.5	799		863		4609		1133		1867		3529	10	173	6	3529	10	3361	2	3475	9	3418	6	2548	9
6424	Varalu (RP)	767	9	679		723		3809		1438		1673		3981	6	86		3981	6	3026	10	3610	7	3318	8	2473	
6425	30288	249		901		575		5092	5	991		1808		1610		0		1610		3419	1	3472	10	3446	5	2248	
6426	30441	580		779		680		4481		1503		1836		3583	8	456	0	3583	8	3302	3	3886	5	3594	4	2588	7
6427	SahbhagiD	832	7	1850	7	1341	5	4749	10	2320	3	2438	4	3532	9	608	-3	3532	9	620		3594	8	2107		2500	10
	Exp. Mean	545.93		1352.78		949.35		4250.57		1562.99		1928		2933		171.01		2933.29		2182.88		3426.76		2805		2316	
	CD	108.23		347.4		189.31		627.2		318.64		197.1		900.9		191.27		900.92		751.05		750.36		655.18		210.96	
	CV%	12.1		15.67		12.17		9.01		12.44		6.24		14.91		67.97		14.91		21		10.65		15.54		5.83	
	D/S	18.08.2021		21.07.21				04.07.2021		15.7.2021				12.07.2021		05-07-2021				04.10.2021		10.08.2021					
	D/P			21.08.21				01.08.2021		5.8.2021				10.08.2021								8.09.2021					

(*), Significant at 5% level

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Table No. 13.8: Days to 50% flowering of entries in AVT 1-NIL (Drought) Kharif 2021

Days to 50% Flowering of entries in AVT 1-NIL (Drought) Kharif 2021														
Entry No.	IET No.	Zone III					Zone III(4)	Zone V		Zone V(1)	Zone VII		Zone VII(2)	Overall (7)
		OD		OD(2)	BI	JH		CG	MP		TN	KA		
		CTK	JYP	mean	BKG	HZB	mean	RPR	REWA	mean	CBT	MGD	mean	mean
6401	29069	90	93	91	83	87	88	89	97	89	71	95	83	87
6402	Swarna (RP)	116	113	114	72	113	104	99		99	87	100	93	100
6403	Pusa Basmati 1 (RP)	100	109	105	94	98	100	98	108	98	87	94	90	97
6404	28787	109	111	110	95	97	103	92	107	92	85	94	89	97
6405	IR 64 (Sensitive Check)	93	95	94	79	90	89	92	100	92	77	93	85	88
6406	28788	97	116	106	98	97	102	101	117	101	86	93	89	98
6407	28032	90	101	96	82	87	90	88	96	88	76	94	85	88
6408	28033	89	97	93	83	86	89	86	100	86	79	94	86	88
6409	Nagina 22 (DP)	80	110	95	74	73	84	89	84	89	57	92	74	82
6410	28834 (R)	79	72	75	73	72	74	83	91	83	62	96	79	77
6411	Vandana (RP)	93	99	96	87	92	93	94	107	94	83	102	92	93
6412	28836 (R)	77	78	77	77	73	76	82	88	82	61	98	80	78
6413	28835 (R)	79	100	90	73	73	81	84	90	84	63	86	75	80
6414	29024 (R)	81	79	80	76	75	78	81	88	81	62	89	76	78
6415	MTU 1010 (check)	87	91	89	82	87	87	92	93	92	75	92	84	86
6416	Anjali (RP)	77	78	77	79	72	77	83	85	83	64	94	79	78
6417	30439	88	103	96	86	88	91	97	100	97	74	92	83	90
6418	30302	102	104	103	98	103	102	104	109	104	85	92	89	98
6419	WGL 14 (RP)	100	119	109	104	97	105	96	119	96	86	91	88	99
6420	30301	116	121	119	107	115	115	97		97	94	96	95	107
6421	Krishna Hamsa (RP)	87	108	98	80	85	90	87	102	87	80	90	85	88
6422	30440	88	98	93	83	86	89	86	94	86	73	87	80	86
6423	30287	90	113	102	85	88	94	89		89	83	93	88	92
6424	Varalu (RP)	91	115	103	85	88	95	89	100	89	79	88	84	91
6425	30288	104	101	103	89	104	99	96		96	85	94	90	96
6426	30441	88	96	92	82	85	88	84	94	84	73	85	79	85
6427	SahbhagiDhan (Check)	88	92	90	83	85	87	85	90	85	66	85	75	83
	Expt. Mean	92	100	96	85	89	91	90	98	90	76	92	92	89

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Table No. 13.9 contd.: Plant Height (cm) of entries in AVT 1-NIL (Drought) Kharif 2021

Plant Height (cm) of entries in AVT 1-NIL (Drought) Kharif 2021														
Entry No.	IET No.	Zone III					Zone III(4)	Zone V		Zone V(1)	Zone VII		Zone VII(2)	Overall (7)
		OD		OD(2)	BI	JH		CG	MP		TN	KA		
		CTK	JYP	Mean	BKG	HZB	mean	RPR	REWA	mean	CBT	MGD	mean	mean
6401	29069	74	99	86	120	110	101	97	78	97	71	82	76	93
6402	Swarna (RP)	66	68	67	101	70	76	56		56	87	68	78	74
6403	Pusa Basmati 1 (RP)	70	65	67	106	86	82	84	68	84	87	74	80	82
6404	28787	63	65	64	125	96	87	84	70	84	85	71	78	84
6405	IR 64 (Sensitive Check)	65	91	78	107	97	90	92	72	92	77	70	74	86
6406	28788	77	56	66	120	94	87	82	69	82	86	67	76	83
6407	28032	59	78	69	100	84	80	79	52	79	76	51	64	75
6408	28033	63	71	67	98	86	79	98	58	98	79	56	67	79
6409	Nagina 22 (DP)	70	74	72	107	111	91	95	88	95	57	81	69	85
6410	28834 (R)	51	71	61	117	107	87	110	70	110	62	68	65	84
6411	Vandana (RP)	55	65	60	98	88	76	89	59	89	83	62	72	77
6412	28836 (R)	59	80	69	123	110	93	117	82	117	61	61	61	87
6413	28835 (R)	65	81	73	128	119	98	111	73	111	63	64	63	90
6414	29024 (R)	75	95	85	116	111	99	122	85	122	62	71	67	93
6415	MTU 1010 (check)	65	90	78	109	106	92	92	64	92	75	69	72	87
6416	Anjali (RP)	81	84	83	138	113	104	102	68	102	64	75	69	94
6417	30439	73	65	69	116	87	85	85	70	85	74	66	70	81
6418	30302	55	65	60	95	65	70	68	57	68	85	55	70	70
6419	WGL 14 (RP)	76	77	76	113	94	90	80		80	86	71	79	85
6420	30301	61	75	68	98	78	78	61		61	94	68	81	76
6421	Krishna Hamsa (RP)	68	65	67	94	78	77	67	62	67	80	65	72	74
6422	30440	64	71	68	109	79	81	96	77	96	73	58	65	79
6423	30287	65	67	66	116	97	86	82		82	83	52	68	80
6424	Varalu (RP)	69	73	71	121	93	89	95	76	95	79	60	70	84
6425	30288	76	93	85	105	79	88	69		69	85	74	79	83
6426	30441	66	75	71	93	90	81	93	78	93	73	66	70	80
6427	SahbhagiDhan (Check)	68	89	79	114	116	97	97	67	97	66	73	69	89
	Expt. Mean	67	76	71	111	94	87	89	70	89	76	67	71	83

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Table No. 13.10: Panicles/m² of entries in AVT 1-NIL (Drought) Kharif 2021

Panicles/m ² of entries in AVT 1-NIL (Drought) Kharif 2021														
Entry No.	IET No.	Zone III					Zone III(4)	Zone V		Zone V(1)	Zone VII		Zone VII(2)	Overall(7)
		OD		OD(2)	BI	JH		CG	MP		TN	KA		
		CTK	JYP	Mean	BKG	HZB	mean	RPR	REWA	mean	CBT	MGD	mean	mean
6401	29069	193	274	233	348	363	294	179	92	179	274	241	257	267
6402	Swarna (RP)	223	436	330	256	220	284	192		192	262	309	285	271
6403	Pusa Basmati 1 (RP)	186	333	259	374	333	307	179	55	179	312	290	301	287
6404	28787	184	334	259	286	356	290	171	52	171	330	296	313	280
6405	IR 64 (Sensitive Check)	202	463	332	344	295	326	263	98	263	324	280	302	310
6406	28788	209	351	280	270	220	263	254	66	254	338	337	338	283
6407	28032	196	316	256	259	304	269	242	76	242	298	350	324	281
6408	28033	190	356	273	288	229	266	246	85	246	265	404	335	283
6409	Nagina 22 (DP)	179	238	209	315	248	245	154	90	154	293	380	336	258
6410	28834 (R)	169	248	209	395	231	261	142	71	142	306	297	301	255
6411	Vandana (RP)	190	271	230	283	389	283	204	56	204	308	317	312	280
6412	28836 (R)	160	241	200	317	224	235	183	86	183	260	257	258	235
6413	28835 (R)	193	259	226	294	299	261	233	84	233	269	225	247	253
6414	29024 (R)	183	248	215	288	209	232	229	97	229	283	235	259	239
6415	MTU 1010 (check)	185	239	212	265	289	245	213	71	213	328	189	258	244
6416	Anjali (RP)	202	256	229	253	201	228	138	85	138	273	225	249	221
6417	30439	207	273	240	266	224	242	146	109	146	286	289	287	241
6418	30302	178	484	331	315	203	295	196	55	196	286	317	301	283
6419	WGL 14 (RP)	189	407	298	312	291	300	233		233	287	313	300	290
6420	30301	172	459	315	298	153	270	154		154	280	296	288	259
6421	Krishna Hamsa (RP)	205	270	237	313	303	273	208	67	208	324	227	276	264
6422	30440	186	310	248	250	199	236	217	113	217	278	249	264	241
6423	30287	206	315	260	256	320	274	200		200	288	297	293	269
6424	Varalu (RP)	243	336	290	236	288	276	171	105	171	305	265	285	263
6425	30288	212	266	239	313	420	303	163		163	325	258	291	279
6426	30441	188	278	233	249	223	234	125	110	125	278	289	283	233
6427	SahbhagiDhan (Check)	194	268	231	259	265	246	150	110	150	288	359	323	255
	Expt. Mean	193	316	255	293	270	268	192	83	192	294	289	291	264

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Table No. 13.11: Grain quality characteristics of entries in AVT 1-NIL DRT, Kharif 2021

Grain quality characteristics of entries in AVT 1-NIL DRT, Kharif 2021																	
Entry No	IET No	HULL %	MILL %	HRR %	MOIS %	CHALKI	KL (mm)	KB (mm)	L/B	ASV	WU	VER	ER	KLAC (mm)	AC%	GC	Grain Type
6401	29069	77	67	62	12.9	VOC	6.85	1.91	2.96	4	155	3.75	1.59	9	20.77	47	SB
6402	Swarna (RP)	76	67	64	12.4	A	4.65	1.76	2.64	5	170	3.75	1.72	8	22.95	39	
6403	Pusa Basmati 1 (RP)	76	67	64	12	A	6.85	1.31	5.22	7	150	3.75	1.45	10	20.1	42	LS
6404	28787	66	58	54	12.8	A	7.13	1.31	5.44	7	170	4	1.54	11	20.77	45	LS
6405	IR 64 (Sensitive Check)	80	67	63	12.7	VOC	5.36	1.65	3.24	4	115	3.75	1.67	9	20.62	45	
6406	28788	74	62	58	12.2	A	6.93	1.36	5.9	7	175	4	1.73	12	21	41	LS
6407	28032	83	72	66	12.6	VOC	5.84	1.89	3.8	4	160	3.75	1.54	9	21.37	40	LS
6408	28033	81	70	65	12.9	VOC	5.8	1.88	3.8	3	120	3.75	1.55	9	22.8	39	LS
6409	Nagina 22 (DP)	77	66	59	12.4	A	4.85	2.12	2.28	3	155	3.75	1.85	9	21.75	40	
6410	28834 (R)	77	67	63	12	VOC	4.6	2.3	2	3	140	3.75	1.73	8	19.8	53	SB
6411	Vandana (RP)	78	71	69	12.5	A	5.86	1.86	3.15	5	165	3.75	1.53	9	20.25	44	
6412	28836 (R)	75	68	61	12.1	A	5.92	1.81	3.27	3	135	3.75	1.52	9	21.75	40	LB
6413	28835 (R)	80	68	64	12.8	VOC	5.24	2.14	2.44	3	155	3.75	1.71	9	18.3	57	SB
6414	29024 (R)	81	74	69	12.1	A	5.77	2.17	2.65	3	125	3.75	1.55	9	19.2	51	SB
6415	MTU 1010 (check)	83	73	70	12.4	A	5.9	1.74	3.39	3	105	3.75	1.52	9	20.32	42	
6416	Anjali (RP)	74	66	66	12.7	VOC	5.17	2.29	2.25	3	105	3.75	1.74	9	20.92	41	
6417	30439	78	65	63	12.3	A	5.85	1.72	3.4	3	155	4	1.7	10	20.85	42	SB
6418	30302	79	61	59	12.8	A	5.48	1.46	3.75	3	125	3.75	1.64	9	18.15	56	MS
6419	WGL 14 (RP)	80	72	69	12.4	A	4.58	1.56	2.93	5	65		1.74	8	21.3	41	
6420	30301																MS
6421	Krishna Hamsa (RP)	82	74	70	12.8	VOC	5.7	1.6	3.56	3	170	3.75	1.57	9	22.02	40	
6422	30440	81	74	68	12.4	VOC	5.67	2.16	2.62	7	215	3.75	1.41	8	19.87	53	MS
6423	30287	71	62	59	12.3	A	5.7	1.54	3.65	7	145	4	1.75	10	18.06	58	LS
6424	Varalu (RP)	77	68	62	12.1	VOC	5.7	1.84	3.54	7	160	3.75	1.56	9	22.27	39	
6425	30288	73	65	68	12	A	6.3	2.5	4.9	4	100	4	1.26	8	22.05	39	LS
6426	30441	80	74	65	12.8	VOC	5.72	2.8	3.1	7	165	3.75	1.57	9	21.06	40	MS
6427	SahbhagiDhan (Check)	81	75	75	12.5	A	5.82	1.91	2.83	7	125	3.75	1.54	9	21.07	40	

PROGRESS REPORT

KHARIF 2021

VARIETAL IMPROVEMENT

AICRIP

BASMATI TRIALS

ICAR-IARI, NEW DELHI

ADVANCE VARIETY TRIAL– BASMATI (AVT-BT)**Locations: 12****Test Entries: 12**

Checks and Recurrent Parents: Pusa Basmati 1 (YC & RP), Pusa Basmati1121 (YC, QC & RP), Taraori Basmati(QC), Pusa RH 10 (HC), Local Check (LC),Pusa Basmati 6 (RP) and Pusa Basmati 1509(RP)

Table:14.1

Advance Variety Trials-Basmati (AVT-BT) was constituted of 12 entries including seven varietal test entries, one hybrid entry, five checks namely, Pusa Basmati1 (Yield Check), Pusa Basmati 1121 (Yield and Quality Check), Taraori Basmati (Quality Check), Pusa RH10 (Hybrid Check) and one local check, and two near isogenic lines for trait verification. Out of 12 test entries tested in breeding trials, five entries namely, IET28589 (PAU 5089-3-7-2-1-1-2), IET28583 (UPR 4088-1-1-1), IET28577 (UPR 4079-10-1-1-1) and IET28586 (UPR 4084-14-1-1-1); and IET28579 (TAJ) are in 3rd year of testing (AVT2-BT); 2 entries including IET28938 (UPR 4259-9-1-1-2) promoted from IVT-BT and IET28572 (CSR162-11-917) repeated in AVT1-BT are in second year of testing (AVT1-BT), while the remaining five entries are checks and recurrent parents. Additionally, two near-isogenic lines (NILs) of Pusa Basmati 1 namely, IET28787 (Pusa 1882-12-111-20) and IET28788 (Pusa 1882-12-111-7) possessing a QTL, *qDTY1.1* governing reproductive stage drought stress tolerance was tested for trait verification under rain out shelter in the Drt-NILs trial. Trial was conducted at 12 locations in the Basmati GI area. Out of 12 test locations, the data from ten locations namely, New Delhi, Pantnagar, Ludhiana, Rauni, Gurdaspur, Kapurthala, Kaul, Karnal, Modipuram (BEDF), and Chatha was considered for analysis, while the data from two locations namely Modipuram (SVBPUAT) and Nagina were not considered for analysis due to low CV of 3.7% and 4.2%, respectively.

Experimental mean of the locations ranged from 4006 kg/ha at Kapurthala to 6023kg/ha at Modipuram (BEDF) while CV ranged from 3.7 % at Modipuram (SVBPUAT) to 16.5 % at Pant Nagar. Days to 50% flowering ranged from 96 days (IET 28583 and Pusa RH10) to 112 days (IET 28589 and Taraori Basmati). Plant height of the entries ranged from 107 cm (Pusa RH 10) to 138 cm (Taraori Basmati) while panicles per sq.m. ranged from 243 (Taraori Basmati) to 284 (PB 1121). Among the checks, hybrid check Pusa RH 10 registered 4953 kg/ha with 6th rank based on overall mean. The data on yield, days to 50% flowering, plant height, number of panicles/m², quality and panel test are presented in 14.2, 14.3, 14.4, 14.5, 14.6 to 14.10 and 14.11 to 14.12, respectively. The details of best performing entries are elaborated below.

Performance of entries in AVT2-BT during third year of testing (AVT2-BT)

Out of five test entries in AVT2-BT, all five varietal test entries namely IET28579, IET28577, IET28586, IET28583, and IET28589 showed superior yield performance over best varietal check and the hybrid IET 28579 was superior over both the best varietal as well as hybrid check.

On overall mean basis, the hybrid entry, IET28579 (TAJ) from the cross F501/F510R recorded an overall mean yield of 5607 Kg/ ha. It was found to have a yield advantage of 24.0% over the best varietal check Pusa Basmati 1121 and 13.2% over the hybrid check, Pusa

RH10. Quality wise, the hybrid recorded low elongation ratio (1.57), and ranked 11th at ICAR-IARI, New Delhi and 7th at BEDF, Modipuram in the panel tests. **Due to low elongation ratio and poor ranking in panel tests, IET 28579 is discontinued.**

The entry IE 28577 (UPR 4079-10-1-1-1) derived from the cross Sugandhamati/PantSugandh Dhan 15 recorded an overall yield of 5088 Kg/ ha. It showed an yield advantage of 11% over the best varietal check, Pusa Basmati 1121 on overall mean basis. Although, it recorded acceptable KLAC (12.61 mm), but a low elongation ratio of 1.60 and ranked 9th at ICAR-IARI, New Delhi and 8th at BEDF, Modipuram in the panel tests. **Due to low elongation ratio and poor ranking in panel tests, IET 28577 is discontinued.**

The entry IET28586(UPR 4084-14-1-1-1) derived from the cross Sugandhamati/Type 3 recorded an overall yield of 4989 Kg/ ha. It showed an yield advantage of 11% over the best varietal check, Pusa Basmati 1121 on overall mean basis. It, however, showed **variation in flowering**. It recorded acceptable KLAC (13.07 mm), but recorded a elongation ratio of 1.66 and ranked 10th at ICAR-IARI, New Delhi and 9th at BEDF, Modipuram in the panel tests. Based on the three years of testing, **IET 28586 is discontinued due to variation in flowering, and the poor ranking in the panel test.**

The entry IET28583 (UPR 4088-1-1-1), derived from the cross Pant Sugandh Dhan 15/ Taraori Basmati recorded an overall yield of 4882 Kg/ ha. Although, it showed an yield advantage of 8 % over the best varietal check, Pusa Basmati 1121 on overall mean basis, it showed **variation in flowering**. Although, it recorded acceptable KLAC (13.27 mm), but with a low elongation ratio of 1.63. **Due to variation in flowering, low elongation ratio and poor ranking in panel tests, IET 28577 is discontinued.**

The entry IET28589 (PAU 5089-3-7-2-1-1-2), derived from the cross Pusa Basmati 1121/PAU3429-6-3-4-2 recorded an overall yield of 4808 Kg/ ha. It showed an yield advantage of 7 % over the best varietal check, Pusa Basmati 1121 on overall mean basis. It recorded acceptable KLAC (13.98 mm), an elongation ratio of 1.66 and ranked 4th at ICAR-IARI, New Delhi and 1st at BEDF, Modipuram in the panel tests. Based on the three years of testing, **IET 28589 is found promising.**

Near Isogenic Lines for drought tolerance

The two NIL entries in the genetic background of Pusa Basmati 1 namely, IET28787 and IET28788 derived from the cross Pusa Basmati 1/N22//Pusa Basmati 1*3 and possesses drought tolerant QTL *qDTY 1.1* governing reproductive stage drought tolerance. In the yield trials under regular Basmati trial in the previous two years, the NIL entries, IET28787, IET 28788 was found to show 4.46% and 9.16% superiority over the recurrent parent under normal irrigated transplanted condition. They were repeated for trait verification under rainout shelters for drought during *Kharif* 2021.

The entry, IET 28787 was found to be 4.46% superior over the recurrent parent under normal irrigated transplanted condition. Over two years, it has shown a superiority of 5.07% (2019) and 4.46% (2020) with an average of 4.75% superiority over the recurrent parent under irrigated trial in Basmati locations. For trait drought stress, it had recorded 308.5% and 61.3% superiority over recurrent parent during 2019 and 2021. The grain and cooking quality parameters were similar to the recurrent parent. Considering the fact that the NIL performed at par under normal irrigated condition (4.75% superiority over the RP) and showed

significant superiority of 94.1% over the recurrent parent for reproductive stage drought stress under rainout shelter based on two years of testing, the trait is verified. Therefore, the NIL entry **IET 28787, the drought tolerant NIL of Pusa Basmati 1, is found promising.**

The entry, IET 28788 was found to be 9.16% superior over the recurrent parent under normal irrigated transplanted condition. Over two years, it has shown a superiority of 11.43% (2019) and 9.16% (2020) with an average of 10.26% superiority over the recurrent parent under irrigated trial in Basmati locations. For trait drought stress, it had recorded 280.0% and 74.2 % superiority over recurrent parent during 2019 and 2021. The grain and cooking quality parameters were similar to the recurrent parent. Considering the fact that the NIL performed at par under normal irrigated condition (10.26% superior over the RP), and showed significant superiority of 101.5% over the recurrent parent for reproductive stage drought stress under rainout shelter based on two years of testing, the trait is verified. Therefore, the NIL entry **IET 28788, the drought tolerant NIL of Pusa Basmati 1 is found promising.**

Performance of entries in AVT1-BT during second year of testing

Out of 2 test entries in AVT1-BT, both the varietal test entries namely IET28938 and IET28572 (R) showed superior yield performance over best varietal check.

The entry, IET28572 (CSR162-11-917) derived from the cross CSR30/FL478 recorded an overall mean yield of 4986 kg/ha. It showed a yield advantage of 11% over the best varietal check, Pusa Basmati 1121. Even though, it recorded a KLAC (12.05 mm), it recorded a low elongation ratio (1.60) and was ranked 8th at ICAR-IARI, New Delhi and 12th at BEDF, Modipuram. **Based on poor elongation ratio and poor ranking in panel tests, the entry IET 28572 does not qualify for promotion to next year of testing.**

The entry, IET28938 (UPR 4259-9-1-1-2) derived from the cross, UPR3506-15-1-1/Sharbati recorded an average yield of 5105 kg/ha. Although it showed a yield advantage of 13% over the best varietal check, Pusa Basmati 1121 on overall mean basis, **it showed variation for both flowering and grain type.** Although, it recorded low KLAC (11.22 mm), low elongation ratio (1.56) and in the panel tests, ranked 7th at ICAR-IARI, New Delhi and 11th at BEDF, Modipuram. **Therefore, based on low KLAC, low elongation ratio, variation for flowering and grain type, the entry IET 28938 does not qualify for promotion to next year of testing.**

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Table No. 14.1: Composition of entries in Advance Variety Trials-Basmati (AVT-BT),Kharif 2021

Entry No.	IET No.	Designation	Cross combination	Grain Type
1901	28583	UPR 4088-1-1-1	Pant SugandhDhan-15/Taraori Basmati	LS
1902	28579	TAJ (Hybrid)	F501/510R	LS
1903	Pusa Basmati 1121(Y & QC, RP)			
1904	28586	UPR 4084-14-1-1-1	Sugandhmati-5/Type-3	LS
1905	28589	PAU 5089-3-7-2-1-1-2	Pusa Basmati 1121/PAU3429-6-3-4-2	LS
1906	Pusa Basmati1(Yield check)			
1907	28577	UPR 4079-10-1-1-1	Sugandhmati/Pant SugandhDhan15	LS
1908	Pusa RH-10 (Hybrid check)			
1909	28572	CSR162-11-917	CSR30/FL478	LS
1910	Taraori Basmati (QC)			
1911	28938	UPR 4259-9-1-1-2	UPR3506-15-1-1/Sharbati	LS
1912	Local check			
For trait verification				
1826 (R)	28788	Pusa 1882-12-111-20	PB1*3/N22	LS
1827 (R)	28787	Pusa 1882-12-111-7	PB1*3/N22	LS

Table 14.2: Grain Yield of entries in AVT-BT, Kharif 2021

Entry No.	IET No.	ND		UK		PUN (4)					
		IARI		PANT		LDH		RUN		GDP	
1901	28583	5860	5	5314	7	3883	10	3659	11	4114	10
1902	28579	6092	3	6270	1 (*9.4%) (#11.8%)	5035	1 (*7 %) (#35.4%)	4638	1(#19.7%)	5448	1 (*20.4%) (#27.9%)
1903	PB1121	5303	9	4502	11	4435	6	4001	6	4077	11
1904	28586	5782	7	5520	5	4649	5	4411	4	4346	6
1905	28589	4988	10	5186	8	5019	2 (*6.7%)	4453	3	4392	5
1906	PB1	4487	11	4786	9	4246	7	3790	9	4524	2
1907	28577	5616	8	5436	6	4923	3	4232	5	4460	3
1908	PRH10	6321	3	5608	4	3720	11	3876	8	4261	9
1909	28572	6383	1 (*9.3%)	4625	10	4191	8	3959	7	4288	8
1910	Taraori Basmati	1830	12	1182	12	3305	12	3220	12	3183	12
1911	28938	6062	4	5932	2	3930	9	3787	10	4291	7
1912	LC	5838	6	5733	3	4704	4	4571	2	4460	4
Exp. Mean		5380		5008		4337		4050		4320	
F value		30.4**		7.9**		7.6**		7.9**		9.2**	
CD		662		1398		591		442		484	
CV (%)		7.3		16.5		8.0		6.4		6.6	
Sowing Date		12-Jun		14-Jun		14-Jun		23-Jun		26-Jun	
Planting Date		07-Jul		10-Jul		14-Jul		24-Jul		26-Jul	
Local Check		Pusa Basmati 1692		Pant Basmati 1		Punjab Basmati 7		Punjab Basmati 7		Punjab Basmati 7	

* % Superior over best check, # % superior over hybrid check, @ not included in means; (**P<0.01)

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Table 14.2 Contd.: Grain Yield of entries in AVT-BT, Kharif 2021

Entry No.	IET No.	PUN		PUN (4)		HR				HR (2)	
		KPT		Mean		KUL		KAR		Mean	
1901	28583	3829	9	3871	11	5183	2	4993	10	5088	4
1902	28579	4484	1 (#21.4%)	4901	1 (*18.9%) (#26.1%)	5865	1 (*18.1%) (#20.8%)	5763	3 (*7.1%) (#12.0%)	5814	1 (*19.0%) (#16.3%)
1903	PB1121	3908	8	4105	8	4392	8	5380	6	4886	7
1904	28586	4078	6	4371	5 (*6.1%)	4501	7	5220	8	4860	8
1905	28589	4411	2	4569	2 (*10.9%)	3846	10	5630	4	4738	9
1906	PB1	3922	7	4121	7	3819	11	5290	7	4554	10
1907	28577	4146	5	4440	4 (*7.7%)	4337	9	5560	5	4949	6
1908	PRH10	3694	11	3887	10	4855	5	5147	9	5001	5
1909	28572	4151	4	4147	6	4692	6	6220	1 (*15.6%)	5456	2 (*11.7%)
1910	Taraori Basmati	3337	12	3261	12	3246	12	3147	12	3196	12
1911	28938	3768	10	3944	9	4910	4	5770	2 (*7.2%)	5340	3 (*9.3%)
1912	LC	4341	3	4519	3	4965	3	3380	11	4172	11
Exp. Mean		4006				4551		5125		5449	
F value		4.6**				17.4**		5.9**			
CD		453				490		1125			
CV(%)		6.7				6.4		13.0			
Sowing Date		23-Jun				10-Jun		08-Jun			
Planting Date		24-Jul				13-Jul		08-Jul			
Local Check		Punjab Basmati 7				Haryana Basmati 2		CSR 30			

* % Superior over best check, # % superior over hybrid check, @ not included in means; (**P<0.01)

Table No. 14.2 Contd.: Grain Yield of entries in AVT BT, Kharif 2021

Entry No.	IET No.	UP (3)				UP (1)		JK(1)		Overall (10)	
		MDP (BEDF)		@MDP	@NGN	Mean		CHT			
1901	28583	6522	6 (*6.1%)	4416	2924	6522	6 (*6.1%)	5467	1 (*15.5%)	4882	8 (*8.0%)
1902	28579	7476	1 (*21.7%) (#5.0%)	5173	6072	7476	1 (*21.7%) (#5.0%)	5000	4 (*5.6%)	5607	1 (*24.0%) (#13.2%)
1903	PB1121	5126	10	4973	4389	5126	10	3933	10	4506	10
1904	28586	6785	5 (*10.4%)	4378	5175	6785	5 (*10.4%)	4600	8	4989	4 (*11.0%)
1905	28589	5482	9	4283	5363	5482	9	4667	7	4808	9 (*7.0%)
1906	PB1	4272	11	4614	3969	4272	11	3933	11	4307	11
1907	28577	6906	4 (*12.4%)	4409	4449	6906	4 (*12.4%)	4467	9	5008	3 (*11.0%)
1908	PRH10	7120	3 (*15.9%)	4667	4869	7120	3 (*15.9%)	4933	5	4953	6 (*10.0%)
1909	28572	6216	7	5071	4078	6216	7	5133	3 (*8.5%)	4986	5 (*11.0%)
1910	Taraori Basmati	2962	12	1803	2750	2962	12	3267	12	2868	12
1911	28938	7262	2 (*18.2%)	4468	3530	7262	2 (*18.2%)	5333	2 (*12.7%)	5105	2 (*13.0%)
1912	LC	6145	8	4399	3803	6145	8	4733	6	4887	7 (*8.0%)
Exp. Mean		6023		4388	4281			4622		4742	
F value		33.5**		87.4**	89.9**			6.6**		12.4**	
CD		684		272	303			731		533	
CV (%)		6.7		3.7	4.2			9.4		10	
Sowing Date		17-Jun		21-Jun	25-Jun			18-Jun			
Planting Date		19-Jul		18-Jul	20-Jul			16-Jul			
Local Check		Pusa Basmati 1509		Vallabh Basmati 22	Pusa Basmati 1509			Jammu Basmati 129			

* % Superior over best check, # % superior over hybrid check, @ not included in means; (**P<0.01)

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Table No. 14: Days to 50% flowering (DFF) of entries in AVT-BT during Kharif 2021

Entry No.	IET No.	ND	UK	PUN				PUN (4)
		IARI	PANT	LDH	RUN	GDP	KPT	Mean
1901	28583	93	89	100	93	94	100	97
1902	28579	93	90	98	95	95	101	97
1903	PB1121 (Y&QC)	116	108	111	105	105	111	108
1904	28586	98	90	102	95	94	102	98
1905	28589	117	108	115	110	110	114	112
1906	PB1 (YC)	108	106	113	107	108	114	111
1907	28577	94	89	100	94	96	101	98
1908	PRH10 (HC)	91	89	100	96	96	102	99
1909	28572	108	102	101	101	102	105	102
1910	Taraori Basmati (QC)	119	112	112	107	113	112	111
1911	28938	98	88	102	97	96	104	100
1912	LC	94	102	102	99	101	101	101
Exp. Mean		102	98	105	100	101	106	103
F value		0	253.5**	59.2**	61.5**	851.6**	45**	
CD (0.05)		0	1.74	2.38	2.22	0.69	2.42	
CV (%)		0	1.1	1.3	1.30	0.40	1.40	
Sowing Date		12-Jun	14-Jun	14-Jun	23-Jun	26-Jun	23-Jun	
Planting Date		07-Jul	10-Jul	14-Jul	24-Jul	26-Jul	24-Jul	
Local Check		Pusa Basmati 1692	Pant Basmati 1	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	

(**P<0.01 and *P<0.05)

Table No. 14.3 Contd.: Days to 50% flowering (DFF) of entries in AVT-BT during Kharif 2021

Entry No.	IET No.	HR		HR (2)	UP			UP (3)	JK	Overall
		KAR	KUL	Mean	MDP (BDF)	MDP (SB)	NGN	Mean	CHT	
1901	28583	107	92	99	92	108	96	99	94	96
1902	28579	103	91	97	92	120	91	101	98	97
1903	PB1121 (Y&QC)	112	109	111	107	120	108	112	104	110
1904	28586	104	93	98	93	118	95	102	96	98
1905	28589	117	112	115	107	119	107	111	104	112
1906	PB1 (YC)	117	112	114	106	100	107	104	104	109
1907	28577	106	93	100	93	109	96	99	94	97
1908	PRH10 (HC)	105	90	98	93	108	91	97	93	96
1909	28572	119	104	112	104	118	109	110	103	106
1910	Taraori Basmati (QC)	113	112	113	108	120	112	113	106	112
1911	28938	106	93	99	92	108	91	97	94	97
1912	LC	115	108	111	89	118	93	100	93	101
Exp. Mean		102	110	101	90	98	114	100	98	
F value		0	34**	782.6**		157**	155.1**	828**	300.6**	
CD (0.05)		0	2.91	1.00		1.76	1.61	0.83	0.86	
CV (%)		0	1.60	0.60		1.10	0.80	0.50	0.50	
Sowing Date		12-Jun	08-Jun	10-Jun		17-Jun	21-Jun	25-Jun	18-Jun	
Planting Date		07-Jul	08-Jul	13-Jul		19-Jul	18-Jul	20-Jul	16-Jul	
Local Check		Pusa Basmati 1509	CSR 30	Haryana Basmati 2		Pusa Basmati 1509	Vallabh Basmati 22	Pusa Basmati 1509	Jammu Basmati 129	

(**P<0.01 and *P<0.05)

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Table No.14.4: Plant height (cm) of entries in AVT-BT during Kharif 2021

Entry No.	IET No.	ND	UK	PUN				PUN (4)
		IARI	PANT	LDH	RUN	GDP	KPT	Mean
1901	28583	130	112	115	106	118	104	111
1902	28579	142	128	127	118	132	116	123
1903	PB1121	137	130	122	112	135	112	121
1904	28586	126	118	112	112	120	100	111
1905	28589	165	140	131	133	148	124	134
1906	PB1	131	121	109	101	120	103	108
1907	28577	130	112	109	106	113	102	108
1908	PRH10	123	100	104	104	115	101	106
1909	28572	134	120	117	112	119	101	112
1910	Taraori Basmati	167	146	154	137	159	135	146
1911	28938	131	101	115	110	124	109	114
1912	Local Check	115	123	113	110	117	113	113
	Exp. Mean	136	121	119	113	127	110	117

Table No. 14.4 Contd.: Plant height (cm) of entries in AVT-BT during Kharif 2021

Entry No.	IET No.	HR		HR (2)	UP			UP (3)	JK	Overall
		KAR	KUL	Mean	MDP (BDF)	MDP (SB)	NGN	Mean	CHT	
1901	28583	114	112	113	114	115	99	109	114	113
1902	28579	116	136	126	131	120	101	118	133	125
1903	PB1121	116	124	120	124	121	103	116	121	122
1904	28586	109	112	111	118	114	100	111	111	113
1905	28589	135	130	133	153	140	119	137	135	138
1906	PB1	103	111	107	116	110	89	105	114	111
1907	28577	113	117	115	120	117	97	111	115	113
1908	PRH10	105	108	107	115	105	94	105	112	107
1909	28572	114	115	114	121	126	105	117	122	117
1910	Taraori Basmati	147	133	140	154	146	130	143	144	146
1911	28938	117	123	120	127	125	97	116	114	116
1912	Local Check	125	126	125	109	110	86	101	119	114
	Exp. Mean	118	121	119	125	121	102	116	121	119

Table No. 14.5: Panicles/m² of entries in AVT-BT during Kharif 2021

Entry No.	IET No.	ND	UK	PUN				PUN (4)
		IARI	PANT	LDH	RUN	GDP	KPT	Mean
1901	28583	456	228	240	213	295	261	252
1902	28579	369	319	268	258	300	268	274
1903	PB1121	619	409	275	287	319	256	284
1904	28586	414	268	262	240	282	216	250
1905	28589	453	247	253	223	305	228	252
1906	PB1	644	227	240	267	307	257	267
1907	28577	331	297	260	230	295	235	255
1908	PRH10	342	287	302	240	310	241	273
1909	28572	320	280	218	223	305	229	244
1910	Taraori Basmati	537	414	259	231	262	220	243
1911	28938	422	302	286	262	297	219	266
1912	LC	465	420	304	305	308	304	305
	Exp. Mean	448	308	264	248	299	245	264
	F value	4.1**	37.6**	3.8**	3.4**	2.7*	3.1*	
	CD (0.05)	147.3	33.4	38.00	44.40	26.90	43.30	
	CV (%)	19.4	6.4	8.5	10.60	5.30	10.40	
	Sowing Date	12-Jun	14-Jun	14-Jun	23-Jun	26-Jun	23-Jun	
	Planting Date	07-Jul	10-Jul	14-Jul	24-Jul	26-Jul	24-Jul	
	Local Check	Pusa Basmati 1692	Pant Basmati 1	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	

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Table No. 14.5 Contd.: Panicles/m² of entries in AVT-BT during Kharif 2021

Entry No.	IET No.	HR		HR (2)	UP		UP (2)	JK	Overall
		KAR	KUL	Mean	MDP (BDF)	NGN	Mean	CHT	
1901	28583	403	234	318	294	263	278	311	291
1902	28579	490	290	390	268	266	267	302	309
1903	PB1121	445	357	401	373	292	333	301	358
1904	28586	425	298	361	254	280	267	306	295
1905	28589	485	344	414	250	259	254	295	304
1906	PB1	425	304	364	321	223	272	328	322
1907	28577	455	326	391	256	211	233	278	289
1908	PRH10	405	270	338	293	297	295	293	298
1909	28572	520	339	429	178	247	213	292	286
1910	Taraori Basmati	320	384	352	384	216	300	290	320
1911	28938	500	309	404	275	282	279	320	316
1912	LC	350	324	337	305	303	304	301	335
	Exp. Mean	435	315	90	288	262	275	301	310
	F value	114.5**	12.44**		11.1**	34.9**		1	1**
	CD (0.05)	16.50	33.40		48.90	15.70		38.10	40.70
	CV (%)	2.20	6.30		10.00	3.60		7.50	10.60
	Sowing Date	08-Jun	10-Jun		17-Jun	25-Jun		18-Jun	
	Planting Date	08-Jul	13-Jul		19-Jul	20-Jul		16-Jul	
	Local Check	CSR 30	Haryana Basmati 2		Pusa Basmati 1509	Pusa Basmati 1509		Jammu Basmati 129	

Table No. 14.6. Summary of the average grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT BT) conducted at ICAR-IARI, New Delhi and analyzed at four testing centres during Kharif 2021

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	VER
1901	28583	78.74	72.11	52.80	8.13	1.64	4.98	4.32
1902	28579	79.53	71.13	50.20	8.21	1.67	4.98	4.34
1903	PB1121	76.79	68.07	54.08	8.18	1.76	4.69	4.29
1904	28586	79.00	71.77	53.34	7.93	1.71	4.74	4.38
1905	28589	79.00	70.92	58.79	8.43	1.96	4.31	4.22
1906	PB1	78.41	70.47	54.21	7.34	1.62	4.57	4.41
1907	28577	79.66	72.71	52.50	7.89	1.69	4.70	4.54
1908	PRH10	82.04	74.19	55.98	7.50	1.75	4.30	4.54
1909	28572	77.42	70.16	49.15	7.48	1.89	3.99	4.26
1910	Taraori Basmati	79.10	71.60	56.07	7.21	1.67	4.36	4.54
1911	28938	80.16	72.17	54.28	7.23	1.69	4.34	4.31
1912	Local Check	77.48	69.90	49.83	8.49	1.80	4.80	4.22

Table No. 14.6. Contd.: Summary of the average grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT BT) conducted at ICAR-IARI, New Delhi and analyzed at four testing centres during Kharif 2021

Entry No.	IET No.	WU (ml)	KLAC (mm)	ER	ASV	AC (%)	GC
1901	28583	335.0	13.27	1.63	6.8	24.0	44.8
1902	28579	341.3	12.83	1.57	6.7	23.1	51.8
1903	PB1121	331.3	16.34	1.98	6.9	23.4	44.3
1904	28586	352.5	13.08	1.66	6.7	24.8	48.0
1905	28589	330.0	13.98	1.66	7.0	24.1	45.3
1906	PB1	353.8	13.36	1.82	7.0	23.7	50.0
1907	28577	343.8	12.62	1.60	6.9	23.6	45.0
1908	PRH10	367.5	12.06	1.63	6.3	21.0	46.0
1909	28572	321.3	12.06	1.60	7.0	25.0	46.5
1910	Taraori Basmati	217.5	11.97	1.66	5.3	23.9	42.8
1911	28938	347.5	11.22	1.56	6.5	23.6	65.5
1912	Local Check	323.8	14.72	1.73	6.6	23.4	52.3

HULL: Hulling(%) MILL: Milling(%) HRR: Head Rice Recovery KL: Kernel length (mm) KB: Kernel Breadth(mm) L/B : Length and Breadth(mm) Grain chalk: Grain Chalkiness VOC Very Occasionally Chalky OC: Occasionally Chalky P: Present A: Absent KLAC: Kernel length after cooking WU: Water uptake ER: Elongation ratio AC: Amylose content (%) ASV: Alkali Spreading Value AC: Amylose Content ELS: Extra Long Slender LS: Long Slender MS: Medium Slender SS: Strongly Scented MS: Mild Scented NS: Non Scented
Local Check: Pusa Basmati 1692

Table No.14.7. Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-IARI, New Delhi during Kharif 2021

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk	VER
1901	28583	80.91	74.71	49.62	7.87	1.53	5.13	ELS	Present	8.28
1902	28579	80.45	72.95	47.20	7.77	1.57	4.96	ELS	Present	8.55
1903	PB1121	79.55	72.65	54.89	7.88	1.68	4.68	ELS	VOC	9.00
1904	28586	81.36	74.85	56.14	7.68	1.58	4.85	ELS	VOC	8.78
1905	28589	81.36	75.13	64.82	8.17	1.75	4.67	ELS	Present	9.00
1906	PB1	80.45	74.02	54.98	7.23	1.45	4.99	LS	Present	9.00
1907	28577	81.36	75.13	53.70	7.30	1.55	4.71	LS	Present	8.78
1908	PRH10	82.50	75.08	53.35	6.93	1.60	4.33	LS	OC	8.78
1909	28572	80.45	74.29	45.59	7.08	1.72	4.13	LS	Present	8.55
1910	Taraori Basmati	81.82	75.00	55.64	6.58	1.58	4.16	LS	VOC	8.55
1911	28938	81.82	75.27	54.55	6.83	1.57	4.36	LS	VOC	5.66
1912	Local Check	80.91	74.44	50.97	8.47	1.67	5.08	ELS	Present	9.00

Table No. 14.7 Contd.: Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-IARI, New Delhi during Kharif 2021

Entry No.	IET No.	WU (ml)	KLAC (mm)	ER	ASV	AC (%)	Aroma
1901	28583	325	13.17	1.67	7.0	25.6	medium
1902	28579	327.5	13.00	1.67	6.5	23.1	medium
1903	PB1121	322.5	17.77	2.25	7.0	23.2	medium
1904	28586	330	13.43	1.75	7.0	25.1	medium
1905	28589	320	14.33	1.76	7.0	25.2	strong scented
1906	PB1	330	12.77	1.76	7.0	22.1	medium
1907	28577	292.5	11.90	1.63	7.0	22.2	mild
1908	PRH10	330	11.73	1.69	6.5	20.2	mild
1909	28572	287.5	11.87	1.68	7.0	25.7	mild
1910	Taraori Basmati	140	11.80	1.79	5.0	23.0	strong scented
1911	28938	330	10.47	1.53	6.0	24.7	mild
1912	Local Check	287.5	16.97	2.00	7.0	24.5	strong scented

HULL: Hulling(%) MILL: Milling(%) HRR: Head Rice Recovery KL: Kernel length (mm) KB: Kernel Breadth(mm) L/B : Length and Breadth(mm) Grain chalk: Grain Chalkiness VOC Very Occasionally Chalky OC: Occasionally Chalky P: Present A: Absent KLAC: Kernel length after cooking WU: Water uptake ER: Elongation ratio AC: Amylose content (%) ASV: Alkali Spreading Value AC: Amylose Content ELS: Extra Long Slender LS: Long Slender MS: Medium Slender SS: Strongly Scented MS: Mild Scented NS: Non Scented
Local Check: Pusa Basmati 1692

Table No.14.8. Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-IARR, Hyderabad Kharif 2021

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk
1901	28583	79.8	69.2	49.4	8.11	1.74	4.66	LS	VOC
1902	28579	82.7	72.4	49.9	8.35	1.80	4.63	LS	VOC
1903	PB1121	77.3	67.0	54.6	7.94	1.93	4.11	LS	VOC
1904	28586	79.7	69.9	51.9	8.08	1.82	4.39	LS	VOC
1905	28589	80.0	70.2	59.5	8.45	2.09	4.04	LS	VOC
1906	PB1	79.2	69.1	55.6	7.33	1.75	4.18	LS	VOC
1907	28577	79.9	69.0	47.9	7.97	1.82	4.37	LS	VOC
1908	PRH10	83.6	73.1	55.1	7.53	1.82	4.11	LS	VOC
1909	28572	79.4	69.3	54.0	7.37	1.98	3.72	LS	OC
1910	Taraori Basmati	80.7	70.7	58.1	7.21	1.79	4.02	LS	VOC
1911	28938	81.0	71.2	53.8	7.25	1.83	3.96	LS	VOC
1912	Local Check	78.9	69.5	48.4	8.51	2.01	4.23	LS	VOC

HULL: Hulling(%) MILL: Milling(%) HRR: Head Rice Recovery KL: Kernel length (mm) KB: Kernel Breadth(mm) L/B : Length and Breadth(mm) Grain chalk: Grain Chalkiness VOC Very Occasionally Chalky OC: Occasionally Chalky P: Present A: Absent KLAC: Kernel length after cooking WU: Water uptake ER: Elongation ratio AC: Amylose content (%) ASV: Alkali Spreading Value AC: Amylose Content ELS: Extra Long Slender LS: Long Slender MS: Medium Slender SS: Strongly Scented MS: Mild Scented NS: Non Scented
Local Check: Pusa Basmati 1692

Table No.14.9: Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-NRRI, Cuttack.

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	VER
1901	28583	77	70	59	8.06	1.47	5.48	ELS	4.00
1902	28579	78	67	55	8.19	1.42	5.77	ELS	3.75
1903	PB1121	75	62	56	8.13	1.48	5.49	ELS	4.00
1904	28586	77	67	54	7.89	1.52	5.19	ELS	3.75
1905	28589	77	62	55	7.89	1.81	4.36	ELS	3.75
1906	PB1	78	67	58	6.90	1.42	4.86	LS	4.00
1907	28577	79	71	56	8.08	1.49	5.42	ELS	4.00
1908	PRH10	81	70	58	7.86	1.67	4.71	ELS	4.00
1909	28572	74	64	48	7.39	1.72	4.30	LS	3.75
1910	Taraori Basmati	77	67	59	7.31	1.45	5.04	LS	4.00
1911	28938	79	66	54	7.19	1.41	5.10	LS	3.75
1912	Local Check	74	63	49	8.20	1.46	5.61	ELS	3.75

Table No. 14.9 Contd.: Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-NRRI, Cuttack.

Entry No.	IET No.	KLAC (mm)	ER	ASV	AC (%)	GC
1901	28583	13.0	1.61	7	21.37	47
1902	28579	12.0	1.46	7	20.91	51
1903	PB1121	14.0	1.72	7	21.82	48
1904	28586	12.0	1.52	6	24.10	47
1905	28589	12.0	1.52	7	21.90	48
1906	PB1	13.0	1.88	7	24.50	45
1907	28577	12.0	1.48	7	23.32	45
1908	PRH10	12.0	1.57	6	17.99	60
1909	28572	11.0	1.48	7	25.50	33
1910	Taraori Basmati	11.0	1.50	6	24.00	42
1911	28938	10.0	1.43	7	22.50	46
1912	Local Check	11.0	1.34	6	22.95	47

HULL: Hulling(%) MILL: Milling(%) HRR: Head Rice Recovery KL: Kernel length (mm) KB: Kernel Breadth(mm) L/B : Length and Breadth(mm) Grain chalk: Grain Chalkiness VOC Very Occasionally Chalky OC: Occasionally Chalky P: Present A: Absent KLAC: Kernel length after cooking WU: Water uptake ER: Elongation ratio AC: Amylose content (%) ASV: Alkali Spreading Value AC: Amylose Content ELS: Extra Long Slender LS: Long Slender MS: Medium Slender SS: Strongly Scented MS: Mild Scented NS: Non Scented Local Check: Pusa Basmati 1692

Table No. 14.10: Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT-BT) conducted at ICAR-IARI, New Delhi and analyzed at BEDF, Modipuram during Kharif 2020

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk
1901	28583	77.25	74.53	53.18	8.47	1.82	4.65	ELS	OC
1902	28579	76.95	72.15	48.71	8.53	1.87	4.56	ELS	VOC
1903	PB1121	75.31	70.61	50.82	8.75	1.96	4.46	ELS	VOC
1904	28586	77.94	75.33	51.30	8.07	1.90	4.51	ELS	VOC
1905	28589	77.63	76.36	55.82	9.19	2.20	4.18	ELS	VOC
1906	PB1	75.99	71.76	48.27	7.90	1.86	4.25	ELS	OC
1907	28577	78.36	75.72	52.38	8.20	1.91	4.29	ELS	OC
1908	PRH10	81.04	78.56	57.46	7.67	1.89	4.06	ELS	VOC
1909	28572	75.84	73.06	49.02	8.07	2.13	3.79	ELS	OC
1910	Taraori Basmati	76.88	73.70	51.52	7.72	1.84	4.20	ELS	VOC
1911	28938	78.81	76.22	54.76	7.65	1.95	3.92	ELS	VOC
1912	Local Check	76.11	72.67	50.93	8.79	2.06	4.27	ELS	VOC

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Table No. 14.10 Contd.: Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (AVT-BT) conducted at ICAR-IARI, New Delhi and analyzed at BEDF, Modipuram during Kharif 2020

Entry No	IET No.	VER	WU (ml)	KLAC (mm)	ER	ASV	AC (%)	GC	Aroma
1901	28583	4.63	345.0	13.65	1.61	6.5	24.92	42.5	Strong
1902	28579	4.93	355.0	13.50	1.58	6.67	25.15	52.5	Mild
1903	PB1121	4.57	340.0	17.25	1.97	6.75	25.11	40.5	Mild
1904	28586	5.00	375.0	13.80	1.71	7.00	25.15	49.0	Mild
1905	28589	4.69	340.0	15.60	1.70	7.00	25.30	42.5	Strong
1906	PB1	4.82	377.5	14.30	1.81	6.91	24.45	55.0	Mild
1907	28577	5.07	395.0	13.95	1.70	6.83	25.42	45.0	Mild
1908	PRH10	5.07	405.0	12.45	1.62	6.50	24.84	32.0	Mild
1909	28572	4.76	355.0	13.30	1.65	7.00	23.67	60.0	Strong
1910	Taraori Basmati	5.07	295.0	13.10	1.70	4.83	24.57	43.5	Strong
1911	28938	4.86	365.0	13.20	1.72	6.58	23.55	85.0	Mild
1912	Local Check	4.69	360.0	16.20	1.84	6.67	22.89	57.5	Mild

HULL: Hulling(%) MILL:Milling(%) HRR:Head Rice Recovery KL:Kernel length (mm) KB:Kernel Breadth(mm) L/B : Length and Breadth(mm) Grain chalk: Grain Chalkiness VOC Very Occasionally Chalky OC: Occasionally Chalky P: Present A: Absent KLAC:Kernel length after cooking WU:Water uptake ER:Elongation ratio AC:Amylose content (%)ASV:Alkali Spreading Value AC: Amylose Content ELS: Extra Long Slender LS: Long Slender MS: Medium Slender SS: Strongly Scented MS:Mild Scented NS: Non Scented
Local Check: Pusa Basmati 1692

Table No. 14.11: Panel Test Scores of entries in Advance Variety Trial 1- Basmati (AVT-BT) conducted at ICAR-IARI, New Delhi during Kharif 2021

Entry No	IET No.	Appearance	Cohesiveness	Tenderness on Touching	Tenderness on Chewing	Taste	Aroma	Elongation	Overall Acceptability	Total	Mean	Rank
1901	28583	5.00	4.50	4.50	4.50	3.50	1.75	3.00	2.75	29.50	3.69	6
1902	28579	5.00	3.75	3.50	3.50	2.50	1.75	2.50	2.25	24.75	3.09	11
1903	PB1121	5.00	5.00	5.00	4.75	4.00	2.25	4.25	4.00	34.25	4.28	3
1904	28586	5.00	3.00	4.50	3.75	2.75	2.25	2.50	2.00	25.75	3.22	10
1905	28589	4.25	4.50	4.50	4.25	3.25	2.50	3.75	3.25	30.25	3.78	4
1906	PB1	5.00	5.00	4.75	4.75	3.75	2.50	4.75	4.00	34.50	4.31	2
1907	28577	5.00	3.00	4.00	4.00	3.00	3.00	3.00	2.00	27.00	3.38	9
1908	PRH10	2.00	3.00	4.00	4.00	3.00	3.00	3.00	2.00	24.00	3.00	12
1909	28572	5.00	4.00	4.00	4.00	3.00	3.00	3.00	2.00	28.00	3.50	8
1910	Taraori Basmati	5.00	5.00	5.00	5.00	4.00	4.00	5.00	4.00	37.00	4.63	1
1911	28938	5.00	4.00	4.50	4.50	3.00	3.00	2.50	2.00	28.50	3.56	7
1912	Local Check	3.50	5.00	5.00	5.00	3.50	4.00	2.00	2.00	30.00	3.75	5
		4.0-4.9 Creamish White 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	3.0-3.9 Desirable 2.0-2.9 Tasteless	4 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9	3.0-3.9 Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable			

Local Check: Pusa Basmati 1692

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Table No. 14.11: Panel Test Scores of entries in Advance Variety Trial 1- Basmati (AVT-BT) conducted at BEDF, Modipuram during Kharif 2021

Entry No	IET No.	Appearance	Cohesiveness	Tenderness on Touching	Tenderness on Chewing	Taste	Aroma	Elongation	Overall Acceptability	Total	Mean	Rank
1901	28583	4.10	3.85	4.05	4.20	3.30	3.50	2.85	3.60	29.45	3.68	5
1902	28579	4.10	4.10	3.95	4.15	3.25	3.30	2.75	3.20	28.80	3.60	7
1903	PB1121	4.30	4.00	4.20	4.60	3.65	3.05	3.35	4.00	31.15	3.89	3
1904	28586	4.10	4.10	4.10	3.70	2.65	3.30	2.70	3.40	28.05	3.51	9
1905	28589	4.55	4.25	4.25	4.30	2.90	3.30	3.85	4.15	31.55	3.94	1
1906	PB1	4.30	4.20	4.20	4.25	2.60	2.70	3.15	3.85	29.25	3.66	6
1907	28577	4.15	3.80	3.75	4.15	2.90	3.30	2.75	3.35	28.15	3.52	8
1908	PRH10	4.30	3.65	3.80	4.70	2.60	2.70	2.60	3.45	27.80	3.48	10
1909	28572	3.95	3.40	3.50	4.10	3.40	3.50	2.55	3.45	27.85	3.48	12
1910	Taraori Basmati	4.35	4.30	4.25	4.35	3.30	3.25	3.35	4.30	31.45	3.93	2
1911	28938	4.00	3.95	3.90	4.05	2.80	2.80	2.50	3.85	27.85	3.48	11
1912	Local Check	4.25	4.00	4.00	4.10	3.20	2.70	3.25	3.95	29.45	3.68	4
		4.0-4.9 Creamish White 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	3.0-3.9 Desirable 2.0-2.9 Tasteless	4 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9	3.0-3.9 Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable			

Local Check: Pusa Basmati 1692

Table No. 14.12: Summary of yield performance of near isogenic lines under trait verification trials

S. No.	IET No	Recurrent Parent (RP) and QTLs	Year	Normal condition			Drought condition			Remarks
				RP yield (kg/ha)	NIL yield (kg/ha)	Per cent superiority	RP yield (kg/ha)	NIL yield (kg/ha)	Per cent superiority	
1	28787	Pusa Basmati 1 (<i>qDTY1.1</i>)	2019	4121	4330	5.1	130	531	308.5	TRAIT VERIFIED Performance of the NIL significantly superior (94.1%) to the recurrent parent: PROMISING
			2020	4377	4572	4.5	-	-	-	
			2021	-	-	-	850	1371	61.3	
			Mean	4249	4451	4.8	490	951	94.1	
2	28788	Pusa Basmati 1 (<i>qDTY1.1</i>)	2019	4121	4592	11.4	130	494	280.0	TRAIT VERIFIED; Performance of the NIL significantly superior (101.5%) to the recurrent parent: PROMISING
			2020	4377	4778	9.2	-	-	-	
			2021	-	-	-	850	1481	74.2	
			Mean	4249	4685	10.3	490	987.5	101.5	

RP, recurrent parent, Pusa Basmati 1

INITIAL VARIETY TRIAL–BASMATI (IVT-BT)**Locations: 12****Test Entries: 19****Checks: Pusa Basmati 1 (YC), Pusa Basmati 1121 (YC & QC), Table:14.13
Taraori Basmati (QC), Pusa RH 10 (HC) and Local
Check (LC)**

Initial Variety Trial – Basmati (IVT-BT) was constituted of 19 entries including one hybrid and five checks namely, Pusa Basmati-1 (Yield Check), Pusa Basmati 1121 (Yield & Quality Check), Taraori Basmati (Quality Check), Pusa RH10 (Hybrid Check) and local check (Table 20.1). The trial was conducted at 12 typical locations within the Basmati GI area and data was received from all the centres. The data from Ludhiana, Rauni, Kapurtala and Gurdaspur was not considered for analysis due to low experimental mean (< 4 t/ha). Experimental mean of the locations ranged from 3285 kg/ha at Rauni to 5941 kg/ha at BEDF, Modipuram while CV ranged from 5.1 % at Modipuram (SVBPUAT) to 16.6 % at Pant Nagar. Days to 50% flowering ranged from 86 days (IET29671) to 112 days (Taraori Basmati). Plant height of the entries ranged from 98 cm (IET 29675) to 142 cm (Taraori Basmati) while panicles per sq. m. ranged from 293 (IET29680) to 370 (PB 1121). The data on yield, days to 50% flowering, plant height, number of panicles/m², quality and panel test are presented in 14.14, 14.15, 14.16, 14.17, 14.18 to 14.21 and 14.22 to 14.23 respectively.

Among the checks, hybrid check, Pusa RH 10 registered 5129 kg/ha with 4th rank based on overall mean. Out of 14 test entries, only three varietal entries (IET29677 and IET29684) out yielded the best varietal check with required yield advantage based on mean yield of the checks + 5% CD. One hybrid entry, IET29680 out yielded over the best varietal check (PB 1121) as well as the hybrid check based on mean yield of the checks + 5% CD. The details of best performing top three entries in the trial are elaborated below:

IET29680 (NPH – BX 4), a hybrid entry from the cross, NPS 2011A/NPS 4127 recorded 1st rank and was found to be significantly superior over the best varietal check (PB 1121) as well as the hybrid check based on mean yield of the checks + 5% CD with an overall mean yield of 6116 kg/ha. However, the entry **showed poor KLAC (11.34 mm) and low elongation ratio (1.49). Therefore this entry did not qualify for next year of testing.**

IET29684 (CSR CPB 55-2), a varietal entry from the cross, CSR 89IR 15/Pusa Basmati 1 recorded 2nd rank and was found to be significantly superior over the best varietal check, PB 1121 based on mean yield of the checks + 5% CD with an overall mean yield of 5416 kg/ha. However, the entry **showed variation for grain type and low elongation ratio (1.58). Therefore this entry did not qualify for next year of testing.**

IET29677 (Basmati 370 MT 7), a mutant of Basmati 370 recorded 3rd rank (5214 kg/ha) and was found to be significantly superior over the best varietal check, PB 1121 based on mean yield of the checks + 5% CD. However, **this entry showed variation for grain type, poor KLAC (11.34 mm), and low elongation ratio (1.56). Therefore, the entry did not qualify for next year of testing.**

Based on both yield and Basmati grain quality, none of the entries qualified for promotion from IVT-BT to AVT1-BT.

Table 14.13: Composition of entries in Initial Variety Trial –Basmati (IVT-BT), Kharif 2021

Entry No.	IET No.	Designation	Cross combination	Grain Type
2001	29671	CSR PET 6	CSR 30/CSR 36	
2002	29672	PAU 7555-1655-1-1-B	Bas386/IET17984/Bas386* ² //Pusa Basmati 1121	ELS
2003	29673	Pusa 1557-06-8-173-88-2	Pusa 1463/ Pusa 1460	ELS
2004	29674	HKR16-459	PB 1/Taraori Basmati	LS
2005	Pusa Basmati 1121 (Y & QC)			
2006	29675	UPR3488-6-2-1	UPR1840-31-1-1/Pusa Sugandh 2	LS
2007	29676	CSR PET 7	CSR30/CSR36	
2008	29677	Basmati 370 MT 7	Mutant of Basmati 370	LS
2009	Pusa Basmati1 (Yield check)			
2010	29678	Pusa 1959-14-5-7-3-2-1-2	Punjab Basmati 3/Vallabh Basmati 22	ELS
2011	29679	CSR PET 25	CSR30/CSR36	
2012	29680	NPH – BX 4	NPS 2011 A x NPS 4127	
2013	Pusa RH-10 (Hybrid check)			
2014	29681	HKR17-424	HKR98-476/CSR30	LS
2015	29682	CSR YET 75	CSR 30/CSR 23	
2016	Taraori Basmati (QC)			
2017	29683	PAU 7145-44-3-1	Pusa Basmati 1509/Pusa 1568-5-6-4-153	ELS
2018	29684	CSR CPB 55-2	CSR 89IR 15/Pusa Basmati 1	
2019	Local check			

Table No. 14.14: Grain yield (kg/ha) of entries in IVT-BT during Kharif 2021

Entry No.	IET No.	ND		UK		PUN (4)			
		IARI		PANT		@ LDH	@ RUN	@GDP	@KPT
2001	29671	5046	12	4918	8	3416	2829	3916	3115
2002	29672	5068	11	3485	15	4649	4039	4279	3596
2003	29673	5494	4	3295	17	2861	2804	3709	3239
2004	29674	2481	18	2820	18	3238	2560	3866	3130
2005	PB1121	4435	16	3476	16	3685	3127	3728	3911
2006	29675	4839	13	5102	6	3959	4202	4316	3879
2007	29676	4818	14	3485	14	3250	2612	3545	2847
2008	29677	5735	3	5151	5	3557	3480	3811	3175
2009	PB1	3994	17	3921	13	3097	3233	3352	3824
2010	29678	5186	6	3954	12	2784	2683	3646	3433
2011	29679	5101	10	5065	7	3225	2872	3903	3135
2012	29680	6342	1	5775	1	4151	3587	4270	3452
2013	PRH10	6056	2	4401	10	3250	3163	4036	3170
2014	29681	5120	9	4046	11	3716	3509	4316	3948
2015	29682	5173	7	5160	4	3793	3559	4454	3730
2016	Taraori Basmati	1626	19	1538	19	3001	2698	3512	2656
2017	29683	4549	15	4913	9	4285	3722	4720	4256
2018	29684	5130	8	5381	3	3940	3624	3811	4251
2019	Local Check	5195	5	5655	2	4457	4112	4532	3919
Exp. Mean		4810		4292		3595	3285	3985	3509
F value		15.2**		4.8**		3*	8.2**	3.9**	2.8*
CD		852		1496		934	546	572	825
CV		8.4		16.6		12.4	7.9	6.8	11.2
Sowing Date		12-Jun		14-Jun		15-Jun	15-Jun	15-Jun	17-Jun
Planting Date		07-Jul		13-Jul		14-Jul	16-Jul	16-Jul	20-Jul
Local Check		Pusa Basmati 1692		Pant Basmati 1		Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7

* % Superior over best check, # % superior over hybrid check, @ not included in means; (**P<0.01)

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Table No. 14.14 Contd.: Grain Yield of entries in IVT-BT, Kharif 2021

Entry No.	IET No.	HR				HR (2)		UP (3)	
		KUL		KAR		Mean		MDP (BDF)	
2001	29671	4350	7	6400	1*	5375	3	6392	8
2002	29672	5500	4	4810	17	5155	7	5986	11
2003	29673	3600	14	5615	9	4608	12	5616	15
2004	29674	3400	15	5140	13	4270	16	4065	17
2005	PB1121	3050	18	5090	14	4070	18	5284	16
2006	29675	3350	16	6180	3	4765	10	6910	3
2007	29676	3950	9	6385	2*	5168	6	5801	14
2008	29677	4200	8	5215	11	4708	11	6725	5
2009	PB1	3750	12	5090	15	4420	14	3806	18
2010	29678	3850	10	6040	5	4945	8	5838	13
2011	29679	4500	6	6065	4	5283	5	6466	6
2012	29680	6100	1*, #	5815	7	5958	1	8018	1
2013	PRH10	3250	17	5065	16	4158	17	7279	2
2014	29681	3800	11	5910	6	4855	9	6318	9
2015	29682	3700	13	5500	10	4600	13	6910	4
2016	Taraori Basmati	2450	19	2650	19	2550	19	2771	19
2017	29683	5550	3	5185	12	5368	4	5949	12
2018	29684	5600	2	5685	8	5643	2	6429	7
2019	Local Check	5150	5	3670	18	4410	15	6318	10
Exp. Mean		4163			5343			5941	
F value		20.5**			6.28**			21.7**	
CD		654			1093			801	
CV		7.5			9.7			6.4	
Sowing Date		10-Jun			08-Jun			18-Jun	
Planting Date		13-Jul			08-Jul			18-Jul	
Local Check		Haryana Basmati 2			CSR 30			Pusa Basmati 1509	

* % Superior over best check, # % superior over hybrid check, @ not included in means; (**P<0.01)

Table No. 14.14 Contd.: Grain Yield of entries in IVT-BT, Kharif 2021

Entry No.	IET No.	UP (3)			UP (3)		JK(1)		Overall (10)		
		MDP (SB)		NGN	Mean		CHT		Mean	Rank	
2001	29671	3497	17	5020	6	4970	9	4100	14	4965	7
2002	29672	4328	12	4147	12	4821	14	4500	11	4728	13
2003	29673	4388	8	3359	15	4455	15	5500	1	4608	14
2004	29674	2523	18	3236	17	3275	18	3500	18	3396	18
2005	PB1121	4348	11	5065	5	4899	11	4700	10	4431	16
2006	29675	4904	1	3724	14	5179	5	4400	13	4926	9
2007	29676	4422	7	5299	3	5174	6	4000	15	4770	12
2008	29677	4638	3	4850	7	5404	4	5200	4	5214	3*
2009	PB1	4678	2	3333	16	3939	17	5000	7	4196	17
2010	29678	3989	15	3229	18	4352	16	3500	19	4448	15
2011	29679	4388	9	4414	9	5089	8	4500	12	5062	5
2012	29680	4555	5	6823	1*, #	6465	1	5500	2	6116	1*, #
2013	PRH10	4571	4	5260	4	5704	2	5150	6	5129	4
2014	29681	4239	14	4798	8	5118	7	5300	3	4941	8
2015	29682	3863	16	3893	13	4889	12	4000	16	4775	11
2016	Taraori Basmati	2244	19	2988	19	2668	19	3900	17	2521	19
2017	29683	4328	13	4199	10	4826	13	5200	5	4984	6
2018	29684	4475	6	5632	2*	5512	3	5000	8	5416	2*
2019	Local Check	4352	10	4167	11	4945	10	4800	9	4913	10
Exp. Mean		4144		4391				4618		4713	
F value		21.9**		31.7**				2.8*		9.95**	
CD		441		526				1140		670	
CV		5.1		5.7				11.8		9	
Sowing Date		21-Jun		25-Jun				18-Jun			
Planting Date		18-Jul		21-Jul				13-Jul			
Local Check		Vallabh Basmati 22		Pusa Basmati 1509				Jammu Basmati 129			

* % Superior over best check, # % superior over hybrid check, @ not included in means; (**P<0.01)

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Table No. 14.15: Days to 50% flowering (DFF) of entries in IVT-BT during Kharif 2021

Entry No.	IET No.	ND	UK	PUN				PUN (4)
		IARI	PANT	LDH	RUN	GDP	KPT	Mean
2001	29671	88	83	89	85	85	85	86
2002	29672	109	100	105	100	103	103	103
2003	29673	107	98	101	100	99	103	101
2004	29674	110	106	113	110	108	111	110
2005	PB1121	114	106	113	109	110	112	111
2006	29675	99	92	100	97	97	102	99
2007	29676	90	86	92	89	89	89	90
2008	29677	95	87	96	93	95	100	96
2009	PB1	114	108	109	107	110	113	109
2010	29678	97	89	98	94	94	98	96
2011	29679	97	91	97	94	95	100	96
2012	29680	93	89	97	95	92	95	95
2013	PRH10	93	89	98	96	93	96	96
2014	29681	98	91	99	97	96	95	97
2015	29682	101	96	98	98	101	102	100
2016	Taraori Basmati	119	109	115	111	115	113	113
2017	29683	109	102	107	105	104	103	105
2018	29684	102	98	103	101	103	108	104
2019	Local Check	93	102	105	98	103	102	102
	Exp. Mean	101	96	102	99	99	101	100
	F value	0	241.3**	45**	98.3**	580**	33.6**	
	CD (0.05)	0.003	1.56	3.20	2.07	0.97	1.32	
	CV (%)	0.001	0.8	1.5	1.00	0.50	1.80	
	Sowing Date	12-Jun	14-Jun	15-Jun	15-Jun	15-Jun	17-Jun	
	Planting Date	07-Jul	13-Jul	14-Jul	16-Jul	16-Jul	20-Jul	
	Local Check	Pusa Basmati 1692	Pant Basmati 1	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	

Table No. 14.15 Contd.: Days to 50% flowering (DFF) of entries in IVT-BT during Kharif 2021

Entry No.	IET No.	HR		HR (2)	UP			UP (3)	JK	Overall
		KUL	KAR	Mean	MDP (BDF)	MDP (SB)	NGN	Mean	CHT	Mean
2001	29671	84	91	88	85	95	86	89	81	86
2002	29672	105	112	109	102	101	104	102	103	104
2003	29673	100	101	101	99	98	103	100	104	101
2004	29674	110	116	113	103	101	106	103	104	108
2005	PB1121	108	112	110	106	101	109	105	103	108
2006	29675	98	105	102	97	94	105	99	96	98
2007	29676	85	92	88	86	95	91	91	88	89
2008	29677	93	102	98	92	94	92	93	91	94
2009	PB1	112	114	113	106	105	111	107	104	109
2010	29678	93	107	100	91	96	94	94	93	95
2011	29679	92	98	95	94	94	101	96	93	95
2012	29680	91	104	98	92	95	93	93	92	94
2013	PRH10	92	106	99	91	92	91	91	91	94
2014	29681	93	107	100	91	94	99	95	94	96
2015	29682	99	106	103	96	97	97	97	100	99
2016	Taraori Basmati	113	119	116	106	104	113	107	108	112
2017	29683	109	110	110	102	100	104	102	106	105
2018	29684	104	105	105	100	93	100	98	101	101
2019	Local Check	111	118	115	89	115	93	99	94	102
	Exp. Mean	100	107	90	96	98	99	98	97	100
	F value	679**	17.3**		52.6**	68.6**	603.9**		222.8**	
	CD (0.05)	1.06	5.60		2.77	1.91	0.91		1.42	2.50
	CV (%)	0.50	2.50		1.40	0.90	0.40		0.70	1.20
	Sowing Date	10-Jun	08-Jun		18-Jun	21-Jun	25-Jun		18-Jun	
	Planting Date	13-Jul	08-Jul		18-Jul	18-Jul	21-Jul		13-Jul	
	Local Check	Haryana Basmati 2	CSR 30		Pusa Basmati	Vallabh Basmati	Pusa Basmati		Jammu Basmati	

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Table No. 14.16: Plant height (cm) of entries in IVT-BT during Kharif 2021

Entry No.	IET No.	ND	UK	PUN				PUN (4)
		IARI	PANT	LDH	RUN	GDP	KPT	Mean
2001	29671	128	106	105	96	111	100	103
2002	29672	134	125	108	110	116	102	109
2003	29673	133	112	111	96	103	99	102
2004	29674	158	147	128	116	136	117	124
2005	PB1121	143	128	127	111	131	107	119
2006	29675	122	103	106	95	109	98	102
2007	29676	136	128	119	108	116	103	111
2008	29677	141	116	113	108	121	105	112
2009	PB1	137	121	107	96	122	96	105
2010	29678	133	99	116	102	117	100	108
2011	29679	132	114	113	105	113	106	109
2012	29680	141	130	129	114	123	107	118
2013	PRH10	124	110	113	95	110	101	105
2014	29681	125	118	112	99	113	99	106
2015	29682	128	105	112	116	120	99	112
2016	Taraori Basmati	172	132	152	133	156	131	143
2017	29683	143	117	115	106	118	110	112
2018	29684	133	113	114	100	117	106	109
2019	Local Check	118	128	116	110	115	111	113
Exp. Mean		135	117	119	109	121	108	114

Table No. 14.16 Contd.: Plant height (cm) of entries in IVT-BT during Kharif 2021

Entry No.	IET No.	HR		HR (2)	UP			UP (3)	JK	Overall
		KAR	KUL	Mean	MDP (BDF)	MDP (SB)	NGN	Mean	CHT	Mean
2001	29671	86	105	95	113	100	88	100	109	104
2002	29672	110	114	112	115	125	97	112	102	113
2003	29673	101	106	104	113	112	95	106	106	107
2004	29674	139	130	135	142	123	109	125	103	129
2005	PB1121	114	116	115	120	125	101	115	124	120
2006	29675	101	105	103	111	111	10	77	103	98
2007	29676	104	112	108	119	100	98	106	113	113
2008	29677	113	113	113	129	112	98	113	125	116
2009	PB1	101	103	102	115	120	109	115	103	111
2010	29678	106	121	114	117	117	92	109	116	111
2011	29679	107	120	114	117	112	99	109	93	111
2012	29680	104	118	111	130	113	105	116	127	120
2013	PRH10	104	106	105	111	120	99	110	112	109
2014	29681	110	111	111	116	100	95	104	93	108
2015	29682	103	117	110	117	104	98	106	112	111
2016	Taraori Basmati	142	142	142	154	132	118	135	136	142
2017	29683	107	114	111	118	139	98	119	115	117
2018	29684	104	120	112	113	114	95	107	110	112
2019	Local Check	120	115	117	112	100	86	99	123	113
Exp. Mean		113	118	115	120	116	98	111	115	116

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Table No. 14.17: Panicles/m² of entries in IVT-BT during Kharif 2021

Entry No.	IET No.	ND	UK	PUN				PUN (4)
		IARI	PANT	LDH	RUN	GDP	KPT	Mean
2001	29671	394	307	277	183	290	246	249
2002	29672	578	335	284	293	290	281	287
2003	29673	592	383	249	244	243	245	245
2004	29674	578	428	281	281	240	245	262
2005	PB1121	595	477	327	291	245	308	293
2006	29675	445	247	290	217	223	240	242
2007	29676	381	271	307	237	280	261	271
2008	29677	394	318	254	245	298	237	258
2009	PB1	571	356	304	276	305	267	288
2010	29678	445	305	254	204	285	245	247
2011	29679	343	270	248	225	315	211	250
2012	29680	360	300	234	231	295	212	243
2013	PRH10	388	324	248	209	283	206	236
2014	29681	473	474	244	213	230	246	233
2015	29682	490	346	271	196	205	228	225
2016	Taraori Basmati	646	429	269	308	303	279	290
2017	29683	418	328	292	263	300	256	278
2018	29684	517	464	277	253	258	300	272
2019	Local Check	456	340	274	301	302	275	288
Exp. Mean		477	353	273	246	273	252	261
F value		4.4**	58.3**	1	4.8**	2.6*	2.7*	
CD (0.05)		132	27.5	93.50	51.20	59.60	51.10	
CV (%)		13.2	3.7	16.3	9.90	10.40	9.70	
Sowing Date		12-Jun	14-Jun	15-Jun	15-Jun	15-Jun	17-Jun	
Planting Date		07-Jul	13-Jul	14-Jul	16-Jul	16-Jul	20-Jul	
Local Check		Pusa Basmati 1692	Pant Basmati 1	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	Punjab Basmati 7	

Table No. 14.17 Contd.: Panicles/m² of entries in IVT-BT during Kharif 2021

Entry No.	IET No.	HR		HR (2)	UP		UP (2)	JK	Overall Mean
		KAR	KUL	Mean	MDP (BDF)	NGN	Mean	CHT	
2001	29671	550	265	408	251	294	272	311	306
2002	29672	400	371	385	404	248	326	344	348
2003	29673	486	285	386	337	273	305	349	335
2004	29674	435	343	389	413	274	343	326	349
2005	PB1121	428	357	392	426	279	352	337	370
2006	29675	525	243	384	340	258	299	325	305
2007	29676	530	249	390	304	305	304	303	312
2008	29677	460	235	348	259	303	281	324	302
2009	PB1	425	316	371	328	280	304	316	340
2010	29678	485	220	352	305	286	295	297	303
2011	29679	515	253	384	262	320	291	318	298
2012	29680	465	269	367	259	267	263	326	293
2013	PRH10	456	278	367	264	301	283	329	299
2014	29681	500	370	435	266	295	280	328	331
2015	29682	494	262	378	276	267	271	317	305
2016	Taraori Basmati	300	372	336	361	314	337	406	362
2017	29683	475	407	441	295	272	283	340	331
2018	29684	495	337	416	338	297	318	297	348
2019	Local Check	320	303	311	323	263	293	317	316
Exp. Mean		460	302	381	316	284	300	327	324
F value		69**	18.8**		10.9**	7.2**		2	
CD (0.05)		23.00	38.30		49.30	21.90		48.30	39.80
CV (%)		2.40	6.00		7.40	3.70		7.00	9.20
Sowing Date		08-Jun	10-Jun		18-Jun	25-Jun		18-Jun	
Planting Date		08-Jul	13-Jul		18-Jul	21-Jul		13-Jul	
Local Check		CSR 30	Haryana Basmati 2		Pusa Basmati 1509	Pusa Basmati 1509		Jammu Basmati 129	

Table No. 14.18: Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (IVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-IARI, New Delhi during Kharif 2021

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk	VER	WU (ml)
2001	29671	80.45	70.80	40.50	7.82	1.65	4.74	ELS	VOC	5.50	372.5
2002	29672	80.91	74.17	55.29	7.63	1.70	4.49	ELS	OC	5.66	325
2003	29673	82.27	76.24	53.20	8.40	1.67	5.04	ELS	VOC	8.00	325
2004	29674	80.91	74.44	55.29	7.98	1.60	4.99	ELS	VOC	5.66	302.5
2005	PB1121	78.64	72.35	61.86	7.93	1.65	4.81	ELS	Present	5.66	345
2006	29675	80.45	74.55	53.90	7.35	1.65	4.45	LS	OC	9.00	345
2007	29676	80.45	73.75	43.98	7.23	1.65	4.38	LS	OC	8.55	220
2008	29677	80.91	73.90	57.18	7.10	1.73	4.10	LS	Present	5.33	320
2009	PB1	79.55	73.18	57.27	6.98	1.57	4.46	LS	Present	6.00	355
2010	29678	80.91	74.71	50.24	7.95	1.63	4.87	ELS	OC	7.85	390
2011	29679	80.45	74.29	54.44	7.75	1.65	4.70	ELS	OC	8.50	365
2012	29680	82.73	76.11	53.50	7.55	1.63	4.62	ELS	VOC	8.00	390
2013	PRH10	83.18	75.70	52.13	6.87	1.63	4.20	LS	VOC	8.50	430
2014	29681	81.82	75.82	57.55	7.78	1.62	4.81	ELS	VOC	8.25	340
2015	29682	79.09	71.45	45.35	7.97	1.50	5.31	ELS	VOC	8.50	422.5
2016	Taraori Basmati	80.45	74.55	59.54	7.12	1.67	4.27	LS	VOC	8.25	257.5
2017	29683	80.00	73.60	46.40	8.38	1.65	5.08	ELS	Present	5.60	417.5
2018	29684	80.45	74.02	61.15	7.38	1.57	4.71	LS	Present	5.60	365
2019	Local Check	80.00	73.60	50.13	8.53	1.67	5.12	ELS	Present	5.60	367.5

Table No. 14.18 Contd.: Summary of the grain quality characteristics of entries in Advanced Varietal Trial - Basmati (IVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-IARI, New Delhi during Kharif 2021

Entry No	IET No.	KLAC (mm)	ER	ASV	AC (%)	Aroma
2001	29671	11.33	1.45	7	23.4	absent
2002	29672	15.53	2.03	7	25.0	medium
2003	29673	15.97	1.90	5	20.3	medium
2004	29674	14.50	1.82	7	24.8	medium
2005	PB1121	16.13	2.03	7	24.9	medium
2006	29675	11.53	1.57	7	24.9	mild
2007	29676	11.43	1.58	2,3,7	23.7	Absent
2008	29677	11.07	1.56	6	23.6	Absent
2009	PB1	11.73	1.68	7	23.5	medium
2010	29678	14.33	1.80	7	24.3	medium
2011	29679	12.93	1.67	7	25.2	medium
2012	29680	12.13	1.61	7	24.9	medium
2013	PRH10	10.43	1.52	7	21.0	medium
2014	29681	12.57	1.61	7	23.3	medium
2015	29682	11.40	1.43	7	25.5	medium
2016	Taraori Basmati	12.37	1.74	5	23.8	SS
2017	29683	15.00	1.79	7	24.9	medium
2018	29684	11.90	1.61	7	24.2	medium
2019	Local Check	16.20	1.90	7	24.0	medium

Local Check: Pusa Basmati 1692

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Table No. 14.19: Summary of the grain quality characteristics of entries in Initial Varietal Trial - Basmati (IVT BT) conducted at ICAR-IARI, New Delhi and analyzed at BEDF, Modipuram during Kharif 2021

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk	VER	WU (ml)
2001	29671	76.77	66.37	52.63	8.42	1.89	4.46	ELS	VOC	5.14	375.0
2002	29672	75.97	69.56	53.97	8.68	2.03	4.28	ELS	VOC	4.69	310.0
2003	29673	80.04	77.15	52.56	9.49	1.98	4.79	ELS	VOC	4.93	320.0
2004	29674	76.34	69.19	48.78	8.10	1.93	4.20	ELS	VOC	4.32	320.0
2005	PB1121	76.42	67.46	51.90	8.66	1.99	4.35	ELS	VOC	4.93	345.0
2006	29675	76.53	70.94	51.17	8.13	1.88	4.32	ELS	OC	4.89	360.0
2007	29676	77.55	69.84	47.73	8.04	1.96	4.10	ELS	VOC	4.75	297.5
2008	29677	77.82	74.03	57.06	8.21	2.13	3.85	ELS	P	5.14	370.0
2009	PB1	76.61	71.86	52.11	7.90	1.82	4.34	ELS	VOC	5.22	390.0
2010	29678	76.49	70.12	50.81	8.75	1.90	4.61	ELS	VOC	4.38	392.5
2011	29679	78.12	73.83	51.36	8.55	1.90	4.50	ELS	OC	5.00	375.0
2012	29680	80.25	76.91	52.06	8.32	1.83	4.55	ELS	VOC	5.07	407.5
2013	PRH10	80.52	78.03	58.27	7.69	1.89	4.07	ELS	VOC	5.22	412.5
2014	29681	77.15	72.52	47.08	8.48	1.88	4.51	ELS	VOC	5.07	380.0
2015	29682	76.03	65.47	48.50	8.36	1.80	4.64	ELS	VOC	5.14	410.0
2016	Taraori Basmati	77.43	73.14	51.16	7.78	1.85	4.21	ELS	VOC	4.69	340.0
2017	29683	76.98	72.10	49.14	9.22	2.03	4.54	ELS	OC	4.96	415.0
2018	29684	76.14	70.05	53.19	8.01	1.91	4.19	ELS	VOC	4.50	385.0
2019	Local Check	76.43	70.10	48.61	8.99	2.01	4.47	ELS	OC	5.07	380.0

Table No. 14.19: Summary of the grain quality characteristics of entries in Initial Varietal Trial - Basmati (IVT BT) conducted at ICAR-IARI, New Delhi and analyzed at BEDF, Modipuram during Kharif 2021

Entry No	IET No.	KLAC (mm)	ER	ASV	AC (%)	GC	Aroma
2001	29671	12.75	1.51	6.59	24.18	58.5	Mild
2002	29672	15.15	1.75	7.00	24.50	57.0	Mild
2003	29673	16.65	1.75	6.00	21.68	60.0	Mild
2004	29674	14.50	1.79	6.08	23.95	53.8	Mild
2005	PB1121	17.10	1.97	7.00	24.42	44.0	Mild
2006	29675	13.30	1.64	7.00	24.14	57.8	Mild
2007	29676	12.30	1.53	2.83	23.87	55.0	Mild
2008	29677	12.95	1.58	6.00	22.78	35.0	Mild
2009	PB1	14.55	1.84	7.00	23.56	43.5	Mild
2010	29678	15.05	1.72	7.00	24.49	50.0	Mild
2011	29679	14.00	1.64	7.00	25.28	35.0	Mild
2012	29680	14.15	1.70	6.75	24.77	56.3	Mild
2013	PRH10	12.35	1.60	6.83	24.69	35.5	Mild
2014	29681	14.75	1.74	7.00	25.36	51.5	Mild
2015	29682	12.70	1.52	6.84	24.30	44.0	Mild
2016	Taraori Basmati	13.55	1.74	4.84	24.30	46.0	Strong
2017	29683	16.80	1.82	7.00	25.20	43.5	Mild
2018	29684	13.05	1.63	7.00	24.42	58.5	Mild
2019	Local Check	15.90	1.77	6.17	24.93	55.0	Mild

Local Check: Pusa Basmati 1692

Table No. 14.20: Summary of the grain quality characteristics of entries in Initial Varietal Trial - Basmati (IVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-NRRI, Cuttack during *Kharif* 2021

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	VER	KLAC (mm)	ER
2001	29671	78	65	43	8.09	1.48	5.47	ELS	3.75	12.0	1.48
2002	29672	75	64	58	7.60	1.47	5.17	ELS	3.75	13.0	1.71
2003	29673	81	68	52	8.51	1.48	5.75	ELS	4.00	12.4	1.45
2004	29674	74	65	53	7.86	1.53	5.14	ELS	3.75	12.0	1.52
2005	PB1121	76	62	55	8.20	1.49	5.50	ELS	4.00	14.0	1.70
2006	29675	78	70	54	7.49	1.36	5.51	LS	4.00	13.0	1.73
2007	29676	77	67	43	7.66	1.69	4.53	ELS	3.75	11.7	1.52
2008	29677	77	66	53	7.46	1.69	4.41	LS	3.75	10.0	1.34
2009	PB1	75	66	53	7.46	1.47	5.07	LS	3.75	11.0	1.47
2010	29678	76	66	47	8.28	1.62	5.11	ELS	4.00	12.0	1.44
2011	29679	78	70	48	7.62	1.57	4.87	ELS	3.75	12.0	1.57
2012	29680	82	69	48	7.57	1.48	5.11	ELS	3.75	11.0	1.45
2013	PRH10	82	66	54	6.56	1.54	4.26	LS	3.75	11.0	1.67
2014	29681	78	73	62	7.62	1.46	5.22	ELS	3.75	11.0	1.44
2015	29682	75	65	53	7.89	1.50	5.26	ELS	4.00	11.0	1.39
2016	Taraori Basmati	77	69	57	7.38	1.42	5.20	LS	4.00	12.0	1.62
2017	29683	76	69	65	8.86	1.68	5.27	ELS	3.75	10.0	1.12
2018	29684	77	64	59	7.36	1.61	4.57	LS	3.75	11.0	1.49
2019	Local Check	78	65	45	8.20	1.45	5.66	ELS	3.75	12.0	1.46

Table No. 14.20 Contd.: Summary of the grain quality characteristics of entries in Initial Varietal Trial - Basmati (IVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-NRRI, Cuttack during *Kharif* 2021

Entry No	IET No.	ASV	AC (%)	GC	Aroma
2001	29671	7	22.00	48	MS
2002	29672	7	25.50	35	SS
2003	29673	7	18.08	59	SS
2004	29674	3	21.65	47	SS
2005	PB1121	6	22.90	45	MS
2006	29675	7	21.13	53	MS
2007	29676	4	22.91	44	SS
2008	29677	6	21.82	49	SS
2009	PB1	7	24.50	40	SS
2010	29678	7	21.90	42	SS
2011	29679	7	22.12	44	SS
2012	29680	7	20.89	52	SS
2013	PRH10	5	19.69	55	SS
2014	29681	6	22.57	45	SS
2015	29682	7	22.26	47	SS
2016	Taraori Basmati	6	21.82	46	SS
2017	29683	7	21.75	47	SS
2018	29684	7	25.03	38	SS
2019	Local Check	7	23.85	48	SS

Local Check: Pusa Basmati 1692

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Table 14.21: Summary of the grain quality characteristics of entries in Initial Varietal Trial - Basmati (IVT BT) conducted at ICAR-IARI, New Delhi and analyzed at ICAR-IIRR, Hyderabad Kharif 2021

Entry No	IET No.	Hull %	Mill %	HRR	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk
2001	29671	73.6	59.9	23.3	8.03	1.86	4.31	LS	VOC
2002	29672	77.4	67.0	57.2	8.12	1.91	4.25	LS	VOC
2003	29673	80.9	68.3	46.4	9.09	1.92	4.73	LS	A
2004	29674	79.0	67.7	48.8	8.21	1.83	4.48	LS	VOC
2005	PB1121	77.3	68.0	54.6	8.17	1.92	4.25	LS	VOC
2006	29675	77.0	67.0	53.0	7.66	1.82	4.20	LS	VOC
2007	29676	76.4	64.5	32.8	7.84	1.87	4.19	LS	VOC
2008	29677	81.0	69.2	52.4	7.66	2.06	3.71	LS	OC
2009	PB1	80.8	70.5	59.1	7.44	1.79	4.15	LS	VOC
2010	29678	77.9	66.2	46.6	8.14	1.89	4.30	LS	VOC
2011	29679	79.6	69.6	52.0	8.23	1.89	4.35	LS	VOC
2012	29680	80.4	69.1	47.3	8.02	1.79	4.48	LS	VOC
2013	PRH10	82.8	71.8	57.0	7.56	1.85	4.08	LS	VOC
2014	29681	79.2	70.0	53.6	7.93	1.83	4.33	LS	VOC
2015	29682	78.1	67.0	50.6	8.19	1.80	4.55	LS	VOC
2016	Taraori Basmati	80.3	69.7	55.2	7.21	1.78	4.05	LS	A
2017	29683	79.6	68.7	42.8	8.64	1.98	4.36	LS	OC
2018	29684	78.7	69.3	59.0	7.77	1.89	4.11	LS	VOC
2019	Local Check	80.1	68.2	41.5	8.19	1.97	4.15	LS	VOC

HULL: Hulling(%) MILL: Milling(%) HRR: Head Rice Recovery KL: Kernel length (mm) KB: Kernel Breadth(mm) L/B : Length and Breadth(mm) Grain chalk: Grain Chalkiness VOC Very Occasionally Chalky OC: Occasionally Chalky P: Present A: Absent KLAC: Kernel length after cooking WU: Water uptake ER: Elongation ratio AC: Amylose content (%) ASV: Alkali Spreading Value AC: Amylose Content ELS: Extra Long Slender LS: Long Slender MS: Medium Slender SS: Strongly Scented MS: Mild Scented NS: Non Scented Local Check: Pusa Basmati 1692

Table 14.22: Panel Test Scores of entries in Initial Variety Trial - Basmati (IVT -BT) conducted at ICAR-IARI, New Delhi during Kharif 2021

Entry No	IET No.	Appearance	Cohesiveness	Tenderness on Touching	Tenderness on Chewing	Taste	Aroma	Elongation	Overall Acceptability	Total	Mean	Rank
2001	29671	5.00	2.00	2.00	1.00	2.00	2.00	1.67	1.33	17.00	2.13	18
2002	29672	5.00	4.67	5.00	5.00	3.67	3.67	4.00	4.00	35.00	4.38	4
2003	29673	3.33	2.67	3.67	3.67	2.67	3.00	3.33	2.67	25.00	3.13	14
2004	29674	4.67	4.33	4.33	4.33	3.33	3.33	3.33	3.33	31.00	3.88	9
2005	PB1121	4.00	5.00	5.00	5.00	4.00	3.33	4.67	4.67	35.67	4.46	2
2006	29675	4.00	2.33	3.00	4.00	2.67	3.00	2.33	2.00	23.33	2.92	16
2007	29676	5.00	2.33	2.00	3.00	2.00	3.00	2.33	1.33	21.00	2.63	17
2008	29677	5.00	1.33	2.00	1.67	2.00	2.33	1.67	1.00	17.00	2.13	19
2009	PB1	5.00	5.00	5.00	5.00	4.00	3.67	4.67	4.67	37.00	4.63	1
2010	29678	5.00	3.67	4.67	4.33	3.67	3.33	4.00	3.67	32.33	4.04	8
2011	29679	5.00	3.67	4.33	4.00	3.67	3.33	3.33	3.33	30.67	3.83	10
2012	29680	4.00	3.67	4.33	4.33	2.67	2.67	2.67	2.00	26.33	3.29	12
2013	PRH10	5.00	3.67	3.33	3.67	3.00	3.33	2.00	2.00	26.00	3.25	13
2014	29681	4.67	4.67	4.67	4.67	4.00	3.67	4.00	3.67	34.00	4.25	6
2015	29682	4.00	3.00	3.00	3.33	3.33	3.00	2.33	1.67	23.67	2.96	15
2016	Taraori Basmati	5.00	5.00	4.67	4.67	4.00	3.67	4.33	4.00	35.33	4.42	3
2017	29683	5.00	4.00	4.33	4.00	3.67	3.33	3.33	3.00	30.67	3.83	11
2018	29684	5.00	5.00	4.67	4.67	4.00	3.33	3.33	3.67	33.67	4.21	7
2019	Local Check	5.00	4.67	4.67	4.67	4.00	3.67	4.00	4.00	34.67	4.33	5
		4.0-4.9 Creamish White 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	3.0-3.9 Desirable 2.0-2.9 Tasteless	4 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9	3.0-3.9 Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable			

Local Check: Pusa Basmati 1692

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Table No. 14.23: Panel Test Scores of entries in Initial Variety Trial - Basmati (IVT -BT) conducted at BEDF, Modipuram during *Kharif* 2021

Entry No	IET No.	Appearance	Cohesiveness	Tenderness on Touching	Tenderness on Chewing	Taste	Aroma	Elongation	Overall Acceptability	Total	Mean	Rank
2001	29671	4.10	3.85	3.70	4.00	2.95	2.70	2.35	3.95	27.60	3.45	10
2002	29672	4.35	4.25	4.10	4.25	3.55	3.45	3.65	4.20	31.80	3.98	1
2003	29673	4.30	3.65	4.05	4.15	3.30	3.10	3.15	3.95	29.65	3.71	4
2004	29674	4.30	3.90	3.75	4.00	3.45	2.75	3.10	3.95	29.20	3.65	6
2005	PB1121	4.40	4.25	4.25	4.30	3.35	2.25	3.25	3.95	30.00	3.75	3
2006	29675	4.15	3.70	3.55	3.65	2.75	2.85	2.30	3.15	26.10	3.26	19
2007	29676	4.20	3.70	3.45	3.95	3.05	2.30	2.30	3.20	26.15	3.27	18
2008	29677	4.10	3.60	3.65	3.85	2.95	3.15	2.50	3.15	26.95	3.37	13
2009	PB1	4.25	4.10	4.00	4.20	3.30	2.70	3.25	3.75	29.55	3.69	5
2010	29678	4.10	4.10	3.85	4.05	3.10	2.70	2.95	3.30	28.15	3.52	8
2011	29679	4.25	3.55	3.70	3.85	2.75	2.70	2.35	3.00	26.15	3.27	17
2012	29680	4.25	3.70	3.60	3.95	3.00	2.90	2.60	3.55	27.55	3.44	11
2013	PRH10	4.25	3.60	3.70	3.85	2.85	2.65	2.35	3.15	26.40	3.30	15
2014	29681	4.15	3.65	3.80	4.00	2.65	2.65	2.85	3.40	27.15	3.39	12
2015	29682	4.25	3.50	3.70	4.10	3.10	2.75	2.50	2.70	26.60	3.33	14
2016	Taraori Basmati	4.30	4.25	4.15	4.20	3.30	3.45	3.30	4.05	31.00	3.88	2
2017	29683	4.05	3.95	3.45	3.95	2.90	2.80	3.10	3.95	28.15	3.52	9
2018	29684	4.15	4.25	3.75	4.15	3.05	1.70	2.50	2.80	26.35	3.29	16
2019	Local Check	4.15	4.10	4.05	4.10	3.65	2.65	3.20	2.85	28.75	3.59	7
		4.0-4.9 Creamish White 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately Hard	Desirable 2.0-2.9 Tasteless	4 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9	Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable			

Local Check: Pusa Basmati 1692

MONITORING OF AICRIP TRIALS 2021

The pandemic COVID-19 for the second consecutive year continued to restrict the visit of monitoring teams from IIRR and NRRI to different AICRIP centres during *kharif* 2021. However, the scientists at the respective AICRIP centres have supported the assessment of entries of trials by organizing self-monitoring teams from their organizations. In addition, a series of zone wise virtual field monitoring and interactive presentations between each centre in different zones and ICAR-IIRR as well as ICAR-NRRI were coordinated and interacted with scientists about the conduct of the trial, performance of entries, information about the mixtures and segregating lines and shifts based on flowering. The online virtual platform, helped participation of most of the centres including voluntary centres in the AICRIP field trial monitoring meetings. The information received from research stations from field monitoring, self-monitoring reports, zone wise teams from IIRR and proceedings of the virtual monitoring is compiled as zone wise and are presented below

Kharif, 2021: Team of Scientists of ICAR-IIRR interacted with cooperators

Zones	Crop Improvement	Crop Production	Crop Protection	TTT
Zone I - Hills	Dr. G.Padmavathi Dr. C.Gireesh Dr. P. Senguttuvel	Dr Bandeppa Dr Soumya saha	Dr Ch padmavathi Dr K Basavraj	Dr S Arun kumar
Zone II - Northern	Dr. J. Aravind Kumar Dr.M.S.SeshuMadhav Dr. B. Divya Dr. M. B. Kalyani	Dr V. Manasa Dr Mangal D Tuti	Dr Chitra Sankar Dr GS Jesudas	Dr Laxmi Prasanna
Zone III - Eastern	Dr. C.Gireesh Dr. S.Mangautria Dr. M.S.Anantha Dr.Shruthi.K	Dr. Brajendra Dr. P.C. Latha Dr Soumya saha	Dr A p Padmakumari Dr G S Laha	Dr P. Muthuraman / Dr Amtul Waris
Zone IV – North Eastern	Dr. K.Suneetha Dr. R.A.Fiyaz Dr. Kemparaju	Dr Gobinath R Dr Aarthi Singh Dr P R Rao	Dr V Prakasam	Dr P. Jeykumar
Zone V - Central	Dr. C.N.Neeraja Dr. M.S. Anantha Dr. B. Jyothi	Dr R M kumar Dr D Subrahmanyam	Dr Y Sreedhar Dr Ladha Lakshmi	Dr B. Nirmala
Zone VI - Western	Dr. A.S. Hari Prasad Dr. B.Jyothi Dr. R. A. Fiyaz Dr.Ch.Survana Rani	Dr R M Kumar Dr Akshay S	Dr B Khansi rani Dr C Kannan	Dr santhosh Rathod
Zone VII Southern	Dr. A.V.S.R.Swamy Dr. P. Senguttuvel Dr. B. Divya	Dr. DVKN Rao Dr.MBB Prasad babu Dr B Sreedevi Dr D Subrahmanyam	Dr v Jhansi Lakshmi Dr D Krishnaveni Dr MS Prasad	Dr P.Muthuraman

Zone-1 (Hills)

Chairman – Dr. R.M.Sundaram, Director, ICAR-IIRR and Coordinator- Dr. L.V. Subba Rao, PI, AICRIP-Varietal Improvement

Members: Drs. G.Padmavathi, C.Gireesh P. Senguttuvel, Bandeppa, Soumya saha, Ch Padmavathi, K Basavraj and S Arun kumar

Khudwani: Four trials namely IVT-MH, AVT-1-MH, IVT-UH and AVT-1-UH trials are conducted under high elevation. Conduct of the trials is as per the AICRIP guidelines. Crop attained maximum tillering to flowering stage. Traces of mixtures are found in the trials. Three pre-released varieties *ie.*, SKUA 522, 540 and 493 are evaluated for performance in mini kits. SVRC has released Shalimar Sugandh 1. In addition to varietal trials LFST, MRST, NSNH, Insecticide-Botanicals Evaluation Trial (IBET) of entomology while NSN1, NHSN (BI and BS), DSN trials of Pathology, 3 trials each in agronomy and soil sciences were carried out. The trials at the voluntary centre Wadura could not be taken up while 4 trials at Pombay and 2 at Larnoo were evaluated. Breeder seed production of Chenab, K 39 and Shalimar rice 2 to 4 was taken up as per the indent. Mixtures and segregants were not found in the trials.

Malan: A total of 7 trials (IVT-EH, AVT-1-EH, AVT-1-MH, IVT-MH, IVT-U, IVT-J (Japonica) and IHRT-E trials were received on time and conducted. A collection of around 400 red rices, white rices and basmati germplasm accessions were not only conserved but also characterized. Moderate weed infestation and false smut incidence was noticed in upland trial. In IVT-*japonica* rat damage was reported. Improvement of red rice and white rices with early maturity, blast and BLB resistance, cold tolerance are focussed. A variety release proposal on HPR 2865 for northern hills was submitted. Marker assisted breeding for incorporation of leaf and neck blast resistance into the popular varieties HPR 2143 and HPU 741 is underway. Breeder seed production of 5 rice varieties *ie.*, HPR Nos. 2143, 266, 2795, 2880 and Sukara dhan 2 was carried out. All the allotted trials of other disciplines *ie.*, Six trials of agronomy, 12 trials of entomology and 13 trials of pathology were successfully conducted. AVT trials of medium and early hills are also conducted at Bajaura, the associated centre of Malan.

Palampur: Two trials were allotted to this centre and both were conducted (IVT EH and AVT-1-EH). Crop was in vegetative stage during monitoring and free from diseases and pests. One of the objectives of this centre is Zero Budget Natural Farming (ZBNF) and Palam Lal Dhan and Him Palam Lal Dhan varieties showed superior performance under ZBNF.



Sundernagar: Received 4 hill trials (IVT-EH, AVT-1-EH, AVT-1-MH and IVT-MH) but conducted only 2 advanced trials of early and medium duration (AVT-1-EH and AVT-1-MH) due to land scarcity. Crop is in flowering stage and free from off types and mixtures. Traces of **blast**, false smut and stem borer infestation were observed.

Almora: Conducted 6 trials of IVT-EH, AVT-1-EH, AVT-1-MH, IVT-MH, IVT-UH and IVT-J (*Japonica*) under irrigated and rainfed conditions. Crop is at maturity stage. Crop appears to be free from weeds.

Ponnampet: Three hill trials, IVT-EH, AVT-1-EH and IVT-J (*Japonica*) and six pathology trials (NSN1, NSN 2, NHSN, NSNH, DSN and field monitoring of rice blast pathogen virulence) were allotted and all are conducted. Experiments were laid out in the recommended experimental design.

Sirsi: A set of 10 trials were conducted among which 3 were hill trials namely IVT-MH, AVT-1-MH and IVT-J (*Japonica*). Crop is in flowering stage. There was a request from the breeder to consider the inclusion of this centre for breeding high yielding red rice varieties.

Gudalur: Conducted 4 trials of IVT-MH, AVT-1MH, IVT-EH and AVT-1-EH.

Lamphelpat: Received AICRIP varietal trials (3) and Pathology trials (3). Three hill trials were conducted *i.e.*, two medium duration hill trials (AVT-1-MH and IVT-MH) under irrigated transplanted conditions while IVT-UH under direct seeded upland conditions. The recommended guidelines were followed and the crop is in active tillering stage. Three trials of pathology namely NSNH, DSN and field virulence monitoring of blast were conducted.

Upper Shillong: Five trials (IVT-MH, AVT-1MH, IVT-EH, AVT-1-EH and IVT UH) were allotted out of which 4 trials except IVT-UH were conducted. Trials were laid out at a high elevation of 1700 m above msl. NSN1, NSNH and field virulence monitoring of blast trials of pathology were taken up.

CAU-Umiam: Received and conducted four trials (IVT-MH, AVT-1- MH, IVT-UH and AVT-1-UH). Tolerance to acidic soils, blast resistance, low P and high Fe tolerance and improvement of local coloured land races are the target objectives for breeding programs.

ICAR-Umiam: Conducted all 3 allotted trials *i.e.*, (IVT-MH, AVT-1- MH and IVT-UH). Cold temperature has considerably affected the crop yields. Target traits for breeding program are low P tolerance, high aluminium tolerance, high iron toxicity tolerance and heat tolerance. Developed a core set of 150 lines possessing heat tolerance.

Gangtok: The allotted two trials were conducted (IVT-MH, AVT-1MH). But the trials were conducted in very low plot size of 2.52 m². In some of the test entries minor infestation of blast, leaf spot and leaf folder was observed. Noticed partial weed infestation. Based on local consumer preference breeding priority is given to develop sticky aromatic rices.

Zone II (Northern)

Chairman – Dr. R.M.Sundaram, Director, ICAR-IIRR and Coordinator- Dr. L.V. Subba Rao, PI, AICRIP-Varietal Improvement (21st August 2021)

Members: Drs. M.S. SeshuMadhav, J. Aravind Kumar, Anantha M S, M. B. Kalyani, V. Manasa, Mangal D Tuti, Chitra Sankar, GS Jesudas, Laxmi Prasanna

ICAR-IARI New Delhi: Dr Gopala Krishnan S, presented the status of AICRIP trials. A total of 6 trials were allotted of which 5 trials were conducted. AVT 1 NIL trial was not conducted due to late receipt of seeds. This will be taken up in Aduthurai in Rabi season. Most of the trials were in maximum tillering stage. He presented the breeding activities related to resistance to biotic and abiotic stress tolerance. A total of 5 varieties are identified and released. Director ICAR IIRR insisted to increase plot size of IHRT trials. He also presented the trials related to pathology, entomology agronomy.

BEDF: Dr Ritesh Sharma presented the progress made and informed that 2 allotted trials were conducted. Two entries get affected due to flooding occurred after transplanting. BEDF is maintaining all the released varieties of Basmati rice including Basmati 217. He also presented the workshops organized by BEDF regarding Basmati rice production to farmers.

Kaul: Dr Rakesh and Dr Mangat Ram presented the status of AICRIP trials in different disciplines. They explained about the varieties released by Kaul including Taroari Basmati. They requested to send the seed in advance to catch the season in Zone II. Director ICAR IIRR assured that seeds will reach in time next season. Kharif 2021 was badly affected due to Corona Pandemic.

Chatha, J&K: Dr. Ravinder Singh Soodan presented the status of AICRIP trials. They conducted all the trials of breeding (3), pathology (7), agronomy (5) and entomology (3). Most of the trials were in maximum tillering stage. They requested for more number of AICRIP trials next season. Director ICAR IIRR agreed to increase number of trials for Chatha. Dr. Chithra Shankar enquired about status of pest incidence in the region. There were some reports of grass hopper damage. Director ICAR IIRR told to take all the available material from Dr. Bhupesh and carry forward.

PAU Ludhiana: Dr Rupinder Kaur presented the progress made and trial status of AICRIP. The centre has conducted all the trials allotted to them except IVT IM (Late receipt of seeds). They also conducted all allotted trials of other discipline. The status of breeding material allotted in Basmati and Non Basmati trial was also presented.

Kota: Dr K M Sharma presented the progress made in conducting AICRIP trials. They have conducted all the trials allotted. One entry IET 27937 in AVT 2 Aerobic trial did not germinate. As per new guidelines Kota is non Basmati area.

Pantnagar: Dr I D Pandey presented the activities of AICRIP at Pantnagar. They have conducted 11 trials out of 13 trials allotted. IVT IM and AVT NIL were not conducted due to late receipt of seeds. They requested for the post of Biochemistry to cater the needs of the station. 2 trials of soil science were conducted out of 3 allotted.

Nagina: Dr. Vivek has presented the progress made and status of AICRIP trials. The centre has conducted all the trials allotted in all the disciplines except DSR trial in agronomy due to late receipt of seeds.

Kanpur: Dr. P K Singh explained of rice status in UP including area and production. 3 out of 4 breeding trials were conducted and IVT MS was not conducted. This time no trial was allotted to soil science. But recently one soil scientists has joined the station and same has not been intimated to ICAR IIRR. Director has requested all the cooperators to intimate the details of joining of new scientists or transfer of existing scientists to ICAR IIRR.

Presentation on MIS:

Dr Shailaja B, Pr. Scientist, ICAR IIRR presented the details of MIS. Only 60% data was received from MIS. She explained about field monitoring, data entry, how to upload photos, receipt of seeds etc., Director, ICAR IIRR suggested uploading information in MIS as presented. Preliminary information should be uploaded in MIS within one week. Director arranged to have one more lecture on MIS on 14-15th Sept to sensitizing MIS and AICRIP. Dr. L V Subba Rao suggested taking up value addition programme next year by important AICRIP centers. He also informed that colored rice trial will be initiated next year. He requested the cooperators to send one copy of release proposal which was submitted/ released by SVRC.

Zone III (Eastern)

Chairman – Dr. R.M.Sundaram, Director, ICAR-IIRR and Coordinator- Dr. L.V. Subba Rao, PI, AICRIP-Varietal Improvement

Members: Drs. C.Gireesh, S.Mangautria, M.S.Anantha, Shruthi.K, Brajendra, P.C. Latha, Soumya saha, A P. Padmakumari, G S Laha, P. Muthuraman, Amtul Waris

RRS, Chinsurah: Dr. Sangeeth Shekar presented the progress of conduct of the trials. In breeding, 20 trials conducted at Chinsurah, eight in Hathwara and two trials in (IVT and AVT1 CSTVT) in Gosaba. The CSTVT trials at Gosaba failed due to continuous submergence of the crop. Breeder seed productions of 12 varieties are being undertaken.

Total of 280 germplasm and 1400 accessions were maintained. Nearly 265 breeding lines were developed at this centre.

In Agronomy 8 trials were conducted, AVTI-IME in nutrient trials. Under SCSP program the project is implemented in four districts of west Bengal. In soil science two trials were conducted. In entomology, 10 trials were allotted and 10 trials were conducted. In plant pathology, 13 trials were conducted. While in crop physiology one trial application of silica was conducted.

BHU Varanasi: Dr. V.K. Srivastav presented the progress of the AICRIP at Varanasi centre. Breeding post is vacant at present, presently Dr. Jayasudha is conducting the breeding trials. Agronomy, 13 trials were allotted and all the trials were conducted which included weed management, nutrient and yield trials. In breeding, 15 trials were conducted and all the trials were conducted. Four trials could not be conducted due to late receipt of seeds. All the trials are conducted in very good condition. Some trials planted late due to late receipt. The centre has developed Sanda planting and drum seeding technology which have been included in state government package of practices. The centre has released six high yielding varieties from SVURC and one variety HUBR 10 from CVRC. The centre also received best AICRIP centre of 2016 and QRT report has designated this centre as very good centre.

CRS Ghagharaghat: Dr. Nitender Prakash presented the progress of Ghagharaghat centre. It comes under deep and semi-deep water ecology. Six breeding namely IVT DW, IVT Semi deep water, AVT1 SDW, IVT RSL, AVT1 RSL and genetic gain in RSL were conducted. Required water level was maintained in the lowland trials. One culture NGR 702 (25882) proposal is released by SVRC. In addition, germplasm and segregating population are being maintained at the center. NDDR 706, 709, 1547 and 1546 are nominated in AICRIP for lowland trials. In other discipline seven in agronomy, five in entomology and pathology are being conducted at the center.

PUSA, Bihar: Dr. Nilanjaya, breeder and PI presented the progress of ACRIP trials. 11 trials conducted and 02 PUE failed due to heavy rains. While 07 in agronomy, 10 in pathology, 07 in entomology, 02 trials in soil science conducted. Centre also conducted 85 segregating population, 42 landraces, 300 germplasm, six station trials, two bio fortification trials from Harvest plus. Breeder seed productions of five varieties (R. Bhagwati) are being undertaken.

CRS, Masodha: Dr. D.K. Dwivedhi has presented the progress of AICRIP trials conducted at Masodha, ANAUT, Ayodhya. A total of 30 breeding trials conducted. False smut was severely reported in late breeding trials. Breeder seed production of Samba Sub1 was undertaken. Centre is presently 850 germplasm. In addition, 09 in Agronomy, 03 in soil science, 06 in entomology and 08 in pathology were conducted.

ICAR Patna: DR. Santosh Kumar presented progress of AICRIP trials. A total of 300 germplasm and several breeding populations are being maintained. Centres also involved in seed production of three varieties (Swarna Shreya, Swarna Sukha dhan, Swarna Unnat Dhan) developed by the centre. Centre also conducted FLDs. At this centre, 13 breeding trials were conducted. Institute monitoring team visited the AICRIP trials for monitoring.

Bikramganj (Dhangain): Dr. Prakash Singh presented the progress of the AICRIP trials at Bikramganj. The centre has conducted 27 in breeding received. It is noticed high disease (sheath blight and bacterial blight) in AICRIP trials and farmer field as well. Institute monitoring team visited trials for monitoring. The institute has started 12 new cross, several breeding populations. Four varieties in SVRC (BRR 2176, 2107, 2141, 2177) and one in

CVRC (BRR2110 (27538)) released for cultivation. At present 579 germplasm, 71 landraces, 23 wild rice, 156 donor are being maintained.

Ranchi: Dr. Krishna Prasad has presented the progress of AICRIP trials conducted at Ranchi center. Total 49 trials conducted, of which 21 breeding, 09 agronomy, 10 entomology, 07 pathology, 02 physiology. Brown spot and blast naturally occur in field and NSN trials also.

Zone IV (North Eastern)

Chairman – Dr. R.M.Sundaram, Director, ICAR-IIRR and Coordinator- Dr. L.V. Subba Rao, PI, AICRIP-Varietal Improvement

Members: Dr. K.Suneetha, Dr. R.A.Fiyaz, Dr. Kemparaju, Dr Gobinath R Dr Aarthi Singh, Dr P R Rao, Dr V Prakasam and Dr P. Jeykumar (27.9.2021)

RARS, Titabar: Drs. S.K. Chetia, R.K. Choudhary, B.C. Das, T.J. Ghose, P.C. De, Mrs. M. Baruah, Mr. M.J. Konwar and Mr. Janardan Das

Dr. S.K. Chetia, PS and Chief Scientist from RARS, AAU, Titabar presented the progress of AICRIP trials and performance of test entries in trial as well as the ongoing research programmes. A total of 16 out of 20 trials namely AVT-1E-TP, AVT2-E-TP, IVT-E-TP, AVT1-IM, IVT-IM, AVT1-IME, IVT-IME, AVT1-L, AVT1-MS, IVT-MS, AVT-1 Biofort, IVT-Biofort, IVT-*japonica*, IVT-ASG, AVT1-NIL (yield, IME &IM) plus 4 hybrid trials were received and all the trials were conducted. Incidence of BLB and leaf folder during the crop growth stage reported. Nine of the 11 entomology, all the allotted 10 Pathology, all five physiology trials, 11 agronomy and 4 soil trials sent were also conducted. Also presented the information about the recent released varieties in 2021: AAU-TTB-Dhan 40 (Dholi) and AAU-Kmi_Dhan (Surma Dhan) and other notified popular varieties of this station include Numali, Ranjit Sub1, Bhadur Sub1, Gitesh, Kanaklata, Jalashree and Jalkuwari. Research is in progress to introgress drought and submergence in the genetic background of Ranjit. Emphasis on biotic stress tolerance to BLB and Blast. About 6000 germplasm lines are being maintained at this center. PI, AICRIP Dr. L.V. Subba Rao suggested the inclusion of Karimganj, north Lakhimpur and Shillongani under AICRIP to be coordinated by Titabar center.

Wangbal: Mr. Naeem Shah

Three plant breeding trials were sent and all the trials were conducted. In addition, agronomy and pathology trials were also conducted at this center.

Upper Shillong: Mrs. Kharshiing

Plant breeding trials AVT- EH, IVT-EH, AVT-MH and IVT MH are conducted at his center. However, Agronomy trials are not conducted due to later receipt of seed while the pathology trials are confined to nursery experiments only.

CAU, Barapani: Dr. Mayank Rai

Three trials were received and all the three (AVT-1-M(H), IVT-M(H) and IVT-U(H)) were conducted at this center. About 350 segregating lines in F3 to F6 generation are being evaluated. Research focus in on Bio-fortification and evaluation and identification of elite lines under acidic soil conditions. CAUS 107 (IET 28210) promising line for SVRC release identified.

ICAR-RC-NEH Region, Sikkim Centre: Dr. E. Lamalakshami Devi

Two trials AVT-1 and IVT Medium hills were received and both were conducted. Incidence of Blast and brown spot, stem borer, leafhopper reported. Sikkim being organic state, pest and disease control is taken care by organic pesticides. Three varieties namely Sikkim Dhan 1, Sikkim Dhan 2 and Sikkim Dhan 3 were released from this centre.



Monitoring Team at RARS Titabar



Monitoring Team at RARS Titabar



Monitoring at ICAR-RC-NEH Manipur



Interactive session with IIRR, NRRI and Cooperators in Zone IV stations

ICAR- Research complex for NEH, Lembuchera, Tripura: Dr. S. P. Das, Principal Scientist (PB), Dr. A. Gnaga Rani, and Dr. Utpal Giri,

All the 16 trials AVT-2 ETP, AVT-1 IM, IVT-J, AVT-1 IME, AVT-1 -ETP, AVT-1 -L, IVT-ETP, AVT-1 AEROB, AVT-1-MS, IVT- AEROB, IVT-IME, IVT-MS, IVT-L, IVT-IM and AVT-1-NIL (Yield trial IME & IM duration) received were conducted. Several crosses with different grain types long slender (28nos), long bold (28), medium bold (30 Nos), medium bold with awns (14 no's), medium slender (29 Nos), short bold (30 no's), short slender (28 no's) were generated and several advanced breeding materials from these crosses are being evaluated.

ICAR RC for NEH, Manipur centre Lamphelpet: Dr. Bhuvanewari S., Dr. Susheel Kumar Sharma and Dr. Romila Akoijam

All the allotted three trials were AVT1-M (H), IVT-M(H), IVT-U(H) were conducted at this centre. This station is focussing on the rice improvement for lowland rainfed condition especially semi-glutinous rice as Black rice improvement for improved yield. About 50 breeding populations in different generations are being evaluation in addition to evaluation of material in four station trials. The popular varieties include RC Maniphou-13, Tampaphou, Leimaphou, RC Maniphou-7, RC Maniphou-10, Chakhao cultivars (aromatic landraces).

ICAR-NRRI Gerua: Dr. Rupankar Bhagawati and team

Two trials out of six allotted trails in Plant breeding and four trails out of six allotted trails in Plant Pathology were conducted during kharif 2021. Reported the entries with mixtures, shifts based on flowering as well as promising entries based on phenotypic acceptability in

AVT1-IM and AVT1-IME. About 233 entries under NSN1 and 291 entries in DSN were screened and reported low disease pressure with LSI 2.15. Monitoring of breeder seed production of NRRI released varieties in 3.22 ha area were reported.

State Agriculture Research Station Arundhutinagar, Agartala Dr. A.K. Pal and Team

ACIRP trials namely AVT-1 E-TP, AVT-2-E-TP, AVT-1-MS, AVT-1-IM, AVT - 1 – Aerobic, IVT-ASG, IVT-E –TP, IVT-MS, IHRT-E, IHRT-ME & IIHRT-MS and IHRT-M were received. Incidence of heavy rains and subsequent inundation of water hampered the crop in AVT-1 E-TP AVT-2 E-TP reported. Other trials like AVT-1-IM, AVT - 1 –Aerobic, IHRT-ME & IIHRT-MS were reported to be vitiated. Water stress at active tillering stage was observed in IVT-MS trial. Rest of the trials the crop was satisfactory. Hence 9 out of 13 trials were conducted. Seed production for several varieties Tripura Chikan Dhan, Gomati, Tripura Sarat Dhan, Tripura Hakuchu-2, Tripura Nirog Dhan, Kalikhasa, Harinarayan *etc.* were taken up by this station. Germplasm related to aromatic rices like Kalikhasa, Tulai Panji, Joha black, Harinarayan, Ketki Joha *etc.*, red rices like Ratnagiri-7, black rices Maimee (Bagma), Chakhao, Sampak, Poreiton and Ambui and other rices are being maintained at this station.

Zone V (Central)

Chairman – Dr. R.M.Sundaram, Director, ICAR-IIRR and Coordinator- Dr. L.V. Subba Rao, PI, AICRIP-Varietal Improvement

Members : Drs D. Subrahmanyam, R Mahendra Kumar, CN Neeraja, Y Sreedhar, B Nirmala, Ladha Lakshmi, Jyothi Badri, and MS Anantha (25.08.2021)

Ambikapur: Ms. Kiran Tigga presented trials details of this centre. Three out of the four trials sent were conducted (IVT ASG, AVT1 IME and AVT1 IM). The crop stand is in good condition.

Jabalpur: Dr. Sanjay Kumar Singh, JNKVV, Jabalpur presented the observations of field trials. A total of 15 breeding trials were conducted. Significant achievements and other activities of centres especially on hybrid rice development were presented. JR 18 is one of the most resistant variety for false smut as the centre is hotspot for false smut. Same local check was used in two trials in this centre.

Raipur: Dr. Sunil K Nair, Senior Scientist, IGKV, Raipur presented the field trial data and submitted self-monitoring report of the trials. A total of 29 trials (AVTs- 12, IVTs – 13, NILs – 03, Hybrid trials – 4 along with 8 agronomical trials were carried out by this centre and the trials were conducted as per recommendations. The centre nominated 20 entries for AICRIP. The crop stand is in good condition. Drought trial was taken up both under rainout shelter and normal situations.

Rewa: Dr. P Perraju, Scientist, Rewa presented the results of this year AICRIP trials from the centre. There were eight breeding trials allotted (AVT1-E (DS), AVT1-AEROB, IVT-E (DS), IVT-E-TP, AVT-1E-TP, AVT-2E-TP, AVT1-NIL(Drt)) and only 7 trials were carried out by this centre. Good field facility is available for upland trials in this centre. Due to late receipt of seeds and sowing, many entries under IVT-Aerobic trials did not germinate.

Jagdarpur: Dr Sonali Kar, Scientist, SGCARS, Jagdarpur centre presented the details on AICRIP trials. 16 breeding trials were allotted (IVT EDS, AVT1-EDS IVT Aerob, AVT1-Aerob, IVT ETP, AVT1ETP, IVT-ASG, IVT-IM, AVT1-IM, AVT2-IM, IVT-IME, AVT1-IME, IVTL, AVT1-L, NIL yield trials for (IME & IM), NIL yield trials for L and all were conducted. 11 Agronomy, 15 Entomology and 12 Plant Pathology trials were also conducted. The centre also evaluated breeding material and conducted station trials.

Sakoli: Dr Shamkuwar, PDKV, Akola explained about the trials conducted under AICRIP this year. A total of 18 Breeding trials and 12 Entomological trials were carried out as per recommendations. The crop stand is in good condition The most prevalent pest and pathogenic infestations were stem borers followed by Sheath Blight. Gall midge incidence was observed to be increasing specially in hybrid trials. PDKV Sadhana has been released through SVRC for early duration.

Waraseoni: Dr. Uttam Bisen, explained the details of 7 trials conducted in the centre during Kharif 2021. Blast and gall midge problem is reported at this centre

Sindewahi: Dr. Madhan, presented the details of trials conducted in the centre during Kharif 2021. A total of 15 breeding trials and hybrid trials were carried out at this centre. All the trials were handled as per recommendations. A few of the entries were missing in the trials. Germination problem was observed in the trials of IVT MS and IVT Biofort. About 250 families of segregating population were evaluated. Stem borer and BPH caused pest infestation in this centre.



Dr LV Subbarao discussed with the breeders from centres of central zone about rice breeding programmes on developing speciality rice varieties for Poha/ puffed rice (value added rice) especially at central zone. Breeders from Raipur, Jabalpur explained about varieties Mahamaya, Rajeswari, Safri and Vijay for Poha making. Since Ambikapur is a hotspot to blast, it was opined in the meeting that conduct of pathology trials should be considered. Dr Deepak Sharma concerned need to look into the details on posting of a Pathologist either at Ambikapur or Jagadapur to initiate AICRIP pathology trials at the centre.

Zone-VI (Western)

Chairman – Dr. R.M.Sundaram, Director, ICAR-IIRR and Coordinator- Dr. L.V. Subba Rao, PI, AICRIP-Varietal Improvement

Members :Drs B Jhansi Rani, R Mahendra Kumar, AS Hariprasad, C Kannan, Jyothi Badri, R Abdul Fiyaz, Akshay Sakare, Ch Suvarna Rani, Santosha Rathod (30.10.2021)

Radhanagari: Dr. S.D. Kumbhar, reported about the trials conductance, Four out of five trials sent were conducted. The crop experienced flood during last week of July 2021. The centre has generated and evaluated breeding material as well as conducted station trial.

Nawagam: Dr M. B. Parmar reported about the conduct of 21 the trials that were allotted and submitted the interim report. In addition, all the allotted trials of Agronomy (7) and Entomology (12) were also conducted. The breeding material from F₂ to F₆ was also evaluated and the crop was in good condition.

Dabhoi and Derol: Dr M. B. Parmar reported about conduct of AICRIP trials at Dabhoi and Derol stations. At Dabhoi, four trials were conducted namely AVT-2- ETP, AVT-1- ETP, AVT-1-MS, IVT-E-TP; and at Derol, two trial were conducted (IVT Aerobic and AVT-1- Aerobic). The crop stand is in good condition

Navsari: The conduct of trials has been reported by Dr P.B. Patel and submitted the interim report. The centre has conducted four Hybrid rice trials and 20 Plant Breeding trials including IVT-ASG, IVT-IME, IVT-Biofort, IVT-Aerobic, IVT-MS , IVT-L, IVT-CSTVT, IVT

AL&ISTVT, AVT-1-IME, AVT1-Aerobic, AVT-1-MS, AVT1-Biofort, AVT-1-L, AVT-1-NIL-Late, AVT-1-NIL IME & IM, AVT-1-IM, AVT-1-, AVT-2- NIL CS, AVT1 AL&ISTVT, ICAR-BMGF-ERA and. About 115 new crosses were attempted and the crop stand was good.

Vadagaon: Dr. T. J. Bhor has conducted the trials of Plant Breeding and Hybrid rice Viz., AVT 2-ETP, AVT-1-BIOFORT, IVT- ETP, IVT- BIOFORT, IVT-ASG and IHRT- ETP. The crop is in good stand.

Shirgaon: Dr. V. V. Dalvi, Shirgaon conducted the trials and submitted the report. Ten out of fifteen AICRIP breeding trials including hybrid rice were conducted at this centre. Nucleus seed production and Breeders seed production has been taken up. Biofortification Rice (Red Kernel Rice) semi-dwarf varieties rich in Zn, Fe, Proteins and other vitamins were some of the target traits for which germplasm has been collected and breeding program has been initiated for evaluation.

Panvel, Phondhaghat and Parbhani: Four trials have been conducted at Panvel. Dr. Setti has conducted two trials out of three trials allotted at Phondhaghat. Dr. S. B. Borgaonkar has conducted four trials at Parbhani. The crop is in good condition

Vyra: Dr. Vipul P.Patel, RARS, Vyra conducted the trials and submitted the report. All the allotted 13 AICRIP trials including hybrid rice trials were conducted at this centre. They had 4347 segregating breeding populations from F₃ to F₆. Breeding programme for value added product like puffed rice and beaten rice targeting for long bold grain type were executed. The crop stand was reported and overall conduct of the trials reported to be good.

Zone VII (Southern Zone)

Chairman – Dr. R.M.Sundaram, Director, ICAR-IIRR and Coordinator- Dr. L.V. Subba Rao, PI, AICRIP-Varietal Improvement

Members :Dr. A.V.S.R. Swamy, Dr. Divya Balakrishnan, Dr. P. Senguttuvel, Dr. DVKN Rao, Dr.MBB Prasad Babu, Dr B Sreedevi, Dr D Subrahmanyam, Dr V Jhansi Lakshmi, Dr D Krishnaveni, Dr MS Prasad, Dr P.Muthuraman (**Sept 6, 2021 & Sept 30, 2021**)

Machlipatnam: Dr Girija Rani presented the details on development of medium duration salt tolerant rice varieties suitable for coastal ecosystem. 2 trials were conducted viz., IVTCSTVT, AVT1NIL CS. Poor germination and salt injury affected performance of various genotypes. Breeder informed the quantity of seed received is inadequate in stress conditions trials.

Ragolu: Dr PV Satynarayana Presented the details about the programmes conducted in the centre with a major focus to develop medium duration genotypes for rainfed and short duration varieties for upland conditions. 4 trials IVT (IM) IVT (L), AVT1 (IM), AVT1(L) were conducted and reported a good crop stand. Details on agronomy and entomology trials were also presented.

Bapatla: Dr Krishnaveni, presented the conductance of various trials at this centre for Late, medium slender and Rice biofortification. Dr Rama Rao explained about the agronomy trials at this centre.

Nellore: Dr Rajasekhar gave a brief outlook on various trials conducted at this station on Late, irrigated mid early and NIL trials under breeding. Other trials conducted in entomology and Pathology were also submitted by respective scientists.

Moncompu: Dr Surendran presented the trails conducted at this centre. Only 7 out of nine trials conducted under ETP, IME, and biofortification. Late trials were not conducted due to

peculiar water management system in this region. Director suggested to carry out marker assisted breeding programmes to improve existing popular varieties for stress tolerance especially for salinity and submergence.

Pattambi: Dr Biji, presented the results of this year AICRIP trials from the centre. All the allotted 16 breeding trials were conducted for ETP, IME, IM MS, Biofortification, NIL and ASG. Director, IIRR suggested for non-inclusion of MS trials in this centre as there is no demand in the region. Pathology and entomology trials conducted in this centre was also presented

Vytila: Dr Veena presented about the 4 breeding trials and 1 Agronomy trial conducted at this centre. Poor germination and survival of entries were reported due to continuous rain and high water table and also due to late receipt of entries

Rajendranagar: Dr Raghu Rami Reddy presented all trials conducted at ARI Rajendranagar during Kharif 2021. Plant breeding 12, Agronomy 5, entomology 12 and Pathology 11 trials were conducted. In plant breeding IVT and AVT trials of MS, IM and NIL trials were conducted and crop stand was good.

Warangal: Dr V Naga Bhushanam and Dr B Sathish Chandra presented the details of AICRIP trials allotted 21 Plant Breeding, 12 entomology, 4 Agronomy were conducted at this centre. Crop was in good condition for the trials under late, medium, mid early, early transplanted, biofortification and NILs trials. It was suggested to focus on developing varieties for beaten rice and puffed rice.

Jagatial: Dr B Srinivas given the details of trials conducted at this centre a total of 5 breeding trials conducted and they were at maximum tillering stage. 1 trial under Agronomy, 5 trials under entomology and 5 trials under Pathology were conducted. It was suggested to focus on gall midge resistance breeding along with other major pest and diseases.

Kampasagar: Dr Shiva kumar presented the AICRIP trials carried out at the station during kharif 2021.9 breeding trials were conducted on AL&ISTVT, medium slender and early (direct sowing)and crop stand was good .

Kunaram: Dr Sreedhar Siddi, presented the activities of the station under AICRIP, 5 breeding trials were conducted under early (transplanted), irrigated medium, medium slender, irrigated mid early trials. The centre requested for Agronomy trials from next year.

Rudrur: Dr. Ramya Rathod, presented the station mandates and details on trials.

5 breeding AICRIP trials were conducted at this centre. Incidence of – Blast, BLB and BPH were majorly observed during 2020. The centre is focussing on breeding material for development of early and medium duration rice varieties with multiple resistance (Blast, BLB & BPH) and developing early rice varieties possessing cold tolerance and aerobic condition.



Mandya: Dr. G.R. Denesh, explained about the trials conducted at this centre. Eighteen AICRIP trials were conducted at this centre including AVT1- Aerobic, IVT-IM, AVT1-IM, AVT2-IM, IVT-IME, AVT1-IME, IVT-E-TP, AVT1-E-TP, AVT2-E-TP, IVT-MS, AVT1-MS, AVT1-AL & ISTVT, IVT-AL & ISTVT, IVT-Biofort, AVT1-Biofort and IVT- Aerobic. The crop stand across trials was reported to be good. 17 Agronomy, 18 Pathology, 11 entomology, 3 soil science were also conducted. It was suggested to give more focus on valued added products and breeding of coloured rice genotypes

Gangavati: Dr Mahantashivayogayya, presented the details of trials conducted in Kharif 2021. All the 16 trials, IVT-IM, AVT1-IM, AVT2-IM, IVT-IME, AVT1-IME, IVT-E-TP, AVT1-E-TP, AVT2-E-TP, IVT-MS, AVT1-MS, AVT1-AL & ISTVT, IVT-AL & ISTVT, IVT-Biofort, and AVT1-Biofort were conducted. Dr BG Masthan Reddy explained about the trials conducted under Agronomy. 12 Agronomy and 16 entomology were also conducted.

Ponnampet: Dr Hosagoudar and Dr Sheshaiah conducted all the allotted six plant breeding and eight plant pathology trials. IVTE (H), AVT1-E (H), IVT-L, AVT1-L, IVT-RSL and AVT1-RSL were evaluated.

Brahmavar: Dr Sreedevi discussed the details on the trials conducted. 15 trials allotted and 13 trials conducted and the crop condition is good. IVT E(TP) & IVT(L) were not conducted. Saline trials conducted at Farmer's field. Mutants of coloured rice varieties are also developed in this centre. Director suggested that to improve the red rice varieties.

Mugad: Dr Satish, conducted 8 AVT trials, 9 IVT trials and all trials are implemented and crop was in flowering stage. 3 trials conducted under pathology and 1 trial was not conducted due to late receipt of seeds. Very early genotypes are required in this region. IVT CSTVT, submergence, semi deep water trials were conducted at Kunda centre.

Sirsi: Dr Surendra explained about Hill trials conducted and Japonica trials in the centre.

Aduthurai: Dr. Suresh and Dr. Sassi kumar, TRRI, Aduthurai presented the observations on trials conducted at this institute. A total of 20 breeding trials (AVT1-IME, IVT-IME, AVT1-IM, IVT-IM, AVT2-L, AVT1-L, IVT-L, IVT-E-TP, AVT1-E-TP, AVT2-E-TP, AVT1-AEROB, IVT-AEROB, AVT2-BIOFORT, AVT1-BIOFORT, and IVT-BIOFORT) were conducted. All the trials were conducted as per recommendations. 6 Agronomy and 15 Pathology trials were conducted.

Coimbtore: Dr. Saraswathi, Dr. Pushpam and Dr Ganesh Murthy; presented the trial status. 21 breeding trials allotted (AVT1-AL & ISTVT, IVT-AL & ISTVT, IVT-IME, IVT-IM, AVT1-IM, IVT-MS, IVT-BIOFORT, AVT1-BIOFORT, AVTII-BIOFORT, IVT-NPT, IVT-IM, IVT-MS, AVT1-MS, AVT1-ASG, IVT-ASG, AVT1-NIL trials) and the trials were conducted as per recommendations. Two Late trials were not conducted. 7 Agronomy, 10 entomology and 9 pathology trials were conducted and presented by respective scientists.

Trichy: Dr. Jayaprakash and Dr Shanmuganathan, presented details of 2 trials under IVT & AVT (ISTVT). Salt injury scores, EC and pH were noted at various crop stages. Poor germination was observed among entries.

Tirur: Dr Bhanumathi, discuss about AICRIP trials. Main mandate of station is to develop varieties for semi-arid areas. Breeding trials 2 irrigated medium trials conducted and at active tillering stage.

Pondicherry: Dr. Narasimhan, presented the observations on trials conducted. 9 trials were allotted and conducted. 9 Agronomy and 5 soil science trials were conducted.

Karaikal: Dr Thirumeni, presented the details on AICRIP trials. 12 breeding trials allotted including hybrid rice, salinity and submergence trials (IVT-L, AVT1-L, NIL TRIALS, IHRT M, IHRT MS). It was asked to consider the soil of this region as sodic soils instead of salinity. Dr Aruna presented the trials under soil science and conductance of 5 trials. It was suggested to identify more locations to conduct salinity trials.

Physical monitoring of the AICRIP Trials, Kharif, 2021

Physical monitoring of AICRIP trials was taken up in Eastern Zone (Zone III) during 16-22, November 2021. Dr. Anantha, M.S. Senior scientist (Plant Breeding), ICAR IIRR visited and monitored AICRIP trials at CRURRS Hazaribag, BAU Ranchi, Bankura and Hathwara.

Monitoring Team of Drs. R. Mahendra Kumar, A.V.S.R.Swamy, Y.Sreedhar, and C. Gireesh visited CSSRI regional Station Lucknow 4-10-2021 and monitored AL & ISTVT Trials. The team also visited CSAU Kanpur on 5-10-2021 and BHU Varanasi 6-10-2021. Dry DSR Plots Raised at Kasigunj in connection with ITC-IIRR Joint programme in Varanasi Area was also monitored.

CRURRS Hazaribag: Six trials were conducted. Overall the conduct was experiments was very good and maintained the plot weed free. AVT 1 NIL Drought stress trial was conducted under Rain out shelter. Entries of varying duration (seed to seed 90 days to 145 days) were included in same trial. It is difficult to impose drought uniformly for all the entries having different maturity duration. Therefore, it is suggested to group genotypes based on flowering duration while constituting the experiments for drought.

BAU Ranchi: All the allotted trials of different disciplines were conducted. It was suggested to conduct Low Nitrogen and Low Phosphorous trials in a fixed plot instead of changing every year. AICRIP trials of Physiology related to silicon was not properly banded. Therefore two physiology experiments may not be considered for analysis. Dr O N Singh, Vice Chancellor joined the AICRIP monitoring group for some time and give his suggestions.

Rice Research Station, Bankura: Six breeding trials, 18 pathology trials (one allotted by ICAR NRRI Cuttack) were conducted. Field labelling of individual genotype was missing in all experiments. It was suggested to put labels to individual plots. Over all, the conduct of experiment is satisfactory, but needs lot of improvement in maintaining plot size, labelling, field board etc.

Zonal Drought Resistant Paddy Research station, Hathwara: Eight breeding trials were conducted during the season. The station has improved a lot over a period of 4-5 years. Over all they are conducting the trials very well and having good breeding programme. It was suggested to concentrate more on medium lands and uplands rather than irrigated / low lands.



Monitoring Team at BAU Ranchi



Monitoring Team at Kanpur, UP

Physical Monitoring (Zone VII) : Maruteru, Machilipatnam, Bapatla

Members: Drs. S.V. Sai Prasad, J. Aravind Kumar, P. Revathi and G. Jesudas (6.12.2021 to 8.12.2021)

ARS, Bapatla

IIRR team monitored AICRIP trials conducted at ARS, Bapatla on 6th December, 2021. A total six AICRIP trials viz., IVT-MS, AVT-1 MS, IVT-L, AVT 1-L, IHRT-MS, AVT-1 Bio-fortification, IVT-Bio fortification were conducted along with ICAR-BMGF ERA trial and Harvest plus MET trial. All the trials were laid out as per the AICRIP guidelines. However, IVT-MS, AVT-1 MS, IVT-L, AVT 1-L were planted using wet DSR method, followed by regular irrigations to save important resources like water and labour. In the AVT -1 biofortification trial lot of mixtures were observed. The entries with more number of mixtures/offtypes are 4505, 4510, 4506 and 4504. IVT-biofortification: The following entries viz., 4637, 4624, 4608, 4636, 4614, 4622 and 4654 were observed with more number of offtypes; hence these entries may be dropped from the trial for further evaluation. The entry number 4613 expressed very poor performance at Bapatla location. The IHRT-MS trial expression was very poor in comparison with varietal trials. IVT-Late, AVT-late trials lodged owing to incessant rains during November. Lodging was a major issue in AICRIP trials due to continuous heavy rainfalls before harvesting. Few entries were damaged by rodents. Major pest was leaf folder and disease incidence of blast/false smut were observed in AICRIP trials. AICRIP team monitored all the breeder and nucleus seed production plots and it was observed that seed production plots were maintained exceptionally well with limited manpower.



RARS, Maruteru

Many of the trials at RARS, Maruteru were harvested except for DWL and RSL. Also, there were some entries yet to be harvested in the medium slender trial and others. Even at Maruteru, there was considerable damage due to rains of both AICRIP and station trials. The monitoring team was informed that the Rabi sowing/transplanting schedule has also been delayed due to the rains. The monitoring team visited the AICRIP plots (crop stand and maintenance was very good), seed production plots, organic rice production plots, and long term fertilizer experiment plot. Also visited the biotechnology and rodent control laboratories at RARS, Maruteru. Also, the team was shown the godown facilities. The visit was coordinated by PS, Rice. Information about the very low cost, very effective solar fencing technology (to prevent from wild boar damage) and polythene sheet rodents trap technology developed under All India Network Project on Vertebrate Pest Management. These low cost technologies can be very well adopted at our Institute taking technical support from Maruteru scientists.

A total 12 trials of plant pathology were conducted at RARS, Maruteru, and all the trials were planted as per the AICRIP guidelines. The Bacterial leaf blight incidence was more and moderate levels of neck blast, false smut and sheath rot diseases were also observed. In case of Entomology trials, 13 were allotted and conducted. Due to heavy rains, the 4 screening nurseries were not conducted properly and also incidence of pests was almost zero. They also informed that the seed is reaching very late and they are asking for 2 more sets of extra seed extra for smooth conduct of trials.

The monitoring team visited the **KVK, Undi** and also a farmer's field near to KVK, Undi. The farmer was cultivating the minikits of 15 Maruteru varieties as well as organic production of BPT 5204.

Dr. R.M. Sundaram, Director, IIRR participated in all the virtual monitoring session, interacted with the all the co-operators, assessed the conducting of trials and gave constructive suggestions to improve the AICRIP trials and breeding programmes. Director stressed the importance of UC and SOE for releasing grants and requested to provide the documents for release of funds in time. Director also assured additional grants for carrying the acrip if submitted with proper justification. He informed that a request has been made to ICAR to increase contingency fund for both voluntary and funded centres. If approved, revised funding will be provided from next year.

Dr L.V Subbarao gave suggestions on AICRIP trial conductance, report writing and other breeding programmes from centres. Dr. B Shailaja & AKMU Cell, ICAR-IIRR interacted with the scientists about AICRIP intranet and also supported the conducting of virtual monitoring through zoom meeting. Dr L.V Subba Rao thanked & congratulated all AICRIP centres, ICAR monitoring team members, breeders & and concluded the virtual monitoring sessions.

LIST OF BREEDERS

ICAR-Indian Institute of Rice Research, Rajendranagar, Hyderabad-500 030		
Dr. R. M. Sundaram, Director		
Crop Improvement Division		
Plant Breeding		
Dr. L.V. Subba Rao	:	Principal Scientist & PI, IIRR
Dr. A.V.S.R.Swamy	:	Principal Scientist
Dr. S.V.Sai Prasad	:	Principal Scientist
Dr. G. Padmavathi	:	Principal Scientist
Dr. J.Aravind Kumar	:	Principal Scientist
Dr. C.Gireesh	:	Senior Scientist
Dr. K.Suneetha	:	Senior Scientist
Dr. Jyothi Badri	:	Senior Scientist
Dr. M.S.Anantha	:	Senior Scientist
Dr. R. Abdul Fiyaz	:	Scientist
Dr. Divya Balakrishnan	:	Scientist
Dr. Ch.Suvarna Rani	:	Scientist
Hybrid rice		
Dr. A.S. Hari Prasad	:	Principal Scientist
Dr. P. Senguttuvel	:	Senior Scientist
Dr. P. Revathi	:	Senior Scientist
Dr. K.B.Kemparaju	:	Senior Scientist
Dr. K.Sruthi	:	Scientist
Biotechnology		
Dr. C.N.N.Neeraja	:	Principal Scientist
Dr. M.Sheshu Madhav	:	Principal Scientist
Dr. S.K.Mangrauthia	:	Senior Scientist
Dr. Kalyani Kulkarni	:	Scientist
Dr.. Santosha Rathod	:	Scientist (Agril. Statistics)

ICAR-National Rice Research Institute, Cuttack-753 006, Odisha		
Dr. Padmini Swain — Director (A)		
Crop Improvement Division		
Genetics & Plant Breeding		
Dr. B.C. Patra	:	PS & Head, CID, Nodal Officer AICRIP (Rainfed)
Dr. K.Chattopadhyay	:	Principal Scientist & Co-Nodal Officer AICRIP (Rainfed)
Dr. Sushanta Kumar Dash	:	Principal Scientist & Co-Nodal Officer AICRIP (Rainfed)
Dr. (Mrs.) Meera Kumari Kar	:	Principal Scientist
Dr. Sarat Kumar Pradhan	:	Principal Scientist
Dr. Lotan Kumar Bose	:	Principal Scientist
Dr. A.Anandan	:	Principal Scientist
Dr. Mridul Chakraborti	:	Senior Scientist
Dr. B.C.Marndi	:	Scientist (SG)
Dr. J. Meher	:	Scientist (SS)
Dr. Ramlaxhan Verma	:	Scientist
Dr. (Mrs.) Sutapa Sarkar	:	Scientist
Dr. Rameswar Prasad Sah	:	Scientist
Dr. (Mrs.) P. Sanghamitra	:	Scientist (Economy Botany)
Dr. Azharudeen T.P.	:	Scientist
Mr. Anil Kumar C	:	Scientist
Mrs. Reshmi Raj K.R.	:	Scientist
Dr. Nabaneeta Basak	:	Scientist (Crop Physiology & Biochemistry)
Dr. N.N. Jambhulkar	:	Scientist (Social Science)

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ICAR-Indian Agricultural Research Institute, New Delhi - 110 012		
Dr. A.K.Singh — Director		
Division of Genetics		
Dr. Rajbir Yadav	:	Head
Dr. S.Gopal Krishnan	:	Principal Scientist
Dr.K.K.Vinod	:	Principal Scientist
Dr. Akshay Talukdar	:	Principal Scientist
Dr. Prolay K.Bhowmick,	:	Scientist (Sr. Scale)
Dr. Ranjith K.Ellur	:	Scientist
Dr. Haritha Bollinedi	:	Scientist

List of Technical Personnel

Mr. M.Vijay Kumar	Senior Technical Officer	Mr. Prem Pal Kumar	Technical Officer
Mr. E.Nagarjuna	Technical Officer	Mr.Bidyasagar Mandal	Senior Technical Asst.
Mr. Md. Tahseen	Technical Officer	Mr. Debakanta Nayak	Technical Assistant
Mr. Sadath Ali	Technical Officer	Mr. Manoj Patra	Technician
Mr. P.Koteswara Rao	Sr.Technical Asst.		
Mr. R. Sathamaiah	Field Technician	Mr. Devinder Singh	Technical Officer

Cooperators

S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
1	Aduthurai	Funded	Dr.R. Suresh, Assistant Professor (Plant Breeding & Genetics), TRRI, Aduthurai – 612101, Tamil Nadu, 91-9578305324 (M), sureshpbg@gmail.com
2	Aduthurai	Funded	Dr. M. Dhandapani, Asst. Professor, (Plant Breeding & Genetics), TRRI, Aduthurai-612101, Tamil Nadu, dhanda1977@gmail.com
3	Almora	Voluntary	Dr. J. P. Aditya, Senior Scientist, ICAR-VPKAS, Mall Road, ALMORA – 263601, Uttarakhand, 05962 241003 (O), 09410795850 (M), jpadiya2021@gmail.com jpadiya4011@rediffmail.com jayaprakashaditya@gmail.com
4	Ambikapur	Voluntary	Ms. Kiran Tigga, Scientist (Genetics & Plant Breeding), R. M. D. College of Agriculture & Research Station, Ajirma, Ambikapur (C.G.) 497001, kiranascoraipur@gmail.com
5	Ambikapur	Voluntary	Dr. Jitendra Kumar Tiwari, Scientist, Department of Genetics and Plant Breeding, RMD, College of Agriculture and Research Station, IGKV, Ambikapur-497001, Chhattisgarh, 08839556957(M), tiwarijk5@gmail.com
6	Annamalainagar	Voluntary	Dr. K.R. Saravanan, Asst. Professor, Dept. of Genetics and Plant Breeding, Faculty of Agriculture, Annamalainagar University, Annamalainagar- 608 002, Cuddalore Dist, Tamilnadu, 09940031431 (M). saravan_rangan@rediffmail.com
7	Arundhutinagar	Funded	Dr. Atanu Kumar Pal, Plant Breeder, HOD, Plant Breeding Division, State Agriculture Research Station, Arundhutinagar, Agarthala-799003, Tripura, 0381-2370249 (O), 0381-2379535, 7005281152, 09436126792, 9774307079 (M), email: dratanukpb60@gmail.com dratanu@hotmail.com
8	Bajaura	Voluntary	Dr. Gurudev Singh, Scientist (Agronomy)-cum-P.I. (Linseed), Department of Genetics and Plant Breeding, COA, CSK-HPKV, Palampur, Himachal Pradesh - 176 062, 09418479856 gdevsaandil@rediffmail.com
9	Bankura	Funded	Dr. Chandan Kumar Bhunia, Joint Director of Agriculture (Mycology & Plant Pathology), Rice Research Station, Bankura, Nutanchati, P.O. & District Bankura, PIN 722101, West Bengal, 03242-251306 (O), 6289633761 (M) , rsbankura@gmail.com

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
10	Bankura	Funded	Dr. Goutam Kumar Mallick, Economic Botanist V , Rice Research Station, Bankura, Nutanchati, P.O. & District Bankura-722101, West Bengal, 03242-251306 (O) , 9474184953(M) rrsbankura@gmail.com
11	Bankura	Funded	Dr. Vivekananda Mandi, Assistant Botanist, Rice Research Station, Nutanchati P.O., Bankura – 722101, West Bengal, 03242-251306 (O), 9564697908 (M), rrsbankura@gmail.com
12	Bapatla	Voluntary	Dr. B. Krishna Veni, Senior Scientist (Breeding), Agricultural Research Station, (ANGRAU). Agricultural College farm Campus, Bapatla, Guntur (Dt.)- 522 101; 08643225901 (Telefax), 9441721120 (M) krishnavenirru@gmail.com
13	BEDF, Modipuram	Voluntary	Dr. Ritesh Sharma, Principal Scientist, Basmati Export Development Foundation (BEDF), Modipuram, MEERUT – 250 110, Uttar Pradesh, 09412705048 (M),0121-2888554 (O) riteshbedf5048@gmail.com
14	Bhubaneswar	Voluntary	Dr. D. N. Bastia, Professor & Rice Breeder, Dept. of Plant Breeding & Genetics, College of Agriculture, O.U.A.T, Bhubaneswar-751 003, 0674-2397780 (F), 09861106427(M) debendranath.bastia@gmail.com
15	Bikramganj (Dhangain)	Funded	Dr. Prakash Singh, Assistant Professor-cum- Rice Breeder, AICRIP, Botanical Research Unit (BRU), DHANGAIN-802 212, P.O.-Bikramganj, Distt.-Rohtas, Bihar, 9452948860 / 7004181244 (M) prakash201288@gmail.com psingh_gene@yahoo.com
16	Bilaspur	Voluntary	Dr. D.J. Sharma, Scientist, Dept. of Genetics & Plant Breeding, C.A.R.S., IGKV, Bilaspur-495 001, Chhattisgarh, (O) 07752-254379, 07752- 254380 djs@rediffmail.com
17	Brahmavar	Funded	Dr. Shridevi A. Jakkeral , Junior Rice Breeder (AICRIP on Rice), Zonal Agricultural & Horticultural Research Station, Kunjal Road, Brahmavar-576 213, Udupi Dist. Karnataka; 0820-2561011 (O), 9611780850(M) gowrishrigpb@gmail.com
18	Canning	Voluntary	Dr. Nitish R. Prakash, Scientist, Genetics & Plant Breeding, ICAR- Central Soil Salinity Research Institute, Regional Research Station, Canning Town - 743329, South 24 Parganas, West Bengal, 03218-255241 (O), 07834810111 (M), nitishranjan240@gmail.com
19	Canning	Voluntary	Dr. S.K. Sarangi, Principal Scientist (Agronomy); ICAR- Central Soil Salinity Research Institute, Regional Research Station, Canning Town - 743329, South 24 Parganas, West Bengal 03218-255084 (F), 09609930909 / 09434709516 (M), sksarangicanning@gmail.com cssri.canning@mail.com
20	Chatha	Funded	Dr. Ravinder Singh Sudan, Senior Scientist and Incharge AICRIP (Rice), Division of Plant Breeding & Genetics, SKUAST-Jammu, FoA, Main Campus, Jammu-180009, 9419159975 (M), rssudanudh@gmail.com
21	Chinsurah	Funded	Dr. Indrani Dana, Joint Director of Agriculture (Rice Dev.), Rice Research Station (Government of West Bengal), Chinsurah (R.S.)-712 102, Hooghly, West Bengal 033-26861149, 033-26862484 (O) jdarice1932@gmail.com
22	Chinsurah	Funded	Dr. Bijan Adhikari, Senior Rice Breeder, Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly-712102, West Bengal, 09433643509(M) adhikaribijan@gmail.com
23	Chinsurah	Funded	Dr. Rajib Das, Asst. Botanist, Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly-712102, West Bengal. rajibrs@gmail.com
24	Chinsurah	Funded	Mr. Sumit Murmu, Assistant Botanist, W.B.A.S. (Research) I/C, S & FRPRS, Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly-712 102, West Bengal, 09007256755 (M) murmu.sumit@gmail.com
25	Chinsurah	Funded	Dr. Mitali Chatterjee, Assistant Botanist, W.B.A.S. (Research), Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly-712 102, West Bengal mitali.mchatterjee@gmail.com
26	Chinsurah	Funded	Dr. Suman Debnath, Assistant Botanist, W.B.A.S. (Research), Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly-712 102, West Bengal, 09933739365 (O) sumandebnath.agri@gmail.com

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
27	Chinsurah	Funded	Dr. Supama Gupta, Assistant Botanist, W.B.A.S. (Research), Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly-712 102, West Bengal drsupamagupta12@gmail.com
28	Chiplima	Funded	Dr. (Mrs.) Rini Pal, Officer-in-charge, AICRP on Rice, RRTTS, Chiplima, Sambalpur-768025, Odisha, 9439895033 (M) icairpricech.ouat@gmail.com
29	Chiplima	Funded	Dr. Pamirelli Ranjith, Assistant Professor/ Rice Breeder. AICRIP, Regional Research and Technology Transfer Station, (OUAT), Chiplima-768025, Sambalpur, Odisha, 09492639312; 08919716454 ranjithpbqouat@gmail.com
30	Coimbatore	Funded	Dr. R.Saraswathi, Professor & Head, Department of Rice, Tamil Nadu Agricultural University, Coimbatore-641 003, Tamil Nadu, 0422-2474967 (O) 09894561745 (M) rice@tnau.ac.in sarasrice2004@yahoo.co.in
31	Coimbatore	Funded	Dr. R. Pushpam, Professor, Department of Rice, TNAU, Coimbatore-641 003, TN, 09790471067 (M) rice@tnau.ac.in pushpamtnau@gmail.com
32	Cuttack	Voluntary	Dr. B.C. Patra, Principal Scientist & Head, Crop Improvement Division, ICAR-National Rice Research Institute, Cuttack-753 006, Odisha, 09937171699 (M) bcpatracri@yahoo.com
33	Cuttack	Voluntary	Dr. Meera Kumari Kar, Principal Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack-753006, Odisha 94380 82075 (M) meera_kar@hotmail.com meerakkar@gmail.com
34	Cuttack	Voluntary	Dr. S. K. Pradhan, Principal Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack -753006, Odisha, 0671-2367788-83, Extn-2219, 09937750353 (M) pradhancrri@gmail.com
35	Cuttack	Voluntary	Dr. L.K. Bose, Principal Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack -753006, Odisha, 09437670122 (M) lotankbose@yahoo.com
36	Cuttack	Voluntary	Dr. Krishnendu Chattopadhyay, Principal Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack -753006, Odisha 9178248015(M) krishnenducrri@gmail.com
37	Cuttack	Voluntary	Dr. S.K.Dash, Principal Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack -753006, Odisha, 07978691066/09040384910(M) skdash139@gmail.com
38	Cuttack	Voluntary	Dr. A. Anandan, Principal Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack -753006, Odisha, Office Tele: 0671-2367768-783 (extension.2227), 09178830981(M) anandanau@yahoo.com
39	Cuttack	Voluntary	Dr. B.C. Marndi, Scientist (SG), Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack -753006, 07008186979 (M) bcmamdicri@gmail.com bc_marndi_cri@yahoo.co.in
40	Cuttack	Voluntary	Dr. J. Meher, Senior Scientist SS), Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack -753006, Odisha, 9937437459 (M) jmehercrri@gmail.com
41	Cuttack	Voluntary	Dr. Mridul Chakraborti, Senior Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack-753006, Odisha; 09932032400 (M) Mridul.Chakraborti@icar.gov.in
42	Cuttack	Voluntary	Dr. Ramlakhan Verma, Scientist, Crop Improvement Division, ICAR-National Rice Research Institute (NRRRI), Cuttack-753006, Odisha; 8847841041/8895237769 (M) ramlakhan.verma@icar.gov.in rampantvarsity@gmail.com
43	Cuttack	Voluntary	Dr. Sutapa Sarkar, Scientist, ICAR-National Rice Research Institute (NRRRI), Cuttack-753 006, Odisha, 09437142920 (M) sutapasarkar1310@gmail.com
44	Dabhoi	Voluntary	Dr. A.G. Pampaniya, Unit Head & Assistant Research Scientist (Rice), Paddy Research Station, AAU Model Farm, (Anand Agril University) Dabhoi – 391110, (Dist - Vadodra) 02663-290 233, 9106425627(M) unitheaddabhoi@aau.in
45	Danti	Voluntary	Dr. Haimil Joshi, Asst. Research Scientist, CSSRS Soil and Water Management Research Institute, (Navsari Agricultural University), DANTI- 396 450, Gujarat.

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
46	Derol	Voluntary	Dr. M.B. Patel, Unit Head & Assoc. Res. Scientist, Agricultural Research Station (Anand Agricultural University) Derol-389320, Tq. Kalol, Dist. Panchmahal (Godhra), Gujarat, 02676- 235528 (O), 09601534177 (M) arsderol@gmail.com arsderol@aaui.in
47	Gangavati	Funded	Dr. Mahantashivayogayya K Hiremath, Senior Breeder (Rice), AICRP-Rice Scheme, Agricultural Research Station, Gangavati -583 227, Dist. Koppal, Karnataka 08533-270143 (O), 09845639892 (M) mahant.shivayogayya2@gmail.com
48	Gangtok	Voluntary	Dr. E. Lamalakshmi Devi, Scientist (Genetics & Plant Breeding), ICAR Research Complex for NEH Region, Sikkim Centre), Tadong, Gangtok, Sikkim-737 102, 9366608798 (M), elangbamtama@gmail.com elangbam.devi@icar.gov.in
49	Gerua	Voluntary	Dr. R. Bhagawati, Principal Scientist & Officer In-charge, ICAR-NRRI RRLRRS, Gerua, Hajo, Kamrup -781102, Assam, 0361-2820334 (O), 0361-2820370(F), 9436252487 (M) rbhagawati@rediffmail.com
50	Ghaghrahat	Funded	Dr. Nitendra Prakash, Rice Breeder, Crop Research Station, P.O. Jarwal Road, Bahraich, Ghaghrahat-271901, Uttar Pradesh 05251-225481 (O), 05262-224669 (R), 09415160709 (M) nitendra63@yahoo.co.in
51	Goa	Voluntary	Dr. K.K. Manohara, Senior Scientist (Genetics & Plant Breeding), Crop Sciences Section, ICAR-Central Coastal Agricultural Research Institute, Ela , Old Goa, Goa – 403402, 0832-2284678/79 (O), 0832-2284607 (R), 07507943679 (M), 0832-2285649 (F) manohar.gpb@gmail.com
52	Gurdaspur	Voluntary	Dr. Arvinder Kaur, Asstt. Plant Breeder, PAU Regional Research Station, Gurdaspur, Punjab, 08146742651 (M) arvindertoor@pau.edu
53	Hathwara	Voluntary	Dr. Uday Sankar Ray , Assistant Botanist, Zonal Drought Resistant Paddy Research Station, Dept. of Agriculture, Govt. of West Bengal, Hathwara, P.O : V. Nagar, Purulia-723 147, West Bengal, 03252-201191 (O),08900606271(M) zdrprs@gmail.com uday_rmp@rediffmail.com
54	Hazaribagh	Voluntary	Dr. N. P. Mandal, Principal. Scientist (Plant Breeding), ICAR-NRRI-CRURRS Post Box- 48, Hazaribag-825 301, Jharkhand 06546-222263 (O),06546-224506 (R) 09430391164(M), 06546-223697 (F) npmandal@hotmail.com nimal.mandal@gmail.com
55	Hazaribagh	Voluntary	Dr. Somnath Roy, Scientist, Plant Breeding), ICAR-NRRI-CRURRS Post Box-48, Hazaribag-825 301, Jharkhand 9402196952 (M) sroypr@gmail.com
56	Imphal, CAU	Voluntary	Dr. (Mrs.) Sonika Yumnam, Scientist (Plant Breeding), AICRIP on Chickpea & I/c AICRIP (Rice), Directorate of Research, Central Agricultural University, Lamphelpat, PIN- 795004, Imphal, Manipur , 8730007376 / 8787674900 (M) sonikayumnam@gmail.com
57	Jabalpur	Voluntary	Dr. Sanjay Kumar Singh, Senior Rice Breeder (Scientist), Department of Plant Breeding & Genetics, J.N.K.V.V., Jabalpur. Madhya Pradesh-482004, 0761-2681020 (O), 9407884019, 7000030929 (M) sanjayivr@gmail.com
58	Jagdalpur	Funded	Dr. Sonali Kar, Scientist (GPB), SG College of Agricultural and Research Station (IGKV) Kumhrawand, JAGDALPUR – 494 001, Bastar District., Chhattisgarh, 07782-229360 (O), 09424282716(M) sonalika31@gmail.com
59	Jagdalpur	Funded	Sh. Raja Ram Kanwar, Scientist (PB), SG College of Agricultural and Research Station (IGKV) Kumhrawand, JAGDALPUR – 494 001, Bastar Dist., Chhattisgarh,
60	Jagtial	Voluntary	Dr. B.Srinivas, Scientist (Plant Breeding), Rice Scheme, Regional Agricultural Research Station (PJ TSAU), Polasa, Jagtial – 505 529, Telangana State, 09618391562, 09866585767 (M), srinu.bdd@gmail.com
61	Jagtial	Voluntary	Gonya Nayak. Pathulothu, Scientist, PJ TSAU, RARS, Polasa, Jagtial, PIN-505 529, Telangana., 9701592326, 9618391562 (M), pgonyanayak@gmail.com
62	Jeypore	Funded	Sri Mihir Ranjan Mohanty, Junior Breeder-cum-Officer-In-Charge, RRTTSS (OUAT), M.G.Road, Jeypore-764001, Koraput, Odisha 06854-240569(O), 09078154995(M) mhirgenetics@gmail.com oiyjeypore.ouat@gmail.com oiicairpricejey.ouat@gmail.com

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
63	Kampasagar	Voluntary	Dr. N.Lingaiiah, Senior Scientist (PB) & Head, Agricultural Research Station, (PJ TSAU), Kampasagar, Babu Sai Pet (Post) Nalgonda District. Pin 508 207, 9949301819 (M), headarsmlg@rediffmail.com
64	Kampasagar	Voluntary	Dr. G. Shiva Prasad, Scientist (Plant Breeding), Agricultural Research Station, (PJ TSAU), Kampasagar, Babu Sai Pet (Post) Nalgonda District. Pin 508 207 Telangana, 09912534831 (M), headarsmlg@rediffmail.com shiva0843@gmail.com
65	Kanpur	Funded	Dr. P. K. Singh, Professor, Genetics & Plant Breeding, Officer-in Charge, AICRIP, C.S. Azad. University of Agriculture and Technology, Kanpur – 208002, Uttar Pradesh, 9415172323,7355751246 (M), pk_singh65@yahoo.com , pk Singh@csauk.ac.in
66	Karaikal	Voluntary	Dr.S.Thirumeni, Professor (PBG), Pandit Jawaharlal Nehru College of Agriculture and Research , Karaikal- 609603, Puducherry (U.T). 09443573371 (M),091- 4368-261372 (O), 091-4368-261260(F),09443573371 (M), s_thirumeni@rediffmail.com
67	Karaikal	Voluntary	Dr. V. KRISHNAN. Professor (Plant Breeding and Genetics), PAJANCOA & RI, Nedungadu post, KARAİKAL-609603, 9842256581, 9789131180, anurakrish@yahoo.com
68	Karjat	Funded	Dr. B.D. Waghmode, Professor (CAS), Rice Specialist, Regional Agricultural Research Station, Karjat-410 201, Dist. Raigad, Maharashtra. 09404580416 , 09834458682(M), bharat_breed@yahoo.com , ricespecialistkarjat@gmail.com
69	Karjat	Funded	Dr. J.P. Devmore, Junior Rice Breeder, Regional Agricultural Research Station, (Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth), Dist. Raigad. Karjat– 410 201, Maharashtra
70	Karnal	Voluntary	Dr. Krishna Murthy, S. L., Senior Scientist (Plant Breeding), Division of Crop Improvement , ICAR-Central Soil Salinity Research Institute (CSSRI), Kachwa Road, Karnal-132001, Haryana 0184-2291218 Ext.216 (O), 08053726399 (M), krishnagene@gmail.com
71	Kaul	Funded	Dr. Rakesh Kumar, Assistant Rice Breeder, CCS HAU Rice Research Station, Kaul (Kaithal)-136 021, Haryana. 8059907772 (M), kaku.3122@gmail.com rskaul@gmail.com dr.rakesh@hau.ac.in
72	Khudwani	Funded	Dr. N.R. Sofi, Professor, PBG AICRIP, Rice, Mountain Research Centre for Field Crops (SKUAST-K), Khudwani, Anantang – 192 102, Kashmir, J&K (F) 01931-238246, 09419040582 (M) najeef_sofi@rediffmail.com
73	Khudwani	Funded	Dr. Asif B Shikari, Senior Scientist, GPB, Mountain Research Centre for Field Crops, Khudwani, Anantnag-192102, Kashmir, J&K.
74	Khudwani	Funded	Dr. Gazala H.Khan, Junior Scientist, GPB, Mountain Research Centre for Field Crops, Khudwani, Anantnag-192102, Kashmir, J&K.
75	Kota	Funded	Dr. Manoj Kumar, Asst. Professor & Rice Breeder, Dept. Of Plant Breeding & Genetics, Agricultural Research Station, Agriculture University, Ummedganj farm, PB. No. 7, G.P.O. Nayapura, Kaitoon Road, Kota-324001, Rajasthan, 0744-2844369 (O), 8005919994 (M) manoj.vishnoi108@gmail.com
76	Kunaram	Voluntary	Dr. Sreedhar Siddi, Scientist (Plant Breeding) & Head, Agricultural Research Station, (PJ TSAU), Kunaram 505174, Kalva Srirampur Mandal, Karimnagar Telangana State, 09849635235 (M), arskunaram@yahoo.com siddu.35@gmail.com
77	Kurumbapet	Funded	Dr. R. Narasimman, Rice Breeder i/c, Perunthalaivar Kamaraj Krishi Vigyan Kendra, Kurumbapet, Puducherry – 605 009, 0413-2271292 (F), 0413-2279758, 09442502107(M), naras65@gmail.com pondicherrykvvk@yahoo.co.in pkkvk.py@gov.in
78	Lamphelpat	Voluntary	Dr. Konsam Sarika, Scientist (Genetics and Plant Breeding), ICAR Research Complex for NEH Region, Manipur Centre, Lamphelpat, Imphal-795 004, 0385-2414654 (O), 0385-2414749 (F), 8787401857 (M, konsams@gmail.com

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
79	Lamphelpat	Voluntary	Dr. Ng. Umakanta, Scientist, Plant Biotechnology, ICAR Research Complex for NEH Region, Manipur Centre, Lamphelpat, Imphal-795004, ukbiotech@gmail.com
80	Lembucherra	Voluntary	Dr. S. P. Das, Principal Scientist, Division of Plant Breeding, ICAR-Research Complex for NEH Region, Tripura Centre, Lembucherra-799210 - West Tripura, 0381-2865203 (O), 0381-2865537 (F), 09436450747 (M), drspcdas@gmail.com
81	Lucknow	Voluntary	Ravi Kiran, KT, Scientist (Genetics & Plant Breeding), ICAR- Central Soil Salinity Research Institute, Regional research station, Lucknow – 226002, Uttar Pradesh, 9991847144 (M), rkravikrankt@gmail.com
82	Ludhiana	Funded	Dr. G. S. Mangat, ADR (Crop Improvement), Dept. of Plant Breeding & Genetics, Rice Section, Punjab Agricultural University, Ludhiana-141 004, Punjab 09814516464 (M), mangatgs2005@yahoo.co.in gsmangat-pbg@pau.edu
83	Ludhiana	Funded	Dr. R.S.Gill, Principal Rice Breeder, Rice Section, Dept. of Plant Breeding & Genetics, PAU, Ludhiana -141 004, Punjab, 09888310070 (M), ranvirgillz@gmail.com
84	Ludhiana	Funded	Dr. Rupinder Kaur, Principal Rice Breeder, Rice Section, Dept. of Plant Breeding & Genetics, PAU, Ludhiana-141 004, Punjab, 08146560105 (M), kaurnupinder-pbg@pau.edu , rupinder.kaur@rediffmail.com
85	Ludhiana	Funded	Dr. Renu Khanna, Rice Breeder, Rice Section, Dept. of Plant Breeding & Genetics, PAU, Ludhiana -141 004, Punjab, 9855552034 (M), renukhanna-pbg@pau.edu
86	Ludhiana	Funded	Dr. Navjot Sidhu, Rice Breeder, Rice Section, Dept. of Plant Breeding & Genetics, PAU, Ludhiana-141 004, Punjab, 09914714690 (M), navjotsidhu-pbg@pau.edu
87	Machilipatnam	Voluntary	Dr. M. Girija Rani, Senior Scientist (Pl.Br) & Head, Agricultural Research Station, Pedana Road, Near Pantakaluva, Machilipatnam-521002, Krishna District, Andhra Pradesh 08672-223266 (O), 9490195904 (M), ars.machilipatnam@angrau.ac.in girija_apri@yahoo.co.in girijaapri@gmail.com
88	Malagi	Voluntary	Dr. Chitti Bharatkumar, Assistant Professor, Genetics and Plant Breeding, University of Agricultural Sciences, Agriculture Research Station, Malagi-581346, North Canara Dist. Karnataka. 09497165713 (M), chittibharat@gmail.com
89	Malan	Funded	Dr. D.P. Pandey, Principal Scientist (Plant Breeding), Rice & Wheat Research Centre, CSK-HPKV, Malan (Kangra) -176 047, HP 01892-252306 (O), 09418149787 (M), pandeydp04@yahoo.co.in
90	Malan	Funded	Dr. Neelam Bhardwaj, Scientist, Rice & Wheat Research Centre, CSK-HPKV, Malan (Kangra) -176 047, HP, 9816743729 (M), neenabhardwaj@gmail.com
91	Mandya	Funded	Dr. C.A. Deepak, Jr. Rice Breeder, AICRP (Rice), Zonal Agril. Research Station, V.C.Farm, Mandya-575405, Karnataka, 08232-277923 (O), 08232-277945 (F), 09945757507(M), deepuca@gmail.com
92	Maruteru	Funded	Dr. T.Srinivas, Principal Scientist (PB), AICRIP on Rice & PS (Rice), RARS, Maruteru-534122, West Godavari Dist, Andhra Pradesh, 9396848380 (M), ps.rice@angrau.ac.in adr.rarsmtu@angrau.ac.in
93	Maruteru	Funded	Dr. B.N.V.S.R. Ravi Kumar, Senior Scientist (PB), AICRIP on Hybrid Rice, RARS, Maruteru-534122, West Godavari District, A.P., 9866649495(M) bnvsr.ravikumar@angrau.ac.in
94	Maruteru	Funded	Dr. P. Venkata Ramana Rao, Senior Scientist (PB), AICRIP on Rice, RARS, Maruteru - 534 122, West Godavari District, A.P, 09440441922 (M), pv.ramanarao@angrau.ac.in
95	Maruteru	Funded	Dr. M. Charumathi, Principal Scientist (PB), RARS, Maruteru-534122, West Godavari Dist. Andhra Pradesh, 8331070288 (M), m.charumathi@angrau.ac.in
96	Maruteru	Funded	Dr. Y.Satish, Senior Scientist (PB), RARS, Maruteru-534122, West Godavari Dist. Andhra Pradesh, 8331934548 (M), y.satish@angrau.ac.in

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
97	Maruteru	Funded	Dr. Y.Suneetha, Senior Scientist (PB), RARS, Maruteru-534122, West Godavari Dist. Andhra Pradesh, 7013166054 (M), y.suneetha@angrau.ac.in
98	Masodha	Funded	Dr. D.K.Dwivedi, Office Incharge/ Professor (Genetics & Plant Breeding), Crop Research Station, Masodha (NDUA &T), Dabhasemar, Ayodhya- 224 133, U.P, 09415720287(M), aicripmasodhafzd@gmail.com dwivedi2000@gmail.com
99	Masodha	Funded	Dr. Saurab Dixit, Senior Rice Breeder, Crop Research Station, NDUA&T, Masodha, P.O. Dabhasemar, Ayodhya- 224 133, UP, 05278-254153 (O), 07992075842 / 09450763002 (M) saurabhnduat@gmail.com
100	Masodha	Funded	Dr. S.P.Giri, Rice Breeder, Crop Research Station, NDUA&T, Masodha, P.O. Dabhasemar, Ayodhya- 224 133, UP, 08400097861 (M), spgirinduat@gmail.com
101	Medizophema	Voluntary	Dr. Harendra Verma, Scientist, Dept. of Plant Breeding & Genetics, ICAR Research Complex for NEH Region, Nagaland Centre, Medizophema-797106, Dimapur dist. Nagaland, 8787348162, 918876739227 (M), harendraicar@gmail.com
102	Meerut	Voluntary	Dr. L.K. Gangwar, Professor & Head, Dept. of Genetics & Plant Breeding, College of Agriculture, SVPUAT, Meerut-250110, Uttar Pradesh, 0121-2888518(O), 0121-2888505 (F), 9411957307 (M) , gangwarlk@gmail.com hod.gpb.svbp@gmail.com
103	Mohanpur	Voluntary	Dr. Arpita Das, Assistant Professor, Dept. of Genetics & Plant Breeding, Bidhan Chandra Krishi Viswavidyalaya, P.O.Krishi Viswavidyalaya, Mohanpur, Dist. Nadia, West Bengal- 741 252, 08902186237 (M), arpitacoh@gmail.com das.arpita@bckv.edu.in
104	Moncompu	Funded	Smt.Ambily A.K, Assistant Professor (Plant Breeding & Genetics), Rice Research Station, Moncompu-688503, Thekkekkara, Alappuzha District-688503, Kerala, 0477-2702245 (O), 9495424961(M), ambily.ak@kau.in
105	Mugad	Funded	Dr. R.G.Satish, Assistant Professor, AICRIP on Rice, Agricultural Research Station, Mugad- 580 007, Karnataka, 90366 85330(M), aicripicemugad@uasd.in satishrg@uasd.in
106	Nagina	Funded	Dr. Rajendra Singh, OIC & Rice Breeder (AICRIP), SVPUA&T Rice Research Station, Nagina, Bijnor, Uttar Pradesh-246762, (O) 01343-250271, 01343-250271 (F), 07017089688(M), malik_zrsnagina@rediffmail.com malikngn@gmail.com
107	Navsari	Funded	Dr. P.B Patel, Associate Research Scientist & PI of AICRIP on Rice, Main Rice Research Centre, Navsari Agricultural University, Aru Cross Road, Vijalpore, Navsari – 396450, Gujarat 02637-282772-75 Ex-113 (O), 02637-283794 (F), 09725023750, 9106678851(M) pbp_swm@nau.in pathik_pbg@yahoo.com
108	Navsari	Funded	Dr. K.S. Mungra, Assistant Research Scientist, Main Rice Research Centre, Navsari Agricultural University, Aru Cross Road, Vijalpore, Navsari-396450, Gujarat.
109	Nawagam	Funded	Dr. M. B. Parmar, I/c. Research Scientist (Rice) & Unit Head, Main Rice Research Station, Anand Agricultural University, Nawagam-387540, (District Kheda), Gujarat, 02694-284278 (O), 07573013548, 08160688494 (M) rsrice_mrs@yahoo.com maheshparmar@aaui.in maheshparmar07@gmail.com
110	Nawagam	Funded	Dr. D. B. Prajapati, Associate Research Scientist, Main Rice Research Station, Anand Agricultural University, Nawagam-387540, (Dist-Kheda), Gujarat, 09429384207(M), dbprajapati207@gmail.com
111	Nawagam	Funded	Dr. S.G. Patel, Assistant Research Scientist, Main Rice Research Station, Anand Agricultural University, Nawagam-387540, (Dist-Kheda), Gujarat, 09879140413 (M), sgpatel1965@gmail.com
112	Nellore	Voluntary	Dr. Ch. Sreelakshmi, Senior Scientist (Plant Breeding), Agricultural Research Station (ANGRAU), NCF post, Muthukur Road, Nellore – 524004, Andhra Pradesh, 09885527227 (M), sreelakshmi.angrau@gmail.com ars.nellore@angrau.ac.in ps.rice@angrau.ac.in

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
113	New Delhi	Voluntary	Dr. A.K. Singh, Director, ICAR-Indian Agricultural Research Institute (IARI), Pusa Campus, New Delhi- 110 012, 91-11-25843375/25842367 (O), 91-11-25843464 (R), 91-9899045037 (M) aks_gene@yahoo.com
114	New Delhi	Voluntary	Dr. Gopala Krishnan, Principal Scientist (Rice Breeding) Division of Genetics, ICAR-Indian Agricultural Research Institute (IARI), Pusa Campus, New Delhi-110012, 011-25843550 (R),09873545505 (M) gopal_icar@yahoo.co.in krish.icar@gmail.com
115	New Delhi	Voluntary	Dr. Prolay K.Bhowmick, Scientist (Rice), Division of Genetics, ICAR-IARI, Pusa Campus, New Delhi- 110 012. 0968024408 prolaybhowmick@gmail.com
116	New Delhi	Voluntary	Dr. Haritha Bollinedi, Scientist, Division of Genetics, ICAR-IARI, Pusa Campus, New Delhi- 110 012, 09555616076 (M) haritha.agrico@gmail.com
117	New Delhi	Voluntary	Dr. Ranjith K.Ellur, Scientist, Division of Genetics, ICAR-IARI, Pusa Campus, New Delhi- 110 012, 08010303649 ranjithellur@gmail.com
118	New Delhi	Voluntary	M. Nagarajan, PS and In-Charge, IARI Regional Station, Aduthurai, Tamil Nadu, 09952805363 (M) iarjad@gmail.com
119	Palampur	Voluntary	Dr. Daisy Basandrai, Principal Scientist (Plant Breeding) CSK-HPKV, Palampur-176 062, Himachal Pradesh, 09816179192/ 09418467275(M) bunchy@rediffmail.com ashwanispp@gmail.com
120	Palghar	Voluntary	Officer - Incharge, Agricultural Research Station (Dr BS KKV), Palghar- 401 404, District Palghar, Maharashtra, 02525 241048 (O) nandishala@gmail.com
121	Pantnagar	Funded	Dr. Indra Deo Pandey, Professor/ Principal Rice Breeder , Department of Genetics and Plant Breeding, College of Agriculture, GBPUA&T, Pantnagar-263 145, Distt.- U.S. Nagar, Uttarakhand 05944-233210 (O), 05944-233473 (F), 08755790584, 07467032941 (M) icpandey2005@rediffmail.com
122	Pantnagar	Funded	Dr. D.C. Baskheti. Junior Scientist (Rice Breeding), Department of Genetics and Plant Breeding, College of Agriculture, GBPUA&T, Pantnagar-263 145, Dist.- U.S. Nagar, Uttarakhand.
123	Parvel	Voluntary	Dr. K.P. Vaidya, Khar Land Scientist, Khar Land Research Station, Bandar Road, Opp: B.P. Marine Academy, Old Parvel – 410 206, Tahsil- Parvel, Raigad Dist. Maharashtra, 8087213854 / 9422431877 krs59@rediffmail.com kvkvaitya73@gmail.com
124	Parbhani	Voluntary	Dr. S.B.Borgaonkar, Assistant Rice Breeder, Upland Paddy Research Scheme, Behind Vegetable Research Scheme, V.N.M.K.V. Parbhani-431402, Maharashtra. 02452-220121 (O), 07588082166 (M) borgaonkars@rediffmail.com uprsmkv@rediffmail.com
125	Parbhani	Voluntary	Dr. Abhay B. Jadhav, Rice Breeder, Upland Paddy Research Scheme, VNMKV, Parbhani-431402, Maharashtra. 8275009885(M) uprsmkv@rediffmail.com
126	Patna (ICAR)	Voluntary	Dr. Santosh Kumar, Senior Scientist (Plant Breeding), Drought & Aerobic Rice, Division of Crop Research, ICAR Research Complex for Eastern Region, ICAR Parisar, PO. Bihar Veterinary College, Patna – 800014, Bihar, 0612-2223962, Extn. 117 (O), 0612-2223956 (F), 09973113026 (M) santosh9239@gmail.com
127	Patna (ICAR)	Voluntary	Dr. Narayan Bhakta, Principal Scientist (Plant Breeding), ICAR Research Complex for Eastern Region, ICAR Parisar, PO. Bihar Veterinary College, Patna – 800014, Bihar, 09471004797 (M) nbhakta65@rediffmail.com
128	Pattambi	Funded	Dr.K.R. Biji, Assistant Professor, Dept. of Plant Breeding & Genetics, Regional Agricultural Research Station (KAU), Mele Pattambi – 679 306, Palakkad District, Kerala, 9946912674(M) biji.kr@kau.in
129	Pattambi	Funded	Dr.Vidhu Francis, Assistant Professor, Dept. of Plant Breeding & Genetics, Regional Agricultural Research Station (KAU), Mele Pattambi – 679 306, Palakkad District, Kerala, 9847236616(M) vidhu.francis@kau.in
130	Phondaghat	Voluntary	Prof. V.N. Shetye, Agronomist; (Dr. Balasaheb Sawant Konkan Krishi Vidhyapeeth, Dapoli) Agricultural Research Station, Phondaghat-416601, Dist. Sindhudurg, Maharashtra 02367 – 245236 (O) , 02367-245105(F), 09421343562(M), arsphondaghat@rediffmail.com arsphondaghat@gmail.com

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
131	Ponnampet	Funded	Dr G.N. Hosagoudar, Junior Rice Pathologist, Agricultural & Horticulture Research Station, Ponnampet- 571216, Kodagu (Dist), Karnataka-571216, 08274249156 (O), 9480838987 (M), gnhosagoudar@rediffmail.com
132	Port Blair	Voluntary	Dr. P.K. Singh, Principal Scientist (Plant Breeding), Division of Field Crops Improvement and Protection, ICAR- Central Island Agricultural Research Institute, Port Blair-7441051, Andaman and Nicobar Islands 03192-250238, 250239, Extn. 162(O), 09474273099 (M), pk Singh1975@gmail.com pk Singh99@rediffmail.com
133	Pundibari	Voluntary	Dr. Bidhan Roy, Professor & Head, Dept. of Seed Science and Technology, Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar-736 165, West Bengal, 08637072242, 9434117057 (M) bcroy10@yahoo.com
134	Pusa	Funded	Dr. Nilanjaya, Asst. Professor-cum-Jr. Scientist & PI, AICRP on Rice & Forage Crops, Dept. of Plant Breeding & Genetics, Dr. Rajendra Prasad Central Agril.University, Pusa-848125, Samastipur, Bihar nilanjayapbg@gmail.com nilanjaya@rpcau.ac.in
135	Pusa	Funded	Dr. M.K.Singh, Assistant Professor, Dept. of Plant Breeding & Genetics, Co-PI, AICRIP, Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur-848125, Bihar, 8986590206, 7983312594 (M). mithileshgpb@gmail.com
136	Radhanagari	Voluntary	Dr. S.D.Kumbhar, Officer-In-Charge, Agricultural Research Station, (MPKV) Radhanagari, Dist. Kolhapur, Maharashtra-416 212, 02321 – 234041 (O), arsradha@yahoo.com , ars_radhanagari@rediffmail.com
137	Ragolu	Voluntary	Dr. P.V. Satyanarayana, Principal Scientist (Breeding) & Head, Agricultural Research Station,(ANGRAU), Ragolu-532484, Srikakulam district 08819-246848 (R), 9490545888 (M), ars_ragolu@angrau.ac.in satya_rice@yahoo.com
138	Ragolu	Voluntary	Dr. K. Madhu Kumar, Scientist (Plant Breeding), Agricultural Research Station,(ANGRAU), Ragolu-532484, Srikakulam district, 08942-279836 (O), 9618186286, 9440149488 (M), madhuagrigo1998@gmail.com
139	Raipur	Funded	Dr. Deepak Sharma, Professor & Head, Dept. of Genetics and Plant Breeding, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Krishak Nagar, Raipur- 492 012, 9826647509 (M), deepakigkv@gmail.com
140	Raipur	Funded	Dr. S.K.Nair, Senior Scientist & Biodiversity, Dept. of Genetics and Plant Breeding, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Krishak Nagar, Raipur-492012 Chhattisgarh, 9826192630 (M), sunil_ryp@yahoo.com sunil.aadya@gmail.com
141	Raipur	Funded	Dr. Abhinav Sao, Scientist (GPB), Dept. of Genetics & Plant Breeding, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Krishak Nagar, Raipur-492012, Chhattisgarh, 08839199972 (M), saoabhi27@yahoo.co.in saoabhi9@gmail.com
142	Raipur	Funded	Dr. Deepak Gauraha, Scientist (GPB), AICRIP on Rice, Department of Genetics & Plant Breeding, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Krishak Nagar, Raipur- 492 012, Chhattisgarh, 0771 2442352 (O), 09424217252 (M) dqauraha@yahoo.co.in
143	Rajendranagar	Funded	Dr. P. Raghu Rami Reddy, Principal Scientist (Rice) & Head, Rice Research Centre, Agricultural Research Institute, PJTSAU, Rajendranagar, Hyderabad – 500 030, Telangana, 040-24015817 (O), psrice2009@gmail.com
144	Rajendranagar	Funded	Dr. L. Krishna, Principal Scientist (Plant Breeding), Rice Research Centre, ARI, PJTSAU, Rajendranagar, Hyderabad-500 030, Telangana, 040-24015817 (O), 9866091711 / 9908577040 (M), lavuri.krishna@gmail.com
145	Rajendranagar	Funded	Dr. Y. Chandra Mohan, Senior Scientist (Plant Breeding), Rice Research Centre, ARI, PJTSAU, Rajendranagar, Hyderabad-500 030, Telangana,09908577040(M), 08724-277283(F), dycmohan@yahoo.co.in
146	Rajouri	Voluntary	Dr. Vikas Sharma, Sr. Scientist / Associate Professor (Agronomy), Regional Agricultural Research Station, SKUAST- Jammu, Tadwal, Rajouri – 185131, Jammu & Kashmir, 9419135427 / 7006361502 (M), rarsrajouri@gmail.com

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
			vsagron@gmail.com
147	Ranchi	Funded	Dr. Krishna Prasad, Rice Breeder, Dept. of Plant Breeding & Genetics, Birsa Agricultural University, Kanke, Ranchi, Jharkhand- 834006, 06151-2450625 (O), 09934199128 (M), krishna_dumka@yahoo.co.in
148	Ranchi	Funded	Dr. Ekhlauque Ahmad, Rice Breeder, Department of Genetics & Plant Breeding, Birsa Agricultural University, Kanke, Ranchi (Jharkhand)-834006; 07763842010 / 09431169721 (M) ekhlauque.bau@gmail.com ekhlauque@bauranchi.org
149	Ranital	Voluntary	Dr. Chinmaya Kumar Das, Scientist (Plant Breeding & Genetics), Regional Research & Technology Transfer Station (OUAT), Ranital-756 111, Bhadrak District, Odisha, 7809280549 (M), iitk.chinmaya@gmail.com adrrttsranital@gmail.com
150	Rewa	Funded	Dr. P. Perraju, Senior Rice Breeder, College of Agriculture (JNKVV), Rewa-486004, Madhya Pradesh, 07662-220732(O), 07662-221014(R), 09827681203 / 7974592405 (M), perraju.p@rediffmail.com
151	Rudrur	Voluntary	Miss. Ramya Rathod, Scientist (Plant Breeding), Regional Sugarcane and Rice Research Station, Rudrur-503188, Nizamabad district, Telangana State, 08179525139 (M), ramyarathod.5@gmail.com
152	Sabour	Voluntary	Dr. Suresh Prasad Singh, Rice Breeder, Dept. of Plant Breeding and Genetics, Bihar Agricultural College, Bihar Agricultural University, Sabour, Bhagalpur-813 210, Bihar, 0641-2451254 (O), 7903213610 / 9472060575 (M) sps2007bau2011@gmail.com
153	Sakoli	Funded	Dr. G.R. Shamkuwar, Senior Rice Breeder, Agriculture Research Station (Dr. PDKV), Sakoli –441802, Bhandara District, Maharashtra, 07186- 236343 (O), 09403049472 (M), srb_skl@rediffmail.com
154	Sakoli	Funded	Dr. M.P. Meshram, Junior Rice Breeder, AICRIP, Agriculture Research Station (Dr. PDKV), Sakoli –441802, Bhandara District, Maharashtra, 09422819327 (M), mpmeshram358@gmail.com
155	Shirgaon	Voluntary	Dr. V.V. Dalvi, Professor (CAS) GPB & Officer Incharge, Agricultural Research Station, Shirgaon-415 629, District Ratnagiri, Maharashtra, 08262830227 (O), 09422544085 (M), arsshirgaon@rediffmail.com
156	Shillongoni	Voluntary	P.C. Sarmah, Principal Scientist & I/C Chief Scientist, Regional Agricultural Research Station, Shillongani, Dist: Nagaon, Assam- 782002, 03672-225023(O), 9435360376 (M), rarsnagaon@gmail.com pcsarmah.2016@aau.ac.in
157	Sindewahi	Voluntary	Dr. M.R. Wandhare, Assistant Professor of Agriculture Botany, Agricultural Research Station (Dr.PDKV), Sindewahi- 441 222, District Chandrapur, Maharashtra, 09604323973 (M), madanwandhare@rediffmail.com adrsyeczarspkv@rediffmail.com madanwandhare@pdkv.ac.in
158	Sirsi	Voluntary	Dr. P. Surendra, Principal Scientist (GPB), Agricultural Research Station (Paddy), Banavasi Road, Sirsi- 581 401, Uttara Kannada, Karnataka, 092422 81402 (M), psurendra63@gmail.com
159	Sundemagar	Voluntary	Dr. Pankaj Sood, Programme Coordinator, KVK Mandi at Sundemagar-175 019, Himachal Pradesh, 01907 262547 (O) 9418222532 (M), pankajlp@rediffmail.com
160	Tirur	Voluntary	Dr. S. Banumathy, Professor (PBG), Rice Research Station, Tirurkuppam, Tirur (Post), Thiruvallur District, Tamil Nadu-602 025, 044-27620233(O), 044-27620383 (F), 09443566162(M), banumathysiva2004@gmail.com
161	Titabar	Funded	Dr. Sanjay Kumar Chetia, Principal Scientist/ Nodal Officer and Chief Scientist, Regional Agricultural Research Station, (Assam Agricultural University) Titabar, Assam – 785630, 03771-248453(O), 09435096506 (M), sanjaykumarchetia@gmail.com
162	Titabar	Funded	Mr. Janardan Das, Jr. Scientist, PBG (AICRIP), Regional Agricultural Research Station (AAU), Titabar, Assam-785630, 9577373867, 6002748186 (M), janardan.das@aau.ac.in janardand03@gmail.com

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S.No.	Location	Funded/ Voluntary	Name & Designation /Organization & Addresses / Tel. No/ Mobile No/ email
163	Trichy	Voluntary	Dr. P. Jeyaprakash, Professor & Head, Dept. of Plant Breeding & Genetics, Anbil Dharmalingam Agricultural College & Research Institute, (TNAU), Trichy-620027, Tamil Nadu, 9443013048(M), agri_jp@yahoo.com
164	Trichy	Voluntary	Dr. M.S. Shanmuganathan, Asst. Professor (PBG), Dept. of Plant Breeding & Genetics, AnbilDharmalingam Agricultural College & Research Institute (TNAU), Trichy-620027, Tamil Nadu, 9443758903 (M), shanagri@gmail.com
165	Umiam – CAU	Voluntary	Dr. Mayank Rai, Rice Breeder, School of Crop Improvement, College of Post Graduate Studies, Central Agricultural University, Umiam (Barapani) Meghalaya-793 104, 9436336008 (M), mrai.cau@gmail.com
166	Umiam-ICAR	Voluntary	Dr. Amit Kumar, Scientist (Plant Breeding) ICAR Research Complex for NEH Region, Umiam (Barapani)– 793103, Meghalaya, 8974630789 (M), amit4118@gmail.com
167	Upper Shillong	Funded	Dr. Daaipaka Diengboh, Assistant Director of Agriculture, Department of Agriculture, Govt. of Meghalaya, Uppershillong- 793 006, East Khasi Hills District, Meghalaya, 8837082029 (M), aicrip.uppsHQ@gmail.com
168	Upper Shillong	Funded	Dr. Ibadakhmkor War, Assistant Director of Agriculture, Department of Agriculture, Govt. of Meghalaya, Uppershillong- 793 006, East Khasi Hills District, Meghalaya, 9862248198 (M), aicrip.uppsHQ@gmail.com
169	Upper Shillong	Funded	Dr. Baphiralin Kharshiing, Scientific Officer, Department of Agriculture, Govt. of Meghalaya, Uppershillong- 793 006, East Khasi Hills District, Meghalaya, 9863748820 (M), aicrip.uppsHQ@gmail.com
170	Vadgaon	Voluntary	Dr. T.J. Bhor, Asst. Professor of Agricultural Botany, Agricultural Research Station, Vadgaon-412106, Maval, District Pune, Maharashtra, 02114-299329 (O), 09422560142 (M), ars_vadgaonmaval@rediffmail.com
171	Varanasi	Funded	Dr. S.K.Singh, Professor, Dept. of Genetics and Plant Breeding, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi- 221005, Uttar Pradesh , 09415445604/ 06387416477 (M), shravanbhu1964@gmail.com
172	Varanasi	Funded	Dr. S.Jayasudha, Assistant Professor cum Rice Breeder, AiCRIP, Dept. of Genetics and Plant Breeding, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh 09880034400 (M), jkomalaster@gmail.com jayasudha@bhu.ac.in
173	Vyara	Voluntary	Dr. Vipul P. Patel, Associate Research Scientist (PB), Regional Rice Research Station, Navsari Agricultural University, Vyara-394650, District Tapi, Gujarat, 02626-220212 (O) , 02637-651344 (R), 08469417374 (M), 02626220212 (F), vppatel13@gmail.com mrsvyara@yahoo.in
174	Vyttila	Voluntary	Dr. Veena Vigneswaran, Asst. Professor (PBG), 09447961586 (M), Dept .of Plant Breeding & Genetics , Rice Research Station (KAU), Vyttila, Cochin-682 019, Kerala, 09447961586 (M), veenarars@gmail.com
175	Wangbal	Funded	Dr. N.Kumar Singh, Rice Breeder, Rice Research Station, Govt. of Manipur, Wangbal-795138, Thoubal, Manipur 8974026929 (M), nkumarsingh2020@gmail.com
176	Warangal	Funded	Dr. B.Satish Chandra, Scientist (Plant Breeding), Regional Agricultural Research Station (PJ TSAU), Mulugu Road, Warangal – 506 007, Telangana State, 09948990788 (M), 0870-2975223, (O) chandragene@gmail.com adrrars_wgl@yahoo.co.in ricerarswarangal@gmail.com
177	Warangal	Funded	Dr. K. Rajendra Prasad, Scientist (Plant Breeding), Regional Agricultural Research Station (PJ TSAU), Mulugu Road, Warangal – 506 007, Telangana State, 09010192629 (M), krprasad456@gmail.com
178	Waraseoni	Voluntary	Dr. Uttam Bisen, Scientist (PB), Regional Agricultural Research Station, JNKVV, Waraseoni-481331, Balaghat, Madhya Pradesh, 09424999321/ 7999321276(M) uk_bisen@rediffmail.com

Private Companies - Hybrid Rice

Company	Name & Address
Ankur Seeds Pvt. Ltd	Dr V.P. Khedkar , Mobile: 09850329757, E-mail: vpkhedkar@ankurseeds.com
Bayer Bio-Science Pvt Ltd	Dr. Yogaraj Sharma , Mobile : +91 98499 89753, E-Mail : yog.raj@bayer.com
	Dr Veeresh Gowda , Email: veeresh.rpgowda@bayer.com
	DrAmaresh Chandel , Mobile: 75662 72272, Email: amaresh.chandel@bayer.com
Bioseed Research India	Dr. Paresh Varma , Director Research, Bioseed Research India, 234, B-Block, Kavuri Hills, Phase II, Hyderabad - 500 033. Ph # 040-67066666, Fax # 040-67066606, E-mail: paresh.verma@bioseed.com
	Dr. N G Ramachandra , Principal Breeder (Rice), E-mail : ramachandra.ng@bioseed.com
	Dr Bahskara Reddy , Email: bhaskara.reddy@bioseed.com
Bisco Bio-Sciences Pvt Ltd	Dr. Vinod Kumar Yadav , Breeding Cordinator - India, Bisco Bio-Sciences Pvt Ltd, Ashoka My Home Chambers, H.No. 1-8-201 to 203, Flat no. 208 & 209, S.P. Road, Secunderabad - 500 003, Telangana. Mobile: 07702888289, Tel: 040 30004050/60, Fax: 040 27841299, E-mail: vinodyadav@limagrain.in
Charoen Pokphand Seeds (India) Pvt Ltd	Dr. WiratRerksiri , Hybrid Rice-Specialist, R&D-Department Manager, Charoen Pokphand Seeds (India) Pvt Ltd, 4th Floor, 12/1 Srinidhi Landmark, Opp. New Thippasandra Post Office, H.A.L III Stage, Bangalore- 560075, Karnataka. Email: wirat.r@cpseeds.in Tel: (91-80) 25210808, 818, 828, 838; Fax: 25210848
	Dr. Prasad Garapati , Department Manager-Admin, Mobile: 83744 44455, Email: gpc.cps@gmail.com prasad.g@cpseeds.in
Crystal Crop Science	Mr. O. Krishna , Mobile: 096181 33544, Email: oggu.krishna@crystalcrop.com ; oggu23@gmail.com
Delta Agri genetics Pvt.Ltd	Dr. R.N. Rao , Research Head, Delta Agrigenetics Pvt. Ltd., Plot Nos: 99&100, Greenpark Avenue, NH-7 Road, Jeedimetla Village, Behind Surabhi Hotel, Hyderabad-500055, Telangana. Mob: 0766002927 (O) ; 09492547300 (P), Email: rn@deltaseeds.in , rnrao14@yahoo.com
Dupont Pioneer Pvt Ltd	Dr S. Chandrasekhar , EZ Lead, Dupont Pioneer, 3 rd & 4 th Floor, Babukhans Millennium Centre, 6-3-1099/1100, Raj Bhavan Road, Somajiguda, Hyderabad – 500082. Email: Chandrashekhar.Somanagoudra@corteva.com ; Mobile: 9000711659
	Dr.Ajay Tomar , Email: ajay.tomar@corteva.com
	Dr Sridhar Sakile , Email: Sridhar.sakile@corteva.com
Ganga Kaveri Seeds Pvt. Ltd	Dr. Sai Murali , Ganga Kaveri Seeds Pvt. Ltd, # 1406, Babukhan Estate, Basheerbagh, Hyderabad -500 001. Mobile: 7732062224, Email: sai.murali@gangakaveri.in
Indo-American Hybrid Seeds (I) Pvt. Ltd	Dr. S.N. Ratho , Indo-American Hybrid Seeds (I) Pvt. Ltd., Villa # 29, Pavani Petals, Hydershakote, Hyderabad - 500 091, Telangana. Ph # 08413-200086 (O); 94400 20855 (M); E-mail : snratho@indamseeds.com
	Dr Vikram Yadav , Email: vikramyadav@indamseeds.com
JK Agri Genetics Ltd	Dr. Sunil Kumar Bhatt , Head Research & Development (Field crops & Cotton), JK Agri Genetics Ltd., 1-10-177, 4th Floor, Varun Towers, Begumpet, Hyderabad - 500 016, Telangana. Tel: +91 (040) 66316858, Fax: +91 (040) 27764943, Mobile: +91 6302750755, Email: sunilbhatt@jkagri.com
	Dr. Manender Singh , Mobile: +91-9100119466, Email: manendersingh@jkagri.com
Kaveri Seed Company Ltd	Dr. P. Santosh , Manager Rice Breeding, Kaveri Seed Company Ltd, 513-B, V Floor, Minerva Complex, S.D. Road, Secunderabad – 500 003, Telangana. Mobile: 9866076378, Email: santosh.p@kaveriseeds.in paikarao_santosh@yahoo.co.in
	Dr B.P. Ravi Kumar , General Manager (Rice), Email: ravikumar.bp@kaveriseeds.in
Longping India Seeds Pvt Ltd.,	Mr. Zhang Xiao , #102, 1 st floor, Varuna towers, Sri Vensai, Komapilly, Hyderabad-500014, Telangana. Email: Maoxueqvan@lpht.com.cn , Zhangx@lpht.co.cn , kiranlal.sunrays@gmail.com
Mahindra Agri Solutions Ltd	Dr. PonnusamyUmashankar , Head: R&D, Mahindra Agri Solutions Ltd, H.No: 02-076/3/302, 3 rd Floor, Sai Baba Complex, Pet Basheerabad, Qudbullapur

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Company	Name & Address
	Mandal, Secunderabad - 500055, Telangana. Email: Ponnusamy.umashankar@mahindra.com , Mobile: +91-9701611152 Dr. SharatSonnad , Principal Breeder (Rice), Email: sonnad.sharatbabu@mahindra.com ; Mobile: 99081 74156
Mahyco	Dr. M S Ramesha , Mobile: +91 9441496778, Email: m.ramesha@mahyco.com Dr. Sanal Kumar P. , Senior Breeder – Rice. Email: sanalkumar.p@mahyco.com kumar2000@gmail.com Dr. Raman , Email: cjv.raman@mahyco.com , rams4janaki@gmail.com
Mali Agri Tech Pvt Ltd	Dr. RajarshiKundu , Managing Director, Mali Agri Tech Pvt Ltd, 80/1 Subhash Avenue, Ranaghat 741201, Email: maliseeds@yahoo.co.in ; Mobile: 9332182940
Metahelix Life Sciences Pvt. Limited	Dr. Sunil Naik , Metahelix Life Sciences Pvt. Limited, Plot No. 3, KIADB 4 th Phase, Bommasandra, Bangalore - 560 099, Karnataka. Mobile: +91 9100991095, Email: sunil.naik@rallis.com , Tel # 080-7870236, 7836086; Fax # 080-7836084 Dr Pradip Kumar , Email: pradip.kumar@rallis.com Dr Upendrs Kumar , Email: upendra.kumar@rallis.com
Namdhari Seeds Pvt. Ltd	Dr. N. Anand , Director-Research, Namdhari Seeds Pvt. Ltd., Sri Sai Arcade, No. 8, 12th Cross, 1st Phase, Ideal Homes Township, Rajarajeshwari Nagar, Bangalore - 560 098, Karnataka. Ph # 080-28602167/69, Fax # 080-28602168, Mobile: 9845310057. Dr. V.K. Jayaramaiah , Senior Breeder, Email: jayaramaiah@namdhariseeds.com , Tel: 09845471271/72, Mobile: 9845641651
Nath Bio-Genes (I) Ltd	Dr.Ish Kumar , Email: ish.kumar@nathseeds.com , Mobile: 90002 77764
Nirmal Seeds Pvt. Ltd	Dr. I.S. Halakude , Research Manager, Nirmal Seeds Pvt. Ltd., BhadgaonRoad, Pachora - 424 201, Dist. Jalgaon, Maharashtra. Tel # 02596-244366/244396, Fax # 02596-244045, Email: ishalakude@nirmalseedsindia.com
Nu Genes Pvt Ltd	Dr. K. Raghupathi Reddy , Director - Research, Nu Genes Pvt Ltd., Plot No. 18, 1st Floor, NCL Enclave, Jeedimetla, NH-7, Medchal Road, Secunderabad-500055, Telangana. Ph # 040-27165569, Mobile # 9989623122, Email : nityaseeds@yahoo.com raghukotla15@gmail.com
Nuziveedu Seeds Limited	Dr. G.S. Varapasad , Consultant (R&D), Survey No. 69, Kandlakoya, GundlaPochampally Village, Medchal Mandal, Ranga Reddy -501 401, Telangana. Mobile: +91 8886061385, Email: varapasad.g@nuziveeduseeds.com Dr. S. Rama Krishna , Sr. Rice Breeder, Email: suraramkrishna@gmail.com , ramakrishna.dr@nuziveeduseeds.com , Mobile: 9581412503
Pallishree Limited	Dr. Pritam Das , Rice Breeder, Pallishree Limited, Merline Infinite, DN 51, Salt Lake, Sector V, Kolkata 700 091, West Bengal. Mobile: +91 92315 65383, Email: pritam.das@pallishree.com
PAN Seeds Private Limited	Dr. AlokMarodia , Director, PAN Seeds Private Limited, Suite 15, 2nd floor, 2N.C. Dutta Sarani, Kolkata - 700 001. Mobile: 98300 59473, E.mail : aloke@panseeds.in Mr. DebrajKanrar , Sr.Rice Breeder, Email: debraj@panseeds.in , Mobile: 9474863116
PrabhatAgri Biotech Ltd	Dr. P. Sankar Rao , Prabhat Agri Biotech Ltd, #8-2-227/45, 1st Floor, UBI Colony, Road No. 3, Banjara Hills, Hyderabad - 500 034. Mobile: 9581412481, Ph:040-23606616
Pravardhan Seeds Pvt. Ltd	Dr. V.N. Deshpande , Pravardhan Seeds Pvt Ltd, #8-2-227/45, Ground Floor, UBI Colony, Road No. 3, Banjara Hills, Hyderabad-500034. Mobile: 9581412481, Ph: 040-23541503
Rasi Seeds (P) Ltd	Dr. Jaya Prakash , Rasi Seeds (P) Ltd, Hyderabad Office: Sri Sai Silica, Plot No. 1-98/K#19, Krithica Layout, Near Nisum Technologies, Arunodaya Colony, Madhapur, Hyderabad - 500081, Telangana. Ph# 04282-241007, 242007, 40024725, Mobile: 8008101038; Fax # 04282-242558, Email: jayaprakash.t@rasiseeds.com
Savannah Seeds Pvt Ltd	Dr. Venkatesh Hubli , Director (Research), Savannah Seeds Pvt Ltd, PH-1A, 10 th Flor. Tower-A, Digital Greens, Golf Course Extn. Road, Sector-61, Gurgaon-122 102. Mobile: 9703918282, Email: yhubli@savannahseeds.com
Seed Works India Private Limited	Dr. BalajiNukal , Managing Director, Seed Works India Private Limited, 437, Avenue 4, Banjara Hills, Hyderabad - 500 034. Ph # 040-23356354; Fax # 040-23356359, Mobile # 98494534535, Email : bnukal@prodigy.net

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Company	Name & Address
	Dr. Jagadeesha Gouda , Director (Research), Email: jagadeesha.gouda@seedworks.com
Shakthi Seeds Pvt. Ltd	Dr. S. Rajeeva Reddy , Director, Shakthi Seeds Pvt. Ltd., 3-6-439/A, Himayathnagar, Hyderabad - 500 029. Ph # 040-27632373/27634390; 27562020(O), Email: shakthiseeds@gmail.com , vidyanath@hotmail.com Dr. Fiaj Mohammad , Breeder - Rice, Ph # 040-55504646; Fax # 040-27634390, Mobile# 09848920554, Email: faij_km@rediffmail.com
Signet Crop Sciences India Pvt Ltd	Dr. Kuldeep Tyagi , Plot No. 1/P & 2, Rainforest, BhelVista(Near Dandamundi Enclave Main Gate), Petbasheerabad, Quthbullapur, Ranga Reddy Dist., Hyderabad, Telangana. Mobile:+91 9133300749, Email: kuldeeptyagik@gmail.com
Siri Seeds (India) Pvt Ltd	Mr. K. Rakesh Reddy , Director Marketing, Siri Seeds (India) Pvt Ltd, # 505, 5th Floor, 6-3-1099/1100, Babukhan'sMillenium Centre, Raj Bhavan Road, Somajiguda, Hyderabad - 500 082. Te: 040 66630762; Fax: 040 23412670, Mobile: 7702966681, E-mail: koripally.rakesh@gmail.com Dr. Surendra Kumar , Director Research, Email: suren.kumar@siriseeds.com , eskay365@rediffmail.com , Mob: 9989451004
Syngenta India Limited	Dr. S. Sundar , Head of Rice Breeding, Syngenta India Limited, Survey No. 660 & 661, Nuthankal Village, Medchal Mandal, RR Dist 501401, Telangana. Email: sundar.s@syngenta.com , Mobile: +91-8008072390, Tel: +91-8418304500, Fax: +91-8418304595 Dr Thippeswamy , Email: Thippeswamy.Sanka@syngenta.com
Tierra Seed Science Pvt Ltd	Dr. C.H.M. Vijayakumar , Director (Rice Research), Tierra Seed Science Pvt Ltd, Malaxmi Courtyard, Khajaguda, Golconda Post, Hyderabad-500 008. Email: vijayakumar@tierraagrotech.com , Mobile: 90009 88903; 96522 55366 Work: 040 4850 6656
TriMurti Plant Sciences Pvt Ltd	Dr. S.K. Ghosh , Vice President & Head (R&D), TriMurti Plant Sciences Pvt Ltd, # 101, MGR Estates, Dwarakapuri Colony, Panjagutta, Hyderabad - 500 082. Tel: 040 30611989; Fax: 040 2335567, Mobile: 83746333388, Email: ghosh@trimurti.in Dr. Amit Shukla , Sr. Rice Breeder, Email: ashukla@trimurti.in , Mob: 8374933388
UACI Seeds and Biotech Pvt. Ltd	SurajitChanda , Sr. Manager- Research, 20 Park Side Road, Rajeswari Niwas 3rd Floor, Kolkata, West Bengal-700026. Phone: 7602294556 Email ID: surajit.chanda@universalagri.in
UPL Limited	Dr. V. Satya Dev , Crop Research Lead - Hybrid Rice, Advanta Limited, Krishnama House, # 8-2-418, 3rd Floor, Road No -7, Banjara Hills, Hyderabad- 500 034. Ph # 040-66284000, Fax # 27890137, E-mail: satyadev@advantaseeds.com Dr. Prabhu Gouda Patil , Email: prabhugouda.patil@advantaseeds.com
Vikky'sAgrisciences Pvt. Ltd	Dr. Y. Yogeswara Rao , Executive Director, Vikky'sAgrisciences Pvt. Ltd, Plot No. 5, Sagar Society, Road No. 2, Banjara Hills, Hyderabad - 500 034. Ph # 040-23550251/52; Fax # 040-23550253, Mobile # 9642311120, Email: yogeswararao.vikkys@gmail.com
VNR Seeds Pvt. Ltd	Dr. K.C. Upadhaya , Head R&D, VNR Seeds Pvt. Ltd., First floor, Ratnagiri, Opp: RajKumar college, G.E. Road, Raipur - 492 001, (C.G) Mobile:08008261509, E-mail: kc_upadhyay@yahoo.com.au , kc@vnrseeds.com

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WEATHER DATA – KHARIF 2021

ALMORA							
Latitude :	29° 36' N		Longitude:	79° 40' E		Elevation(m) :	1250
Soil type:	Clay loam		Soil pH :	6.5		Soil texture :	Clay
	May	June	July	Aug.	Sep.	Oct.	Total / Range
No. of Rainy days	9	15	14	16	12	4	70
Total Rainfall (mm)	126.5	300.0	176.0	201.0	54.0	327	1184.5
Avg. Max. Temp. (°C)	28.0	29.5	29.5	29.5	29.9	28.1	28.0-29.9
Avg. Sunshine hours	6.38	6.65	5.09	4.92	4.59	5.86	5.58

Annamalainagar							
Latitude :	14° 26'		Longitude:	74° 50' E		Elevation(m) :	619 MSL
Soil type:	Laterite		Soil pH :	5.5		Soil texture	
	July	Aug.	Sep.	Oct.	Nov.	Dec	Total / Range
No. of Rainy days	6	5	6	12	23	8	60
Total Rainfall (mm)	122.0	143.8	91.2	193.2	904.2	149.9	1604.3
Avg. Max. Temp. (°C)	35.4	34.8	33.4	32.5	28.7	29.9	28.7-35.4
Avg. Mini. Temp. (°C)	24.6	24.4	23.2	23.8	22.3	21.2	21.2-24.6
* Avg. Sunshine hours	6.3	5.2	7.4	5.5	2.2	6.3	5.48
*Avg. wind velocity	4.7	4.1	3.2	2.9	3.1	3.0	3.5

BRAHMAVAR							
Latitude :	13° 25' N		Longitude:	75° 45' E:		Elevation (m):	10
Soil type:	Laterite		Soil pH :	6.36		Soil texture	Light Textured
	JUNE	JULY	AUG	SEP	Oct	Nov	Dec
No. of rainy days	22	28	24	23	15	12	2
Total rainfall (mm)	808.6	1122.0	617.7	521.0	468.6	233.6	21.2
Avg. Max Temp. (°C)	30.3	29.4	29.7	30.3	31.2	31.9	32.6
Avg. Min.Temp. (°C)	22.2	22.7	22.4	22.9	23.4	22.4	21.0
* Avg. Sunshine hours	2.2	1.8	3.0	3.9	5.3	4.0	8.6
* Avg. wind velocity	4.4	4.2	4.6	4.3	3.2	3.1	3.3

BAPATLA							
Latitude :			Longitude:			Elevation(m) :	
Soil type:			Soil pH :			Soil texture :	
	JUNE	July	Aug	Sep	Oct.	Nov	Total / Range
No. of Rainy days	12	11	8	16	-	-	47
Total Rainfall (mm)	205.8	204.5	178.4	276.0	-	-	216.17
Avg. Max. Temp. (°C)	34.0	33.3	33.1	29.1	29.9	-	29.1-34.0
Avg. Mini. Temp. (°C)	25.0	25.0	24.2	22.7	18.4	-	18.4-25.0

Bageshwar							
Latitude :	29° 36' N		Longitude:	79° 40' E		Elevation(m) :	1320
Soil type:	Clay loam		Soil pH :	6.5		Soil texture :	Sandy clay
	May	June	July	Aug.	Sep.	Oct.	Total / Range
No. of Rainy days	17	9	15	15	12	4	72
Total Rainfall (mm)	139.75	247	215.75	123.95	57	211.84	995.29

CHINSURAH							
Latitude :	22° 52' N		Longitude:	88° 24' E		Elevation (m) :	8.62
Soil type:	Clay Loam		Soil pH :	7.3		Soil texture :	Gangetic Alluvial
	June	July	Aug	Sep	Oct	Nov	Total / Range
No. of Rainy days	15	15	17	23	10	3	83
Total Rainfall (mm)	355.3	252.5	248.30	367.8	195.2	26.7	1445.8
Avg. Max. Temp. (°C)	34.51	33.89	33.86	35.5	32.67	29.37	29.37-35.5
Avg. Mini. Temp. (°C)	20.50	17.95	23.59	24.4	22.88	15.58	15.58-24.4

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COIMBATORE							
Latitude	11°N	Longitude:	77°E			Elevation (m):	426.72
Soil type	Clay	Soil pH:	7.8			Soil Texture:	Heavy
	August 21	September 21	October 21	November 21	December 21		Total / Range
No. of Rainy days	11	6	21	21	8	-	67
Total Rainfall (mm)	38.5	33.5	191.6	271.7	54.5	-	589.8
Avg. Max. Temp. (°C)	31.6	31.7	30.6	28.4	28.9	-	28.4-31.7
Avg. Mini. Temp. (°C)	22.9	23.3	23.3	22.3	20.89	-	20.89-23.3
Solar radiation (CAL/CM ²)	294.1	306.9	275.1	219.4	200.6	-	
Avg. Sunshine hours	5.3	5.5	4.9	2.3	6.1	-	4.82
Avg. wind velocity	7.8	8.4	5.0	3.9	3.7	-	5.76

CHPLIMA							
Latitude :	20°21'N		Longitude	80° 55'E		Elevation :	178.8
Soil type:	Mixed Red, Black & Lateritic		Soil pH:			Soil texture :	
	June	July	Aug	Sep	Oct	Nov	Total/Range
No. of Rainy days	24	21	20	8	2	6	81
Total Rainfall (mm)	664.4	114.4	280.3	28.4	26.7	87.0	1201.2
Avg. Max. Temp. (°C)	31.2	33.2	33.2	34.0	31.3	27.1	27.1-34.0
Avg. Mini. Temp. (°C)	23.9	26.1	25.6	23.9	19.9	15.3	15.3-26.1

Canning							
Latitude :	27.2046 N		Longitude:	77.4977 E		Elevation (m) :	6
Soil type:	Salitu Clay		Soil pH:	6.5-7.0		Soil texture	Heavy texture
	July	Aug.	Sep.	Oct.	Nov	Dec.	Total / Range
No. of Rainy days	17	16	17	9	0	3	62
Total Rainfall (mm)	849	277.2	616.8	302.4	3.2	74.6	2123.2
Avg. Max. Temp. (°C)	32.2	32.2	31.5	32.2	29.3	25.0	25.0-32.2
Avg. Mini. Temp. (°C)	25.7	26.1	25.5	25.3	19.5	15.4	15.4-26.1
Avg. Sunshine hours	3.4	2.6	3.6	5.6	6.9	5.4	4.58
Avg. wind velocity	5.1	5.6	6.1	3.3	2.3	2.5	4.15

CHATHA							
Latitude	32° 40'N		Longitude	74° 48'E		Elevation (m)	293
Soil type			Soil pH	7.0		Soil texture	Clay loam
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range
No. of Rainy days	5.0	14.0	4.0	7.0	2.0	-	32
Total Rainfall (mm)	61.2	488.4	186.6	173.4	107.2	-	1016.8
Avg. Max. Temp. (°C)	38.0	34.9	35.0	33.0	31.2	26.4	26.4-38.0
Avg. Mini. Temp. (°C)	25.0	25.9	25.8	34.2	18.0	9.0	9.0-34.2
Avg. Sunshine hours	8.0	4.8	6.9	6.0	7.7	7.2	6.76
* Avg. wind velocity	5.0	4.2	2.1	1.3	2.6	1.3	2.75

NRRI – CUTTACK							
Latitude :	20.5° N		Longitude:	86.0° N		Elevation(m) :	23.48
Soil type:	Clay loam		Soil pH:	-		Soil Texture:	
	June	July	Aug	Sep	Oct	Nov	Total / Range
No. of Rainy days	13	16	18	14	7	7	75
Total Rainfall (mm)	200.4	282.0	254.2	494.3	130.0	70.4	1431.3
Avg. Max. Temp. (°C)	32.14	32.15	32.75	31.77	32.15	29.71	29.71-32.75
Avg. Mini. Temp. (°C)	26.81	26.44	26.35	25.76	24.94	20.42	20.42-26.81
Avg. Sunshine hours	3.55	3.94	4.31	3.15	5.27	4.68	4.15
Avg. wind velocity	0.96	1.63	0.27	0.99	2.50	-	1.27

DEROL							
Latitude:	22° 36'		Longitude:	73° 27'		Elevation (m):	83.14
Soil type:	Sandy Loam		Soil pH:	7.3		Soil texture:	
	July	Aug	Sep	Oct	Nov	DEC	Total / Range
No. of Rainy days	9	5	16	0	0	2	32
Total Rainfall (mm)	154.0	81.0	295.0	3.0	0	17.0	550
Avg. Max. Temp. (°C)	34.7	31.5	31.2	33.0	31.8	26.8	26.8-34.7
Avg. Mini. Temp. (°C)	26.7	26.1	25.4	20.9	15.3	12.7	12.7-26.7
Avg. Sunshine hours	3.9	3.3	1.9	7.3	7.4	5.7	4.916

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Dabhoi							
Latitude :	22° 08'		Longitude:	73° 26'		Elevation(m) :	781
Soil type:	Medium Black		Soil pH :	7.9		Soil texture	Med. Black to loamy sand
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Total / Range
No. of Rainy days	7	10	3	17	4	1	42
Total Rainfall (mm)	155.8	238.8	62.4	378.4	49.2	6.0	890.6
Avg. Max. Temp. (°C)	35.7	33.9	32.4	30.9	33.7	32.7	30.9-35.7
Avg. Mini. Temp. (°C)	28.2	27.6	26.8	25.4	23.9	18.3	18.3-28.2
* Avg. Sunshine hours	1.9	1.6	0.7	1.7	6.7	6.8	3.23

GANGAVATI							
Latitude :	15° 15' N		Longitude:	76° 31' E		Elevation (m) :	419
Soil type:	Medium Black		Soil pH/EC	6.5-7.5		Soil texture :	Fine
	July	Aug	Sep	Oct	Nov	Dec	Total / Range
No. of Rainy days	10	03	09	06	11	0	39
Total Rainfall (mm)	76.2	4.70	83.2	21.1	120.4	0	305.6
Avg. Max. Temp. (°C)	30.71	31.17	30.17	31.6	28.6	29.29	28.6-31.6
Avg. Mini. Temp. (°C)	23.10	22.93	22.36	21.7	20.5	16.84	16.84-23.10

Goa							
Latitude :	15°33' 20"		Longitude:	73° 53' 53"		Elevation(m) :	3
Soil type:	Clay Loam		Soil pH :			Soil texture	
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range
No. of Rainy days	26	30	20	25	10	6	117
Total Rainfall (mm)	903.9	1345.9	343.9	421.0	239.9	166.4	3421
Avg. Max. Temp. (°C)	30.9	29.2	29.9	29.8	32.4	33.0	29.2-33.0
Avg. Mini. Temp. (°C)	23.4	23.2	23.8	24.7	24.0	23.3	23.2-24.7
Avg. Sunshine hours	3.3	2.3	3.6	2.3	6.7	5.4	3.93
Avg. wind velocity (km/h)	4.8	5.1	4.5	4.6	3.8	3.6	4.4

HATHWARA													
Latitude :	23° 20' N				Longitude:	86° 25' E				Elevation (m) :	255		
Soil type:	Light				Soil pH :	5.8				Soil texture :	Sandy Loamy		Total / Range
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct.	Nov	Dec	
No. of Rainy days	01	00	03	05	17	14	16	12	16	06	02	02	94
Total Rainfall (mm)	0.2	-	11.6	11.8	290.7	416.6	467.4	204.8	458.2	226.6	74.4	30.2	2192.5
Avg. Max. Temp. (°C)	26.2	29.8	36.2	38.4	34	32.6	31.2	31.9	31.1	31.0	28.0	24.7	24.7-38.4
Avg. Mini. Temp. (°C)	10	11.7	17.7	22.3	21.6	24	24	23.9	23	20.7	14.9	11.8	10-24.0
Avg. Sunshine hours	6.3	8	7.6	7.8	6.8	4.9	5.5	5.5	4.8	6.9	6.9	7.0	6.5
Avg. wind velocity (Km/h)	0.3	0.6	1.5	1.1	1	0.6	0.4	0.2	0.6	1.0	0.7	0.06	0.671
Avg Max RH	82	81	60	61	84	87	90	92	92	91	86	87	82.75
Avg Min RH	30	25	19	23	53	63	73	72	79	64	45	50	49.66

HAZARIBAG							
Latitude :	23° 95' 91" N		Longitude:	85° 37' 20" E		Elevation :	614
Soil type:	Sandy loam		Soil pH :	5.7		Soil texture :	35% clay, 53% silt, 15% sand
	JUNE	July	Aug	Sep	Oct	Nov	Total / Range
Total Rainfall (mm)	380.80	344.40	313.80	289.40	146.40	7.20	1482
Avg. Max. Temp. (°C)	31.23	31.18	30.61	30.07	29.02	25.98	25.98-31.23
Avg. Mini. Temp. (°C)	20.87	22.45	21.84	21.05	17.82	10.65	10.65-22.45
* Avg. Sunshine hours	4.26	3.53	3.25	4.37	7.08	6.45	4.82
* Avg. wind velocity	2.59	2.24	1.78	2.17	1.21	0.37	1.72

JAGDALPUR							
Latitude :	19.05°N		Longitude:	82.02°		Elevation(m) :	552
Soil type:	Alfisol		Soil pH :	6.5		Soil texture :	Sandy loam
	June	July	Aug	Sep	Oct.	Nov	Total / Range
No. of rainy days	12	17	19	12	4	6	70
Total Rainfall (mm)	170.7	317.6	354.9	188.9	57.7	150.5	1240.3
Avg. Max. Temp. (°C)	31.0	29.8	29.8	29.7	30.9	29.2	29.2-31.0
Avg. Mini. Temp. (°C)	22.7	22.4	22.3	22.2	20.4	17.8	17.8-22.7
Avg. Sunshine hours	2.9	2.4	2.3	3.4	5.7	4.9	3.6
Avg. wind velocity (km/h)	4.2	3.5	2.2	2.3	1.4	1.7	2.55

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JEYPORE								
Latitude:	18.60° N	Longitude:	82.44° E		Elevation (m):			553
Soil type:	Acidic	Soil pH:	6.6		Soil texture :			Sandy Loam
	June	July	Aug	Sep	Oct	Nov	Dec	Total / Range
No. of Rainy days	20	23	25	21	10	4	4	107
Total Rainfall (mm)	318.20	344.60	310.50	320.60	61.60	78.00	6.80	1440.3
Avg. Max. Temp. (°C)	35	34	33	33	33	33	30	30-35
Avg. Mini. Temp. (°C)	21	22	21	22	17	15	7	7-22

KARJAT								
Latitude :	18° 55' N		Longitude:	73° 18' E		Elevation (m) :		51
Soil type:	Medium black		Soil pH :	6.2		Soil texture :		Clay loam
	June	July	Aug	Sep	Oct	Nov	Total / Range	
No. of Rainy days	25	24	20	26	7	2		104
Total Rainfall (mm)	792.50	1644.30	365.00	834.80	207.60	69.80		3914
Avg. Max. Temp (°C)	30.92	29.60	29.81	29.98	32.98	34.23		29.60-34.23
Avg. Mini Temp (°C)	24.22	23.90	23.50	23.73	22.00	20.10		20.10-24.22
Avg. Sunshine hours	1.87	1.40	2.49	3.23	6.88	6.05		3.65
Avg. wind velocity	3.31	3.80	2.11	2.78	1.02	1.00		2.33

KAUL								
Latitude :	29° 51' N		Longitude	76° 39' E		Elevation (m) :		230.7
Soil type:	Clay loam		Soil pH :	7.8		Soil texture :		Clay
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range	
No. of Rainy days	6	14	5	8	2	0		35
Total Rainfall (mm)	95.7	426.7	111.3	162.5	47.8	0		844
Avg. Max. Temp. (°C)	41.5	44.0	39.8	35.0	36.5	29.5		29.5-44.0
Avg. Mini Temp. (°C)	16	23.5	22.5	21.0	12.2	5.0		5.0-23.5
Avg. Sunshine hours	8.4	5.2	5.7	7.8	-	-		6.77
Avg. wind velocity (Km/h)	6.3	5.5	3.0	2.5	2.0	1.7		3.5

KURUMBAPET								
Latitude :	11° 45' N		Longitude:	79° 35' E		Elevation (m) :		26
Soil type:	Clay loam		Soil pH :	6.6		Soil texture :		Clay loam
	Aug	Sep	Oct	Nov	Dec	Jan	Total / Range	
No. of Rainy days	13	10	20	23	6	4		76
Total rainfall (mm)	164.4	141.5	362	787.5	47	8.5		1510.9
Avg. Max. Temp. (°C)	34.2	34.2	32.2	29.8	31.2	31.3		29.8-34.2
Avg. Mini Temp. (°C)	24	23.4	24.7	24	22.5	21.5		21.5-24.7
Relative Humidity (%)	76.62	79.3	86.8	88	79.67	79.35		81.62

KHUDWAN								
Latitude :	34° N		Longitude:	73° E		Elevation(m) :		1560
Soil type:	Clay loam		Soil pH :	Neutral		Soil texture		Silty Clay loam
	April	May	June	July	Aug	Sep	Oct	Total / Range
No. of Rainy days	9	3	1	10	2	3	6	34
Total Rainfall (mm)	193.2	53.4	21.5	218.5	59.5	137.6	113.3	797
Avg. Max. Temp. (°C)	15.8	24.5	29.4	29.9	30.4	29.5	21.5	15.8-30.4
Avg. Mini. Temp. (°C)	5.3	9.4	13.4	17.6	15.1	13.8	6.4	5.3-17.6
* Avg. Sunshine hours	4.97	6.2	8.3	6.4	8.0	7.5	5.9	6.75
* Avg. wind velocity	1.7	2.0	2.8	2.8	2.5	2.8	2.3	2.41

Karaikal								
Latitude :	110.01' N		Longitude:	790.52' E		Elevation(m) :		4 MSL
Soil type:	Fluventic ustropept (Surakudy soil series)		Soil pH :			Soil texture		Clay loam
	Aug	Sep	Oct	Nov	Dec	Jan	Total / Range	
No. of Rainy days	3	8	20	24	11	4		70
Total Rainfall (mm)	2.22	6.87	9.77	75.84	1.83	3.21		99.74
Avg. Max. Temp. (°C)	35	35	33	30	31	31		30-35
Avg. Mini. Temp. (°C)	26	25	25	24	23	22		22-26
* Avg. wind velocity	5	11	4	4	3	3		5

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Kampasagar							
Latitude :	17.0586693		Longitude:	79.265585		Elevation(m) :	
Soil type:	Loamy		Soil pH:	9.5-10		Soil texture	
	June	July	Aug	sep	Oct	Nov	Total / Range
No. of Rainy days	11	9	10	12	5	9	56
Total Rainfall (mm)	134.8	178.3	185.2	159	38.8	84.0	780.1

LUCKNOW							
Latitude :	27.47		Longitude:	80.21		Elevation (m):	126
Soil type: -Typic Natrustalfs	Alkali		Soil pH:	9.6±0.18, 0.96 dSm ⁻¹		Soil texture :	Loam (sandy to clayey)
	July	Aug	Sep	Oct	Nov	Dec	Total / Range
No. of Rainy days	7	11	9	6	0	1	34
Total Rainfall (mm)	52.2	264.6	269.2	159.2	0	32	777.2
Avg. Max. Temp. (°C)	34.4	33.4	33.8	34.9	33.6	26.8	26.8-34.9
Avg. Mini. Temp. (°C)	25.4	25.9	26.0	25.9	16.2	8.2	8.2-26.0

LUDHIANA									
Latitude :	30°54' N		Longitude:	75° 48' E			Elevation(m) :	247	
Soil type:	Loamy Sand		Soil pH :	7.7			Soil texture		
	May	June	July	Aug	Sep	Oct.	Nov.	Dec	Total / Range
No. of Rainy Days	8	10	9	6	11	3	-	-	47
Total rainfall (mm)	1.20	7.71	8.75	3.47	26.89	1.21	-	-	49.3
Avg. Max. Temp. (°C)	36.35	37.92	34.27	33.77	31.79	31.29	-	-	31.29-37.92
Avg. Mini Temp. (°C)	22.62	25.38	28.75	27.22	25.37	19.52	-	-	19.52-28.75
Avg. Sunshine hours	7.93	8.15	7.48	7.27	5.43	8.53	-	-	7.46

LAMPHELPAT								
Latitude :	24° 45' N		Longitude:	93° 54' E			Elevation (m) :	774
Soil type:	Inceptisols		Soil pH:	5.5-6.0			Soil texture :	Clay loam
	JUNE	July	Aug	Sep	Oct	Nov	Total / Range	
No. of rainy days	21	13	11	13	10	-	68	
Total rainfall (mm)	228.5	220.1	248.0	208.9	77.7	-	983.2	
Avg. Max Temperature (°C)	29.6	30.2	29.3	30.0	29.4	-	29.3-30.2	
Avg. Min. Temperature (°C)	22.1	22.6	22.7	21.9	20.0	-	20.0-22.7	
* Avg. Sunshine hours	3.3	3.4	2.7	4.5	6.1	-	3.96	
* Avg. wind velocity (Km/h)	2.5	1.6	1.6	1.3	-	-	1.75	

MACHILIPATNAM								
Latitude :	8.15° E		Longitude:	16.17°N			Elevation (m) :	14
Soil type: Sandy Loams	Sandy clay loam		Soil pH :	7.6 , EC 6.48 ds/m			Soil texture :	Sandy loam
	June	July	Aug	Sep	Oct	Nov	Total / Range	
No. of Rainy days	7	10	14	15	6	18	70	
Total Rainfall (mm)	29	201.3	173	123.2	75.5	254.7	856.7	
Avg. Max. Temp. (°C)	34.13	33.68	33.15	32.9	34.29	30.38	30.38-34.29	
Avg. Mini. Temp. (°C)	27.77	25.2	24.83	25.96	26.6	24.07	24.07-27.77	

MALAN								
Latitude :	32° 1' N		Longitude:	76° 20' E			Elevation (m) :	950
Soil type:	Alfisol		Soil pH :	5.6- 5.8			Soil texture :	Silty clay loam
	June	July	Aug	Sep	Oct	Nov	Total / Range	
No. of Rainy days	5	15	13	10	3	0	46	
Total Rainfall (mm)	74.4	648.1	271.4	245.2	52.2	0	1291.3	
Avg. Max. Temp. (°C)	33.1	32.6	31.5	31.5	30.5	26.3	26.3-33.1	
Avg. Mini. Temp. (°C)	15.88	17.01	14.89	14.52	13.73	10.01	10.1-17.01	

MANDYA								
Latitude	12.45°- 13.57° N		Longitude	76.48°- 78.24° E			Elevation (m):	695
Soil type	Sandy Loam		Soil pH	6.5- 7.1			Soil texture:	Sandy loam
	July	Aug	Sep	Oct	Nov	DEC	Total / Range	
No. of Rainy days	8	5	3	14	9	3	42	
Total Rainfall (mm)	104.3	49.6	54.9	307.4	161.2	49.4	726.8	
Avg. Max. Temp. (°C)	29.8	29.8	30	29.9	28.8	28.7	28.7-30.0	
Avg. Mini. Temp.(°C)	17.2	18.7	19.4	19.7	17.8	16.5	16.5-19.7	
Avg. Sunshine hours	3.1	4.6	4.6	5.0	2.6	6.1	4.33	
Avg. wind velocity (Km/h)	5.9	5.1	4.6	2.2	2.3	1.8	3.65	

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MARUTERU							
Latitude	16.38° N		Longitude:	81.44° E		Elevation (m)	13
Soil type	Black alluvial clay		Soil pH:	6.5- 7.5		Soil Texture:	Delta alluvial
	July	Aug	Sep	Oct	Nov	DEC	Total / Range
No. of Rainy days	4	18	8	10	6	9	55
Total Rainfall (mm)	67.0	382.1	241.4	281.5	176.2	207.1	1355.3
Avg. Max. Temp. (°C)	33.37	30.61	31.89	30.22	31.95	28.62	28.62-33.37
Avg. Mini. Temp. (°C)	28.02	26.39	27.55	26.27	26.56	24.57	24.57-28.02
Avg. wind velocity (Km/h)	2.23	7.96	6.71	4.55	1.63	3.84	4.486

MUGAD							
Latitude :	15° 15' N		Longitude:	75° 40' E		Elevation(m) :	697
Soil type:	Laterite		Soil pH :	6.5 – 7.3		Soil texture :	Silty Clay Loam
	June	July	Aug.	Sep.	Oct.	Nov.	DEC
No. of Rainy days	9	45	10	7	7	8	2
Total Rainfall (mm)	193.00	187.40	72.90	47.40	98.20	156.21	27.41
Avg. Max. Temp. (°C)	28.34	27.22	28.05	28.01	30.01	28.06	28.10
Avg. Mini. Temp. (°C)	20.7	20.74	20.45	20.54	19.97	18.82	14.50
							Total / Range
							57
							782.52
							27.22-30.01
							14.50-20.74

MALAGI							
Latitude :	14° 26'		Longitude:	74° 50' E		Elevation (m) :	619
Soil type:	Laterite		Soil pH :	5.4		Soil texture :	Sandy Loam
	July	Aug.	Sep.	Oct.	Nov	Dec.	Total / Range
No. of Rainy days	21	16	17	8	7	3	72
Total Rainfall (mm)	549.2	153	173.8	148.4	159.8	42.8	1227.0

MONCOMPU							
Latitude :	90-25'N		Longitude:	76027'E		Elevation (m) :	1-2.5
Soil type:	Alluvial clay		Soil pH :	4.5 to 6.5		Soil texture :	Silty Clay Loam
	July	Aug.	Sep.	Oct.	Nov.	Dec	Total / Range
No. of Rainy days	25	20	18	23	18	2	106
Total Rainfall (mm)	419.2	384.2	331.2	410.7	460	10.9	2016.2
Avg. Max. Temp. (°C)	30.9	30.35	30.9	30.9	30.9	33.6	30.35-33.6
Avg. Mini. Temp. (°C)	23.8	22.6	24	22.4	23.2	24.49	22.4-24.49

Malda							
Latitude :	24.97763 N		Longitude:	88.14285 E		Elevation(m) :	24 m MSL
Soil type:	Clay Loam		Soil pH :	7.1		Soil texture	Alluvium
	June	July	Aug	sep	Oct	Nov	Total / Range
No. of Rainy days	15	13	15	10	5	0	58
Total Rainfall (mm)	220.2	239.3	247.4	53.0	70.1	0	830
Avg. Max. Temp. (°C)	33.5	33.5	33.0	33.7	33.0	29.1	29.1-33.7
Avg. Mini. Temp. (°C)	26.3	26.9	26.4	25.9	23.8	17.1	17.1-26.9
* Avg. Sunshine hours	4.7	5.0	3.4	6.1	7.2	7.0	5.56
*Avg. wind velocity	84.32	78.70	73.21	63.57	55.3	63.33	69.73

Nagina							
Latitude :	290 28'N		Longitude:	780 32'E		Elevation(m) :	450
Soil type:	Sandy loam		Soil pH :	7.5		Soil texture	
	June	July	Aug	Sep	Oct	Nov	Total / Range
No. of Rainy days	07	12	12	07	03	0	41
Total Rainfall (mm)	160.2	457.2	314	224.2	234.0	0.0	1389.6
Avg. Max. Temp. (°C)	33.8	33.5	32.4	32.0	30.5	26.1	26.1-33.8
Avg. Mini. Temp. (°C)	24.6	25.4	24.7	23.5	17.7	9.5	9.5-25.7
* Avg. Sunshine hours	7.1	4.8	4.6	5.6	6.6	6.6	5.88
* Avg. wind velocity	4.8	4.6	3.4	2.9	2.1	1.6	3.23

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NAVASARI								
Latitude :	20° 29'		Longitude:	73° 29'		Elevation (m) :		105
Soil type:	Clayey		Soil pH :	7.5		Soil texture :		Loamy
	June	July	Aug.	Sep.	Oct.	Nov.	Dec	Total / Range
No. of Rainy days	10	17	12	20	2	1	2	64
Total Rainfall (mm)	384.00	423.00	170.00	493.00	18.00	11.00	66.00	1565.0
Avg. Max. Temp. (°C)	32.63	31.29	30.58	30.58	33.88	33.72	29.26	29.26-33.88
Avg. Mini. Temp. (°C)	24.52	24.74	23.39	22.91	20.14	18.27	14.67	14.67-24.74
Avg. Sunshine hours	6.03	3.76	2.41	2.63	7.25	7.39	6.16	5.09
Avg. wind velocity (Km/h)	5.93	6.45	4.61	4.44	2.43	3.62	3.40	4.41

NAWAGAM								
Latitude :	22° 48'		Longitude:	71° 3'		Elevation (m) :		32.4
Soil type:	Medium black		Soil pH :	7.8		Soil texture :		Sandy Clay Loam
	June	July	Aug.	Sep.	Oct.	Nov.	Dec	Total / Range
No. of Rainy days	10	06	02	16	-	02		36
Total Rainfall (mm)	243	178	72	345	-	08		846.0
Avg. Max. Temp. (°C)	35.8	33.3	33.2	31.4	33.1	31.9		31.4-35.8
Avg. Mini. Temp. (°C)	26.3	27.0	26.4	26.1	24.4	21.4		21.4-27.0
Avg. Sunshine hours	6.6	3.8	3.2	3.3	8.2	7.2		5.38
Avg. wind velocity (Km/h)	3.4	4.5	3.4	2.5	1.5	4.8		3.35

Nellore								
Latitude :	14021'N		Longitude:	Longitude		Elevation(m) :		20AMSL
Soil type:	Sandy clay loam		Soil pH :	Soil pH		Soil texture		
	Aug	Sep	Oct	Nov	Dec	Total / Range		
No. of Rainy days	4	6	5	20	5	40		
Total Rainfall (mm)	34.2	94.6	79.3	852.4	48.2	1108.7		
Avg. Max. Temp. (°C)	33.8	33.2	31.7	27.6	28.2	27.6-33.8		
Avg. Mini. Temp. (°C)	28.1	27.2	26.8	24.6	23.2	23.2-28.1		
* Avg. Sunshine hours	5.7	3.6	5.2	2.06	6	4.512		
* Avg. wind velocity	7.5	5.1	4.3	6.2	4.5	5.52		

PARBHANI								
Latitude :	19° 16' N		Longitude:	76° 47' E		Elevation(m) :		409
Soil type:	Black Cotton Soil		Soil pH :	7.8		Soil texture :		Heavy Soil
	June	July	Aug.	Sep.	Oct.	Nov.	Dec	Total / Range
No. of Rainy days	13	14	7	17	4	0		55
Total Rainfall (mm)	315.2	568.8	98.5	468.0	161.7	1.2		1613.4
Avg. Max. Temp. (°C)	32.9	31.1	31.0	30.0	32.0	30.9		30.0-32.9
Avg. Mini. Temp. (°C)	21.8	22.5	22.3	22.0	19.3	17.9		17.9-22.5
Avg. Sunshine hours	5.7	4.5	4.8	4.3	7.9	6.5		5.61
Avg. wind velocity (Km/h)	5.0	4.4	4.2	3.6	2.6	3.8		3.93

PATNA -ICAR								
Latitude :	25.30°N		Longitude:	85.15° E		Elevation(m) :		52
Soil type:	Recent alluvial		Soil pH :	7.5		Soil texture :		Clay loam
	June	July	Aug.	Sep.	Oct.	Nov.	Dec	Total / Range
No. of Rainy days	13	09	13	11	04	00		50
Total Rainfall (mm)	431.8	185.3	232.8	150.6	41.4	00		1041.9
Avg. Max. Temp. (°C)	33.3	33.7	33.0	33.1	31.8	28.7		28.7-33.7
Avg. Mini. Temp. (°C)	26.2	27.3	26.8	26.5	23.2	15.0		15.0-27.3
Avg. Sunshine hours/day	2.90	2.72	2.76	4.59	4.71	3.77		3.575
Avg. wind velocity	5.67	6.59	4.69	6.53	3.85	1.56		4.815

PATTAMBI								
Latitude :	10.770388	Longitude:	76.37706		Elevation (m) :		63	
Soil type:	Clay loam	Soil pH :	5.8		Soil texture :		fine	
	July	August	Sep	Oct	Nov	Dec	Total / Range	
No. of Rainy days	15	23	18	20	16	3	95	
Total Rainfall (mm)	535.1	430.2	354.2	766.2	271.3	21.5	2378.5	
Avg. Max. Temp. (°C)	29.5	29.7	31.1	31.1	30.6	31.7	29.5-31.7	
Avg. Mini. Temp. (°C)	23.2	23.1	23.4	23.5	23	21.5	21.5-23.5	
Avg. Sunshine hours/day	2.5	3.1	3.5	3.8	3.0	10.7	4.43	
Avg. Wind velocity	4.1	3.3	2.1	2.4	2.7	10.7	4.216	

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PONNAMPET							
Latitude :	12° 29' N		Longitude:	75° 56' E		Elevation (m):	867
Soil type:	Red lateritic		Soil pH :	5-6		Soil texture :	Sandy loam to red Loam
	July	Aug.	Sep.	Oct.	Nov	Dec.	Total / Range
No. of Rainy days	18	17	18	20	12	2	87
Total Rainfall (mm)	561.3	333.2	459.3	463.8	81.3	39.3	1938.2

PHONDAGHAT							
Latitude	16-22'35"		Longitude	73-47'18"		Elevation (m)	75.7
Soil type	Sandy clay		Soil pH	5.6-6.5		Soil texture	Clay loam
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range
No. of Rainy days	23	28	30	26	5	9	121
Total Rainfall (mm)	1250.4	2045.1	619.7	736.2	133.1	104.1	4888.6
Avg. Max. Temp. (°C)	29.8	28.3	29.6	29.6	30.4	31.8	28.3-31.8
Avg. Mini. Temp. (°C)	22.4	24.1	24.5	23.7	22.5	22.2	22.2-24.5
* Avg. wind velocity	5.7	1.4	1.3	1.1	1.9	1.9	2.21

Parvel							
Latitude :	18° 59'		Longitude:	73° 16'		Elevation(m) :	858
Soil type:	Coastal saline soil		Soil pH :	7.8		Soil texture	Clay loam
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Total / Range
No. of Rainy days	23	24	20	22	8	3	100
Total Rainfall (mm)	917.4	1444.8	308.8	883.8	163.4	30.2	3748.4
Avg. Max. Temp. (°C)	31.6	30.2	29.8	28.7	35.9	36.3	28.7-36.3
Avg. Mini. Temp. (°C)	22.6	24.6	22.4	21.5	19.3	17.4	17.4-24.6
* Avg. wind velocity	4.9	6.7	3.1	7.4	2.6	3.1	4.63

RAJENDRANAGAR							
Latitude :	17.32510°		Longitude:	78.39912°		Elevation (m) :	586.60
Soil type:	Loamy		Soil pH :			Soil texture :	
	July	Aug.	Sep.	Oct.	Nov	Dec.	Total / Range
No. of Rainy days	12	9	13	3	2	0	39
Total Rainfall (mm)	305.8	106.2	255.2	100.8	18.2	0	786.2
Avg. Max. Temp. (°C)	30.2	30.5	28.8	31.0	28.6	28.5	28.5-31.0
Avg. Mini. Temp. (°C)	23.1	23.1	22.4	20.7	19.3	14.5	14.5-23.1
* Avg. Sunshine hours	3.7	4.9	3.9	7.3	4.3	6.7	5.133

RAGOLU							
Latitude :	18.24° N		Longitude:	83.84°E		Elevation (m) :	27
Soil type:	Red sandy loam with clay base		Soil pH :			Soil texture	Low organic matter content
	July	Aug.	Sep.	Oct.	Nov	Dec.	Total / Range
No. of Rainy days	12	9	8	5	9	3	46
Total Rainfall (mm)	180	120.4	271	75.5	155.7	72	874.6
Avg. Max. Temp. (°C)	32.5	33.0	32.18	32.69	30.03	28.56	28.56-33.0
Avg. Mini. Temp. (°C)	27.0	28.38	26.58	26.11	23.61	18.91	18.91-28.38
Avg. Sunshine hours	4	6	9	5.33	5.5	7.14	6.161
Avg. wind velocity	1.4	2.1	2.1	0.65	0.57	0.49	1.218

RAIPUR							
Latitude :	21.2514° N		Longitude:	81.6296° E		Elevation (m):	298
Soil type:	Red-yellow soil		Soil pH :	7.2-7.4		Soil texture :	Loamy clay
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range
No. of Rainy days	3	20	16	21	04	02	66
Total Rainfall (mm)	53.2	312	119.4	369.3	15.6	48.6	918.1
Avg. Max. Temp. (°C)	36.8	32.25	32.17	31.49	32.04	30.1	30.1-36.8
Avg. Mini. Temp. (°C)	25.28	25.54	25.61	24.61	22.35	18.1	18.1-25.61
Avg. Sunshine hours	3.24	3.62	3.30	4.21	7.54	6.10	4.668
Avg. wind velocity	6.1	8.04	6.83	5.19	3.23	3.3	5.448

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Rajouri							
Latitude :	33° 42' N		Longitude:	74° 13' E		Elevation(m) :	953 mamsl
Soil type:	Clay loam		Soil pH :	7.2		Soil texture	
	June	July	Aug	sep	Oct	Nov	Total / Range
No. of Rainy days	08	16	05	07	07	0	43
Total Rainfall (mm)	54.6	253.4	60	71.6	92.2	0.0	531.8
Avg. Max. Temp. (°C)	33.3	31.4	31.6	30.4	28.0	23.8	23.8-33.3
Avg. Mini. Temp. (°C)	18.5	19.0	20.3	19.1	12.3	3.6	3.6-20.3
* Avg. Sunshine hours	9.0	5.8	7.7	6.0	7.6	7.7	7.3

Rewa							
Latitude :			Longitude:			Elevation(m) :	
Soil type:			Soil pH :			Soil texture	
	June	July	Aug	sep	Oct	Nov	Total / Range
No. of Rainy days	8	16	13	11	2	0	50
Total Rainfall (mm)	201.4	191.6	329	160.2	21.6		903.8
Avg. Max. Temp. (°C)	34.09	33.49	32.13	32.58	32.93	29.39	29.39-34.09
Avg. Mini. Temp. (°C)	2.06	25.57	25.17	24.62	19.82	12.04	2.06-25.57

SAKOLI							
Latitude:	20°04'01 N		Longitude:	79°59'17 E		Elevation (m):	243
Soil type:	Lateritic		Soil pH :	6.57 - 7.02		Soil texture:	Clay loam
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range
No. of Rainy days	15	18	15	15	2	0	65
Total Rainfall (mm)	300.80	331.0	197.60	390.60	14.60	1.50	1236.1

SHIRGAON								
Latitude :	17° 50' N		Longitude	73° E		Elevation(m):	10	
Soil type:	Laterite		Soil pH :	6.7		Soil Texture:	Porous	
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range	
No. of Rainy days	23	26	23	24	5	5	106	
Total Rainfall (mm)	1119.2	1737.8	365.9	654.6	68.4	113.4	4059.3	
Avg. Max. Temp. (°C)	31.1	29.8	30.3	29.9	32.8	33.3	29.8-33.3	
Avg. Mini. Temp. (°C)	22.8	22.1	21.7	20.4	22.3	19.0	19.0-22.8	
Avg. Sunshine hours	3.2	1.9	3.0	2.8	7.5	6.1	4.083	
Avg. wind velocity	3.6	4.3	2.9	3.3	2.0	1.9	3.0	
Avg Humidity (%)	Morning	95.8	95.5	96.0	96.3	92.9	89.5	94.333
	Evening	94.9	94.4	95.7	96.2	88.4	81.6	91.866

SIRSI								
Latitude :	14 26'		Longitude:	74° E		Elevation (m) :	619	
Soil type:	Laterite		Soil pH :	5.5		Soil texture :		
	May	June	July	Aug.	Sep.	Oct.	Nov	Total / Range
No. of Rainy days		16	26	13	20	12	13	100
Total Rainfall (mm)		540.8	964.6	159.2	332.2	173.8	160.2	2330.8
Avg. Max. Temp. (°C)		28.93	27	28.02	27.68	30.03	29.75	27.0-30.03
Avg. Mini. Temp. (°C)		20.43	20.35	20.9	20.72	20.66	19.72	19.72-20.90
* Solar radiation (CAL/CMP)		4.87	6.57	4.67	5.53	3.23	3.6	4.745
Avg. wind velocity		6.89	8.11	7.1	5.86	3.84	4.63	6.071
ET (mm)		-15.65	-14.08	-2.14	-8.32	-2.62	0.92	6.981
WD		261.67	276.58	270.92	276.5	258.87	258.33	267.14

Sundernagar							
Latitude :	31°32'08"N		Longitude:	76°53'39"		Elevation(m) :	858
Soil type:	Clay		Soil pH :	7.0		Soil texture	Clay loam
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Total / Range
No. of Rainy days	5	7	18	17	11	3	61
Total Rainfall (mm)	67	147.8	318.8	347.5	230.5	20	1131.6
Avg. Max. Temp. (°C)	30.4	32.7	31.7	31.4	30	29.2	29.2-32.7
Avg. Mini. Temp. (°C)	16.3	19.2	21.8	21.1	20.2	15.1	15.1-21.8
* Avg. wind velocity	3.5	1.5	1.2	1.9	1.9	1.9	1.98

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TITABAR							
Latitude :			Longitude:			Elevation :	
Soil type:			Soil pH :			Soil texture :	
	June	July	Aug.	Sep.	Oct.	Nov	Total / Range
No. of Rainy days	17	15	11	8	4	1	56
Total Rainfall (mm)	173.4	185.2	143	169.4	79.4	31	781.4
Avg. Max. Temp. (°C)	32.06	33.44	32.93	33.83	32.95	28.49	28.49-33.83
Avg. Mini. Temp. (°C)	23.16	23.93	23.9	23.8	21.81	12.83	12.83-23.93
Avg. Sunshine hours	3.37	3.9	3.5	6.1	4.77	7.3	4.823

Tirur							
Latitude :	78056'N		Longitude:	1307'E		Elevation(m) :	39.47
Soil type:	Enceptisol		Soil pH :	7-8.5		Soil texture	Sandy clay loam
	Aug	Sep	Oct	Nov	Dec	Total / Range	
No. of Rainy days	10	8	11	21	5	55	
Total Rainfall (mm)	190.00	109.7	263	696.8	157.4	1416.9	
Avg. Max. Temp. (°C)	35.8	34.6	33.8	29.0	30.5	29.0-35.8	
Avg. Mini. Temp. (°C)	24.8	24.8	24.7	23.9	21.9	21.9-24.8	

Trichy							
Latitude :	10°45'N		Longitude:	78°36'E		Elevation(m) :	85.0m
Soil type:	Clayey loam		Soil pH :			Soil texture	
	Sep	Oct	Nov	Dec	Jan	Total / Range	
No. of Rainy days	8	14	24	7	2	55	
Total Rainfall (mm)	212.0	263.8	528.4	46.2	11.2	1061.6	
Avg. Max. Temp. (°C)	35.6	33.4	30.7	31.2	32.4	30.7-35.6	
Avg. Mini. Temp. (°C)	24.2	24.3	23.6	22.0	21.4	21.4-24.3	
Relative humidity (Morning)	79.5	87.1	90.0	90.6	86.7	433.9	
Relative humidity (Evening)	47.9	53.3	69.2	68.8	53.1	292.3	
Avg. Wind velocity	4.3	3.3	2.6	2.3	3.1	3.12	
Avg. Sun shine hours	6.1	4.9	2.1	6.6	7.4	5.42	
Avg. Evaporation	5.5	4.8	2.1	3.5	3.7	3.92	

Upper Shillong									
Latitude :	25°54'		Longitude:	75°48' E			Elevation(m) :	247	
Soil type:	Loamy Sand		Soil pH :	7.7			Soil texture		
	Apr	May	June	July	Aug	Sep	Oct.	Nov.	Total / Range
No. of Rainy Days	4	3	15	18	20	10	10	-	80
Total rainfall (mm)	22.8	11.6	261	275	452.4	121.8	125	-	1269.6
Avg. Max. Temp. (°C)	24	27.96	25.18	26.32	25.54	25.58	27.05	20.48	20.48-27.96
Avg. Mini Temp. (°C)	9	12.08	15.18	16.72	16.11	14.68	9.41	3.68	3.68-16.72

VARANASI							
Latitude	25° 20' N		Longitude	23° 03'E		Elevation (m)	75.7
Soil type	Medium		Soil pH	7.2		Soil texture	Sandy loam
	July	Aug.	Sep.	Oct.	Nov.	Total / Range	
No. of Rainy days	14	11	11	06	0	42	
Total Rainfall (mm)	555	256.1	312.9	120.7	0	1244.7	
Avg. Max. Temp. (°C)	34.56	33.49	32.59	32.52	28.94	28.94-34.56	
Avg. Mini. Temp. (°C)	26.27	25.71	24.09	21.77	12.99	12.99-26.27	
RH (%)	78.29	82.53	84.13	77.84	70.93	78.7444	
Avg. Sunshine hours	4.7	4.22	5.74	7.19	6.89	5.748	
* Avg. wind velocity	4.6	3.25	3.97	1.94	0.59	2.87	

VYARA									
Latitude :	20° -10'			Longitude:	73° 20'			Elevation (m) :	69
Soil type:	Medium Black			Soil pH :	7.5			Soil texture :	Clayey
	JUNE	July	Aug.	Sep.	Oct.	Nov	Dec.	Total / Range	
No. of Rainy days	9	14	17	16	-	2	-	58	
Total Rainfall (mm)	99.4	390.0	227.5	310.6	-	48	-	1075.5	
Avg. Max. Temp. (°C)	36.8	34.9	32.4	32.2	37.2	35.6	-	32.2-36.8	
Avg. Mini. Temp. (°C)	22.3	20.3	18.8	17.6	16.9	17.0	-	16.9-22.3	
Avg. Sunshine hours	3.5	3.2	2.9	2.9	8.6	7.3	-	4.733	

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VADAGAON									
Latitude :	187-45		Longitude:	73 – 41 East		Elevation(m) :			677.9 m
Soil type:	Medium		Soil pH :	6.5-7.5		Soil texture			Clay loam
	May	June	July	Aug	Sep	Oct.	Nov.	Dec	Total / Range
No. of Rainy Days	9	14	17	10	13	5	3	2	73
Total rainfall (mm)	111.6	336.4	561.2	90.8	183.4	116.8	31.6	73.4	1505.2
Avg. Max. Temp. (°C)	–	29.2	28.1	26.6	27.3	30.0	28.0	27.3	27.3-30.0
Avg. Mini Temp. (°C)		21.7	22.0	21.4	21.7	21.6	21.3	14.3	14.3-22.0
Avg. Sunshine hours	7.93	8.15	7.48	7.27	5.43	8.53	-	-	7.46

WARASEONI								
Latitude :	21°45'N		Longitude:	80°50'E		Elevation (m) :		301.5
Soil type:	Sandy loam		Soil pH :	7.5		Soil texture :		
	June	July	Aug.	Sep.	Oct.	Nov	Total / Range.	
No. of rainy days	14	16	10	17	1	1	59	
Total rainfall (mm)	309.7	428.2	106.4	333.5	0.3	3.0	1181.1	

WANGBAL								
Latitude :	24.8° N		Longitude:	94° E		Elevation(m) :		781
Soil type:	Clay Loam		Soil pH :	5.5		Soil texture		fine
	June	July	Aug.	Sep.	Oct.	Nov.	Total / Range	
No. of Rainy days	15	11	12	4	0	3	45	
Total Rainfall (mm)	148.3	167.6	115.8	20.1	3.0	52.7	507.5	
Avg. Max. Temp. (°C)	34	34	35	34	29	26	26-35	
Avg. Mini. Temp. (°C)	26	25	25	24	17	12	12-26	

Trials Sent and Data Receipt

Funded Locations – 2021

Region	State	Location	Trials Sent	Data receipt	Failed/late receipt	
Zone 1-Hills	Himachal Pradesh	Malan	6	6		
	Jammu Kashmir	Khudwani	4	4		
	Meghalaya	Upper Shillong	5	4		
	Manipur	Wangbal	3	3		
Zone II-Northern	Uttarakhand	Pantnagar	8	6		
	Punjab	Ludhiana	16	12		
	Haryana	Kaul	13	7		
	Uttar Pradesh	Nagina	1	1		
		Kanpur	5	3		
	Jammu & Kashmir	Chatha	1	1		
Zone III-Eastern	Rajasthan	Kota	5	5		
	Odisha	Jeypore	17	17		
Zone IV-North Eastern		Chiplima	7	7		
		Bihar	Bikramganj (Patna)	18	18	
		Pusa	9	3		
		Jharkhand	Ranchi	18	15	
	West Bengal	Chinsurah	20	14		
		Bankura	3	3		
	Uttar Pradesh	Masodha	20	19		
		Varanasi	23	15		
	Zone IV-North Eastern	Assam	Titabar	18	14	
		Tripura	Arundhutinagar	12	6	2
Zone V- Central	Madhya Pradesh	Rewa	5	4		
	Chhattisgarh	Raipur	21	18		
		Jagadapur	14	14		
	Maharashtra	Sakoli	15	15		
Zone VI- Western	Maharashtra	Karjat	19	16		
	Gujarat	Nawagam	16	16		
		Navsari	17	17		
Zone VII-Southern	Andhra Pradesh	Maruteru	18	15		
	Telangana	Rajendranagar	12	11		
		Warangal	16	16		
	Tamil Nadu	Aduthurai	15	8	7	
		Coimbatore	17	14		
	Kerala	Moncompu	9	7		
		Pattambi	14	14		
	Karnataka	Mandya	20	17		
		Mugad	7	3	4	
		Brahmavar	15	13		
		Ponnampet	5	5		
Puducherry	Gangavati	18	15			
	Kurumbapet	9	6	3		
	Total		514	427	16	

Voluntary Locations-2021

Region	State	Location	Trials Sent	Data receipt	Failed/late receipt			
Zone 1-Hills	Jammu & Kashmir	Rajouri	4	2				
		Pombay (Khudwani)	4	4				
		Wadura (Khudwani)	4	0				
	Himachal Pradesh		Palampur	2	2			
			Sundernagar	4	2			
			Bajaura	4	0			
			Uttarakhand	Almora-ICAR	6	6		
			Bageswar (Almora)	1	1			
			Meghalaya	Umiam-ICAR	3	3		
			Umiam-CAU	3	3			
			Manipur	Lamphelpat-ICAR	3	3		
			Imphal-CAU	3	0			
			Sikkim	Gangtok-ICAR	2	2		
	Zone II-North Western	Haryana	Karnal (CSSRI)	11	8			
Kurukshetra (CSSRI)			2	2				
Panipat (CSSRI)			2	2				
Rohtak			2	0				
Anjanteli			2	2				
New Delhi			Jind	2	0			
			ICAR-IARI	1	0			
			Zone III-Eastern	Odisha	Bhubaneswar	8	0	
					ICAR-NRRI (Cuttack)	26	18	6
					Ranital	2	2	
Bihar		Patna-ICAR	13	13				
		Sabour	12	9				
Jharkhand		Hazaribagh-ICAR	5	2				
		West Bengal		Pundibari	9	9		
Canning-ICAR	2			2				
Hathwara	7			5				
		Malda	5	5				
		Chakdaha (Mohanpur)	2	0				
		Uttar Pradesh		Lucknow-ICAR	2	2		
				Gautam Budha Nagar	2	0		
				Gorakhpur	2	2		
Zone IV- North Eastern	Assam	Shillongani	2	0				
		Gerua-ICAR	13	4				
		Karimganj	2	0				
	Tripura	Lembucherra-ICAR	17	17				
Zone V- Central	Madhya Pradesh	Waraseoni	7	4				
		Jabalpur	11	0				
	Chhattisgarh		Bilaspur	7	5			
			Ambikapur	5	3			
	Maharashtra	Sindewahi	11	11				
Zone VI- Western	Maharashtra	Panvel	2	2				
		Shirgaon	13	8				
		Vadgaon	9	6				
		Phondaghat	2	1				

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Region	State	Location	Trials Sent	Data receipt	Failed/late receipt
		Parbhani	2	2	
		Radhanagari	7	3	
	Gujarat	Danti	2	2	
		Derol	2	2	
		Dabhoi	5	4	
		Vyara	9	9	
		Baruch (CSSRI)	2	0	
	Goa	Goa-ICAR	2	1	
Zone VII-Southern	Andaman & Nicobar	Port Blair-ICAR	2	0	
	Andhra Pradesh	Machilipatnam	2	2	
		Ragolu	4	4	
		Bapatla	6	4	
		Nellore	4	3	
	Telangana	Kunaram	9	5	
		Jagital	14	5	
		Rudrur	6	4	
		Kampasagar	8	5	
	Tamil Nadu	Trichy	2	2	
		Annamalainagar	2	2	
		Tiru	2	2	
		Gudaluru	4	4	
	Kerala	Vytilla	4	0	4
	Karnataka	Sirsi	10	10	
		Kumta	2	0	
		Malagi	5	4	
	Puducherry	Karaikal	8	7	
		Total	388	258	10

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Details of the Hybrid Rice (IHRT) Kharif-2021 Trials Sent and Data Received

Zone	State	Location	No. of Trials allotted	No. of Trials conducted as per Data received	No. & Reasons for the failure of the experiment
Funded Locations					
Zone II Northern	Himachal Pradesh	Malan	1	1	0
	Haryana	Kaul	3	3	0
	Punjab	Ludhiana	3	3	0
	Uttarakhand	Pantnagar	3	3	0
Zone III Eastern	West Bengal	Chinsurah	4	4	0
	Odisha	Chiplima	1	1	0
		Masodha	4	4	0
		Varanasi	1	1	0
	Uttar Pradesh	Nagina	3	3	0
		Bihar	Dhangain	3	3	0
	Jharkhand	Ranchi	4	4	0
Zone IV North Eastern	Tripura	Arundhatinagar	4	2	2 (IHRT-ME and IHRT-MS trials got vitiated due to heavy downpour, rat damage during flowering stage)
	Assam	Titabar	4	4	0
Zone V Central	Chhattisgarh	Raipur	4	4	0
	Maharashtra	Sakoli	2	2	0
Zone VI Western	Maharashtra	Karjat	4	4	0
	Gujarat	Navsari	4	4	0
		Nawagam	4	4	0
Zone VII Southern	Andhra Pradesh	Maruteru	4	4	0
	Telangana	Warangal	4	4	0
	Karnataka	Mandya	4	4	0
		Aduthurai	3	3	0
	Tamilnadu	Coimbatore	4	4	0
Total			75	73	2
Voluntary Locations					
Zone II Northern	Delhi	IARI-New Delhi	2	2	0
Zone III Eastern	Jharkhand	Hazaribagh	1	1	0
	Odisha	Cuttack (NRRI)	4	4	0
Zone V Central	Madhya Pradesh	Jabalpur	4	4	0
		Waraseoni	2	2	0
	Maharashtra	Sindewahi	4	4	0
Zone VI Western	Gujarat	Dabhoi	4	0	4(IHRT -E,ME, M & MS trial was not conducted)
	Maharashtra	Radhanagari	2	2	0
		Shirgaon	2	2	0
		Vadgaon Maval	1	1	0
		Pondaghat	2	2	0
Zone-VII Southern	Andhra Pradesh	Bapatla	1	1	0
		Ragolu	3	3	0
	Telangana	Hyderabad (IIRR)	4	4	0
	Puducherry	Karaikal	2	2	0
	Karnataka	Malagi	1	1	0
		Sirsi	2	2	0
Total			41	37	4

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Private Sector Locations						
Zone	State	Location	Name of the Seed Company	No. of Trials allotted	No. of Trials conducted as per Data received	No & Reasons for the failure of the experiment
Zone III Eastern	Uttar Pradesh	Barabanki	JK. Agri Genetics Ltd.	2	2	0
		Faizabad	Rasi Seeds Pvt. Ltd.	2	2	0
	Bihar	Bihar Sharif	Syngenta India Ltd.	4	4	0
	Jharkhand	Ranchi	Trimurthi Plant Sciences Pvt. Ltd.	1	1	0
Zone V Central	Chhattisgarh	Raipur	VNR Seeds Pvt. Ltd.	4	4	0
		Raipur	Nuziveedu Seeds Pvt. Ltd.	1	1	0
		Raipur	Rasi Seeds Pvt. Ltd.	2	2	0
	Maharashtra	Dighori, Nagpur	Ankur Seeds Pvt. Ltd.	4	4	0
Zone VII Southern	Andhra Pradesh	Rajahmundry	Bayer Bio-Science Pvt. Ltd.	4	4	0
Total				24	24	0

Center wise Breeder Seed Production for Kharif 2021

S. No.	Centre Name	Variety	Allocation (q)	Production (q)	Surplus/deficit (q)
1	CRURRS, Hazaribagh (NRRI, Cuttack)	Abhishek (IET - 17868) (RR-272-829)	0.05	1.92	1.87
		SAHBHAGI (Sahbhagi Dhan IET-19576)	75.65	167.70	92.05
		Total	75.70	169.62	93.92
2	TNRRI, Aduthurai (TNAU, Coimbatore)	ADT-37	1.10	1.10	0.00
		ADT-39	1.10	1.10	0.00
		ADT-45	0.10	0.10	0.00
		ADT (R)-46	0.10	0.10	0.00
		ADT-51 (IET 23617)	1.85	1.85	0.00
		ADT-53 (IET 23955)	0.95	0.95	0.00
		Total	5.20	5.20	0.00
3	RRS, Chinsurah (Govt. of WB)	Ajit	7.60	5.00	-2.60
		Muktashree (IET 21845)	2.70	1.95	-0.75
		Rajdeep (CN 1039-9) (IET 17713)	0.65	1.70	1.05
		Sabita (IET-8970)	2.00	2.48	0.48
		Sukumar (IET 21261)	5.80	0.00	-5.80
		Shatabdi (IET-4786)	28.20	5.59	-22.61
		Sujala (CNR-2) (IET 20235)	1.10	1.60	0.50
		Bidhan Suruchi (IET 25701)	3.10	0.00	-3.10
		Chinsurah Nona - 2 (Gosaba- 6) (IET-21943)	1.00	1.28	0.28
		Chinsurah Rice (IET 19140)(CNI 383-5-11) (Kaushalya)	1.00	1.00	0.00
		CN1272-55-105 (IET- 19886) (Kanak)	0.50	2.50	2.00
		Khitish (IET-4094)	3.00	3.90	0.90
		BNKR-1 (Dhiren) (IET 20760) (PY-84)(IET 19848)	3.20	1.85	-1.35
		Total	59.85	28.85	-31.00
4	ANGRAU, Guntur	Amara (MTU-1064)	5.60	5.60	0.00
		Bharani (NLR 30491)	1.00	1.00	0.00
		BPT 5204	42.80	42.80	0.00
		BPT-3291 (Sonamasuri)	4.00	4.00	0.00
		Chandra(IET 23409) (MTU-1153)	86.90	86.90	0.00
		Cotondora Sannalu (MTU-1010)	164.60	164.60	0.00
		Maruteru Sannalu (MTU-1006, IET-14348)	1.00	1.00	0.00
		MTU 1001 (Vijetha)	55.30	55.30	0.00
		MTU 1075 (IET 18482)	8.50	8.55	0.05
		Varam (MTU 1190)	1.50	1.50	0.00
		MTU 1223	17.80	17.80	0.00
		MTU 1239	16.70	16.70	0.00
		MTU 1140 (Bheema)	11.10	11.10	0.00
		MTU 1156 (Tarangini)	103.50	103.50	0.00
		MTU-1061	6.20	6.20	0.00
		MTU-1121(Sri Dhruthi)	32.85	32.85	0.00
		Ksheera (MTU 1172)	1.70	1.70	0.00
		MTU-1210	9.00	9.00	0.00
		MTU-1224	8.50	8.50	0.00
		MTU-1262	7.50	7.50	0.00
		MTU-7029	130.80	130.80	0.00
		Nellore Dhyanyarasi (NLR- 3354)	1.00	1.00	0.00
		NLR-4001	1.00	1.00	0.00
		NDLR-7	2.10	2.10	0.00
		Nellore Mahsuri (NLR- 34449)	7.10	7.10	0.00
		Pardhiva (NLR - 33892)	1.00	1.00	0.00

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S. No.	Centre Name	Variety	Allocation (q)	Production (q)	Surplus/deficit (q)
		RGL 2537	9.00	9.00	0.00
		Total	738.05	738.10	0.05
5	NRRI, Cuttack	Ankit	9.20	9.20	0.00
		Annada	1.50	1.50	0.00
		CR Dhan 201 (IET 21924)	0.65	0.65	0.00
		CR Dhan 202 (IET 21917)	0.80	0.80	0.00
		CR Dhan 300 (CR2301-5) (IET 19816)	0.30	0.30	0.00
		CR Dhan 303 (CR 2649-7)(IET 21589)	0.10	0.10	0.00
		CR Dhan 304 (IET 22117)	0.40	0.40	0.00
		CR Dhan 305 (IET 21287)	7.69	7.70	0.01
		CR Dhan 306	1.00	1.00	0.00
		CR Dhan 315	3.00	3.00	0.00
		CR Dhan 311 (MUKUL)	25.51	25.60	0.09
		CR Dhan 401(REETA) (IET 19969)	0.50	0.00	-0.50
		CR Dhan 505 (IET 21719)	0.20	1.00	0.80
		CR Dhan 510 (IET 23895)	0.60	0.70	0.10
		CR Dhan 511	0.60	0.80	0.20
		CR Dhan 601(IET 18558)	4.60	4.60	0.00
		CR Dhan 701 (IET 20852)(CRHR32)	0.02	0.02	0.00
		CR Dhan 800 (SWARNA- MAS)	25.00	26.40	1.40
		CR Dhan 801 (IET-25667)	5.05	11.20	6.15
		CR Dhan 802 (Subhar)	11.50	4.55	-6.95
		CR Dhan-203	16.15	16.15	0.00
		CR Dhan-307	2.10	0.80	-1.30
		CR Dhan-309	1.00	1.00	0.00
		CR Dhan-310	70.60	70.60	0.00
		CR Dhan-407	0.30	1.60	1.30
		CR Dhan-409	1.50	9.50	8.00
		CR Dhan-508	1.70	3.00	1.30
		CR Sugandh Dhan 907 (IET 21044) (CR2616- 3- 3-3-1)	10.00	0.25	-9.75
		CR-1009	2.00	3.00	1.00
		CR-1009 SUB-1	49.75	39.00	-10.75
		CR Dhan-102 (IET 26121)	1.52	1.60	0.08
		CR Dhan-210 (IET 23449)	1.50	1.50	0.00
		CR Dhan-308 (IET 25523)	1.50	1.50	0.00
		CR Dhan 312 CR 3808-13 (IET 25997)	1.50	4.00	2.50
		CR Dhan 602 (IET 26692)	3.55	3.60	0.05
		Geetanjali (CRM-2007-1) (IET-17276)	1.00	1.00	0.00
		LunaSampad (IET 19470)	1.50	0.15	-1.35
		LunaSuwarna (IET 18697)	1.50	0.15	-1.35
		Luni Sree	0.50	0.80	0.30
		Naveen (CR-749-20-2) (IET-14461)	4.20	4.20	0.00
		Pooja (IET-12241)	0.10	48.40	48.30
		Samba Sub-1 (IET 21248)	23.30	4.06	-19.24
		CR Sugandh Dhan-908 (IET-23189)	1.92	2.00	0.08
		Swarana-Sub 1 (CR2539-1) IET-20266	79.50	78.00	-1.50
		Varshadhan (CRLC-899)(IET-16481)	1.50	4.50	3.00
		Improved Lalat	17.35	9.28	-8.07
		Total	395.26	409.16	13.90
6	OUAT, Bhubaneswar	Ashuthosh	1.50	1.50	0.00
		Gobinda (OR 2324-8)	1.50	1.50	0.00
		Hasanta	4.70	4.70	0.00
		Kalachampa	45.00	28.00	-17.00
		Lalat (IET-9947)	1.00	1.00	0.00
		Mandakini (OR 2077-4) (IET 17847)	6.20	6.20	0.00

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S. No.	Centre Name	Variety	Allocation (q)	Production (q)	Surplus/deficit (q)
		Mrunalini (OR 1898-18) (IET 18649)	3.00	3.00	0.00
		Parijat (IET-2684)	1.00	1.00	0.00
		Pradeep (IET 20923)	0.10	0.10	0.00
		Pratibha (OR 2172-7) (IET 21582)	1.50	1.50	0.00
		Pratikshya (ORS 201-5) (IET-15191)	19.10	19.10	0.00
		Rani Dhan (IET-19148)	4.00	4.00	0.00
		Total	88.60	71.60	-17.00
7	RARS, Pattambi	Athira (PBT-51)	0.30	1.00	0.70
		Jyothi	10.50	23.21	12.71
		Total	10.80	24.21	13.41
8	PRDF Gorakhpur, Uttar Pradesh	KN3 (Kalanamak)	0.10	0.10	0.00
		Total	0.10	0.10	0.00
9	IGKV, Raipur	Bhadshabhog Selection-1	25.40	26.60	1.20
		CG Madhuraj Dhan-55	30.00	46.20	16.20
		Chhattisgarh Devbhog	30.00	42.90	12.90
		Chhattisgarh Zinc Rice -1	30.00	32.10	2.10
		Chhattisgarh Zinc Rice-2	30.00	31.20	1.20
		DUBRAJ SELECTION-1	30.50	39.90	9.40
		IGKVR-1 (IET 19569)	63.30	73.50	10.20
		IGKVR-2 (IET 19795)	10.00	12.00	2.00
		Indira Aerobic- 1 (R1570-2649-1-1546-1) (IET 21686)	50.00	58.20	8.20
		Indira Barani Dhan-1 (RF-17-38-70)(IET 21205)	22.00	25.20	3.20
		IR-36	2.60	17.10	14.50
		IR-64	33.10	45.60	12.50
		Mahamaya (IET-10749)	80.00	96.60	16.60
		Maheswari (IGRKVR- 1244) (R 12244-1246-1-605-1) (IET 19796)	15.00	15.00	0.00
		Samaridhi (R-2384)	1.20	0.00	-1.20
		Tarun Bhog Selection-1	30.00	45.20	15.20
		Trombey Chattisgarh Dubraj Mutent-1	30.00	37.20	7.20
		Vishnubhog Selection- 1	25.20	39.60	14.40
		Zinco Rice MS	50.00	63.30	13.30
		Total	588.30	747.40	159.10
		10	IIRR, Hyderabad	Kasturi (IET-8580)	5.00	3.20	-1.80
BRRIDhan 69	0.10			0.50	0.40
BRRIDhan-75 (HUA 565)	4.20			5.00	0.80
BINA Dhan-10	0.30			0.00	-0.30
BINA Dhan-11 (Cinerang Sub-1)	31.70			23.50	-8.20
BINA Dhan-8	0.10			0.00	-0.10
BINA Dhan-17	9.90			5.40	-4.50
DRR Dhan 50 (IET 25671) (Drt Tolerent)	21.00			22.00	1.00
DRR Dhan-45 (IET 23832)	12.20			13.00	0.80
DRR Dhan-53	11.00			9.00	-2.00
DRR Dhan-39 (Jagjevan (IET-19487) RP-4631-46-6- 5-1-1-1)	11.05			7.00	-4.05
DRR Dhan-42 (IR-64 Drt- 1) (RP 5208 - IR-87707-445-B-B)	123.74			125.00	1.26
DRR Dhan-43	11.20			6.90	-4.30
DRR Dhan-44	41.20			25.00	-16.20
DRR Dhan-46	5.70			4.50	-1.20
DRR Dhan-48	1.20			1.50	0.30
DRR Dhan-49	0.10			0.50	0.40
DRR Dhan-51	20.00			20.00	0.00
DRR Dhan-56	1.50			0.00	-1.50

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S. No.	Centre Name	Variety	Allocation (q)	Production (q)	Surplus/deficit (q)
		Improved Samba Mahsuri	1.00	2.00	1.00
		Jaya	14.65	15.00	0.35
		Total	326.84	289.00	-37.84
11	RARS, Titabar (AAU, Jorhat)	Bahadur Sub-1	15.32	16.30	0.98
		Kanaklata (TTB-103-3- 1) (MGD-103)	0.60	1.20	0.60
		Ranjeet (IET - 12554)	1.70	6.70	5.00
		Ranjit Sub -1	32.40	34.50	2.10
		Disang [Dehangi] (IC-574471)]	2.00	4.80	2.80
		Luit	2.00	5.00	3.00
		Total	54.02	68.50	14.48
12	ARS, Kaul (CCSHAU, Hisar)	Basmati-370	11.50	11.50	0.00
		HKR-127 (HKR-95-222)	4.64	5.00	0.36
		HKR-47	0.43	1.00	0.57
		HKR-48	0.10	0.10	0.00
		Total	16.67	17.60	0.93
13	MPKV, Rahuri (ARS, Rathnagiri)	Bhogavati	0.60	2.90	2.30
		Total	0.60	2.90	2.30
14	BAU, Ranchi	Birsa Vikas Dhan – 111 (IET 19848) (PY - 84)	2.10	2.50	0.40
		Birsa Vikas Dhan - 203	2.10	3.25	1.15
		Birsa Vikas Sugandha-1 (IET 18941)	5.00	5.50	0.50
		Total	9.20	11.25	2.05
15	ZARS, Mandya (UAS, Bangalore)	BR-2655	0.70	4.00	3.30
		Total	0.70	4.00	3.30
16	TNAU, Coimbatore	CO 51	33.23	33.23	0.00
		Rice VGD 1	0.10	0.10	0.00
		TM-07278	0.10	0.10	0.00
		TKM 13	0.30	0.30	0.00
		Total	33.73	33.73	0.00
17	CSSRI, Karnal	CSR 56 (IET24537)	2.00	2.45	0.45
		CSR 60 (IET 25378)	5.00	5.60	0.60
		CSR-30	0.08	2.70	2.62
		CSR-36 (Naina) (IET- 17340)	1.00	1.23	0.23
		CSR-43	1.90	2.80	0.90
		Total	9.98	14.78	4.80
18	RRS, Bankura	Dhruba (IET-20761)	4.05	4.05	0.00
		Pushpa (IET 17509)	2.35	1.05	-1.30
		Sampriti (BNKR-B12) (IET-21987)	2.00	2.10	0.10
		Total	8.40	7.20	-1.20
19	PJTSAU, Hyderabad	Erra Mallelu (WGL- 20471)	1.00	1.50	0.50
		JGL-1798	0.40	1.00	0.60
		JGL-18047 (Bathukamma)	9.02	10.00	0.98
		JGL-24423	5.00	10.00	5.00
		JGL-17004	1.20	1.20	0.00
		JGL-11727	0.90	1.00	0.10
		JGL 11118 (Anjana)	1.30	1.30	0.00
		KNM-118	28.90	30.00	1.10
		RNR-15048 (Telangana Sona)	43.30	50.00	6.70
		Krishna (RNR-2458)	0.10	0.20	0.10
		Shobhini (RNR-2354) (IET- 21260)	0.30	0.50	0.20
		Sugandha Samba (RNR- 2465)	0.02	0.10	0.08
		Somnath (WGL-347)	0.10	0.50	0.40
		Tellahamsa	1.00	1.00	0.00
		Telangana Vari-1 (IET25330) (WGL-739)	1.10	1.50	0.40
		WGL-915	1.50	2.00	0.50
		Total	95.14	111.80	16.66

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S. No.	Centre Name	Variety	Allocation (q)	Production (q)	Surplus/deficit (q)
20	UAS, Raichur (ARS, Gangavati)	Gangavati Sona (GGV-05- 01)	0.70	2.50	1.80
		GNV-1089	0.75	1.75	1.00
		Gangavati Ageti (IET-19251)	0.75	1.25	0.50
		Total	2.20	5.50	3.30
21	AAU, Anand (GAU, Nawagam)	GAR-1 (IET 21276)	2.10	1.50	-0.60
		GAR-14	0.50	0.50	0.00
		Mahisagar (IET 22100)	0.50	0.50	0.00
		Total	3.10	2.50	-0.60
22	Chatha J & K (SKUAST, Jammu)	GIZA-14	6.00	1.50	-4.50
		SJR-5(IET-19972)	15.00	1.50	-13.50
		Total	21.00	3.00	-18.00
23	ICAR RC NEH Tripura Centre	Gomati Dhan TRC-2005-1 (TRC-05-8-4-42-8-3-7) IET 21512	0.10	0.10	0.00
		Tripura Hakuchuk-2	0.50	0.50	0.00
		Tripura Hakuchuk-1	0.50	0.50	0.00
		TRC 2008-1 (IET22167) Tripura Jala	0.10	0.10	0.00
		Tripura Khara 2 (IET 22835)	0.20	0.20	0.00
		Total	1.40	1.40	0.00
24	BCKV, Nadia	Gontra Bidhan-1 (IET 17430)	6.20	21.30	15.10
		Gontra Bindhan-3 (IET 22752)	20.25	22.10	1.85
		Total	26.45	43.40	16.95
25	RWRS, Malan (CSKHPKV, Palampur)	HPR 2143	10.00	11.50	1.50
		HPR-2656	15.00	16.50	1.50
		HPR-2795	10.00	15.45	5.45
		HPR-2880	10.00	15.00	5.00
		Sukha Dhan-5	0.10	1.00	0.90
		Total	45.10	59.45	14.35
26	BHU, Varanasi	HUR-917	2.50	14.00	11.50
		Total	2.50	14.00	11.50
27	ARS, Mugad	IET- 24451	0.25	0.00	-0.25
		KMD-2 (Abhilash)	0.75	2.00	1.25
		Intan	0.50	2.00	1.50
		Total	1.50	4.00	2.50
28	IARI-RS, Karnal	Improved Pusa Basmati-1 (IET - 18990) (PUSA 1460-01-32-6-7-67)	0.10	0.10	0.00
		Pusa Basmati-1(IET 10364)	0.08	10.00	9.92
		Pusa Basmati 1637 (IET 24570)	14.68	14.68	0.00
		Pusa Basmati 1728	6.00	9.00	3.00
		Pusa Basmati-1718 (IET 24565)	62.03	26.00	-36.03
		Pusa Basmati-6 (PUSA 1401) (IET 18005)	21.22	22.00	0.78
		Pusa Basmati 1692 (IET 26995)	20.98	22.00	1.02
		Pusa-44	0.08	0.08	0.00
Total	125.17	103.86	-21.31		
29	IARI, New Delhi	Pusa-2511	0.05	0.00	-0.05
		Pusa Sugandh-5 (IET- 17021)	15.00	0.00	-15.00
		Total	15.05	0.00	-15.05
30	JNKVV, Jabalpur	Improved Chinnor	7.60	13.50	5.90
		Improved Jeera Shankar	13.10	18.00	4.90
		JR 767	16.50	27.82	11.32
		JR-81	45.00	128.48	83.48
		JR-206	34.00	90.00	56.00
		JRB-1	25.00	90.00	65.00
		Kranti (R-2022)	0.60	50.00	49.40
		Rashmi(JR-201)	7.50	6.21	-1.29
Total	149.30	424.01	274.71		
31	ARS, Vadagon	Indrayani (IET - 12897)	24.00	70.00	46.00

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S. No.	Centre Name	Variety	Allocation (q)	Production (q)	Surplus/deficit (q)
	(MPKV, Rahuri)	Total	24.00	70.00	46.00
32	NDUAT, Faizabad	IR-64 Sub-1 (IET 21247)	9.50	1.50	-8.00
		Narendra Dhan-97	0.05	28.00	27.95
		Sarjoo-52	1.10	160.40	159.30
		NDR 9930111	3.00	1.80	-1.20
		Total	13.65	191.70	178.05
33	Khudwani, J & K (SKUAST, Srinagar)	K 39	3.00	3.00	0.00
		K-448	3.00	3.00	0.00
		Shalimar Rice -2	3.60	3.60	0.00
		Total	9.60	9.60	0.00
34	UAHS, Shivamogga, Karnataka	KKP-5 (IET 24250)	2.10	2.10	0.00
		KHP-11	0.25	0.25	0.00
		KHP-13	0.50	0.50	0.00
		KPR-1	0.25	0.25	0.00
		Sahyadri Megha	1.25	1.00	-0.25
		Sahyadri Panchamuk	0.50	0.50	0.00
		Tunga (IET-13901)	5.85	5.85	0.00
		Total	10.70	10.45	-0.25
35	RARS, Karjat (BSKKV, Dapoli)	Karjat-3	3.50	4.50	1.00
		Karjat-5	1.20	1.65	0.45
		Karjat-7	2.00	5.00	3.00
		Karjat-8	0.92	1.50	0.58
		Karjat-9	1.00	2.00	1.00
		Total	8.62	14.65	6.03
36	Arundhutinagar, Tripura	Khowai TRC-2005-3 (TRC- 05-2-6-4-39-3-6) IET 21564	0.10	0.00	-0.10
		Total	0.10	0.00	-0.10
37	RRS, Moncompu (KAU, Thrissur)	MO 21 (Pratiksha)	1.00	4.35	3.35
		Bhadra (MO-4)	2.75	2.75	0.00
		Uma (MO-16)	27.25	28.00	0.75
		Total	31.00	35.10	4.10
38	GBPUAT, Pantnagar	Pant Dhan-18 (IET17920) (UPRI 99-1)	1.00	6.00	5.00
		Pant Dhan-24	11.20	40.00	28.80
		Pant Dhan-26	0.30	6.00	5.70
		Total	12.50	52.00	39.50
39	ARS, Sindewahi (PDKV, Akola)	PDKV Tilak (SYE-503-78- 34-2)	1.60	20.00	18.40
		PKV HMT	43.20	43.20	0.00
		PKV Kisan	1.60	10.00	8.40
		Sakoli-9	0.30	15.00	14.70
		Total	46.70	88.20	41.50
40	PAU, Ludhiana	PR 121	39.29	45.00	5.71
		PR 122	14.58	15.00	0.42
		PR 127	4.94	5.00	0.06
		PR-113	3.38	6.00	2.62
		PR-114	0.72	4.00	3.28
		PR-124	3.84	6.00	2.16
		PR-126	55.14	60.00	4.86
		PR-128	0.44	3.00	2.56
		PR-129	0.28	3.00	2.72
		Punjab Basmati 4	0.04	0.10	0.06
		Punjab Basmati 5	0.04	0.10	0.06
		Total	122.69	147.20	24.51
		41	BEDF, New Delhi	Pusa - 1121 (Pusa Sugandh-4)	12.12	0.00	-12.12
Pusa Basmati-1509 (IET 21960) (Pusa 1509-03-3-9-5)	106.23			0.00	-106.23
Total	118.35			0.00	-118.35

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S. No.	Centre Name	Variety	Allocation (q)	Production (q)	Surplus/ deficit (q)
42	RPCAU, Pusa	Rajendra Bhagvati	14.95	27.00	12.05
		Rajendra Kasturi	13.00	12.16	-0.84
		Rajendra Sweta	20.95	20.70	-0.25
		Rajendra Neelam	30.00	29.88	-0.12
		Rajshree (TCA-80-4) (IET 7970)	0.05	5.00	4.95
		Total	78.95	94.74	15.79
43	ARS, Shirgoan (BSKKV, Dapoli)	Ratnagiri-6	1.00	2.00	1.00
		Ratnagiri-7	0.60	1.00	0.40
		RTN-5	2.00	2.50	0.50
		RTN-8	0.30	2.00	1.70
		Total	3.90	7.50	3.60
44	BAU, Sabour	Sabour Shree (RAU 724- 48-33) (IET 18878)	60.60	78.00	17.40
		Sabour Deep	35.00	40.00	5.00
		Sabour Harshit Dhan (IET25342)	0.10	8.00	7.90
		Sabour Sampann	20.00	25.00	5.00
		Sabour Surbhit	10.00	14.00	4.00
		Total	125.70	165.00	39.30
45	ICAR RCER Patna, Bihar	Swarna Samridhi	15.00	35.40	20.40
		Swarna Shakti Dhan (IET 25640)	10.00	24.90	14.90
		Swarna Shreya	24.50	38.50	14.00
		Total	49.50	98.80	49.30
46	SHIATS, Prayagraj	Shiats Dhan -1 (AAIR 2) (IET 20928)	2.50	0.00	-2.50
		Shiats Dhan 5	2.00	0.00	-2.00
		Shiats Dhan-4	12.00	0.00	-12.00
		Total	16.50	0.00	-16.50
47	ZARS, Mandya (UAS, Bangalore)	Thanu	2.10	4.00	1.90
		Total	2.10	4.00	1.90
48	UBKV, Pundibari	Uttar Sona (UBKVR-1) (IET-24171)	2.70	18.00	15.30
		Uttar Lakshmi (UBKVR-15) (IET 24173)	2.10	12.00	9.90
		Total	4.80	30.00	25.20
49	VPKAS, Almora	VL Dhan 157 (VL 31611)(IET 22292)	2.50	1.00	-1.50
		VL Dhan 68 (VL 31611) (IET 22283)	3.00	3.00	0.00
		VL Dhan 85 (IET-16455) (VL-3613)	0.60	1.50	0.90
		VL 88	3.00	5.50	2.50
		Total	9.10	11.00	1.90
Total(A)			3598.37	4446.06	847.69

Hybrids/Parental lines

S. No.	Centre Name	Hybrid/Parental Lines	Allocation(q)	Production (q)	Surplus/ deficit (q)
1	UAS, Bengaluru	KRH 2 A-line	0.10	0.50	0.40
		KRH 2 B-line	0.10	0.50	0.40
		KRH 2 R-line	0.10	2.00	1.90
		TOTAL (B)	0.30	3.00	2.70
Grand Total			3598.67	4449.06	850.39

Insect pest and disease reaction of entries in National Screening Nurseries (NSN-1), Kharif 2021

Trial Name & IET No.	Diseases and pests reaction
AVT 2-E TP	
28356	MR-BS, MR-GD,
28366	MR-LB, MR-NB, MR-BS, MR-ShR,MR-GD,
28354	MR-LB, MR-NB, MR-BS, MR-GD,
28332	MR-LB, MR-BS, MR-ShR,
28115	MR-LB, MR-BS, MR-GD,
28329	MR-LB, MR-BS, MR-GD,
AVT 1- E TP	
29140	MR-RTD,
28954	MR-LB, MR-NB, MR-BS, MR-RTD, MR-GD,
28960	MR-LB, MR-BS, MR-ShR, MR-RTD,
29189	MR-NB, MR-BS, MR-ShR, MR-RTD,
29142	MR-BS, MR-ShR, MR-GD,
29193	MR-LB, MR-NB, MR-BS, MR-ShR, MR-RTD, MR-GD,
28952	MR-LB, MR-BS, MR-RTD,
28962	MR-ShR, MR-RTD,
29177	MR-BS, MR-GD,
28959	MR-LB, MR-NB, MR-BS, MR-GD,
28964	MR-LB, MR-NB, MR-BS,
29197	MR-LB, MR-GD,
28950	MR-LB, MR-NB, MR-BS,
28956	MR-LB, MR-NB, MR-BS, MR-RTD, MR-GD,
28953	MR-LB, MR-NB, MR-BS, MR-GD,
28123	MR-RTD,
28124	MR-NB, MR-BS,
AVT 1- IME	
28506	MR-LB, MR-BS, MR-ShR, MR-GD, MR-BPH
28380	MR-LB, MR-NB, MR-BS,
29214	MR-LB, MR-NB, MR-BLB, MR-BS,
29216	MR-LB, MR-BS, MR-ShR, MR-GD,
29218	MR-NB, MR-BS, MR-GD,
29226	MR-BS, MR-GD,
29219	MR-ShR, MR-RTD, MR-GD,
29228	MR-BS, MR-RTD,
29233	MR-BS, MR-RTD, MR-GD,
29236	MR-NB, MR-BS, MR-ShR, MR-GD,
28396	MR-LB, MR-NB, MR-BS, MR-RTD, MR-GD,
28357	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29215	MR-BS, MR-ShR, MR-GD,
28378	MR-LB, MR-NB, MR-BS,
29229	MR-LB, MR-BS, MR-GD,
29239	MR-RTD, MR-GD,
29247	MR-LB, MR-BS, MR-RTD, MR-GD,
29251	MR-GD,
28347	MR-LB, MR-NB, MR-BS, MR-GD,
29217	MR-NB, MR-BS,
29212	MR-LB, MR-NB, MR-BS, MR-ShR,

Trial Name & IET No.	Diseases and pests reaction
	MR-RTD, MR-GD,
28374	MR-LB, MR-BS, MR-ShR, MR-GD,
28353	MR-LB, MR-BS, MR-ShR,
28369	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD
29230	MR-BS, MR-ShR, MR-GD,
29235	MR-BS, MR-ShR, MR-RTD, MR-GD,
29246	MR-BS, MR-ShR, MR-GD,
29250	MR-BS, MR-ShR, R-GD,
28979	MR-LB, MR-NB, MR-BLB, MR-BS, MR-GD,
28972	MR-LB, MR-BS, MR-GD,
28128	MR-LB, MR-NB, MR-BS, MR-RTD, MR-GD,
28982	MR-NB, MR-BS, MR-GD,
28981	MR-LB, MR-BS, MR-GD,
28386	MR-BS, MR-GD,
28328	MR-BS,
29243	MR-LB, MR-GD,
29238	MR-LB, MR-BS, MR-ShR, MR-GD,
AVT 1-IM	
29268	MR-LB, MR-NB, MR-ShR, MR-RTD,
29263	MR-NB, MR-ShB, MR-BS, MR-ShR,
28489	MR-ShR, MR-GD,
29002	MR-LB, MR-BS, MR-ShR, MR-GD,
29011	MR-LB, MR-BS, MR-GD,
27900	MR-LB, MR-GD,
29284	MR-LB, MR-BS, MR-ShR, MR-GD,
27908	MR-LB, MR-NB, MR-BS, MR-GD,
29278	MR-NB, MR-BS, MR-ShR,
28998	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29006	MR-LB, MR-BS, MR-RTD, MR-GD,
29014	MR-NB, MR-GD,
28160	MR-LB, MR-NB, MR-BLB, MR-BS, MR-ShR,
28383	MR-LB, MR-NB, MR-BS, MR-GD
29257	MR-LB, MR-NB, MR-ShR, MR-GD
29301	MR-LB, MR-BLB, MR-BS, MR-ShR, MR-GD,
28997	MR-LB, MR-NB, MR-BLB, MR-BS, MR-ShR, MR-GD,
29008	MR-LB, MR-NB, MR-BS, MR-GD,
29012	MR-LB, MR-NB, MR-ShR, MR-GD,
28171	MR-LB, MR-NB, MR-BS,
29256	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,MR-BPH
29264	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29290	MR-GD,
29001	MR-LB, MR-NB, MR-BS, MR-ShR,
29004	MR-LB, MR-BS, MR-GD,
29009	MR-LB, MR-BS, MR-GD,
29260	MR-BS, MR-ShR, MR-GD,

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Trial Name & IET No.	Diseases and pests reaction
29276	MR-LB, MR-NB, MR-ShR, MR-GD,
29302	MR-LB, MR-BS,
29000	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,MR-BPH
AVT 1-L	
28538	MR-NB, MR-ShB, MR-ShR,
29347	MR-LB, MR-NB, MR-ShR,
28497	MR-LB, MR-NB, MR-BS,
28440	MR-LB, MR-NB, MR-BS,MR-BPH
29349	MR-NB, MR-RTD, MR-GD,
29343	MR-NB, MR-BLB, MR-BS, MR-RTD,
28508	MR-NB, MR-BLB, MR-BS, MR-GD,
28524	MR-NB, MR-BS, MR-ShR, MR-RTD, MR-GD,
29345	MR-LB, MR-NB, MR-ShR, MR-RTD,MR-BPH
28509	MR-NB, MR-BS, MR-RTD,
29328	MR-NB, MR-BS, MR-GD,
29351	MR-LB, MR-NB, MR-ShR, MR-RTD, MR-GD,
28501	MR-LB, MR-BS, MR-GD,
28544	MR-LB, MR-NB, MR-BS, MR-GD,
AVT 1-AEROB	
29427	MR-LB, MR-BS, MR-ShR, MR-RTD,
29423	MR-LB, MR-NB, MR-BS, MR-ShR, MR-RTD, MR-GD,
29422	MR-LB, MR-NB, MR-BS, MR-RTD,
29431	MR-BS, MR-GD,
28650	MR-LB, MR-NB, MR-BS,
28645	MR-LB, MR-NB, MR-BS, MR-RTD, MR-GD,
29426	MR-NB, MR-RTD, MR-GD,
29412	MR-LB, MR-GD,
27951	MR-LB, MR-NB, MR-ShR,
29396	MR-LB, MR-BS,
29402	MR-LB, MR-NB, MR-BS, MR-ShR, MR-RTD, MR-GD
29410	MR-LB, MR-NB, MR-BS, MR-GD,
29405	MR-LB, MR-NB, MR-BS, MR-ShR,
29398	MR-LB, MR-NB,
27937	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29411	MR-LB, MR-NB, MR-BS, MR-ShR,
29448	MR-LB, MR-NB, MR-BS,
29444	MR-LB, MR-NB, MR-BS, MR-GD,
29420	MR-NB,
28631	MR-LB, MR-BS, MR-ShR, MR-GD,
29415	MR-BS, MR-ShR, MR-RTD, MR-GD,
29424	MR-NB, MR-BS, MR-ShR, MR-RTD, MR-GD,
29394	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD
29446	MR-LB, MR-NB, MR-BS, MR-ShR,
29436	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29421	MR-LB, MR-NB, MR-ShR, MR-GD,
29409	MR-LB, MR-NB, MR-BS, MR-ShR,

Trial Name & IET No.	Diseases and pests reaction
29433	MR-LB, MR-ShR, MR-RTD, MR-GD,
29430	MR-LB, MR-NB, MR-BS, MR-ShR,
AVT 1-MS	
29539	MR-LB, MR-NB, MR-BS,
29495	MR-LB, MR-BS, MR-ShR, MR-RTD, MR-GD,
29526	MR-ShR,
28730	MR-NB, MR-GD,
29494	MR-NB, MR-ShR, MR-GD,
28757	MR-NB, MR-ShB, MR-RTD,
29502	MR-NB, MR-BS, MR-ShR,
29535	MR-LB, MR-BS,
29023	MR-BS,
29524	MR-BS, MR-GD,
29506	MR-NB, MR-RTD, MR-GD,
29503	MR-ShR,
29523	MR-BS, MR-GD,
29492	MR-NB, MR-BS, MR-GD,
29017	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29527	MR-BS,
29485	MR-LB, MR-NB, MR-BS, MR-ShR,
29490	MR-LB, MR-NB, MR-BS, MR-ShR,
29515	MR-LB, MR-BS, MR-RTD,
29534	MR-NB, MR-BS, MR-ShR
29536	MR-LB, MR-BS, MR-NB, MR-ShR, MR-RTD,
29511	MR-LB, MR-NB, MR-BS, R-ShR, MR-RTD,
29021	MR-LB, MR-NB, MR-BS, MR-GD,
29538	MR-NB, MR-BS, MR-RTD, MR-GD,
28746	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD
29514	MR-LB, MR-NB, MR-BS,
29489	MR-NB, MR-GD,
29508	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29018	MR-LB, MR-NB, MR-BS, MR-GD,
29537	MR-NB, MR-BS, MR-GD,
29487	MR-LB, MR-NB,
29543	MR-NB, MR-BLB, MR-ShR, MR-RTD,
28754	MR-LB, MR-NB, MR-BS, MR-ShR,
28187	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
29519	MR-LB, MR-NB, MR-BS,
AVT 1-BIOFORT	
28701	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
28714	MR-NB,
28694	MR-LB, MR-NB, MR-ShR, MR-RTD,
28692	MR-LB, MR-NB,
28703	MR-LB, MR-NB,
28704	MR-NB, MR-BS, MR-ShR, MR-GD,
27984	MR-LB, MR-BS, MR-GD,
AVT 1-AL & ISTVT	
28608	MR-NB, MR-ShR, MR-GD,
27077	MR-LB, MR-NB, MR-BLB, MR-BS,

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Trial Name & IET No.	Diseases and pests reaction
	MR-ShR, MR-GD,
27823	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
28606	MR-LB, MR-GD,
27807	MR-LB, MR-BS, MR-GD,
29356	MR-LB, MR-NB, MR-BS, MR-ShR, MR-RTD, MR-GD,
29365	MR-LB, MR-NB, MR-BS, MR-GD,
29354	MR-RTD, MR-GD,
29360	MR-NB, MR-ShR, MR-GD,
29361	MR-LB, MR-NB, MR-BS, MR-RTD, MR-GD,
29364	MR-NB, MR-ShR, MR-GD,
29366	MR-LB, MR-NB, MR-BS, MR-GD,
29358	MR-LB, MR-NB,
29353	MR-BS, MR-NB, MR-ShR, MR-RTD, MR-GD,
AVT 1-LPT	
28816	MR-LB, MR-NB, MR-BLB, MR-BS,
28818	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
27641	MR-BS, MR-ShR, MR-RTD, MR-GD
28066	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD, MR-NB, MR-BS, MR-GD,
28065	MR-BLB, MR-BS, MR-ShR, MR-BLB
28821	MR-NB,
AVT 1-NIL (Yield- IME & IM duration)	
28008	MR-LB, MR-BS, MR-ShR, MR-GD
30276	MR-GD,
30277	MR-BS, MR-GD,
30278	MR-NB, MR-BS,
30279	MR-BLB, MR-BS, MR-GD,
28791	MR-NB, MR-BLB, MR-BS, MR-ShR, MR-GD,
28789	MR-LB, MR-NB, MR-BLB, MR-BS, MR-ShR, MR-RTD, R-GD,
28018	MR-NB, MR-BS, MR-GD,
28017	MR-LB, MR-BS, MR-ShR, MR-GD,
30280	MR-BS, MR-GD,
30281	MR-BS, MR-RTD, MR-GD,
30282	MR-NB, MR-GD,
29203	MR-BS, MR-GD,
30283	MR-LB, MR-ShR,
30284	MR-LB, MR-BS, MR-ShR, MR-GD,
30285	MR-LB, MR-BLB, MR-BS, MR-GD,
30286	MR-LB, MR-NB, MR-BS, MR-ShR,
29548	MR-BS, MR-ShR, MR-RTD, MR-GD,
28818	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
30253	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
30254	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD
30261	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
30287	MR-BS, MR-GD,
30289	MR-NB, MR-BLB, MR-GD,

Trial Name & IET No.	Diseases and pests reaction
30290	MR-LB, MR-ShR, MR-RTD, MR-GD,
AVT 1-NIL (Yield- Late duration)	
30291	MR-BS,
30292	MR-NB, MR-BS, MR-GD,
30293	MR-LB, MR-NB, MR-GD,
30294	MR-LB, MR-NB, MR-BS, MR-RTD, MR-GD,
30295	MR-LB, MR-NB, MR-BLB, MR-BS, MR-ShR,
30296	MR-LB, MR-NB, MR-BLB, MR-BS, MR-GD
30246	MR-LB, MR-GD,
30263	MR-GD,
30297	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
30298	MR-BS,
30299	MR-NB, MR-GD,
30300	MR-LB, MR-NB,
29209	MR-LB, MR-GD,
30301	MR-NB, MR-BS, MR-ShR, MR-GD,
30302	MR-BS, MR-GD,
30303	MR-LB, MR-NB, MR-BS, MR-ShR, MR-GD,
30304	MR-GD,
30305	MR-LB, MR-NB, MR-BS, MR-GD,
AVT 1-NIL (CS)	
28010	MR-NB, MR-GD,

R-Resistance; MR-Moderate Resistance; P-Promising/Tolerance; LB-Leaf blast; NB-Neck blast; ShB-Sheath blight; BS-Brown spot; ShR-Sheath rot; BB-Bacterial leaf blight; PH-Plant hoppers; GM-Gall midge; SBDH-Stem borer Dead heart, SBWE-Stem Borer white ear; WM-Whorl maggot; LF-Leaf folder; BPH-Brown plant hoppers; WBPH- White backed plant hoppers.

ABBREVIATIONS

ABP	Ambikapur	JBP	Jabalpur	PDG	Phondaghat
ADT	Aduthurai	JDP	Jagadapur	PLG	Palghar
ALG	Aligarh	JGL	Jagtial	PLM	Palampur
ALH	Allahabad	JND	Jind	PNB	Pundibhari
ALM	Allmora-ICAR	JRP	Jharanapani	PNP	Ponnampet
AML	Annamalainagar	JYP	Jeypore	PNT	Pantnagar
AMS	Ambasamudram	KBP	Kurumbapet	PNV	Panvel
ARD	Arundhutinagar	KHD	Khudwani	POB	Port Blair
BBN	Bhubaneswar	KJT	Karjat	PPT	Panipat
BDP	Bandipore	KLP	Kalimpong	PRK	Paramakudi
BGL	Bengaluru	KLS	Kolasib	PSA	Pusa
BGS	Bageshwar	KMP	Kampasagar	PTB	Pattambi
BJR	Bajaura	KNM	Kunaram	PTN	Patna
BKG	Bikramganj (Patna)	KNP	Kanpur	PTN	Patna-ICAR
BLP	Bilaspur	KOL	Kolkata	RCI	Ranchi
BNK	Bankura	KPT	Kapurthala	RDN	Radhanagari
BNS	Banswara	KRK	Karaikal	RDR	Rudrur
BPT	Bapatla	KRL	Karnal (CSSRI)	REW	Rewa
BRD	Bardoli	KTA	Kota	RGL	Ragolu
BRM	Brahmavar	KTG	Kathalgere	RHK	Rohtak
CBT	Coimbatore	KTR	Katrain	RJR	Rajouri
CHN	Chinsurah	KUK	Kurukshetra	RNG	Ranichouri
CHP	Chiplima	KUL	Kaul	RNR	Rajendranagar
CHT	Chatha	LCK	Lucknow	RPR	Raipur
CKD	Chakdha (Mohanpur)	LDN	Ludhiana	RUN	Rauni
CNG	Canning-ICAR	LGL	Langol	SBR	Sabour
CTK	NRRI-Cuttak (ICAR)	LMB	Lembucherra	SHL	Shalimar
CTP	Chintapalli	LPP	Lamphalpat	SHR	Shirgaon
DBI	Dabhoi	MDG	Mudigere	SKL	Sakoli
DNT	Danti	MDP	Modipuram	SND	Sindewahi
DRL	Derol	MGD	Mugad	SRS	Sirsi
DUK	Dhaulakhan	MJH	Majhera	SUN	Sundernagar
GBN	Gautam Buddha Nagar	MLN	Malan	TLJ	Tuljapur
GDL	Gudalur	MNC	Moncompu	TRR	Tirur
GDP	Gurdaspur	MND	Mandya	TRY	Trichy
GER	Gerua-ICAR	MPM	Machilipatnam	TTB	Titabar
GGT	Ghaghrahat	MSD	Masodha	UMM	Barapani (Umiam)
GNV	Gangavati	MTO	Motto	USG	Upper Shillong
GOA	Goa	MTU	Maruteru	VDG	Vadagaon
GRK	CRD-Gorakhpur	NGN	Nagina	VRN	Varanasi
GSB	Gosaba	NLP	North Lakhimpur	VTL	Vytilla
GTK	Gangtok	NLR	Nellore	VYR	Vyara
HTW	Hathwara	NND	Nandyal	WBL	Wangbal
HZB	Hazaribagh	NVS	Navsari	WDR	Wadura
IAR	IARI-New Delhi	NWG	Nawagam	WGL	Warangal
IGP	Igatpuri	PBN	Parbhani	WRS	Waraseoni
IMP	Imphal (CAU)	PBY	Pombay		

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