चावल अनुसंधान समूह बैठकों की प्रारूप कार्यवाही

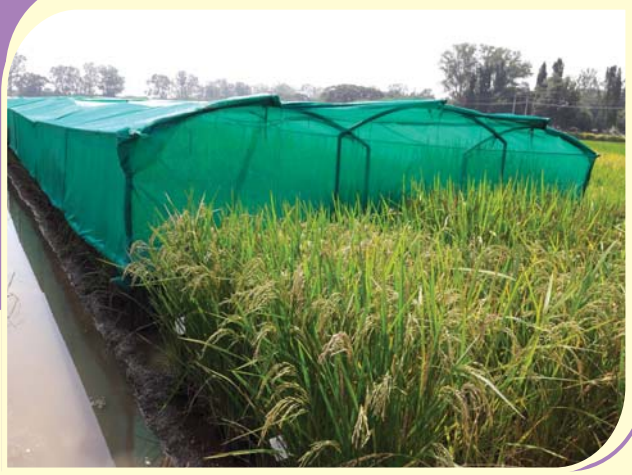
Draft Proceedings of 60th Annual Rice Group Meetings

अखिल भारतीय समन्वित अनुसंधान परियोजना: चावल

All India Coordinated Research Project on Rice (AICRPR)

ICAR-Indian Institute of Rice Research, Hyderabad

26-28th, April 2025



2025

Diamond Jubilee Year

भाकृअनुप-भारतीय चावल अनुसंधान संस्थान

ICAR - Indian Institute of Rice Research

Indian Council of Agricultural Research

Rajendranagar, Hyderabad - 500 030, India

DRAFT PROCEEDINGS

Diamond Jubilee
60th Annual Rice Group Meetings
April 26-28th, 2025

All India Coordinated Research Project on Rice (AICRPR)

ICAR-Indian Institute of Rice Research
(Indian Council of Agricultural Research)
Rajendranagar, Hyderabad-500 030, Tel: 91-40-24591218,
Fax: 91-40-24591217, email :director.iirr@icar.gov.in;www.icar-iirr.org

CONTENTS

*****

SESSION I : INAUGURAL SESSION

Chairperson : Dr. Mangi Lal Jat, Secretary, DARE, DG, ICAR, New Delhi
Chief Guest : Dr. R S Paroda, *Fmr* Secretary, DARE & DG, ICAR, New Delhi
Co-Chair : Dr. D K Yadava, DDG (CS) ICAR, New Delhi
Rapporteurs : Dr. J. Aravind Kumar & Dr S. L. Krishnamurthy

Dr. R.M. Sundaram, Director, ICAR–Indian Institute of Rice Research (IIRR), Hyderabad welcomed all the dignitaries and presented a detailed progress report on the activities of the All India Coordinated Research Project on Rice (AICRPR) and ICAR–IIRR. In his address, he emphasized the importance of initiating a focused program on developing short slender grain types, especially for Direct Seeded Rice (DSR). Highlighting emerging research priorities, he pointed out the progress made in the development of genome-edited rice lines and the improvement of coloured rice varieties. He further advocated for adopting genomic selection and pre-breeding programs as an effective strategy for developing pyramided lines with multiple stress tolerance. He also explained about the new initiatives like "Rice Expert System" and "Aavishkar – an AI-based mobile app to detect rice pests through a click of the camera", the applications of artificial intelligence in rice cultivation. He also explained the importance of DNA fingerprinting of AICRPR entries with a 1K RiCA chip. In addition to research strategies, the Director highlighted the importance of exploring new funding avenues, particularly 'Corporate Social Responsibility' (CSR) funds. He expressed confidence that such partnerships could significantly strengthen the resource base for rice research.

Dr. M.J. Baig, Director, ICAR-Central Rice Research Institute (CRRI), Cuttack, also shared his insights, focusing particularly on the role of AICRPR in advancing rice research for rainfed ecologies. He emphasized the pressing need for developing varieties suitable for DSR under varying moisture regimes. He was optimistic that gene-editing technologies would immensely contribute to improving the rice scenario. He indicated that a public-private partnership is required for the development and dissemination of biofortified, coloured and basmati varieties.

Dr. S.K. Pradhan, Assistant Director General (ADG-FFC), ICAR, New Delhi called attention to the development of multiple stress-tolerant rice varieties, identifying it as one of the most challenging yet crucial research areas. He also stressed the need to breed rice varieties rich in essential micronutrients such as iron (Fe), zinc (Zn), and protein. Furthermore, he highlighted the importance of clean energy initiatives, suggesting the development of rice varieties suitable for bioethanol production as an avenue to promote sustainable agriculture.

Dr. A.K. Singh, Emeritus Scientist, ICAR-IARI, New Delhi, passionately advocated for the formulation of a national rice policy to ensure that Indian rice can effectively compete in the global market. He also emphasized the necessity of establishing clear Intellectual

Property (IP) regulations surrounding gene-edited technologies. Additionally, he proposed the development of standardized protocols for regenerative agriculture and carbon crediting, highlighting their potential benefits in promoting sustainable farming practices. Dr. Singh further recommended mapping the nutrient profile of rice-growing soils across India to better target biofortified varieties to regions most in need. He suggested that the hybrid rice policy (Hybrid Enabling Policy) reforms should be introduced. Dr Singh also suggested nationwide mapping for the DSR area.

Prof. Aldas Janaiah, Vice Chancellor, PJTAU, Hyderabad, spoke about the historical establishment of rice research stations in India and lauded the significant contributions of AICRPR scientists towards the development and release of improved rice varieties for farmers. He supported the idea of the "National Rice Policy" for decision-making. Shri Ajay Bhalotia, Chairman, Fortune Rice Ltd., added that rice varieties developed through Marker-Assisted Backcross Breeding (MABB) should retain the name of their recurrent parent to maintain pedigree clarity. He also proposed the de-notification of rice varieties that are no longer under cultivation and stressed the importance of boosting rice exports to generate foreign exchange earnings. Dr. R. Sarada Jayalakshmi Devi, Vice Chancellor, ANGRAU, noted that the release of mega rice varieties has substantially contributed to India's surge in rice production. She acknowledged the collective efforts of researchers in this achievement.

Dr. R. C. Agarwal, DDG (Education), ICAR, New Delhi, emphasized the need for greater collaboration across scientific disciplines, suggesting that conferences and group meetings should also involve organizations like CSIR and ICMR. He highlighted the importance of addressing international issues related to benefit-sharing and biodiversity conservation. He recommended studies on the societal impact of AICRPR and advocated for the adoption of micro-learning programs to popularize scientific advancements in local languages, thereby reaching a wider audience.

Dr. D. K. Yadava, DDG (CS) ICAR, New Delhi, suggested that CSR funds should be channelled towards tackling challenging research problems. Citing statistics, he shared that among the newly released rice varieties, 34% were developed by ICAR institutes, 54% by State Agricultural Universities (SAUs), and 14% by private companies. He stressed the importance of bridging the yield gap between Indian and global rice productivity levels. He appreciated the significant achievement of developing two genome-edited rice varieties—one each from ICAR–IIRR and ICAR–IARI. He proposed the initiation of new research areas, including speed breeding, AI-enabled precision agriculture, regenerative agriculture technologies, as well as improvements in Nitrogen Use Efficiency (NUE), Water Use Efficiency (WUE), and DSR adaptation. Furthermore, he emphasized that underperforming funded centers should be evaluated critically, and if necessary, discontinued to optimize resource allocation. Dr Yadava stressed the urgent need for increasing the productivity levels of rice and improving the genetic gain from 1% to at least 2%.

Dr. Mangi Lal Jat, Secretary, DARE & DG, ICAR, New Delhi, appreciated the increase in rice exports and the advances made in genome editing. He urged researchers to integrate social sciences into their research programs, pointing out that understanding farmers' behavior and market dynamics is crucial. He introduced the "-5 area and +10 production" strategy, suggesting that decreasing the rice area by 5.0 m ha while simultaneously increasing production by 10.0 m t could enhance sustainability. He stressed the need to improve nitrogen use efficiency and reduce water consumption in rice farming. Dr. Jat also proposed to use AI technologies to extract meaningful insights from six decades of AICRPR data. He encouraged greater collaboration with SAUs and private companies and highlighted the need to develop a second line of leadership among young researchers. Improving the publicity of technological advancements and engaging youth in cutting-edge research areas were also among his recommendations. Dr. Jat also proposed a policy based on scientific evidence.

Dr. R.S. Paroda, Former Secretary, DARE and DG ICAR, congratulated AICRPR for its achievements in developing and sharing valuable rice varieties and genetic resources. He reminded participants that while China leads global rice production, it is also a major importer, underscoring the importance of resilient and efficient agricultural technologies. Dr. Paroda emphasized developing rice varieties suited for DSR systems and Basmati cultivation. He suggested promoting micro-irrigation and herbicide tolerance to enhance productivity under DSR conditions. Furthermore, he advocated for registering all released varieties under the Protection of Plant Varieties and Farmers' Rights Authority (PPVFRA). He encouraged promoting hybrid rice cultivation to increase national productivity and called for stringent quality monitoring before the release of any new rice variety. Finally, Dr. Paroda emphasized the importance of building the capabilities of young scientists through hands-on training and international exposure to foster the next generation of agricultural leaders.

Dr. R Mahender Kumar, Principal Scientist & Head, Agronomy, ICAR-IIRR, Hyderabad, proposed the Vote of Thanks

TECHNICAL SESSION - Review of Results and Progress Report

CROP IMPROVEMENT

Chairperson : Dr. AK Singh, Emeritus Scientist, ICAR-IARI, New Delhi
Co-Chair : Dr. S K Pradhan, ADG (FFC), ICAR, New Delhi
Co-Chair : Dr. P V Satyanarayana, Director of Research, ANGRAU
Rapporteurs : Drs. Jyothi Badri & Divya Balakrishnan, ICAR-IIRR, Hyderabad

The technical session of crop improvement on review of results and progress report for 2024, was conducted on 27.04.2025. Dr. AK Singh, Emeritus Scientist, ICAR-IARI, New Delhi, acted as Chairman and Dr. S. K. Pradhan, ADG (FFC), ICAR, New Delhi, acted as Co-chair. The session started with presentation of Dr. S. V. Sai Prasad, Head Plant Breeding, Principal Scientist and PI (AICRP-R) on the overview of irrigated trials, coordinated by ICAR IIRR, the progress of varietal improvement, experimental details, promotion of the entries in various trials and breeder seed production. 121 entries out of 574 entries tested in IVT were promoted and 94/421 were promoted in AVT trials. New facilities like speed breeding facilities were initiated by the cooperating centers, Navsari and IGKV, Raipur. The new initiatives in IIRR breeding programs including Target 1000, prebreeding and newly released climate resilient varieties were discussed. Details about review meeting on centers were informed to the house along with details of AICRP-R monitoring. In the BSP, 44 centers carried out seed production of 512 varieties amounting up to 9186.2 qtls. The PI opined that promotion criteria for NIL entries should be based on zonal checks in addition to comparison with recurrent parent.

Dr. A. S. Hari Prasad, Principal Scientist & PI-Hybrid Rice presented the progress of Hybrid rice trials conducted during kharif 2024 and briefed about Hybrids released. Ten Hybrids were released during 2023-24 of which, one hybrid was released by IIRR. A total of 180 entries were evaluated in 2023-24 of which 30% were promoted and 29 hybrids were promoted.

Dr. C.N. Neeraja made a presentation of a study on Benchmarking - Special Biofortification Trial. Biofortification trials were initiated in 2013. The bench marking trial was conducted for deciding micronutrient baseline for rice varieties released from India. 40 varieties out of 1500 released varieties with highest seed indent were sourced from original centres and raised in 11 locations under various zones along with biofortified varieties. Zn content ranged from 16 to 22ppm with a mean of 18-ppm. There was a decadal improvement in micronutrient content from 17.3 to 25.4 ppm. These materials and soil samples were tested again with the support of NIN + CRIDA.

Dr. Pradhan informed house that it is evident that breeding methods enhanced molecular Fe+Zn content, and the area is to be expanded by keeping benchmark in Fe & Zinc content and this data is to be published. Dr.RM Sundaram informed the house that NIN in collaboration with IIRR conducted a study on bioavailability of Fe and Zn in small

animals fed on straw of biofortified varieties. Dr AK Singh advised to keep the benchmark of micronutrient (zinc) content of the AICRP-R trials as 16 ppm and continue the threshold of Biofortification trials as 24 ppm. However, three years timeline is suggested to develop materials in this direction, considering the logistics/facilities required in the assessment of micronutrient content.

The following decisions were taken in the meeting

1. When an entry is performing on overall basis but has significant advantage only in few zones but not in all zones, the entry will be promoted only in those zones where it has significant yield advantage.
2. In addition to the grain quality analysis at ICAR-IIRR, satellite labs at three centres, Raipur (IGKV), Navsari (NAU) and Rajendranagar (PJTAU) were identified which will cooperate in grain and nutritional quality of a set of AICRP trials.
3. Soil sample should be analyzed to assess the nutrient status at locations conducting LPT and LNT trials and accordingly, the promotion of entries should be done.
4. For the conduct of AVT-2 Agronomy trial, seed in sufficient quantity (6 kg) should be submitted to the Head, Agronomy Department in addition to the regular submission of seed for varietal trial.
5. Any centre volunteering to conduct trials should take up the complete set (IVT, AVT 1 and AVT 2) of an ecology. As far as funded centres are concerned, the trials will be allotted based on mandate/suitability to the region.

The presentation of decadal trends on yield *vs* micronutrient content made by Dr CN Neeraja revealed that there is no decline in nutrient content with an increase in grain yield over the last sixty years. Dr Satyanarayana congratulated the IIRR team and the growth over 60 years of AICRP-R in improving rice for grain yield, micronutrient content and making it climate resilient. He suggested that Genome Edited Line (GEL) technology be used to increase the grain number of high-grain-weight genotypes for improving the yield. The session was concluded with the final remarks of the Chair and Co-chair that this study, based on a robust data set, stands as a rebuttal of the earlier articles on micronutrient reduction based on pot experiments.

CROP PRODUCTION

Chairperson : Dr S. Sheshshayee , Head, Plant Physiology, UAS, Bangalore
Co-Chair : Dr. D.K. Singh, Professor, Agronomy, GBPUA&T, Pantnagar
Rapporteurs : Drs. Mangal Deep Tuti, Dr. Akshay Sakhare, Bandeppa & Gobinath, ICAR-IIRR, Hyderabad

AGRONOMY

The session was chaired by Dr. M.S. Sheshshayee, Professor, Crop Physiology, UAS, Bangalore, PAMC Member and co-chaired by Dr. D.K. Singh, Professor, Agronomy, GBPUA&T, Pantnagar. The Session started with the presentation by Dr. R Mahendra Kumar, PI, Agronomy, with the salient findings from the various trials such as Wet DSR, Dry DSR, Weed Dynamics, Resource use efficiency and collaborative trials of Soil Science taken up by the Agronomy co-operating centers.

At the end of the presentation and deliberations, the following points were finalised

- Dr. M.S. Sheshshayee emphasized that 50% of Crop Production Scientists' effort is going towards the evaluation of breeding materials. So, due credit has to be given to all crop production scientists in variety, patent and copyright, etc.
- Further, drone-based pre- and post-emergence application of herbicides increased the grain yield compared to that of knapsack-sprayed plots. A scientist from CRRI wanted to know the mechanism/reason.
- Suggested to include an ecosystem approach in formulating the programme

SOIL SCIENCE

Dr. MBB Prasad Babu, PI, Soil Science, presented the results and salient findings of 2024 from the Co-ordinated trials *i.e.* long-term fertilizer experiment, management of sodic soil using nano Zn formulation, management of acid soil, residue management in RBCS, Nano fertilizers for increasing NUE, Yield maximization, organic and natural farming, assessing the potential of biofortified varieties with agronomic biofortification and assessing the carbon dynamics in rice ecologies and recarbonising rice soils. The following points emerged during discussions.

- Dr. B.N. Singh suggested studying the compatibility of the nano urea with other pesticides for aerial spray using drones, for which IFFCO representative responded that they have carried out the compatibility studies and the results are available on their website.
- IFFCO representative enquired about the mechanism of absorption of nano DAP by foliage for which he gave the explanation.

PLANT PHYSIOLOGY

Dr. P. Raghuveer Rao elaborately presented the results and progress of Plant Physiology trials, *viz*., Role of silicon in inducing abiotic stress tolerance, drought tolerance and high temperature stress tolerance, Multiple abiotic stress tolerance, Submergence stress tolerance and low light stress tolerance trials.

Chair and PAMC member, Dr. Sheshshayee Sreeman, appreciated the progress made in the AICRPR trials in Plant Physiology discipline and the following decisions were made.

- Silicon trial will be discontinued from this year.
- While undertaking any abiotic stress tolerance trials, the mechanisms of stress tolerance should be the focus, besides yield.
- Dr. Akshay S. Sakhare proposed a new trial on Dry Direct DSR.
- Chair and PAMC member Dr. Sheshshayee Sreeman, along with Heads of Plant Physiology, Agronomy and Soil Science discipline elaborately discussed the proposal and suggested specific traits to measure.
- It was unanimously decided that a collaborative trial on Dry Direct DSR should be formulated in collaboration with Agronomy and Soil Science.

Elaborate and exhaustive discussions on the technical programme of the three disciplines lead to a few pragmatic suggestions. Both chair and co-chair were satisfied with the progress and appreciated the efforts of the crop production group.

The meeting ended with a vote of thanks proposed by Dr. B. Sreedevi.

CROP PROTECTION

Chairperson : Dr R Sarada Jayalakshmi Devi, Vice-Chancellor, ANGRAU
Co- Chair : Dr Sanjay Sharma, Principal Scientist, Entomology, IGKV, Raipur
Rapporteurs : Dr Ch Padmavathi, Dr Ladhalakshmi

ENTOMOLOGY

Dr. A. P. Padmakumari, PI of the Entomology Coordinated Programme, presented the results of the trials conducted during *Kharif* 2024. She explained that the entomology program focused on various aspects like host plant resistance studies, chemical control, biocontrol studies, ecological studies, IPM DSR trials, population dynamics of insect pests and natural enemies in the rice ecosystem and monitoring through light traps. The trials were conducted at 41 locations (30 funded & 10 voluntary centres, including IIRR) in 22 states and 1 Union Territory. She apprised the house that 1967 entries were screened, comprising 1674 pre-breeding lines, 111 hybrids, 4 varieties, 8 donors and 170 check varieties. These entries were evaluated against 14 insect pests in 281 valid tests (58 greenhouse tests and 223 field tests). She presented the most promising cultures identified in pest-specific screening trials, *viz.*, planthoppers, gall midge, leaf folder, stem borer and the National Screening Nurseries of IIRR and NRRI. In all the trials, 136 entries (6.91% of the tested) were promising against various insect pests, out of which 24 entries (17.65%) were under retesting.

She presented the results of insect biotype studies of planthoppers and stated that RP 2068-18-3-5 (with *Bph33t* gene) was promising in 10 tests, PTB 33 (with *bph2+Bph3+Bph32+*unknown factors) was promising in 7 tests, Salkathi (with *qBph4.3* and *qBph4.4*) in 6 tests and T12 in 4 tests. Evaluation of gene differentials against gall midge identified Aganni (*Gm8*) and INRC 3021(*Gm8*) were promising in eight of the 13 valid tests based on percent plant damage. RP6749-RMS7-17-27-41 (*Gm4+Gm8*) was promising in six tests. W1263 (*Gm*1) and Kavya were promising in four tests. INRC17470, RP5925-24 and Kavya had 1% silver shoot damage in five locations suggesting that the donors with *Gm8 and Gm1* genes confer resistance to gall midge across many of the test locations. In planthopper population monitoring trial, Gangavathi population was more virulent than the other four BPH populations from Ludhiana, Pantnagar, IARI and Coimbatore. In Gall midge monitoring trial, a variation in the pattern of virulence was observed.

In chemical control studies, Seed Treatment for the Management of Early Season Insect Pests of Rice, all the four tested insecticides, *viz.,* carbosulfan 25% DS, chlorantraniliprole 50% W/W FS, thiamethoxam 70% WS, imidacloprid 48% W/W FS were effective in minimising yellow stem borer and gall midge damage and reducing the yield losses. However, in gall midge endemic areas, carbosulfan 25% DS and thiamethoxam 70% WS were most effective with 59.2 and 57.2 % reduction in silver shoots, respectively. In

Prophylactic Management of Rice Hoppers in southern black streak virus disease affected areas, spraying of triflumezopyrim 10% SC @236 ml/ha at maximum tillering stage followed by pymetrozine 50 % WG @300 g/ha at the booting stage, was most effective in reducing the populations of brown planthopper, white backed planthopper and green leafhopper with 42.2, 38.9 and 27.2 per cent reduction, respectively over the untreated control. In the trial on Evaluation of Drones for Spraying of Agrochemicals (herbicides, insecticides and fungicides) in rice Pest Management, application by drone and battery-operated knapsack sprayer minimised the damage caused by stem borers, gall midge, leaf folder and white backed planthopper significantly. With respect to diseases, drone and knapsack spraying reduced the leaf blast disease by 53.6 and 45.6 per cent, respectively.

In biocontrol and biodiversity studies, the Evaluation of Entomopathogens against Lepidopterous Pests revealed that *Bacillus thuringiensis* NRRI TB 261 was effective, with the lowest stem borer (2.56 – 5.80 %) and leaf folder (6.31 %) damage. *Beauveria bassiana* NBAIR-Bb5a and NRRI TF 6 strains and *Metarhizium anisopliae* strains (T3, T5, T6) resulted in moderate pest control and higher yields (up to 6067 kg/ha), with greater natural enemy retention.

Under ecological studies on the Influence of Crop Establishment Methods on pest incidence, the incidence of insect pests like stem borer, gall midge, leaf folder, thrips and caseworm was high in the normal transplanting method and wet DSR, while it was low in mechanical transplanting and dry DSR. In a new trial initiated this year on pest incidence in natural farming, the incidence of dead hearts, white ears, leaf folder, whorl maggot, hispa and BPH was low in T5-Integrated Crop Management with 50 % nutrient application through organic manures and 50% nutrient application through inorganic sources with need-based application of pesticides. In Efficacy of Pheromone Blends on Rice Pests, slow-release pheromone formulations recorded maximum catches compared to the normal formulations in the case of the yellow stem borer and leaf folder across locations.

She highlighted the results of the Integrated Pest Management in Direct-seeded rice trial that was conducted in a farmer participatory mode and analysed zone-wise. Low incidence of insect pests, diseases and weeds was recorded in IPM plots, resulting in higher grain yield and BC ratio as compared to farmer practices (FP) plots.

Studies on the population dynamics of insect pests and natural enemies in the rice ecosystem revealed that yellow stem borer, planthoppers, leaf folder and gall midge as major pests of rice across the country during *Kharif* 2024. However, rice hispa and whorl maggot were recorded as minor pests in different locations in India. Natural enemies, including spiders, coccinellids and mirid bugs showed fluctuating populations. Stem borer and leaf folder damage had a significant positive correlation with temperature, rainfall and evening humidity, while whorl maggot damage was positively correlated with rainfall but negatively with morning humidity.

In the end, she summarised the population dynamics of rice insect pests assessed through light trap catches across locations. Yellow stem borer, leaf folder, and hoppers continued

to be the most important pests in terms of numbers as well as spread across the locations. Gall midge continues to be an endemic pest. However, case worm, and gundhi bug showed an increase in the spread and intensity of incidence posing concern for future. Patterns in seasonal incidence and population build-up based on light trap catches indicated that the key pests are reaching their peak levels in the months of October and November during the *kharif* season and in the month of late January or early February during the post-rainy (*rabi*) season.

Chairperson appreciated the presentations and Dr Sanjay Sharma, Co-chair of the session, suggested screening MRST entries for grain moth.

PLANT PATHOLOGY

Dr. M. Srinivas Prasad, PI, Principal Scientist and Head, Plant Pathology, IIRR, Hyderabad, presented the results of AICRPR Plant Pathology trials conducted during 2024 at different hot spot locations in India. A total of 16 trials were conducted at 47 AICRPR locations on host plant resistance, field monitoring of virulence of two major rice pathogens, disease management, special screening trial on false smut, yield loss trial on brown spot diseases and collaborative trial on evaluation of drones for the spray of pesticides in Rice Pest Management. He mentioned that five national screening nurseries comprising 1,579 entries of Initial and advanced breeding lines and new rice hybrids were evaluated at 47 centers for their reactions to major rice diseases. Among the tested entries, 78 entries were moderately resistant or resistant to a minimum of two and a maximum of four diseases.

In NSN-1, eleven entries found to be promising for minimum of two diseases and few were IET 31733 (resistant to neck blast and moderate resistant to brown spot), 30603 (resistant to neck blast and moderate resistant to bacterial blight) and 32065 (resistant to neck blast and moderate resistant to bacterial blight). In NSN-2, only one entry IET 31733, showed resistance to neck blast and moderate resistance to brown spot. In NSN-H, 13 entries showed a promising reaction to two or more diseases. Among them, entry IET 32358 showed resistant/moderately resistant reaction to four diseases (resistant to neck blast and moderately resistant to leaf blast, bacterial blight and rice tungro disease). In NHSN, 27 entries were found resistant or moderately resistant to two or more diseases. IET 33053 showed resistance to leaf blast, brown spot and bacterial blight. In DSN, 28 donors were found with resistant or moderately resistant reactions against two or more diseases. Seven donors showed a resistant or moderate reaction to three or more diseases. The entry CBMASP 9016 showed resistance to neck blast and moderate resistance to leaf blast, bacterial blight and sheath rot, and GLB 94, ISHB 30, JGL 47870, N 4933 and NWGR-17048 showed either resistance or moderate resistance to minimum of three diseases.

PI presented the results of monitoring of field virulence of blast pathogen (*Pyricularia oryzae*) and bacterial blight pathogen (*Xanthomonas oryzae* pv. *oryzae*). With respect to *Pyricularia oryzae*, the resistant donor Tetep recorded susceptible disease reaction at

Ghaghraghat, Hazaribagh, Karjat, Almora, and Upper Shillong. The *Pi2* and *Pi54* gene conferred resistance to most *P. oryzae* isolates. Cluster analysis grouped 25 isolates into eight major clusters and isolates from Ghaghraghat and Almora were unique and formed a separate cluster. Regarding the monitoring of field virulence of bacterial blight pathogen, most of the differentials possessing single bacterial blight resistance genes like *Xa1*, *Xa3*, *Xa7*, *xa8, Xa10*, *Xa11* and *Xa14* were susceptible at many locations. The majority of the *Xoo* isolates were categorized as moderately virulent and the isolate from Raipur and strain 8 from Ludhiana were unique. Results of the disease observation nursery revealed that sheath blight and bacterial blight severity was more in early sown compared to normal and late sown crops in the Maruteru, Mandya, Moncompu, Raipur, Chinsurah and Bankura centres. The severity of the BLB was more in the late-sown crop. In Nawagam, sheath rot incidence was higher in the late-sown crop. The results also revealed that the intensity of the disease is high in transplanted conditions as compared to the DSR conditions. Among the two different formulations of the bioagent, seed treatment with *Trichoderma asperellum* strain TAIK1 followed by seedling dip @ 10 g/l of liquid formulation and spraying of specific fungicide *viz*., hexaconazole @ 2ml/l at tillering stage for sheath blight, isoprothiolane @1.5 ml/l at panicle emergence for neck blast disease and propiconazole @1ml/l at booting stage for false smut disease was effective. He mentioned that the IPM trial was conducted in three zones (Zone II, VI and VII) under direct seeded conditions. The results revealed that IPM practices performed better compared to farmer practices against leaf blast, neck blast, sheath blight, sheath rot, and bacterial blight. In the yield loss trial, the findings confirm that a maximum brown spot disease severity of 54% can cause potential yield loss of up to 32%, emphasising the need for effective management strategies. Among the 85 selected entries screened against false smut at hot spot locations, 41 entries recorded the smut ball of 0 to 3 were selected for further screening. A new trial was conducted to evaluate the drone spray of agrochemicals for the management of leaf blast, sheath blight and grain discoluration. The results revealed that two sprays of pesticides (a combination of fungicide and insecticide) using drones increased the percentage of disease reduction (9 to 10%) compared to the use of battery operated knapsack sprayer.

Dr G.S. Laha, Principal Scientist, Plant Pathology, ICAR-IIRR, presented the results of Production Oriented Survey-2024. He informed that the survey was conducted in 15 states by 18 AICRPR centres. He informed that the monsoon was near normal for the year and in addition to several monsoon depressions in the Bay of Bengal and the Arabian Sea, there were 4 major cyclones during 2024, which significantly affected the crops. He presented the survey results about the rice consumption pattern, cropping sequence, weedy rice, etc. The survey results showed that the hybrid rice varieties occupied a significant area in states like Uttar Pradesh, Haryana, Chhattisgarh and Gujarat and their area is increasing in states like Karnataka, West Bengal and Maharashtra. Among diseases, leaf and neck blast, brown spot, sheath blight, sheath rot, grain discolouration and bacterial blight were widespread in different rice-growing states of India. Sheath blight and bacterial blight were observed at high intensities in several states. Among

insect pests, stem borer, leaf folder and brown planthopper were widespread in different rice-growing states. Brown planthopper infestation was very high in many areas of eastern Uttar Pradesh and parts of Kerala.

During the discussion, Dr. N Krishnakumar, Former DDG (Horticulture), ICAR, suggested identifying the genotypes having both leaf and neck blast resistance, which will serve as a very good source for blast disease management. Dr. S D Mohapatra, Head, Crop Protection, ICAR-CRRI, expressed the concern to initiate the screening trial against Rice Bakanae disease as the incidence is being reported from the eastern region of the country. He also suggested including ICAR-CRRI for conducting the Production-Oriented Survey. He also suggested that crop protection scientists should mention the scientific names of the pests and pathogens while making a presentation. Dr. B. N Singh, former Director, ICAR-CRRI, Cuttack, congratulated the speakers and enquired about the occurrence of Southern Rice Black Streaked Dwarf Virus (SRBSDV) and the existence of any variation in the infestation level among the genotypes. Dr. N Krishnakumar also suggested removing and destroying the infected virus plants, spraying insecticide for the vector to avoid further spread of the virus.

In the concluding remarks, Dr. Sanjay Sharma, Principal Scientist, Entomology, IGKV, Raipur and co-chairman of the session, congratulated all the speakers. He suggested that the drone experiment be allotted to a large number of locations. He pointed out the importance of the brown spot and the need to work on the disease. He informed the group about the high incidence of false smut in Chhattisgarh and suggested studying the favourable weather parameters responsible for the high incidence of false smut disease. He advised using the reports of Production oriented survey and pest surveillance data for program planning. The Chairperson, Prof. R. Sarada Jayalakshmi, Vice Chancellor, ANGRAU appreciated the speakers of the session for their excellent presentation. She suggested focusing on the objectives and outcomes of the trial on drone application of pesticides for the management of different pests and diseases. She emphasised the use of AI tools and hyperspectral images to study the identification of different pests and diseases and the extent of damage caused by them. She suggested using the resistant donors and native biocontrol agents for the management of different pests and diseases and focusing research work on false smut due to the increasing incidence of the disease. She also suggested that the donors identified in the crop protection program should be shared with the breeders for their use in the resistance-breeding program.

PRE WORKSHOP INAUGURAL SESSION

Chairperson	:	**Dr. D. K. Yadava, DDG (Crop Sciences) ICAR**
Co-Chair	:	**Dr. S. K. Pradhan, ADG (FFC) ICAR**
PAMC Members	:	**Dr. R. P. Kaushik, Chairperson,** **Dr. Deepak Sharma, Member,** **Dr. R. Jagadeeshwar, Member,** **Dr. M.S. Sheshshayee, Member**
Rapporteurs	:	**Dr. P. Senguttuvel, Dr. Mangal Deep Tuti and Dr. Chinnababu Naik**

The pre-group meeting of the 60th Annual Rice Research Group Meeting was held virtually on April 16-17, 2025, at ICAR-Indian Institute of Rice Research (IIRR), Hyderabad. Dr. R.M. Sundaram, Director of ICAR-IIRR, welcomed Dr. D.K. Yadava, Dr. S.K. Pradhan, Dr. R.P. Kaushik, Dr. Deepak Sharma, Dr. R. Jagadeeshwar, Dr. M.S. Sheshshayee, and other delegates. He highlighted the importance of DNA profiling of AICRPR entries using 1K RiCA SNP genotyping and stressed genomic-assisted analysis. He encouraged breeders to develop and nominate high-yielding varieties with built-in resistance to biotic and abiotic stresses, aligned with the zonal promotion system initiated last year.

Dr. D.K. Yadava, DDG (Crop Science), welcomed all participants and highlighted the significance of the meeting to review the centre-wise progress of AICRPR. He stressed the urgent need for breeding climate-resilient varieties and hybrids with improved quality and resistance to pests and diseases. Dr. Yadava acknowledged the valuable contributions of the private sector over the years in developing superior materials that have benefited farmers. He emphasized the importance of adopting a systematic and predictive approach to enhance breeding programs and underlined the necessity of regular monitoring to ensure sustained progress and impactful outcomes in crop improvement efforts.

Dr. R.P. Kaushik, Chairman of PAMC, congratulated the network cooperating centres for achieving self-sufficiency in rice production over six decades through the AICRPR system, highlighting India's status as a leading rice exporter. He emphasized the need to breed varieties and hybrids suitable for aerobic, and DSR ecologies, and to promote the cultivation of coloured rice, which is gaining popularity. Dr. Kaushik opined a need to strengthen research in two-line hybrid breeding, biofortification, and low-GI rice. Additionally, he urged for DNA fingerprinting of new varieties to protect germplasm and advocated for greater use of AI technology in rice research.

Dr. Deepak Sharma, PAMC Member, highlighted India's rice production journey, achieving 137 MT from 46.6 Mha at 2.89 t/ha productivity. He emphasized the use of AI-powered rice diagnostic kits developed with BARC, Mumbai, for variety identification. Stressing value-added products, he cited Sanjeevini—an amino booster aiding cancer patients by Tata Memorial—as a model, advocating research on medicinal rice. He urged replacing Swarna with climate-resilient, high-yielding varieties through genome editing,

referencing IIRR's work on Samba Mahsuri. Enhancing hybrid seed production with innovative approaches was recommended to empower rice farmers and break current genetic yield barriers.

Dr. R. Jagadeeshwar, Member of the PAMC, congratulated all the cooperating scientists on completing 60 years of AICRPR. He highlighted the significant progress made, particularly in the development of varieties suited to upland and aerobic ecologies. Emphasizing the evolving nature of agricultural research, he urged that this is a critical time to enhance research efforts through the effective use of digital technologies. He also stressed the importance of adopting a farmer-centric approach while keeping health concerns at the forefront. His message reflected the need for innovation and collaboration to address emerging challenges in agricultural development.

Dr. M.S. Sheshshayee, member of the PAMC, emphasized that plants often face combined stresses rather than isolated ones, and research should focus on developing resilience to multiple stress factors. He highlighted the need for integrated, omics-driven approaches to enable precise and effective breeding strategies. Additionally, he advocated for exploring small molecular stimulants that can mitigate stress impacts. He stated that understanding the underlying mechanisms of stress tolerance and incorporating this knowledge into breeding programs would enhance crop performance and sustainability under diverse environmental conditions. This holistic research direction promises to improve agricultural productivity and adaptability in the face of climate challenges.

Dr. S.K. Pradhan, ADG (FFC), announced that India has achieved a record rice production of 138 million tonnes and congratulated the scientists, AICRPR network, and farmers for their collaborative efforts. He emphasized the urgent need for focused research on the adverse impacts of climate change, particularly in rainfed ecologies, and stressed the importance of addressing these region-specific challenges. Dr. Pradhan advocated for the simultaneous introgression of multiple traits rather than focusing on single traits. He urged breeders to develop location-specific, farmer-centric varieties and hybrids. Highlighting the role of technology, he encouraged the adoption of AI-based breeding methods, speed breeding for advancing segregating populations, and high-throughput approaches. He also informed that under the Viksit Bharat initiative, the country aims to boost rice production to 170 million tonnes. His message strongly reinforced the need for innovation, speed, and precision in breeding to ensure sustainable and climate-resilient agriculture.

Zone II – Northern and Zone III – Eastern Region

Rapporteurs: Dr. M.S. Anantha, Dr. A. Fiyaz and Dr. Gobinath

Zone II

Chatha: Dr. Anuradha Saha shared the progress of the Chatha centre, highlighting the need for a technical assistant to facilitate smooth experimentation. Dr. Kaushik recommended registering the dwarf basmati variant 'Ranabir' with NBPGR. Dr.

Sheshshayee encouraged a focused study on dwarf lines, emphasizing aromatic profiling. Dr. R. Jagadeeshwar suggested documenting the pest and disease scenario in the region.

Kanpur: Dr. P.K. Singh presented the work done at Kanpur. The Director of IIRR advised registering salinity-tolerant lines with NBPGR. Dr. Deepak Sharma emphasized the need for pre-breeding activities and a thorough investigation into the biochemical and physiological mechanisms behind salinity tolerance. Dr. Jagadeeshwar proposed research on the impact of Nano Zinc on brown spot disease. Dr. S.K. Dash from CRRI suggested expanding the number of trials and upgrading the centre to a national-level salinity screening facility. Additionally, IIRR Director, Dr RM Sundaram, advised preserving local aromatic short-grain germplasm.

Kaul: Dr. Chaudhary reported the progress at Kaul. Dr. Kaushik raised concerns over delays in the release of the HKR variety and pushed for acceleration. Dr. Deepak Sharma recommended focusing on CMS (cytoplasmic male sterility) lines, while Dr. Pradhan emphasized monitoring black streak disease, which is particularly relevant to the region.

Kota: Dr. K.M. Sharma presented the centre's report. Dr. Pradhan stressed the need for more publications and advised concentrating on direct-seeded rice (DSR) traits. Dr. Kaushik recommended enhancing the export quality of rice. Dr. Deepak Sharma encouraged pursuing GI (Geographical Indication) registration.

Nagina: Dr. Rajendra Singh updated the results of trials from Nagina. Dr. Pradhan commended the centre's efforts and suggested bringing in more students to ensure timely and efficient trial execution.

Ludhiana: Dr. Rupinder Kaur shared the progress at Ludhiana. Dr. Deepak Sharma suggested incorporating stable isotopes in trials related to water-use efficiency.

Pantnagar: Dr. I.B. Pandey presented the centre's progress, with Dr. Pradhan noting the potential of a promising variety, Tilakchandhan. Dr. Sundaram emphasized timely registration of the line with NBPGR. Dr. Deepak Sharma proposed establishing a mutation breeding facility to enhance research capacity.

Zone III: Bankura: Dr. Kaushik underscored the need to strengthen the Bankura centre by appointing more scientists for timely research outcomes.

Ghaghraghat: Dr. Pradhan recommended improving publication output and overall research quality.

Jeypore: Dr. Mohanty gave an overview of Jeypore's work. Dr. Kaushik suggested the centre to specialize in black rice accessions, while Dr. Deepak Sharma advocated for initiating mutation breeding with IIRR's support.

Chiplima: Dr. Pradhan appreciated Chiplima's progress and urged the team to focus on the stem borer and brown plant hopper, given the centre's hotspot status.

Pusa: Dr Nilanjaya reported on Pusa's progress. Dr. Pradhan noted publication inconsistencies and advised improvement.

Varanasi: Dr. S.K. Singh reported on Varanasi's progress. Dr. Hariprasad raised concerns over the low coefficient of variation in hybrid rice trials.

Ranchi: Dr. Ahmed shared the centre's progress, with no major observations recorded.

Chinsurah: Dr. Indrani presented updates from Chinsurah. Dr. Pradhan noted publication inconsistencies and advised improvement. Dr. Deepak Sharma encouraged launching a hybrid rice programme in coordination with IIRR's hybrid section.

Bikramganj: Dr. Prakash Singh reported challenges, especially the absence of entomologist visits during peak seasons. The centre was commended for obtaining a GI tag for its 'Sonachur' variety. Dr. Sheshshayee advised narrowing down trait focus and streamlining crosses.

Masodha: Dr. Dixit presented the Masodha centre's progress. Dr. Pradhan emphasized digitizing field-level records and using local checks in yield trials. Dr. Sundaram pushed for timely recruitment, while Dr. Sheshshayee encouraged focusing on QTLs for heterosis breeding. Dr. Dash urged headquarters to release funds promptly to avoid delays in trials.

Zone IV – North Eastern, Zone V – Central and Zone VI – Western

Rapporteurs : Dr B. Sreedevi, Dr P. Senguttuvel and Dr. Sutapa Sarkar

Zone IV – North Eastern

Arundhatinagar: At Arundhatinagar, all AICRPR trials—including plant breeding, hybrid rice, agronomy, soil science, entomology, and pathology were executed in accordance with established guidelines. However, the results from hybrid rice trials reflected relatively low yields despite low coefficient of variation (CV %), indicating uniform performance but lower productivity. The site is flood-prone, which may be a significant factor influencing these outcomes. To enhance future trial performance and data quality, it is recommended that flood mitigation measures be implemented at this location.

Titabar: All AICRPR trials were conducted as per protocol at the Titabar center, encompassing plant breeding, hybrid rice, agronomy, soil science, plant physiology, entomology, and pathology. Hybrid rice trials here also showed low CV per cent, but trial management and execution require further strengthening to improve overall quality. Notably, the center released the variety *Shatabdi*, which is tolerant to arsenic and salinity. This version of *Shatabdi* differs from the one released in West Bengal, underscoring the unique adaptation and breeding outcomes at this center.

Zone V – Central

Raipur: Raipur successfully conducted all AICRPR plant breeding and hybrid rice trials in line with standard protocols. Over 1,800 germplasm lines were registered as genetic stocks, marking a significant achievement. Trials in crop production, agronomy, and plant physiology, as well as crop protection through entomology and pathology, were completed and reported. The medicinal rice variety developed at this center needs further characterization to identify specific compounds and determine dosage. Efforts should also focus on reducing arsenic accumulation in *Shatabdi* and *Muktashree*.

Jagdalpur: All AICRPR trials allocated by ICAR-IIRR were conducted according to the guidelines at Jagdalpur. The variety *IndravathiDhan*, derived from *Bastardhan1*, was released and indented under Breeder Seed Production (BSP). The center benefits from distinct ecological zones within its research farm, aiding in diverse evaluations. Trials under the crop production program, including agronomy, entomology, and pathology, were successfully completed.

Sakoli: Sakoli focuses on the development of superfine grain rice varieties with resistance to hopperburn and gall midge (biotype 4), as well as biofortified pigmented rice. All assigned plant breeding trials were conducted. Key breeding goals include early maturity, direct-seeded rice (DSR) adaptation, and development of super grain and pigmented rice types. The variety *PDKV Sadhana* (SKL-3-1-41-8-33-15) was identified for release in Vidarbha, Maharashtra through the SVRC. Breeder seed production was undertaken for *PDKV Sadhana*, *PKV Ganesh*, *PDKV Kisan*, *Sakoli-9*, *PDKV Sakoli Red Rice*, and *PKV HMT*. In crop protection, all entomology trials were implemented as per guidelines. Gene mapping and breeding for stem borer resistance should be intensified.

Rewa: All AICRPR plant breeding trials were conducted at Rewa, with particular focus on popular varieties such as *JR 767* and *JR 206*, targeted under BSP. Trials in agronomy and plant physiology were also carried out under the crop production program. In plant protection, ten pathology trials were completed. Future efforts should focus on mapping brown spot resistance genes using donor materials identified at the center.

Zone VI – Western

Karjat: Karjat executed all AICRPR trials according to technical guidelines. The center is encouraged to utilize its speed breeding facility for accelerating the improvement of hybrid parental lines. Although Karjat leads in PPVFRA variety registrations, further efforts are needed to expand this portfolio. Collaborative hybrid rice projects with CRRI and IIRR are recommended.

Nawgam: All trials at Nawgam were conducted as per the technical program. The hybrid rice program received commendation from the ADG (FFC). Major achievements include technologies and varieties tailored for upland, drilled paddy conditions. Speed breeding facilities should be utilized to develop new CMS lines, while high-throughput genotyping can support mapping and targeted breeding.

Navsari: Navsari successfully implemented all assigned AICRPR trials. Agro-techniques developed for aerobic rice-based systems were released to farmers and adopted widely. Strengthening the Daboi center was recommended for enhancing data quality. The Dandi center's excellent screening capacity for salinity tolerance should be paired with speed breeding to develop improved rice varieties.

Zone VII – Southern

Rapporteurs : Dr. K. Suneetha, Dr. V. Prakasam & Dr. Ch. Suvarna Rani

Gangavati: Dr. Mahantashivayogayya K presented the results of 16 breeding trials conducted at Gangavati during Kharif 2024, including IVT-IM, AVT1-IM, AVT2-IM, IVT-IME, AVT1-IME, and several other varietal, biofortification, and agronomy trials. In total, 14 agronomy, 18 entomology, and 23 pathology trials were also conducted and results presented. Significant research achievements include the generation of 30 crosses and the identification of 709 breeding lines. Key focuses were on resistance to biotic stresses like blast and gall midge, and abiotic stresses such as salinity and drought. The promising variety, DRR Dhan 58, was highlighted for its performance in farmer fields. The center also emphasized the importance of breeding varieties with improved grain type and biofortification, focusing on zinc and protein content.

Moncompu: Dr. Surendran shared insights into the trials conducted at Moncompu, where 9 breeding trials were carried out, focusing on ETP, IME, bio-fortification, and NIL & GEL, along with 8 agronomy, 5 soil science, 13 entomology, and 13 pathology trials. One of the key research areas is the development of rice varieties with tolerance to salinity, floods, and acidic soils. The challenges posed by high rainfall and flooding in this region were addressed by developing varieties that can withstand such stresses. The center also focused on developing high-yielding varieties under direct-seeded conditions and managing weed dynamics.

Brahmavar: Dr. Revanna discussed 16 breeding trials and 8 entomology trials conducted at Brahmavar, despite crop damage preventing the conduct of AVT-2 and AVT-1 late trials. Highlights included field days on red rice varieties such as Kaje 25-9 and MO 21, with a focus on improving traits like high zinc and iron content, non-lodging slender grains, and resistance to various diseases like gall midge and false smut. The center has also maintained 41 new germplasm lines, and these promising lines are being utilized in hybridization programs.

Pattambi: Dr. Biji provided a detailed overview of the 16 breeding trials, 12 entomology trials conducted at Pattambi, which included trials on bio-fortification, ETP, IME, and others. Over 110 crosses were generated, leading to the evaluation of 5445 breeding materials and the identification of 440 promising lines. Additionally, 1366 germplasm collections are maintained. Special emphasis was placed on the evaluation of wild rice derivatives, with notable progress made in identifying donors for abiotic and biotic stress tolerance.

Puducherry: Dr. Narasimhan outlined the challenges faced by the Puducherry center, where the trials were heavily impacted by a cyclone and flash flooding. Despite these setbacks, the center managed to conduct several agronomy and soil science trials. The focus was on developing rice varieties with tolerance to the specific stresses of the East Coast ecology, such as biotic, abiotic, and edaphic stresses. The development of the package of practices for cultivating traditional rice varieties under changing climatic conditions was also discussed.

Aduthurai: Dr. Suresh presented findings from 23 breeding trials at Aduthurai, which included a range of varietal and bio-fortification trials. He also presented 14 entomology

trials conducted at this location. The center focused on the development of rice varieties with resistance to terminal drought, salinity, and submergence. Research also concentrated on improving nutritionally enhanced rice varieties and exploring the tolerance mechanisms in rice landraces. The development of advanced lines with multiple resistance genes for bacterial leaf blight (BLB) was also emphasized.

Coimbatore: Dr. S. Manonmani presented the results of 21 breeding trials conducted at Coimbatore, along with 7 agronomy, 10 entomology, and 9 pathology trials. The focus was on breeding varieties for yield, quality, and stress tolerance, especially for drought and salinity. Promising donors for traits like BPH resistance, false smut, and anaerobic germination were identified, and the center maintained a large gene bank of over 3500 accessions. Molecular breeding for biotic stress tolerance, including pyramiding genes for blast and BLB resistance, was also discussed.

Mandya: Dr. G.R. Denesh and Dr. Deepak presented a summary of the 20 AICRIP trials conducted at Mandya, covering a wide range of varietal and bio-fortification trials, along with 12 entomology trials. Special focus was placed on developing varieties that could withstand diseases like leaf blast and neck blast, and the center has generated 17 new crosses with potential for better disease resistance. The center also emphasized the importance of maintaining a large germplasm collection, which includes over 12,000 accessions, and molecular breeding for stress tolerance, including salinity and sheath blight.

Mugad: Dr Satish presented 18 Plant breeding trials conducted during Kharif 2024. In plant breeding, IVT and AVT trials of IME, Aerobic, Biofort, AGT, ETP, DRT-NIL, IM, Late, CSTVT and MS trials were conducted. Four entries are in minikit testing. About 474 germplasm, several donors of Blast, BLB and BPH are available. Kagga, a salinity-tolerant landrace, was applied for Genetic Stock Registration. Several diverse crosses are being generated as well and new CMS lines are being developed. Focused on the development of high-yielding varieties with drought tolerance and BLB, BPH resistance.

Maruteru: Dr. M. Girija Rani presented results from 26 trials at Maruteru, including a wide range of plant breeding, agronomy, entomology, and pathology trials. Key research areas included biofortification for zinc and protein, and breeding for disease resistance, especially BPH and BLB. The center also highlighted its work on molecular breeding for anaerobic germination and its efforts to identify donors for various biotic and abiotic stresses. Despite heavy rainfall affecting some trials, significant progress was made in evaluating promising breeding lines.

Rajendranagar: Dr. Ch. Damodar Raju provided an overview of the trials conducted at Rajendranagar, including 11 plant breeding trials, 7 agronomy trials, 12 entomology trials and 16 pathology trials. The focus was on developing high-yielding varieties with cold and salt tolerance. The center has made progress in the development of disease-resistant lines and has submitted seven varieties for registration under the Extant Notified Category with PPVFRA. The center also emphasized the importance of maintaining a diverse collection of germplasm for future breeding programs.

Warangal: Dr. Satish Chandra gave an overview of the AICRIP trials conducted at Warangal, which included a mix of breeding trials, agronomy, and entomology trials. The center has maintained 500 landrace collections and has developed promising lines with resistance to various diseases, including blast, sheath rot, and gall midge. Molecular breeding initiatives have been focused on improving traits like disease resistance and yield, and the center has initiated a program for marker-assisted selection (MAS) for traits like blast and BPH resistance.

- During the session, delegates including Dr. B.N. Singh, Dr. S.K. Pradhan (ADC, FFC), Dr. Deepak Sharma, and Dr. R. Jagadeshwar interacted with the co-operators.
- Dr. S.K. Pradhan highlighted that the trial RSL is well-suited for conditions of submergence and drought stress, while irrigated late trials are not subjected to such stresses. He further noted that EDS trials are designed for drought conditions, while ETP trials cater to irrigated environments without stress. Emphasis was placed on the need to monitor trials closely based on the target environments. The commencement of genome-assisted breeding at various centers was also commended.
- Dr. Deepak Sharma emphasized the significance of proper trial management, as it directly influences the coefficient of variation (CV%), which in turn affects the number of data points available for the trial.
- In his concluding remarks, Dr. S.K. Pradhan, ADG(FFC), congratulated Dr. R.M. Sundaram, Director of IIRR, for organizing the session with Zone-VII co-operators and praised their exemplary research and teamwork. He also stressed the importance of safeguarding rice varieties and elite lines from different stresses under the PPV&FR Act and the need to register donors for various stresses and quality rice lines with NBPGR.
- Dr. S.V. Sai Prasad, PI AICRIP in Varietal Improvement, extended his gratitude to all the presenters.
- The session concluded with a formal vote of thanks from Dr. R.M. Kumar, PS and Head of Agronomy at IIRR.

CROP IMPROVEMENT (Pre-Workshop)

Chairperson : Dr A. K. Singh, Emeritus Scientist, ICAR- IARI, New Delhi
Co-Chair : Dr. S.K. Pradhan, ADG (FFC), ICAR New Delhi
Rapporteurs : Dr. Suneetha Kota, Dr. R Abdul Fiyaz, and Dr. Divya Balakrishnan, ICAR-IIRR

IRRIGATED TRIALS

The Breeder's group meeting was held at ICAR-IIRR on 26th April 2025. Dr. AK Singh, Emeritus Scientist, ICAR- IARI, chaired the session, Dr. S.K Pradhan ADG (FFC), ICAR, co-chaired the session. Rice breeders from different AICRPR centres participated in the group meeting for detailed discussion of trial results. Dr. S V Sai Prasad, Head, CIS & PI AICRPR- Varietal Improvement, IIRR, extended a warm welcome to the distinguished delegates from AICRPR centres and private agencies who participated in the group meeting. Dr. A. K. Singh and Dr. S. K. Pradhan congratulated all rice breeders for their rice research accomplishments to commemorate "Diamond Jubilee Year of AICRP on Rice (Glorious 60 years of ARGM), 2025. Dr. S.K. Pradhan, in his introductory remarks, emphasized the utilization of new technology along with experimental designs to achieve high yield levels above the popular rice varieties. Dr. A. K. Singh made remarks on India's rice export potential of basmati, non-basmati, with a substantial share in the global rice trade. Dr. R. M. Sundaram, Director, ICAR-IIRR, Dr. Viswanathan C, Joint Director of Research, IARI, Dr. Sanghamitra S. from CRRI, eminent rice breeders, Dr. S. R. Das, Dr. B.N. Singh and Dr. Ravindra Babu, Ex-Director, IIRR, also participated in the meeting.

Dr. S.V. Sai Prasad, PI AICRPR- Varietal Improvement, presented the action taken report of the crop improvement and also the overview of the conduct of the AICRPR trials across locations. A total of 38 trials (34 varietal trials and 4 hybrid rice trials) were conducted in 1104 experiments at 124 locations (41 funded, 83 voluntary centres) in 28 states and 5 union Territories across seven zones of the country during 2024. The 38 trials were constituted with 1388 entries (1296 varietal and 92 hybrid rice), including 166 checks. The overall data receipt was 83.6%, of which 87.7% and 74.6% data was received from funded and voluntary centres, respectively. Ecology wise presentations were made by IIRR, CRRI and IARI breeders. Trial wise detailed discussions and deliberations were made during the group meeting. Results of irrigated experiments are presented by Drs. J. Aravind Kumar, Suneetha Kota, S.L. Krishnamurthy, Jyothi Badri, M.S. Anantha, R Abdul Fiyaz, Divya B and Ch Suvarna Rani from Plant Breeding, Dr. P. Senguttuvel from hybrid rice. Trial wise discussions and deliberations made are presented below.

- Promotions of entries should be based on zonal basis only in IVT and AVT1 and not on overall basis.
- For promotion of hybrid/varieties entries in AICRPR, they should meet the requirement of ≥67% milling percentage and ≥55% HRR.

- Dr. Gopal Krishnan from IARI conveyed the idea that local check (LC) should not be considered for identification of significant performance of entries at the zonal level, but the house differed that the LC check should be considered for promotion of entries.
- IET 32404 from the ETP trial was dropped and the concerned breeder requested for shift for a suitable duration trial. The same was discussed and it was decided that the entries that are dropped due to differences in flowering duration will not be considered for shift to other trials.
- New Nominations with details of designation and pedigree information will only be considered at the time of trial constitution.
- Dr AK Singh had expressed discouragement about the nomination of any breeding material in the genetic background of Pusa 44, unless entries are 15-20 days earlier in flowering duration as compared to Pusa 44.
- He suggested replacing Pusa 44 as a sensitive check in the salt stress trial. PR 126 or any other sensitive check can be included.
- For LPT (Low Phosphorous Trial), soil samples are to be collected from test locations across centres to estimate the available phosphorous content. Accordingly, suggested to revisit the conduct of the low 'P' trial.
- For LNT (low nitrogen trial), the available Nitrogen may be considered to estimate.
- Dr SK Pradhan expressed that nominations for LPT and LNT should be derived from focused breeding material generated with known donors or lines with tolerance to 'P' or 'N'.
- In AGT, comparison of entries for promotion is to be made with checks of similar grain type.
- NILs nominated with a specific target trait will be compared with previous released NILs with target trait and with respective recurrent parent.
- NILs of DRR Dhan 50 are to be repeated as only one testing location (Drought stress) was considered.
- Dr. SV Sai Prasad raised that NIL entries should be compared not only with recurrent parent but also with the zonal/national checks for their on par and/or numerical superiority in performance in the zone. Accordingly, the guidelines for NILs evaluation be revisited for conduct of NILs trials.

RAINFED TRIALS

Rapporteurs: Drs. L Behera (NRRI) and MS Anantha(IIRR)

Dr. S. Samantaray, Head, Crop Improvement Division and Nodal Officer of the AICRP-Rainfed trials, presented the trial-wise reports. The reports were thoroughly discussed, leading to the following recommendations:

1) Henceforth, test entries in all trials should be promoted based on zonal superiority from the IVT stage rather than overall mean performance.
2) Entries dropped due to low Head Rice Recovery (HRR) should be compared against the values of the respective recurrent parent (in case of NILs) and standard checks (in case of inbred). If it is found at par, such entries should be reconsidered and repeated in the respective trials. Additionally, quality data must be from at least two laboratories.
3) Deep and Semi-deep water trials must be repeated if the required water table is not maintained at a minimum of two locations.
4) Breeding of herbicide-tolerant rice should be restricted to early Direct Seeded Rice (DSR) ecosystems only. Furthermore, the target area should be limited to regions where the original parent variety is already recommended for cultivation.

BASMATI TRIALS

Rapporteurs: Dr. Divya Balakrishnan (IIRR), Drs. P K Bhowmick, B Haritha (IARI)

Dr Gopalakrishnan presented the Basmati trials conducted by ICAR-IARI, New Delhi. During Kharif 2024, IVT Basmati (IVT BT) was constituted with 24 entries comprising 17 varietal entries, one hybrid entry and six checks at 12 locations and data received from all centers.

The two zinc biofortified entries namely, IET32311 and IET32312, performed better than superior yield check. Advance Variety Trial - Basmati including both AVT1-BT, AVT1-BT NIL, AVT 2 and AVT2-BT NIL was constituted with 28 entries including 20 varietal test entries; one hybrid entry; five near-isogenic lines; two recurrent parents namely, Pusa Basmati 1 and Pusa Basmati 1509 and six checks across 12 locations and data from 9 locations were only considered for analysis.

Two entries namely, IET 30533 and IET 30535 were in third year of testing and both the entries were significantly superior to the yield of 4445 kg/ ha recorded by the best check variety, Pusa Basmati 1121. He presented the results of both basmati trials in detail.

CROP PRODUCTION (Pre-Workshop)

Chairperson : Dr. A. Subba Rao, Ex. Director, ICAR-IISS
Co-Chair : Dr. M.S. Sheshshayee, Professor, Crop Physiology, UAS-B
Rapporteuers : Dr. Mangal Deep Tuti and Dr. P. Spandana Bhatt

As a part of the 60th AICRPR workshop, the Agronomy group meeting was held on 26th April 2025 from 9:30 AM to 2:00 PM. The session was chaired by Dr A. Subba Rao, Ex-Director, ICAR-IISS, Bhopal & PAMC Member, who joined online and co-chaired by Dr. M.S. Sheshshayee, Professor, Crop Physiology, UAS-B & PAMC Member, who was physically present in the session. A total of 75 Scientists, including Cooperators, the Private sector and startups, participated in the group meeting.

Dr R. Mahender Kumar, PI-Agronomy, welcomed the delegates and apprised the chair about the pre-group meeting and last year's remarks of the experts during 59th ARGM, 2024, followed by the introduction of all the participants.

In the session, Chairman Dr A. Subba Rao gave the following remarks:

1. Actual quantification of water in all methods of establishment, *i.e.*, dry DSR, wet DSR, transplanted rice, mechanized rice, etc., should be done.
2. Quantification of nutrient recycled and nutrient budgeting, which will result in the best nutrient management option, should be done.
3. Sustainable yield in natural farming, organic farming and regenerative agriculture can be achieved by quantifying the nutrient addition and depletion.
4. In the long-term fertilizer experiment, soil carbon and carbon credits need to be calculated and advised on the use of drones for nutrient management.

Following are the remarks of Co-Chair Dr M. S. Sheshshayee:

1. The amalgamated group of Scientists of NRM (Agronomy, Soil Science, Physiology and Microbiology) for the benefit of farmers is commendable.
2. Nutrient balance sheet in N, P efficient entries/genotypes needs to be worked out
3. The nutrient composition of the Sampoorna formulation developed by KAU should be specified.

Agronomy report was presented by Dr R. Mahender Kumar.

- Approximately 55% of efforts are being devoted to conducting AVT-2 trials to support the Breeding group in identifying the suitable cultivars.
- A total of 300 experiments were conducted at 45 locations (39 funded and 7 voluntary centres), consisting of evaluation of promising cultures/genotypes (117 cultures).
- In RCT trials, quantification of water is necessary.

The chairman suggested bringing out the protocol for the complete package of practices of DSR. Co-Chair advised to work on thermo-sensitivity and photo-sensitivity of genotypes. There is a need to work on the epigenetics of seed priming and genotypes that respond to priming in dry DSR. Further, he also suggested studying the initial seedling vigour in genotypes. Real-time detection of weeds and their management using drones may be included. Feedback from social scientists is to be considered.

Dr. Anuradha Saha from Jammu requested to include the Jammu centre for the AVT-2 Basmati trial. Dr. D.K. Singh expressed concern about the mixture of seeds, different duration entries, late receipt of entries, and acknowledgement to the Agronomist in the release of the variety. Scientists from Khudwani requested special funds for the conduct of DSR trials and basmati trials in their region.

Dr. Annie Poonam presented the results of the herbicide-tolerant trial. Out of 5 centres, 3 centres (Nagina, Chinsurah and Naira) data were not appropriate and need more careful execution of the experiment. Dr. Mahender Kumar advised having an online meeting for the selection of centres for this trial.

Dr. R. M. Sundaram appreciated the efforts of the Crop Production group and gave a few suggestions

- Work may be initiated on soil health and soil biome.
- Work on mechanisms behind the effective treatment vs untreated, as well as epigenetics and transcriptomic analysis with the help of the biotechnology team.
- Initiate long-term studies on carbon sink in rice cultivated soil vs fallow or single season vs different cropping systems vs residue incorporated.
- He also reinforced that due acknowledgement will be given to the NRM group for the efforts in evaluating AVT trials and the development of PoPs for new varieties.

Private partners have presented different products for inclusion in the AICRPR programme

M/s String Bio presented on clean rice formulation. The chairman suggested including CRRI methanotrophic bacteria along with clean rice. Mr. Pundarikakshudu, from Pranadhara (NGO) gave a presentation on mechanized DSR from seed to seed being practiced by Pranadhara in the Guntur district of Andhra Pradesh. Co-chair advised to go for laser-based land levelling in dry DSR. Dr. Buta Singh Dhillon informed the house that rodents management plays a crucial role in dry DSR. Mr. Krupa Shankar, IFFCO representative presented about nano urea plus technology and also informed the house about the ongoing research on nano DAP, nano Zinc, Nano NPK granules.

- House informed that there is no significant benefit of nano urea compared to 100% RFD
- Increase of BLB and blast disease and leaf folder after nano urea spray in different locations was recorded

- The house sought information from the IFFCO representative about the studies on nitrogen uptake pattern in the rice crop after application of nano urea compared to soil application of urea.
- Co-chair emphasized the company to study in-depth on the effect of nano urea spraying on human beings.

Mr. Sukumaran from Muruguppa Chetiyar Research Centre, Chennai, has briefed about the Biochar equipment for small-scale use with a 300-400 kg capacity /batch of kiln costing around Rs. 2000/unit and gave his consent to supply the required quantity of Rice straw husk biochar for experiments.

After a thorough discussion on the Agronomy technical programme, the following decisions were taken:

- The plant breeding section must give the appropriate number of AVT-2 seeds by May 15th in sufficient quantity with proper germination percent and uniformity so that the actual yield potential of the entry can be realized by timely sowing.
- The centres conducting the herbicide-tolerant trial to have an online meeting and discuss the proper methodology to be followed.
- Co-chair advised that in the resource conservation trial, quantification of water in different establishment methods is necessary.
- Resource conservation trial has to be continued with modifications and include pulse (location-specific) instead of sorghum hybrids and quantification of nitrogen supplied due to the addition of pulse to be calculated.
- Weed management: Long-term trial will continue with dry DSR and wet DSR treatments in main plots and appropriate sub-plot treatments in split plot design.
- Co-chairman advised to include a change in biology with the rotation of herbicides
- Kerala Agricultural University centres will propose a trial on weedy rice management for the cooperating centres of Chhattisgarh, Kerala, HP, MP, eastern UP, and part of Jammu.
- Interdisciplinary trials to be continued with necessary modifications.
- The house has decided to initiate a separate yield maximization trial for dry DSR and wet DSR and Co-chair suggested to include bio stimulants, Clean rice products for climate mitigation strategies.
- All cooperating centers are requested to send good photographs of weeds, nutrient deficiencies, pest and diseases for Rice AI Project and additional contingencies will be provided. After presentation, discussion of soil science and physiology programme, Co-chair briefed some protocols for evaluation of entries.
- Co-chair emphasized the group efforts and also suggested to conduct field experiments in intense manner to come out with meaningful results and technologies for recommendations.

The session ended with vote of thanks by Dr. B. Sreedevi.

SOIL SCIENCE

Dr. A. Subba Rao suggested focusing on the following areas:

- Develop technologies to reduce the water consumption for rice production because of the depleting groundwater levels, particularly in states like Punjab, Haryana and Telangana.
- Monitor the soil health for sustainable production under natural/organic farming,
- To study the beneficial effects of the inclusion of legumes and biofertilisers for sustaining the system productivity and soil health under regenerative agriculture.
- Explore the use of drone technology for fertilizer application.

Dr. Sheshshayee emphasised the development of high water use efficient varieties suited for DSR in collaboration with other disciplines, especially breeding.

Dr. R.M. Sundaram, Director, ICAR –IIRR, joined the pre-group meeting and appreciated the work carried out by AICRPR Cooperating centres. He suggested initiating new studies on soil metagenomics in key rice ecologies.

Dr. M.B.B. Prasad Babu, PI, Soil Science, ICAR-IIRR, presented the results of AICRPR coordinated trials conducted at various centres. Dr. Dibyendu Chatterjee, Senior Scientist (ICAR-CRRI) presented the result of the biofortification trial which were thoroughly deliberated upon and the following technical program was agreed upon.

All nine ongoing trials were approved for the coming year.

1. Long-term soil fertility management in rice-based cropping systems

- Microbial biodiversity of the selected treatments to be studied

  Locations: 3 (Maruteru, Mandya, Titabar)

2. **Management of sodic soils using nano Zn formulation**

- This experiment will be continued for one more year with the present set of treatments. A fresh schedule of treatments to be formulated from next year.

  Locations: 5 (Faizabad, Kanpur, Mandya, Pusa, Navasari)

3. **Management of acid soils**

- This experiment will be continued for one more year with the present set of treatments. A fresh schedule of treatments will be formulated from next year.

  Locations: 4 (Moncompu, Dumka, Umiam, Titabar)

4. **Residue management in rice-based cropping systems**

- This experiment will be continued for one more year and concluded.

  Locations: 10 (Chiplima, Kaul, Moncompu, Maruteru, Pantnagar, Pusa, Faizabad Khudwani, Kanpur and Karaikal)

5. **Nano-fertilisers for increasing nutrient use efficiency, yield and economic returns in transplanted rice**

- To continue for one more year

- Suggested to focus more on nutrient balance and impact on soil health in the long run in foliar nutrition treatments.

  Locations: 11 (Chiplima, Kanpur, Karaikal, Kaul, Ludhiana, Maruteru, Moncompu, Pantnagar, Masodha, Khudwani, NRRI)

6. **Yield maximisation of rice in different zones**

- Continued with the same set of treatments for another two years
- It can be studied in the DSR environment, wherever feasible.

  Locations: 13 (Chiplima, Kanpur, Karaikal, Ludhiana, Maruteru, Mandya, Moncompu, Pusa, Titabar, Chinsurah, Masodha, Khudwani, Puducherry)

7. **Enhancing the productivity of Organic Rice & Natural farming**

- Continued for one more year
- Suggested to include RDF treatment (100% inorganic) to assess the yield decline in natural farming.

  Locations: 12 (Chiplima, Karaikal, Kaul, Mandya, Moncompu, Pantnagar, Pusa, Titabar, Khudwani, Chinsurah, Puducherry, Varanasi)

8. Zn response of fortified rice genotypes to assess agronomic biofortification potential

- Approved for one more year
- Suggested to identify the variety with high zinc content, yield potential and farmers' acceptability.

  Locations: 8 (Karaikal, Kaul, Ludhiana, Maruteru, Pusa, Titabar, Varanasi, NRRI)

9. Assessment of Carbon dynamics in rice ecologies and recarbonising rice soils for sustainable production.

- Approved for one more year
- Carbon dynamics in virgin soil *vis-à-vis* rice soils need to be explored.

  Locations: 10 (Kanpur, Karaikal, Kaul, Ludhiana, Pantnagar, Titabar, Chinsurah, Masodha, Hazaribagh, Vytilla)

PLANT PHYSIOLOGY

The Plant Physiology report for the year 2024 was presented by Dr. P. Raghuveer Rao. The Plant Physiology Group discussed on 26th April, 2025 and hereby proposed the following technical programme for the year 2025. The comments given by various experts and dignitaries were discussed and would be included in the technical programme for next year. Dr. M.S. Sheshshayee provided valuable comments and emphasized the need to focus on characterizing the physiological traits conferring tolerance to drought, heat and low light stresses. He also appreciated that deploying various stress indices is relevant. He emphasized the need to deviate from conventional discipline-based programmes and initiate collaborative research with Agronomy and Soil Science. He also suggested the crop production group to work in collaboration with breeders to attain fruitful outcomes. One trial, “Role of Silicon in inducing abiotic stress

tolerance in rice genotypes" was dropped as sufficient data was generated with salient findings. Instead, Dry DSR has been proposed by Plant Physiology group which will be carried out in collaboration with Agronomy and Soil Science. The following trials have been finalised for *Kharif* 2025:

1. **Role of Silicon in inducing abiotic stress tolerance in rice genotypes**

   Locations: CBT, IIRR, KJT, KRK, MTU, PNR, PTB, REWA, TTB & RANCHI (10)

   This trial was dropped as sufficient data was generated with salient findings. In place of this trial, Dry DSR has been proposed by the Plant Physiology group, which will be carried out in collaboration with Agronomy and Soil Science. Initially, this trial was planned to take up at five centers – IIRR, CRRI, CBT, PNR and KJT.

2. **Phenotyping of elite rice genotypes for Drought Tolerance**

   Locations: CHN, CRRI, FZB, PTB, REWA, RPUR & RANCHI (7)

   The entries to be tested will be decided in consultation with the Plant Breeding section.

3. **Screening for high temperature tolerance in rice genotypes**

   Locations: IIRR, KAUL, MTU, PNR, PTB, REWA & TTB (7)

   The trial will continue without any modifications and entries to be tested will be decided in consultation with the Plant Breeding section.

4. **Physiological characterization of selected rice genotypes for multiple abiotic stress tolerance**

   Locations: CBT, CRRI, FZB, KAUL, KJT, KRK, MTU, PNR, PTB & TTB (10)

   The trial will be continued and coordinated by CRRI.

   1. anaerobic condition (8-10 cm of standing water above the soil surface)

   2. salinity (equivalent to 12 dS m-1 of NaCl) at early seedling stage

   3. osmotic stress (1 and 2% mannitol solution) at early seedling stage

   All the experiments will be conducted in the laboratory and subjected to stress treatments individually at the seedling stage only.

5. **Screening of Rice Genotypes for Submergence Tolerance**

   Locations: CBT, CHN, CRRI, KRK, PTB, and TTB (6).

   The trial will be continued and coordinated by CRRI.

6. **Screening of rice varieties for tolerance to low light stress**

   Locations: IIRR, KJT, MTU, NRRI, PNR, RPUR, CHN & TTB (8)

The trial will be continued and entries to be tested will be decided in consultation with the Plant Breeding section.

CROP PROTECTION (Pre-Workshop)

PLANT PATHOLOGY

Chairperson : Dr. SK Tripathi
Co-Chair : Dr. Pushpa D Patil
Rapporteurs : Drs. D. Ladhalakshmi, K Basavaraj & GS Jasudasu

The Plant Pathology Group meeting was held on 26th April 2025 at the Director's Committee room of ICAR-Indian Institute of Rice Research, Hyderabad. Dr. M. Srinivas Prasad, PI, Plant Pathology, welcomed the participants and introduced the Chairman, Dr. S.K. Tripathi, Dean, College of Agriculture, Rewa and Co-chairperson, Dr. Pushpa D Patil, Principal Scientist, RARS, Karjat. Dr R Jagadeeshwar, Former Director of Research, PJTAU and PMC member, coordinated the meeting. The group meeting was also graced by Dr V Ravindra Babu, former Director, ICAR-IIRR. Dr D. Ladhalakshmi, Senior Scientist, ICAR-IIRR, read the brief biodata of the Chairperson and Co-chairperson of the session.

The Chairman of the session Dr. S. K. Tripathi, welcomed the participants and congratulated PI, Plant Pathology, Dr. M. Srinivas Prasad and the entire Plant Pathology team at headquarters for good and timely compilation of Plant Pathology reports. In his introductory remarks, Dr. Tripathi highlighted the importance of rice disease management in national food security and farmers' welfare. He stressed on role of Plant Pathologists in the identification of promising donors, broad-spectrum fungicides in the effective management of rice diseases. He also appreciated the conduct of a production-oriented survey in understanding the overall rice cultivation scenario across India. He mentioned the importance of bio-control agents as a part of disease management over the use of fungicides, considering the ecological safety. He stressed on growing importance of direct-seeded rice and emerging diseases like grain discoloration, false smut, brown spot and nematode infestation under climate change. He highlighted the use of drones in the application of pesticides and herbicides. Dr Pushpa D Patil, co-chairperson, in her introductory remarks, congratulated all the cooperators for good conduct of trials. She highlighted the importance of organic farming in disease management and changing disease scenario, wherein minor diseases becoming major threat for rice cultivation. Chairperson requested the PI for the brief presentation of AICRPR trials 2024. He also requested the participants to give their suggestions and to discuss the status of rice diseases and their management in their respective centres.

Dr. M. S. Prasad, PI gave a brief presentation about AICRPR trials of 2024. He informed the house that a total of 560 experiments in 16 trials were conducted at 47 locations (33 funded centres and 14 voluntary centres) including IIRR. He discussed in detail the disease pressure at different locations and pointed out the variations in the disease reaction data with respect to checks. PI insisted on the timely submission of the

trial data and expressed that the quality of the data should be improved. He requested the cooperators to give more importance and focus while conducting the AICRPR trials. He also instructed that the transfer of the cooperators should be updated to the headquarters and the WhatsApp group should be effectively used for fast communication and smooth conduct of the trials. He informed the house that only a few centers are screening the boro entries and advised the cooperators to take up the boro screening and these data are essential for the release of the boro variety. Dr Bishnumaya Bashyal presented the results of basmati rice trials in which she highlighted the increasing importance of bakanae disease in Basmati growing areas and insisted that the PI initiate a new management trial on bakanae disease. Dr. G. S. Laha briefed on observations of the production-oriented survey report. He appreciated all the cooperators for the excellent conduct of the POS survey and the timely submission of POS data. Cooperators *viz*., Dr. Rajappan (Aduthurai), Dr. V.B. Singh (Chatha), Dr. Rini Pal (Chiplima), Dr. C. Gopalakrishnan (Coimbatore), Dr. D Pramesh (Gangavathi), Dr. Pushpa Patil (Karjat), Dr Fayaz Ahmad (Khudwani), Dr. Mahaveer Singh (Kaul), Dr Jayalakshmi (Karaikal), Dr. J.S. Lore (Ludhiana), Dr Someshwar Bhagat (Hazaribagh), Dr. Bhuvaneshwari (Maruteru), Dr. V. Prasad (Masodha), Dr. M. Surendran (Moncompu), Dr. Vijay A. Patil (Navsari), Dr. R.K. Gangwar (Nawagam), Dr. Madhusudhan (Nellore), Dr. P.K Tiwari (Raipur), Dr Kiran Babu (Rajendranagar), Dr Bijender Kumar (Pantnagar), Dr P Raji (Pattambi) and Dr. Phuleswar Nath (Titabar) presented the trial results and also disease scenario in their respective locality. They also mentioned the emerging diseases in their area and different approaches followed for disease management.

During the meeting Dr. R. M. Sundaram, Director, IIRR interacted with the participants and congratulated the Plant Pathology group for the excellent conduct of the trials. The Director mentioned that to recognize the contribution of Plant Pathologists, due credit to be given in terms of acknowledgements and authorships in the papers and varieties released. He highlighted the emerging diseases like false smut and brown spot under a changing climate and also importance of development/use of microbial consortia in rice disease management. He informed the house about variations in disease reactions of resistant and susceptible checks across the screening nurseries and suggested that utmost care should be taken while recording the disease reaction data. He also suggested that if any resistant check shows moderate to high level of susceptibility, then the disease samples should be sent to headquarter for further analysis. He also mentioned that donors for different diseases should be registered with ICAR-NBPGR after thorough testing.

In the closing remarks, Chairman Dr. SK Tripathi expressed that all the cooperators should attend the group meeting and their active involvement is necessary to resolve the issues related to trials. He informed the house that due to low disease pressure, many locations data were not considered for the selection of promising entries. He insisted for augmentation of the disease pressure with artificial inoculation. He mentioned that non-significant data can be omitted and recommendations can be made from the salient findings. Co-Chairman Dr Pushpa D Patil, congratulated the group for the

well conduct of AICRPR trials and POS and suggested to add the GPS coordinates to help in mapping of hotspot locations. She insisted to formulate collaborative projects with breeders and use of microbial consortia in organic farming. In his closing remarks, Dr R Jagadeeshwar, expressed his concern for the artificial screening of major diseases and suggested to re-evaluate the multiple disease-resistant entries identified in the previous years. He also recommended to develop sick plots for effective screening at hotspot locations. He appreciated the emerging technologies in rice farming such as new crop geometry (paired row planting) in Pattambi and use of weed wiper in Moncompu, where weedy rice is a major problem. He also appreciated good progress of research work on false smut and identification of new donors against false smut. He insisted to conduct disease observation nursery trial with two susceptible varieties under both transplanted and DSR conditions to compare the disease scenario and to correlate with weather parameters to understand the influence of these factors on disease development. He requested Dr Kiran Babu to give presentation to all the cooperators on pioneering work being conducted on drone technology at PJTAU.

In the afternoon session, PI presented and discussed the technical program and requested the house for further modifications. Dr. D. Krishnaveni requested to take up artificial screening for Rice Tungro Disease in few more centres. As per the request of the PI, the Chairman suggested modifications in the Disease observation trial. The chairman suggested formulating a management trial on bakanae disease in Basmati growing areas. PI insisted that Dr. Arup Mukharjee and Dr Bishnumaya send their technical program, data recording Excel sheet, and report of Upland and Basmati trials, respectively, to include them in the IIRR main technical program and reports. Dr. C. Kannan informed the house about the continuation of a new trial (Trial 12) for the evaluation of biocontrol consortia for location-specific diseases. He insisted that the meteorological data from each centre should be submitted, which is important for information to the national pest surveillance system (NPS) portal. Dr. D. Ladhalakshmi discussed the IPM DSR trial and Dr. G.S. Laha suggested taking up the special screening trial for false smut under artificial inoculation. Dr. M. S. Prasad informed the house that Trial 11 will be conducted with new fungicide molecules. Dr. K Basavaraj discussed the yield loss trial on brown spot and Dr. G.S. Jasudasu discussed on disease observation trials, respectively. Group meeting ended with vote of thanks by Dr. D. Krishnaveni, PS, IIRR).

The following technical program of plant pathology was finalized

TRIAL 1: SCREENING FOR LEAF BLAST RESISTANCE

NSN-1 (27)

Almora	Bankura	Bikramgunj	Coimbatore	Cuttack
Gangavati	Ghaghraghat	Gudalur	Hazaribagh	IIRR
Jagdalpur	Karjat	Karaikal	Khudwani	Lonavla
Mandya	Maruteru	Navsari	Nawagam	Nellore
New Delhi	Pattambi	Ponnampet	Ranchi	Rewa

Umiam (Barapani)	Wangbal			

NSN-2(22)

Bikramgunj	Coimbatore	Cuttack	Gangavati	Ghaghraghat
Gudalur	Hazaribagh	IIRR	Imphal (Lamphalpet)	Jagdalpur
Kaul	Mandya	Maruteru	Mugad	Nawagam
Nellore	Pattambi	Ponnampet	Rajendranagar	Ranchi
Rewa	Wangbal			

NSN-H-(13)

Almora	Coimbatore	Cuttack	Gudalur	IIRR
Imphal (Lamphalpet)	Jagdalpur	Karjat	Khudwani	Lonavla
Ponnampet	Upper Shillong	Wangbal		

NHSN-(26)

Bankura	Bikramgunj	Coimbatore	Cuttack	Gangavati
Ghaghraghat	Gudalur	Hazaribagh	IIRR	Imphal (Lamphalpet)
Jagdalpur	Karjat	Khudwani	Lonavla	Malan
Mandya	Maruteru	Mugad	Nawagam	Nellore
Ponnampet	Rajendranagar	Ranchi	Rewa	Upper Shillong
Wangbal				

DSN-(25)

Almora	Bikramgunj	Coimbatore	Cuttack	Gangavati
Ghaghraghat	Gudalur	Hazaribagh	IIRR	Imphal (Lamphalpet)
Jagdalpur	Karjat	Lonavla	Malan	Mandya
Maruteru	Mugad	Nawagam	Nellore	Ponnampet
Rajendranagar	Ranchi	Rewa	Upper Shillong	Wangbal

TRIAL 2: SCREENING FOR NECK BLAST RESISTANCE

NSN-1(11)

Bankura	Gangavati	Jagdalpur	Karaikal	Lonavla
Mandya	Maruteru	Nawagam	Nellore	Ponnampet
Rajendranagar				

NSN-2(7)

Gangavati	Jagdalpur	Mandya	Maruteru	Mugad
Nellore	Ponnampet			

NSN-H-(5)

Almora	Imphal (Lamphalpet)	Lonavla	Malan	Ponnampet

NHSN (11)

Bankura	Gangavati	Imphal (Lamphalpet)	Jagdalpur	Lonavla
Malan	Mandya	Maruteru	Mugad	Nawagam
Rajendranagar				

DSN (11)

Almora	Gangavati	Imphal (Lamphalpet)	Jagdalpur	Lonavla
Mandya	Maruteru	Mugad	Nawagam	Nellore
Rajendranagar				

TRIAL 3: SCREENING FOR BROWN SPOT RESISTANCE

NSN-1(19)

Bankura	Bikramgunj	Chatha	Chinsurah	Coimbatore
Gangavati	Ghaghraghat	Hazaribagh	IIRR	Jagdalpur
Khudwani	Lonavla	Ludhiana	Moncompu	Ponnampet
Pusa	Rewa	Sabour	Upper Shillong	

NSN-2

Bikramgunj	Chatha	Coimbatore	Gangavati	Ghaghraghat
Hazaribagh	IIRR	Jagdalpur	Ludhiana	Moncompu
Ponnampet	Pusa	Rewa	Sabour	

NSN-H (7)

Almora	Chatha	Coimbatore	IIRR	Khudwani
Lonavla	Ponnampet			

NHSN (16)

Bankura	Bikramgunj	Chatha	Chinsurah	Coimbatore
Gangavati	Ghaghraghat	Hazaribagh	IIRR	Jagdalpur
Khudwani	Lonavla	Ludhiana	Moncompu	Pusa
Rewa				

DSN (14)

Almora	Bikramgunj	Chatha	Gangavati	Ghaghraghat
Hazaribagh	IIRR	Jagdalpur	Lonavla	Ludhiana
Moncompu	Pusa	Rewa	Sabour	

TRIAL 4: SCREENING FOR SHEATH BLIGHT RESISTANCE

NSN-1(22)

Aduthurai	Arundhutinagar	Bankura	Bikramgunj	Chinsurah
Chiplima	Gangavati	IIRR	Kaul	Lonavla

Ludhiana	Mandya	Maruteru	Masodha (Faizabad)	Moncompu
Navsari	New Delhi	Pantnagar	Pattambi	Raipur
Titabar	Varanasi			

NSN-2(17)

Aduthurai	Arundhutinagar	Bikramgunj	Gangavati	IIRR
Kaul	Ludhiana	Mandya	Maruteru	Masodha (Faizabad)
Moncompu	Navsari	Pantnagar	Pattambi	Raipur
Titabar	Varanasi			

NSN-H (4)

Cuttack	IIRR	Lonavla	Pantnagar	

NHSN (22)

Aduthurai	Arundhutinagar	Bankura	Bikramgunj	Chinsurah
Cuttack	Gangavati	IIRR	Kaul	Lonavla
Ludhiana	Mandya	Maruteru	Masodha	Moncompu
Navsari	New Delhi	Pantnagar	Pattambi	Raipur
Titabar	Varanasi			

DSN (21)

Aduthurai	Arundhutinagar	Bikramgunj	Chiplima	Cuttack
Gangavati	IIRR	Kaul	Lonavla	Ludhiana
Mandya	Maruteru	Masodha	Moncompu	Navsari
New Delhi	Pantnagar	Pattambi	Raipur	Titabar
Varanasi				

TRIAL 5: SCREENING FOR SHEATH ROT RESISTANCE

NSN-1 (12)

Aduthurai	Bankura	Chinsurah	Karjat	Lonavla
Ludhiana	Navsari	Nawagam	Pusa	Raipur
Sabour	Titabar			

NSN-2(7)

Aduthurai	Ludhiana	Navsari	Nawagam	Pusa
Raipur	Sabour			

NSN-H (2)

Karjat	Lonavla			

NHSN (12)

Aduthurai	Bankura	Chinsurah	Cuttack	Karjat
Lonavla	Ludhiana	Navsari	Nawagam	Pusa
Raipur	Titabar			

DSN (9)

Aduthurai	Cuttack	Lonavla	Ludhiana	Navsari
Nawagam	Pusa	Raipur	Sabour	

TRIAL 6: SCREENING FOR BACTERIAL BLIGHT RESISTANCE

NSN-1(24)

Aduthurai	Arundhutinagar	Bankura	Bikramgunj	Chatha
Chinsurah	Chiplima	Gangavati	IIRR	Karjat
Karaikal	Ludhiana	Maruteru	Masodha	Moncompu
Navsari	Nawagam	Nellore	Pantnagar	Pattambi
Raipur	Rajendranagar	Titabar	Varanasi	

NSN-2 (19)

Aduthurai	Arundhutinagar	Bikramgunj	Chatha	Cuttack
Gangavati	IIRR	Ludhiana	Maruteru	Masodha
Moncompu	Navsari	Nawagam	Nellore	Pantnagar
Pattambi	Raipur	Titabar	Varanasi	

NSN-H (5)

Chatha	Cuttack	IIRR	Karjat	Pantnagar

NHSN (22)

Aduthurai	Arundhutinagar	Bankura	Bikramgunj	Chatha
Chinsurah	Cuttack	Gangavati	IIRR	Karjat
Ludhiana	Maruteru	Masodha	Moncompu	Navsari
Nawagam	Pantnagar	Pattambi	Raipur	Rajendranagar
Titabar	Varanasi			

DSN (22)

Aduthurai	Arundhutinagar	Bikramgunj	Chatha	Chiplima
Cuttack	Gangavati	IIRR	Karjat	Ludhiana
Maruteru	Masodha	Moncompu	Navsari	Nawagam
Nellore	Pantnagar	Pattambi	Raipur	Rajendranagar
Titabar	Varanasi			

TRIAL 7: SCREENING FOR RESISTANCE TO RICE TUNGRO DISEASE

NSN-1 2)

Coimbatore	IIRR			

NSN-2(1)

IIRR				

NSN-H (1)

IIRR				

NHSN (2)

Coimbatore	IIRR			

DSN (1)

IIRR				

ENTOMOLOGY

Chairperson : Dr Anand Prakash, Former Director I/c, ICAR-CRRI, Cuttack
Co-Chair : Dr Sanjay Sharma, Principal Scientist, IGKV, Raipur
Rapporteurs : Dr V Chinna Babu Naik, ICAR-IIRR, Hyderabad
Dr Guru Prasanna Pandi, ICAR-CRRI, Cuttack
Dr Sanju Thorat, AAU, Nawagam

The entomology pre-group meeting was held on 26th April 2025, under the Chairmanship of Dr Anand Prakash, Former Head, Entomology & Director I/c CRRI Cuttack and Dr Sanjay Sharma, PS, IGKVV, Raipur. Dr N. Krishna Kumar, Former DDG (Hort.), ICAR, also participated in the group meeting. At the outset, Dr A. P. Padmakumari, Principal Investigator & Head, Entomology, ICAR-IIRR, Hyderabad, welcomed the Chairpersons and all the dignitaries and co-operators from different AICRIP centres and representatives from industry. She complimented all the co-operators for the timely reporting of the data and delivered the introductory remarks. The Chair, Dr Anand Prakash, congratulated the entomology group and, in his introductory remarks, suggested focusing on survey and surveillance in a holistic manner and emphasized looking into the tolerance mechanism of host plant resistance. Dr Sanjay Sharma also congratulated the scientists of this mammoth entomology program under AICRP on Rice.

A total of 42 scientists participated in the meeting. This was followed by presentations on the results of entomology trials conducted during Kharif 2024 and Rabi 2023–24. Representatives from Indo-American Hybrids, Corteva, and Indofil also attended the meeting and shared their valuable insights. The entomology program focused on a range of key areas, including host plant resistance studies, chemical control, biocontrol strategies, ecological studies, integrated pest management (IPM) trials, population dynamics of insect pests and their natural enemies within the rice ecosystem, and pest monitoring using light traps. These trials were carried out across 41 locations, comprising 30 funded centers, 10 voluntary centers, and the ICAR-Indian Institute of Rice Research (ICAR-IIRR), spanning 22 states and one Union Territory.

Dr A P Padmakumari presented the results of 2024-25 screening trials that included PHS, GMS, SBST, MRST, IIRR – NSN (NSN1, NSN2, NHSN, NSN hills, NSN-BORO, NSN-ETP); insect biotype studies (PHSS, PHPM, GMBT and GMPM trials) and summarised the results of the HPR trials. She apprised the house that 1967 entries were screened comprising of 1674 pre-breeding lines and varieties, 111 hybrids, 4 varieties, 8 donors and 164 checks. These entries were evaluated against 14 insect pests in 281 valid tests (58 greenhouse reactions and 223 field reactions). The results of these reactions identified 136 entries (6.91 % of the tested entries) as promising against various insect pests. Dr Chitra Shanker discussed the results of EELP trials under biocontrol and biodiversity studies. Dr. Ch. Padmavathi, presented the results of a screening trial against leaf folder (LFST), ecological and IPM studies which included IEMP, PINF, EPBI and IPMDSR trials. Dr Y. Sridhar, presented the results of chemical control studies that

included STEP, PMRH and EDAPM trials. Dr V. Chinna Babu Naik, discussed the results of insect pest population dynamics assessment of insect pests and natural enemies (PDPNE) and bio- efficacy of insecticides against BPH (BIBPH). Dr Guru Prasanna Pandi, Scientist, ICAR-CRRI, Cuttack presented the results of CRRI-NSN trials and reported that certain breeding materials showed promising results against multiple pests. During the course of presentations and in the concluding remarks by the Chairpersons there were suggestions for improving the conduct of the trials and data reporting. Some of the suggestions are as follows:

- Marker-based detection method may be developed to detect gall midge biotypes across India and HPR activities should be strengthened to manage this pest.
- In all biocontrol experiments, the B: C ratio should be calculated factoring in the ecosystem services.
- In all insecticide treatment trials, a non-chemical method/bioagents was suggested to be included as one of the checks.
- An in-depth analysis of the "Population dynamics of insect pests in rice over the last 20-25 years" can be done as a publication.
- IPM with a focus on basmati rice can be taken up to support the export-oriented basmati sector.
- Rice nematologists from ICAR-IIRR may present nematode problems associated with DSR cultivation.
- The group decided that the trial on "Prophylactic management of planthoppers (PMRH)" can be discontinued as the Southern black streak virus' is a local problem.
- The trial on "Bio-efficacy of insecticides against brown planthopper (BIBPH)" is also discontinued.
- Seed treatment trials should include fungicides along with insecticides.

PI entomology advised all the co-operators to follow the protocols/procedures provided by the coordinating centre for correct recording and reporting of the data. The technical programme for upcoming *Kharif* 2025 and *Rabi* 2026 was discussed with the collaborators. Dr Y. Sridhar proposed the formal vote of thanks.

The following trials were allotted to various centres for conduct during *kharif* 2025 and Rabi 2025-26

Planthopper Screening Trial (PHS)					**Locations 14**
Aduthurai	Coimbatore	Cuttack	Gangavathi	Jagdalpur	Ludhiana
Mandya	Maruteru	Nawagam	Pantnagar	R. Nagar	Raipur
Sakoli	Warangal				
Gall Midge Screening Trial (GMS)					**Locations 12**
Ambikapur	Brahmavar	Chiplima	Gangavathi	Jagtial	Maruteru
Nellore	Pattambi	Ranchi	Sakoli	Warangal	Moncompu
Leaf Folder Screening Trial (LFST)					**Locations 22**
Aduthurai	Arundhutinagar	Bapatla	Brahmavar	Chatha	Chinsurah

Cuttack	Jagdalpur	Karaikal	Karjat	Kaul	Ludhiana
Malan	Masodha	Moncompu	Navsari	Nawagam	Nellore
Pattambi	R. Nagar	Rewa	Titabar		
Stem Borer Screening Trial (SBST)					**Locations 23**
Aduthurai	Ambikapur	Arundhutinagar	Brahmavar	Chinsurah	Chiplima
Coimbatore	Cuttack	Ghagraghat	Ludhiana	Mandya	Malan
Maruteru	Moncompu	Navsari	Nawagam	Nellore	Pantnagar
Pattambi	Pusa	R. Nagar	Raipur	Titabar	
Multiple Resistance Screening Trial (MRST)					**Locations 32**
Aduthurai	Ambikapur	Arundhutinagar	Brahmavar	Chatha	Chinsurah
Chiplima	Coimbatore	Cuttack	Gangavathi	Jagdalpur	Karaikal
Kaul	Ludhiana	Malan	Mandya	Maruteru	Masodha
Navsari	Nawagam	Nellore	New Delhi	Pantnagar	Pattambi
Pusa	R. Nagar	Raipur	Ranchi	Rewa	Sakoli
Titabar	Warangal				
IIRR-National Screening Nursery -1 (NSN-1)					**Locations 21**
Ambikapur	Chatha	Chiplima	Coimbatore	Gangavathi	Jagdalpur
Jagtial	Ludhiana	Mandya	Maruteru	Masodha	Moncompu
Navsari	Nawagam	Pantnagar	Pusa	R. Nagar	Raipur
Sakoli	Titabar	Warangal			
IIRR_National Screening Nursery -2 (NSN-2)					**Locations 17**
Aduthurai	Chinsurah	Coimbatore	Gangavathi	Ghaghraghat	Jagdalpur
Karjat	Kaul	Ludhiana	Malan	Mandya	Maruteru
Moncompu	Navsari	Pantnagar	Pusa	Warangal	
National Screening Nursery (Hills)(NSN-H)					**Locations 9**
Chatha	Coimbatore	Khudwani	Ludhiana	Malan	Mandya
Maruteru	Pantnagar	R. Nagar			
National Hybrid Screening Nurseries (NHSN)					**Locations 16**
Ambikapur	Chinsurah	Coimbatore	Ghagraghat	Karjat	Ludhiana
Mandya	Maruteru	Moncompu	Nawagam	Pantnagar	Pattambi
Pusa	Raipur	Ranchi	Rewa		
Gall Midge Biotype Trial (GMBT)					**Locations 16**
Ambikapur	Bapatla	Brahmavar	Chiplima	Gangavathi	Jagdalpur
Jagtial	Maruteru	Moncompu	Nellore	Pattambi	Ragolu
Ranchi	Sakoli	Titabar	Warangal		
Planthopper Special Screening Trial (PHSS)					**Locations 11**
Aduthurai	Coimbatore	Gangavathi	Ludhiana	Mandya	Maruteru
New Delhi	Pantnagar	R. Nagar	Raipur	Warangal	
Gall Midge Population Monitoring Trial (GMPM)					**Locations 6**
Gangavathi	Jagtial	Moncompu	Pattambi	Ragolu	Warangal
Planthopper Population Monitoring Trial (PHPM)					**Locations 5**

Gangavathi	Ludhiana	New Delhi	Pantnagar	Raipur	
Seed Treatment for Management of Early Season Insect Pests of rice(STEP)					**Locations 14**
Aduthurai	Ambikapur	Chiplima	Coimbatore	Gangavathi	Jagdalpur
Karaikal	Maruteru	Moncompu	Pattambi	Ragolu	R. Nagar
Rewa	Warangal				
Evaluation of Drones for spraying of Agrochemicals (herbicides, insecti-cides and fungicides) in rice Pest Management (EDAPM)					**Locations 6**
Chinsurah	Gangavathi	Ludhiana	Nawagam	R. Nagar	Raipur
Influence of Establishment Methods on Pest Incidence (IEMP)					**Locations 13**
Aduthurai	Chatha	Chinsurah	Chiplima	Gangavathi	Ghagraghat
Jagdalpur	Moncompu	Nawagam	Pantnagar	Pattambi	Pusa
Titabar					
Pest Incidence in Natural Farming (PINF)					**Locations 13**
Chatha	Chinsurah	Chiplima	Gangavathi	Ghagraghat	Karaikal
Khudwani	Maruteru	Moncompu	Pantnagar	Pattambi	Raipur
Titabar					
Evaluation of Pheromone Blends for Insect Pests of rice (EPBI)					**Locations 14**
Aduthurai	Brahmavar	Chinsurah	Coimbatore	Jagdalpur	Jagtial
Karaikal	Ludhiana	Maruteru	Navsari	Pusa	R. Nagar
Raipur	Titabar				
Population Dynamics of insect Pests and Natural Enemies in rice ecosystem (PDPNE)					**Locations 32**
Aduthurai	Bapatla	Chinsurah	Chiplima	Coimbatore	Gangavathi
Ghagraghat	Jagdalpur	Jagtial	Karaikal	Karjat	Kaul
Khudwani	Ludhiana	Mandya	Maruteru	Masodha	Moncompu
New Delhi	Navsari	Nawagam	Nellore	Pantnagar	Pattambi
Pusa	Ragolu	R. Nagar	Raipur	Ranchi	Rewa
Titabar	Warangal				
Evaluation of Entomopathogens against Lepidopteran Pests of rice (EELP)					**Locations 15**
Brahmavar	Chinsurah	Chiplima	Coimbatore	Gangavathi	Karaikal
Karjat	Kaul	Ludhiana	Mandya	Moncompu	Navsari
Raipur	Ranchi	Titabar			
Evaluation of Entomopathogens against Sucking Pests (EESP)					**Locations 6**
Brahmavar	Gangavathi	Karjat	Ludhiana	Moncompu	Navsari
Integrated Pest Management in Direct Seeded Rice (IPMDSR)					**Locations 12**
Aduthurai	Bapatla	Chinsurah	Coimbatore	Cuttack	Gangavathi
Karjat	Kaul	Mandya	Navsari	R. Nagar	Titabar
Population dynamics of insect pests through Light Trap collections (LT)					**Locations 33**
Aduthurai	Bapatla	Brahmavar	Chatha	Chinsurah	Chiplima

Coimbatore	Cuttack	Gangavathi	Ghagraghat	Jagdalpur	Jagtial
Karaikal	Karjat	Kaul	Khudwani	Ludhiana	Malan
Mandya	Maruteru	Masodha	Moncompu	Navsari	Nawagam
Nellore	Pantnagar	Pattambi	Ragolu	R. Nagar	Raipur
Rewa	Titabar	Warangal			

Rabi 2025-26					
Stem Borer Screening Trial (SBST)					**Locations 6**
Bapatla	Chinsurah	Gangavathi	Gerua	Maruteru	Titabar
Multiple Resistance Screening Trial (MRST)					**Locations 4**
Chinsurah	Gerua	Khudwani	Maruteru		
National Screening Nursery (Boro) (NSN-BORO)					**Locations 6**
Chinsurah	Chiplima	Gerua	Maruteru	Pattambi	Titabar
National Screening Nursery (Early Transplanted) (NSN-ETP)					**Locations 8**
Chinsurah	Chiplima	Gangavathi	Mandya	Maruteru	Pattambi
R. Nagar	Titabar				
Evaluation of Pheromone Blends for Insect Pests of rice (EPBI)					**Locations 3**
Gangavathi	Moncompu	Pattambi			
Pest Incidence in Natural Farming (PINF)					**Locations 1**
Karaikal					
Population Dynamics of insect Pests and Natural Enemies in rice Ecosystem (PDPNE)					**Locations 2**
Chinsurah	Pattambi				
Evaluation of Entomopathogens against Lepidopteran Pests of rice (EELP)					**Locations 2**
Pattambi	Titabar				
Integrated Pest Management in Direct Seeded Rice (IPMDSR)					**Locations 3**
Arundhutinagar	Maruteru	Pattambi			

Proceedings of 12th Rice Research Group Meeting for Hill region (3rd March, 2025)

The 12th Rice Research Group Meeting for Hill Region (AICRPR) was conducted online on 3rd March 2025 under the guidance of Dr. R.M. Sundaram, Director, ICAR-IIRR Hyderabad. The meeting was chaired by Dr. D.K. Yadava, Deputy Director General (Crop Science), ICAR, and Co-chaired by Dr. S.K. Pradhan, Assistant Director General (FFC), ICAR. The meeting was also attended by Dr. A.K. Nayak, Director ICAR-CRRI, and Dr. Gopala Krishnan, Head of the Division of Genetics, IARI. Dr. S.V. Sai Prasad and Dr. R. Mahender Kumar were the Conveners, and Drs. G.S. Laha, J. Aravind Kumar, and A.P. Padma Kumari were Co-conveners for the session. The rapporteurs of the programme were Drs. M.S. Anantha, Satish N. Chavan and Jesudasu. Scientists from ICAR-IIRR, ICAR-CRRI, and from different AICRPR cooperating centers participated in the workshop.

At the outset, Director Dr. R.M. Sundaram welcomed the participants and gave brief introductory remarks on the Hill Workshop. He praised all the co-operators for submitting their reports and data on time. Dr. Sundaram emphasized that rice plays a crucial role in the hill ecology and serves as a primary source of livelihood for many people in the region. He also highlighted the potential of specialty rice from the hill region for export purposes.

Dr. A.K. Nayak stated that the data received this year is encouraging. He pointed out that rice in the hill region faces several challenges, including drought, iron and aluminum toxicity, cold stress, and low productivity. He emphasized the significance of the hill ecosystem and stressed that issues related to biodiversity, climate resilience, and variety development programs should be aligned to bridge the yield gap. Additionally, perennial rice and short-duration rice should also be considered in the variety development program.

Dr. S.K. Pradhan, ADG (FFC), ICAR, emphasized that rice is an important crop in hill ecology. He reiterated that although this region falls under a high rainfall zone, its distribution and deficit are issues. Additionally, acidic soil, Fe and Al toxicity, and other abiotic and biotic stresses are some of the constraints. He suggested placing greater emphasis on direct-seeded rice technology, resilience to drought, seedling vigour, seed replacement with high-yielding rice cultivars, and the marketing potential of specialty rice.

Dr. S.V. Sai Prasad, PI, AICRPR, provided an overview of the research highlights for the hill region this year, along with the corresponding action-taken report. He informed the house about the overall improvement in the quality of data and its submission by the cooperating centers. He gave brief information about the entries promoted to various AVTs and requested the co-operators to send the information about the new nominations. He also urged the cooperating centers to submit the seeds of advanced and new nomination entries along with check varieties as early as possible to avoid delays in the dispatch of trials and set a deadline of 15th March, 2025.

Dr. D.K. Yadava, DDG (Crop Science), ICAR, congratulated and appreciated the Director of IIRR and Team AICRPR for a well-structured program and the timely conduct of this workshop. He highlighted some of the challenges faced by rice cultivation in the hill region, such as soil acidity, low water-holding capacity, rocky soil, Al and Fe toxicity, drought, and small farm holdings, which make large-scale farm mechanization difficult. He stressed the importance of considering nutrient use efficiency (NUE), specialty rice, and location- and trait-specific breeding programs to address various challenges associated with rice cultivation. He also emphasized the need to develop an online platform for AICRPR to facilitate seamless data submission, query resolution, and better monitoring of activities by cooperating centers across regions. Additionally, he suggested regularly monitoring and evaluating the cooperating centers and continuing support for well-performing centers. He also emphasized that the well-structured program is advancing successfully under the commendable leadership of Dr. Sundaram, Director of ICAR-IIRR.

The Director of IIRR mentioned that genomic selection has already been initiated at several centers, including IIRR, and a significant amount of material has been fingerprinted. He added that efforts in this area will be further intensified in the future. He also informed the house that Dr. B. Sailaja, Principal Scientist, Computer Section, along with her team, has developed an in-house online AICRPR intranet portal for seamless data submission and improved coordination with the centers. This portal is already in use for the program, and we are continuously working on improving it.

The inaugural session ended with a vote of thanks by Dr. M.B.B. Prasad Babu, Head, Soil Science, ICAR-IIRR.

Technical Session

The inaugural session was followed by a technical session, during which representatives from each cooperating center presented their respective progress reports. All centers presented their reports except for Wangbal, Gangtok, Medziphema, and Rajouri due to technical issues that arose during the meeting. These centers were asked to submit the required information via email as soon as possible after the meeting. The Director suggested that the Khudwani center reconfirm the results of exceptionally high Fe content in some of their lines. The Umiam-ICAR center was asked to accelerate work related to phosphorus (P) tolerance and blast resistance. Additionally, alternative research options should be explored in addition to the Upper Shillong Centre, as no major research work is currently being undertaken there, given that this center falls under the State Agriculture Department rather than a formal research station. The house suggested discontinuing one DSR and two RSL trials sent by NRRI to Ponnampet last year due to the unsuitability of the location. However, the Ponnampet center expressed interest in taking up **late-duration trials**. The house appreciated the hard work and dedication of Dr. Surendra from Sirsi. Since he is set to retire in the coming months, no new trials will be conducted at Sirsi next year. The Chairman suggested exploring the possibility of continuing the Sirsi Center under AICRPR for the coming year. The PI of Plant Pathology

urged centers to perform artificial inoculation for blast in case of low disease incidence, while the PI of Entomology emphasized the need for augmenting the insect pest population to improve the evaluation of entries and technologies against pests and diseases.

The following are some of the points that came up during the meeting:

- The monitoring team should check the outperforming or best-performing entries for more confidence in the promotion of such entries
- Emphasis should be given to genome-assisted breeding to speed up the work related to developing high-yield and other traits-related breeding programmes.
- Co-operators can use facilities at ICAR-IIRR, ICAR-NRRI, and ICAR-IARI to estimate iron, zinc, protein, and other bio fortification-related traits.
- The trait-specific rice lines/genotypes should be registered with the NBPGR.
- Support will continue to the use of IIRR facilities for advancing seed material during the winter season for those who need it.
- Director, IIRR urged centers to fill their vacant posts on priority.
- Emphasis should be given to developing trait and location-specific rice varieties.
- More crossings should be attempted at cooperating centers and the number of entries nominated for trials should also be increased.
- Efforts should be intensified in developing a Japonica variety suitable for export quality.

The program ended with a vote of thanks by Dr. M.S. Anantha, Senior Scientist, Plant Breeding, ICAR-IIRR, Hyderabad.

PLENARY SESSION

Chairperson : Dr SK Pradhan, ADG (FFC) ICAR
Co-Chair : Dr MJ Baig, Director (A), ICAR-CRRI, Cuttack &
Dr R M Sundaram, Director, ICAR-IIRR, Hyderabad
Convener : Dr R Mahender Kumar, Head, Crop Production
Rapporteurs : Dr Ch Padmavathi, ICAR-IIRR, Hyderabad
Dr D Ladhalakshmi, ICAR-IIRR, Hyderabad

Presentation of Recommendations & Action Points

RECOMMENDATIONS

VIC Proceedings - Dr Sai Prasad, PI, Plant Breeding

Dr Sai Prasad presented the recommendations of the VIC held on 26th April 2025. Received around 35 varieties for identification, out of which 26 varieties were identified. Out of these, 7 varieties were identified under irrigated early transplanted (ETP), 3 varieties were identified under the MS category irrigated medium-early, and 1 variety under a genome-edited line under the background of MTU 1010 was identified for the first time, under irrigated medium, only one variety was identified. Under MS, four varieties were identified, of which one genome-edited line under the BPT 5204 background was identified. Two varieties were identified under low phosphorous tolerance (LPT), and three were identified under low nitrogen tolerance (LNT). One variety was identified for Saline-alkaline areas (ALS). Under the Basmati category, two varieties were identified. Under irrigated late conditions, two varieties have been identified. Four varieties have been deferred. Five varieties were not identified and one variety was recommended for area extension as it was released under SVRC. The above list was sent for approval to the competent authority and the final list will be uploaded onto the IIRR website.

VIC Proceedings - Dr AS Hariprasad, PI, Hybrid Rice

In Hybrid rice, 21 proposals were submitted for VIC. In irrigated early ecology, 5 hybrids were recommended. In mid-early, 7 proposals were submitted, out of which 4 were recommended. In irrigated medium, 5 proposals were examined and all 5 were recommended. In early direct seeding, one proposal was submitted and after examination, it was recommended. In Saline and alkaline ecology, one proposal was submitted and recommended. Four proposals were not identified. One proposal was deferred. Of the 16 recommended proposals, two are from the public sector institutions (one each from ICAR-CRRI, Cuttack and ICAR-IIRR, Hyderabad)

Dr SK Pradhan, ADG (FFC), informed the house that all the VIC proposals mentioned above were provisionally approved, and after the approval from the competent authority, the final list will be put on the website. He congratulated all the lead developers and co-developers of various varieties and hybrids.

AGRONOMY – Dr R Mahender Kumar, PI

- Alternate wetting and drying method enhanced the water productivity and mechanised transplanting resulted in significantly higher grain yield.
- Yield maximisation was possible (24 locations) by using 125% RDF + FYM @ 5 t/ha (6.09 t/ha).
- IPM implemented plots recorded mean grain yield advantage of 10.63, 23.32, 23.05, 21.29, and 17.18 % respectively, in Zone I, III, IV, V, VI and VII over the farmer practices.
- Puddled or unpuddled DSR system was comparable to transplanting (5 years of study) system in terms of crop growth, grain yield and Benefit-Cost ratio, though individual weed shifts in number, species, and biomass are higher in DSR systems, which are manageable with mechanical and/or chemical weed control methods.

SOIL SCIENCE – Dr MBB Prasad Babu, PI

- Residue application (5 t/ha) can help in saving 25% N and 100% K in addition to enhancing SOC.
- Long-term application of either FYM 10 t/ha alone or 5 t/ha in addition to RDF can significantly improve soil fertility (SOC, available N, P and K status).
- Integrated crop management (ICM) with need-based pest control can result in a higher grain yield up to 35% over complete natural farming.

PLANT PHYSIOLOGY – Dr P. Raghuveer Rao, PI

- Silicon (80 ppm) increased mean grain yield by 6.5%. Water stress alone reduced mean grain yield by 13%; Silicon + water stress ameliorated the negative impact of water stress by 7%. 27P37, AZ 8433 DT and VNR-2228 noted the highest positive performance for grain yield with silicon application. VNR-2228 performed best with silicon application under water stress.
- D-163-3, followed by RP 6469-88, exhibited the least reduction in grain yield and could be used as donors in breeding for rainfed upland situations.
- Heat stress reduced the mean grain yield by 30.37% over the control and was mainly attributed to the reduction in filled grain number per panicle. IET 31512, followed by NDR-97, US-314 and IET 29700 recorded the least reduction in grain yield under heat stress over control, and can be utilized as donors in breeding for high temperature.
- A highly significant and positive association was noted between visual salt injury score (SES) and shoot Na+/K+ ratio, which can serve as a promising criteria in selecting salinity-tolerant genotypes. Rashpanjor, Ratnagiri-8, for anaerobic germination + salt stress; AC 443, CRRG6 for anaerobic germination + osmotic stress, were noted as tolerant genotypes.

- CBMAS22061 was highly tolerant to submergence, with a survival ability of 77.39%, which was even higher than the tolerant check, Swarna Sub1.

- Low light stress has led to a reduction in grain yield ranging from 20 to 60% among the genotypes, with a mean reduction of 43% over the control. IET-31246(R), IET-32147, IET-33262, IET-32134, IET-33264 and IET-32176 noted the least reduction in grain yield under low light stress over control and can be utilized as donors for low light breeding.

ENTOMOLOGY – Dr AP Padmakumari, PI

- In the second year of the Planthopper screening trial, the genotypes, namely, MTU 2721-7-1-2-1, MTU 2720-28-2-1-1, MTU 2721-7-1-2-2, RP 6740-SP-M-MS-70, MTU 2716-28-2-1-2, MTU 2716-28-2-2-2, RP 5977-MS-112, ISM B-8, JGL 38935, were found promising. Therefore, these entries can be promoted to the Multiple Resistance Screening Trial and can also be registered as donors for planthopper resistance.
- In the second year of the Gall midge screening trial, the genotypes, namely, RMS (ISM24), WGL1909, RGL294 and RMS (ISM 26), were found promising. Therefore, these genotypes can be promoted to the Multiple Resistance Screening Trial and can also be registered as donors for Gall midge resistance.
- In the second year testing in the Stem Borer Screening trial, four entries, namely, RP4919-NSR24, BK49-76, RP6505-40, RP6112-Sm-92-R-293-1-1-3-3 were found promising. Therefore, these genotypes can be promoted to the Multiple Resistance Screening Trial and can also be registered as donors for stem borer resistance.
- NND 2 was found promising in the MRST trial against 4 pests, BPH, stem borer, leaf folder and whorl maggot for two years and can be registered

PLANT PATHOLOGY – Dr M Srinivas Prasad, PI

- Six genotypes were identified with moderate to high level of resistance to 4 or more diseases viz., NLRBL-5 (MR to Neck blast, Sheath blight, Brown spot & Sheath rot), NLRBL-7 (MR to Sheath blight, Brown spot, Bacterial blight & Sheath rot), NLRBL-8 (MR to Neck blast, Sheath blight, Bacterial blight &Sheath rot), NLRBL-5 (MR to Neck blast, Sheath blight, Brown spot, &Sheath rot), NLRBL-7 (MR to Sheath blight, Brown spot, Bacterial blight & Sheath rot) and NLRBL-8 (MR to Neck blast, Sheath blight, Bacterial blight &Sheath rot).
- The new combi-product, azoxystrobin 5.1% + tebuconazole 9.1% + prochloraz 18.2% EC (3.5 ml/l) showed broad-spectrum activity against leaf blast, neck blast, sheath blight, brown spot and sheath rot.

ACTION POINTS

PLANT BREEDING – Dr SV Sai Prasad, PI

- Even if an entry is performing on overall basis, the entry will be promoted only in those zones where it has significant yield advantage.
- The promotion of entries in rainfed trials will be based on the significant yield advantage. However, When no entries are promoted based on this criteria, then 5% superiority over the best check can be considered for promotion.
- In addition to the grain quality analysis at ICAR-IIRR, satellite labs at three more centres i.e Raipur (IGKV), Navsari (NAU) and Rajendranagar (PJTAU) to aid in grain quality analysis.
- Soil sample should be analyzed to assess the nutrient status at locations conducting Low Phosphorous Trials (LPT) and Low Nitrogen Trials (LNT) and accordingly, the promotion of entries to be finalized.
- For the conduct of AVT-2 Agronomy trial, seed in sufficient quantity (6 kg) should be submitted to the Head, Agronomy Department in addition to the regular submission of seed for varietal trial.
- Centres volunteering to conduct trials should take up the complete set (IVT, AVT 1 and AVT 2) of an ecology. As far as funded centres are concerned, the trials will be allotted based on mandate/suitability to the region.
- Hybrid/ variety entries in AICRPR should meet the minimum requirement of ≥67% milling percentage and ≥55% HRR for promotion.
- Breeding for herbicide-tolerant rice should be restricted to Early Direct Seeded Rice (DSR) ecologies only. Furthermore, the target area should be limited to regions, where the original parent variety is already recommended for cultivation.
- Based on the results of benchmarking in biofortification trials, The benchmark of grain zinc in polished rice to be kept at 20 ppm and to be introduced as a pilot basis from kharif 2025.

AGRONOMY – Dr R Mahender Kumar, PI, Agronomy

- Water requirement for rice production has to be reduced significantly due to groundwater depletion and the availability of other water resources. A focus is needed for IoT-based water management.
- A detailed study on soil available nutrients and crop nutrient uptake of low phosphorus and low nitrogen trials is recommended.
- A focused study on the initial seedling vigour of different varieties suitable for DSR needs to be done.
- A trial on Weedy rice involving Kerala Agricultural University needs to be planned.
- Inclusion of biostimulants for climate-resilient agriculture.

SOIL SCIENCE – Dr MBB Prasad Babu, PI

- The soil microbiome is to be assessed through metagenomics in the long-term fertilizer trial.
- Impact study of Nano urea application on long-term productivity and soil nitrogen status.

PLANT PHYSIOLOGY – Dr P. Raghuveer Rao, PI

- A new trial may be initiated on direct-seeded rice (DSR) in collaboration with Agronomy and Soil Science with emphasis on plant physiological mechanisms.

ENTOMOLOGY – Dr AP Padmakumari, PI

- In the trial on "Evaluation of Drones for spraying of Agrochemicals (Herbicides, insecticides and fungicides) in rice pest management" (EDAPM), one untreated check may be included.
- Multiple resistance screening trial entries should be screened for grain moth.

PLANT PATHOLOGY – Dr M Srinivas Prasad, PI

- Natural incidence of diseases will be recorded in the collaborative trial on the Evaluation of Organic fertilizers and Natural farming practices for enhancing the productivity and soil health.
- Staggered sowing (three dates of sowing at 10-day intervals) is recommended to screen the selected genotypes at natural false smut hot spot locations.
- Screening non-basmati genotypes against Bakanae will be formulated by CRRI, Cuttack
- A trial on the Management of Bakanae disease in Basmati will be formulated by IARI, New Delhi.

Dr SK Pradhan, ADG (FFC), congratulated all the lead breeders whose varieties/ hybrids were identified. He also congratulated all the awardees of the best centers. He said that the 60th ARGM is a highly successful event, as all the co-operators took an active part in the formulation of the program. He congratulated the Director and the team ICAR-IIRR for successfully conducting this ARGM. He also congratulated the Chairman and Co-Chairman of all the sessions, who conducted the sessions in a very interactive way. He emphasised the following points to be ready for the future:

1) Our target is Viksit Bharat and rice is the main food crop for food security, so we should plan accordingly and act appropriately. Please be sure that the material nominated is for the right target environment.

2) Think of multi-trait breeding, as we need many biotic and abiotic traits to be incorporated. Already, ICAR-CRRI and ICAR-IIRR have started a multi-trait breeding approach.

3) He said that he reviewed centers individually and found 10-15 centers as outstanding and he congratulated them. He also said that few centers have to improve their performance.

In his remarks, Dr MJ Baig, Director in-charge, ICAR-CRRI, congratulated all the award winners of the best centers. The last three days were a testament to the hard work and extraordinary commitment of AICRPR to national and global food security, as India is now a leading exporter of rice to many countries. The recommendations presented today must guide to making of a road map for 2025-26. He affirmed the commitment of ICAR-CRRI to rice research, reducing the gap between the laboratory and the farm with public-private partnerships. First time in the history of AICRPR, two genome-edited varieties were identified and he congratulated the developers and team members. In alignment with Atmanirbhar Bharat and sustainable development goals, he said that let this diamond jubilee be a catalyst for action on climate change, resource scarcity and nutritional security to innovate and adopt.

The following scientists and cooperating centers were awarded

S.No	Name of the Award	Name of the Recipient
1	Lifetime Achievement Award	**Dr B Misra**, Former VC, SKAUST, Jammu & Kashmir, Former Director, ICAR-DWR and Former Director, ICAR-DRR
2	Lifetime Achievement Award	**Dr BN Singh**, Former Director, ICAR-CRRI, Cuttack
3	Lifetime Achievement Award	**Dr Vijaipal Singh**, Former Program Leader, Rice, IARI, New Delhi
4	Lifetime Achievement Award	**Dr GA Parray**, Emeritus Scientist, SKAUST, Jammu & Kashmir, Former ADR, Khudwani, Jammu & Kashmir
5	Lifetime Achievement Award	**Dr AK Singh**, Former Director, ICAR-IARI, New Delhi
6	Lifetime Achievement Award	**Dr V Ravindra Babu**, Former Director, ICAR-IIRR, Hyderabad
7	Lifetime Achievement Award	**Dr SR Das**, Honorary Professor, OUAT, Bhubaneswar, Odisha
8	Lifetime Achievement Award	**Dr Deepak Sharma**, Head, Department of Genetics & Plant Breeding, IGKV, Raipur & Nodal Officer, PPV&FR
9	Lifetime Achievement Award	**Dr S Thirumeni**, Professor of Plant Breeding & Genetics, PAJANCOA & RI, Puducherry
Best Center Awards		
1	Overall AICRPR Center - Funded	Main Rice Research Center, **Navsari**, NAU, Gujarat

S.No	Name of the Award	Name of the Recipient
2	Overall AICRPR Center - Funded	IGKV, **Raipur**, Chattisgarh
3	Overall AICRPR Center – Voluntary	PAJANCOA & RI, **Karaikal**, Puducherry
4	Best AICRPR Funded Center – Crop Improvement	Main Rice Research Center, **Navsari**, Gujarat
5	Best AICRPR Funded Center – Crop Improvement	**Raipur**, IGKV, Chattisgarh
6	Best AICRPR Voluntary Center – Crop Improvement	**Karaikal**, PAJANCOA & RI, Puducherry
7	Best AICRPR Funded Center – Agronomy	**Pantnagar**, GBPUA&T, Uttarakhand.
8	Best AICRPR Funded Center – Agronomy	**Aduthurai,** TNRRI, Tamil Nadu
9	Best AICRPR Voluntary Center – Agronomy	PAJANCOA & RI, **Karaikal**, Puducherry
10	Best AICRPR Funded Center – Soil Science	PAJANCOA & RI, **Karaikal**, Puducherry
11	Best AICRPR Funded Center – Soil Science	Regional Agricultural Research Station, **Maruteru**, ANGRAU, Andhra Pradesh
12	Best AICRPR Voluntary Center – Soil Science	Mountain Research Center for Field Crops, **Khudwani**, SKAUST-K, Jammu & Kashmir
13	Best AICRPR Funded Center – Plant Physiology	Regional Agricultural Research Station, **Maruteru**, ANGRAU, Andhra Pradesh
14	Best AICRPR Funded Center – Plant Physiology	Regional Agricultural Research Station, (Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth), **Karjat,** Maharashtra
15	Best AICRPR Voluntary Center – Plant Physiology	PAJANCOA & RI, **Karaikal**, Puducherry
16	Best AICRPR Funded Center – Plant Pathology	Agricultural Research Station, **Gangavati,** UAS, Karnataka
17	Best AICRPR Funded Center – Plant Pathology	Main Rice Research Center, **Navsari**, NAU, Gujarat
18	Best AICRPR Voluntary Center – Plant Pathology	Hybrid Rice Evaluation Center, **Gudalur**, TNAU
19	Best AICRPR Funded Center – Entomology	Regional Agricultural Research Station, **Pattambi,** KAU
20	Best AICRPR Funded Center – Entomology	Institute of Rice Research, **Rajendranagar**, PJTAU
21	Best AICRPR Voluntary Center – Entomology	PAJANCOA & RI, **Karaikal**, Puducherry
Special Awards for Ecologies		
22	Best Award in Coastal Rice Ecology	Agricultural Research Station, **Ragolu**, ANGRAU
23	Best Award in Hill Ecosystem	Mountain Research Center for Field Crops, **Khudwani**, SKAUST-K, Jammu & Kashmir

Felicitation of Retiring Scientists

1) Dr MJ. Baig, Director in-charge, ICAR-CRRI, Cuttack
2) Dr Sanghamitra Samantaray, Principal Scientist & Head, Crop Improvement Division, ICAR-CRRI, Cuttack
3) Dr S. Thirumeni, Professor of Plant Breeding & Genetics, PAJANCOA & RI, Karaikal, Puducherry
4) Dr R. Narasimhan, Rice Breeder, KVK, Puducherry
5) Dr Subrata Ray, Senior Scientist, Plant Breeding, Department of Farmer Welfare, Tripura
6) Dr R. Mahender Kumar, Principal Scientist & Head, Agronomy, ICAR-IIRR, Hyderabad
7) Dr K. Surekha, Principal Scientist, Soil Science, ICAR-IIRR, Hyderabad
8) Dr P. Raghuveer Rao, Principal Scientist & Head, Plant Physiology, ICAR-IIRR, Hyderabad
9) Dr P. Muthuraman, Principal Scientist & Head, TTT, ICAR-IIRR, Hyderabad
10) Dr N Nagarajan, Plant Breeder, Aduthurai**,** TNRRI, Tamil Nadu

In the end, Dr MBB Prasad Babu, Principal Scientist & Head, Soil Science, proposed formal vote of thanks.

Proceedings of Variety Identification Committee (VIC) Meeting-2025

The Variety Identification Committee (VIC) chaired by Dr. D.K. Yadava DDG (CS), ICAR met on April 26, 2025 in the Committee Room of ICAR-Indian Institute of Rice Research, Rajendranagar, Hyderabad during the 60th Annual Rice Research Group Meetings. The members of the Committee are listed in the Annexure "A". A total of 35 varietal and 21 hybrid proposals were put up to the Committee. All the 56 proposals were critically examined for their zonal performance. Specific comments and decision of the committee are given below for all the proposals.

List of VIC Proposals (Varietal entries) received for 60th ARGM 2025

S. No	Proposal No	IET No.	Designation	Submitted by
Early Transplanted (ETP)				
1.	1.1	IET 30642	KNM 12509	PJTAU, Kunaram, Telangana
2.	1.2	IET 30641	RNR 35105	PJTAU, Rajendranagar, Telangana
3.	1.3	IET 30669	WGL 1719	PJTAU, Warangal
4.	1.4	IET 30636	JGL 28639	Jagitial, Telangana
5.	1.5	IET 29940	CRV-BCKV-22-35	West Bengal
6.	1.6	IET 29975	KPS 6251	Kampasagar, Telangana
7.	1.7	IET 30656	IIAB Dhan 5	IIAB, Ranchi
8.	1.8	IET 32036	KKL (R) 5	Karaikal, Puducherry
Irrigated Mid-Early (IME)				
9.	2.1	IET 30756	RP 6693-16-388 (DRR Dhan 82)	IIRR, Hyderabad
10.	2.2	IET 32043	Pusa DST Rice-1	IARI, New Delhi
11.	2.3	IET 32045	RP 6744-19182-1-1(DRR Dhan 83)	IIRR, Hyderabad
Irrigated Medium (IM)				
12.	3.1	IET 30772	TRC-GTC739-B-B-4-1	Umiam, Meghalaya
13.	3.2	IET 30819	PNPG 114	Prabhat Agribiotech Limited
14.	3.3	IET 32051	RP 6741-RAF-2608-IJ-2-2 (DRR Dhan 84)	IIRR, Hyderabad
Medium Slender				
15.	4.1	IET 32072	BGIR7-26-3(GEL-SM) (DRR Dhan 100)	IIRR, Hyderabad
16.	4.2	IET 30961	CR Dhan 417	CRRI, Cuttack
17.	4.3	IET 32047	RP 6747-19484-1-1	IIRR, Hyderabad
18.	4.4	IET 32061	RP 6755-RMS-1-23-65-83 (DRR Dhan 91)	IIRR, Hyderabad
19.	4.5	IET 32054	RP 6749-RMS-7-17-27-41 (DRR Dhan 85)	IIRR, Hyderabad
20.	4.6	IET 32062	RP 6756-RMS-29-4364-82	IIRR, Hyderabad
21.	4.7	IET 32056	RP 6751-RMS-1-13-34-42 (DRR Dhan 86)	IIRR, Hyderabad

S. No	Proposal No	IET No.	Designation	Submitted by
Low Phosphorus Tolerance (LPT)				
22.	5.1	IET 31110	RP 5405-JBB-631(B)-B-B-1-1-1-1 (DRR Dhan 87)	IIRR, Hyderabad
23.	5.2	IET 28070	RP Bio 4919-B-B-13-7 (DRR Dhan 88)	IIRR, Hyderabad
Low Nitrogen Tolerance (LNT)				
24.	6.1	IET 29581	RP 6255-BV-RIL-1696 (DRR Dhan 90)	IIRR, Hyderabad
25.	6.2	IET 28084	CR Dhan 330	CRRI, Cuttack
26.	6.3	IET 29578	CR Dhan 338	CRRI, Cuttack
Alkaline/Saline (AL & ISTVT)				
27.	7.1	IET 31050	CSR 106 (CSR 104-10-2)	CSSRI, Karnal
28.	7.2	IET 31055	CSR 108 (CSR 141-11-112)	CSSRI, Karnal
Basmati				
29.	8.1	IET 30533	HKR 17-422	Kaul, Haryana
30.	8.2	IET 30535	Basmati CSR 111 (CSR-BT-252-19)	ICAR-CSSRI, Karnal
31.	8.3	IET 31307	Pusa 3136-49-2-105-19	IARI, New Delhi
Late (L)				
32.	9.1	IET 32053	CSR 389-16-23-42	ICAR-CSSRI, Karnal
33.	9.2	IET 32064	RP 6533-RMS-3-45-9-18 (DRR Dhan 89)	IIRR, Hyderabad
34.	9.3	IET 32123	CR Dhan 8129 CR 4430-1-3-2-1	CRRI, Cuttack
Early Direct Seeded (EDS)				
35.	10.1	IET 30336	ORJ 1356	HRRS, OUAT, Jeypore

Early Transplanted (ETP)

Proposal No. 1.1 KNM 12509 (IET 30642)

IET 30642 (KNM 12509) (KNM 118 / IR 72//MTU 1156) with flowering duration of 88 days, long slender grain with HRR of 62.5%, moderately resistant to leaf blast and neck blast has been carefully examined and based on its yield superiority it is identified for the Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh), Zone IV (Tripura and Assam), Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh) and Zone VI (Maharashtra and Gujarat).

Proposal No. 1.2 RNR 35105 (IET 36041)

RNR 35105 (IET 36041) (JGL 24423/MTU 1156**),** with flowering duration of 93 days, medium slender grain, HRR of 57.0% and moderately resistant to leaf blast and neck blast, medium slender grain and based on its yield superiority it is identified for Zone II (Haryana, Rajasthan, Punjab and Uttar Pradesh), Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh) and Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh).

Proposal No. 1.3 WGL 1719 (IET 30669)

WGL 1719 (IET 30669) (MTU 1081/R1556-2577) with a flowering duration of 85-90 days, long slender grain, HRR of 62.6% and moderately resistant to leaf blast. Based on its yield superiority, it is identified for Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh).

Proposal No. 1.4 JGL 28639 (IET 30636)

JGL 28639 (IET 30636) (MTU 1010 / NLR 34449) has flowering duration of 90 days, long slender grain, HRR of 57.5% and moderately resistant to sheath blight, BB, leaf blast and neck blast. Based on its yield superiority it is identified for Zones III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh) and IV (Tripura and Assam).

Proposal No. 1.5 CRU-BCKV-22-35 (IET 29940)

CRU-BCKV-22-35 (IET 29940) (N22 / IET 25701) has a flowering duration of 89 days, short bold grain, HRR of 59.4%, and moderately resistant to leaf blast and neck blast. Based on its yield superiority it is identified for Zones II (Haryana, Rajasthan, Punjab and Uttar Pradesh), Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh), Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh) and Zone VII (Tamil Nadu, Kerala, Karnataka, Puducherry, Telangana and Andhra Pradesh).

Proposal No. 1.6 KPS 6251 (IET 29975)

KPS 6251 (IET 29975) (MTU 1010 / Chittimuthyalu) has already been released by SVRC for the state of Telangana and recommended during 93rd CVRC for notification. Keeping its superior yield performance and 57% HRR, moderate resistance to leaf blast and neck blast, proposal is considered for area expansion in zone V (Maharashtra and Chhattisgarh).

Proposal No. 1.7 IIAB Dhan-5: IIABR-9- IIAB-54-IR16A3098 (IET 30656):

IIAB Dhan-5: IIABR-9-IIAB-54-IR16A3098 (IET 30656) (PR 36921-B-6-1-3-4 / IRRI 154// IR09A228) has flowering duration of 89 days, long slender grain, HRR of 55.9%, and moderately resistant to leaf blast and neck blast Based on its yield superiority it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh) and Zone IV (Tripura and Assam).

Proposal No. 1.8 KKL (R) 5 (IET 32036)

KKL (R) 5 (IET 32036) (ADT 45*4 / FL478 // CSR 27) is a NIL of ADT 45 for seedling and reproductive stage salt tolerance with *qSaltol + qSSISFH 8.1.* This has flowering duration of 90 days with medium slender grain, HRR of 55.0%, moderately resistant to leaf blast, neck blast and stem borer. Based on its yield superiority it is identified for gazette notified states of ADT 45 in Zone VII (Tamil Nadu, and adapted states of Puducherry and Kerala) and Zone III (West Bengal).

Irrigated Mid-Early

Proposal No. 2.1 DRR Dhan 82 (IET 30756)

DRR Dhan 82 (IET 30756) (Swarna / MTU 1010) has flowering duration of 99 days, medium slender grain with HRR of 59.9%. Moderately resistant to BB, hence based on its

yield superiority it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh).

Proposal No. 2.2 Pusa DST Rice 1 (IET 32043)

Pusa DST Rice 1 (IET 32043) is a genome edited line of MTU 1010 with 2bp deletion in the *DST* gene for enhancing drought and salt tolerance. This line has flowering duration of 90 days, long slender grains, HRR of 63.1% with salinity tolerance, moderate resistance to leaf blast and field tolerance to plant hoppers. Based on its yield superiority, it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh), Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh) and Zone VII (Tamil Nadu, Kerala, Karnataka, Puducherry, Telangana and Andhra Pradesh).

Proposal No. 2.3 DRR Dhan 83 (IET 32045)

DRR Dhan 83 (IET 32045) (Krishna Hamsa / IRBB60 // Krishna Hamsa / Tetep /// Krishna Hamsa / IR 96321 1447-561-B-1 // Krishna Hamsa / IR81896-96-B-B-195 //// Krishna Hamsa / IR 74371-46-1-1 13 // Krishna Hamsa /DSB2) is a NIL in the background of Krishna Hamsa with introgression of *xa5, and Xa21* for BLB resistance*, and Pi*9, *Pi1*, *Pi20, Pi38* for blast resistance*.* It has a flowering duration of 91 days, long slender grains, HRR of 65.8%, and it is resistant to BB and blast. Based on its yield superiority it is identified for Zone IV (Tripura and Assam) and Zone VII (Tamil Nadu, Kerala, Karnataka, Puducherry, Telangana and Andhra Pradesh).

Irrigated Medium

Proposal No. 3.1 TRC-GTS 739-B-B-4-1 (IET 30772)

TRC-GTS 739-B-B-4-1 (IET 30772) (Gomati / Tripura Sarat), has a flowering duration of 105 days, long slender grains and moderate resistance to leaf blast, neck blast, bacterial blight, sheath rot and brown spot. After re analysis of grain quality, this entry with a HRR of 55.3% is identified for Zone III (Odisha, Bihar, West Bengal, Uttar Pradesh and Jharkhand).

Proposal No. 3.2 PNPG 114 (IET 30819)

PNPG 114 (IET 30819) (PNP 115 / PNP 310) has a flowering duration of 101 days, short bold grains and moderate resistance to leaf blast, bacterial blight and brown spot. After re-analysis of grain quality, this entry with a HRR of 59.3% is identified for Zone III (Odisha, Bihar, West Bengal, Uttar Pradesh and Jharkhand) and Zone VII (Tamil Nadu, Karnataka, Telangana and Andhra Pradesh).

Proposal No. 3.3 DRR Dhan 84 (IET 32051)

DRR Dhan 84 (IET 32051) [Jaya*2 / MTU1010-NIL-99 (*Gn1a+Xa21+Pi54*)] is a NIL in the background of Jaya for high yield (*Gn1a*), BLB (*Xa21*) and Blast (*Pi54*) resistance. It has flowering duration of 102 days, short bold grain, and HRR of 62.2%. It also has tolerance to plant hoppers. Based on its yield superiority, it is identified in Zone III (Odisha, Bihar and Jharkhand), Zone V (Maharashtra) and Zone VII (Tamil Nadu, Telangana and Andhra Pradesh).

Medium Slender

Proposal No. 4.1 DRR Dhan 100 (IET 32072)

DRR Dhan 100 (IET 32072) [BGIR7-26-3 (GE line of Samba Mahsuri)], is a genome edited line of BPT 5204 with enhanced yield. This line has flowering duration of 90 days, medium slender grains, HRR of 57.3%, with resistance to gall midge. Based on its yield superiority, it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh), Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh) and Zone VII (Tamil Nadu, Kerala, Karnataka, Puducherry, Telangana and Andhra Pradesh).

Proposal No. 4.2 CR Dhan 417 (IET 30961)

CR Dhan 417 (IET 30961) (CR 3969-24-1-2-1-1-1 / CB 09 123) has a flowering duration of 95-117 days, medium slender grain, and HRR of 57.5%. Moderately resistant to leaf blast, neck blast, sheath rot, stem borer and leaf folder. Based on its yield superiority it is identified for Zones IV (Tripura and Assam) and Zone VII (Tamil Nadu, Kerala, Karnataka, Puducherry, Telangana and Andhra Pradesh).

Proposal No. 4.3 RP 6747-19484-1-1 (IET 32047)

RP 6747-19484-1-1 (IET 32047) (WGL 14 / IR 96321-1447-561-B-1 ///// WGL 14 / IR 81896-96-B-B-195 // WGL 14 / IR 74371-46-1-1-13 ///// WGL-14 /RP Patho-2// WGL 14 / RP Patho-3; RP 6747-19484-1-1) is a NIL of WGL 14 with introgression of *Bph17_1, Bph17_2, Bph17_3, BPH32-01 for BPH and Xa21-02, xa4_2, Xa4_3 for BLB.* This entry has a flowering duration of 101 days, medium slender grains and resistance to bacterial blight and plant hoppers. Due to its amylose content of 27.1% and GC of 22 mm, this entry is recommended for repeat for another year for grain quality traits only.

Proposal No. 4.4 DRR Dhan 91 (IET 32061)

RP 6755-RMS-1-23-65-83 (IET 32061) (Improved Samba Mahsuri*2 // Tetep / Swarna Sub1) is a NIL of ISM with Blast (*Pi54*) and Submergence (*Sub1*) resistance. It has a flowering duration of 98 days with medium slender grains, resistance to blast, submergence stress tolerance and field tolerance to plant hoppers. This entry after reanalysis of grain quality, with HRR of 56.9% is identified for Improved Samba Mahsuri growing regions of Zone VII (Telangana, Andhra Pradesh, Tamil Nadu and Karnataka), Zone V (Chhattisgarh), Zone III (Orissa, Jharkhand and Bihar), Zone VI (Gujarat and Maharashtra).

Proposal No. 4.5 DRR Dhan 85 (IET 32054)

DRR Dhan 85 (IET 32054) (Improved Samba Mahsuri*2 / Abhaya// Improved Samba Mahsuri*2 / Aganni) is NIL of ISM with Gall midge (*Gm4 and Gm8*) resistance. It has flowering duration of 96-105 days with medium slender grain and HRR of 55.0%. It has resistance to gall midge. Based on its yield superiority, it is identified for Improved Samba Mahsuri growing regions of Zone VII (Telangana, Andhra Pradesh, Tamil Nadu and Karnataka), Zone V (Chhattisgarh), Zone III (Orissa, Jharkhand and Bihar), Zone VI (Gujarat and Maharashtra).

Proposal No. 4.6 RP 6756-RMS-29-43-64-82 (IET 32062)

RP 6756-RMS-29-43-64-82 (IET 32062) (Improved Samba Mahsuri *2 // Tetep / RP 2068-18-3-5) is a NIL of ISM with Blast (*Pi54*) and Brown plant hopper (*Bph33t*) resistance. Due to low HRR (52.0%) and high AC (28.8%), this entry is not identified.

Proposal No. 4.7 DRR Dhan 86 (IET 32056)

DRR Dhan 86 (IET 32056) (Improved Samba Mahsuri*2 // Tetep / FL478) is a NIL of ISM with Blast (*Pi54*) and Salinity (*Saltol*) resistance. It has a flowering duration of 101-105 days, medium slender grain with HRR of 56.0%. It has tolerance to salinity. Based on its yield superiority, it is identified for Improved Samba Mahsuri growing regions of Zone VII (Telangana, Andhra Pradesh, Tamil Nadu and Karnataka), Zone V (Chhattisgarh), Zone III (Orissa, Jharkhand and Bihar), Zone VI (Gujarat and Maharashtra).

Low-Phosphorus

Proposal No. 5.1 DRR Dhan 87 (IET 31110)

DRR Dhan 87 (IET 31110) (Swarna*1 / IRGC 4105) has a flowering duration of 109 days, medium slender grain with a HRR of 71.8% and moderate resistance to bacterial blight, sheath blight, neck blast, leaf blast and plant hoppers. This entry has high photosynthetic use efficiency and low soil P tolerance. Based on its yield superiority, it is identified for Zones III (Odisha, Jharkhand, and Bihar) and Zone VII (Karnataka, Telangana and Andhra Pradesh).

Proposal No. 5.2 DRR Dhan 88 (IET 28070)

DRR Dhan 88 (IET 28070) (KMR3 / *Oryza rufipogon*) has a flowering duration of 99 days, short bold grain with a HRR 58.6% and moderate resistance to leaf blast. The entry is low P tolerant and hence based on its yield superiority it is identified for Zone VI (Maharashtra) and Zone VII (Karnataka, Telangana and Andhra Pradesh).

Low-Nitrogen

Proposal No. 6.1 DRR Dhan 90 (IET 29581)

DRR Dhan 90 (IET 29581) (BPT 5204 / Varadhan) is a low N tolerant variety with flowering duration of 100 days, short bold grain, and HRR of 69.4%. Moderately resistant to leaf blast and neck blast; tolerance to plant hoppers, stem borer, BPH and WBPH. Hence, based on its yield superiority it is identified for Zone VII (Karnataka, Telangana and Andhra Pradesh).

Proposal No. 6.2 CR Dhan 330 (IET 28084)

CR DHAN 330 (IET 28084) (ADT 43 / Annapurna) is mid early duration culture with days to 50% flowering of 99. It has short bold grain type, HRR of 69.0%, moderately resistant to stem borer and leaf folder. Based on its yield superiority it is identified for Zone II (Punjab) and Zone VII (Karnataka, Telangana and Andhra Pradesh).

Proposal No. 6.3CR Dhan 338 (IET 29578)

IET 29578 (Salivahana / Krishnaveni) is a low N tolerant culture with a flowering duration of 102 days. It has medium slender grain, HRR of 55.0% with tolerance to plant hoppers, moderate resistance to brown spot and leaf blast. Based on its yield superiority

it is identified for Zones II (Punjab) and Zone VII (Karnataka, Telangana and Andhra Pradesh).

Saline-Alkaline

Proposal No. 7.1 CSR 106 (IET 31050)

CSR 106 (IET 31050) (IR 60997-L / FL 478) has not been identified due to low HRR, high AC and low GC i.e., undesirable grain quality.

Proposal No. 7.2 CSR 108 (IET 31055)

CSR 108 (IET 31055) (Pusa 44 / CSR 27) with a flowering duration of 85 days, long slender grain with HRR 56.5% and moderately resistant to leaf folder. Based on its yield superiority, it is identified for Zone II (Haryana and Uttar Pradesh).

Basmati

Proposal No. 8.1 HKR17-422 (IET 30533)

HKR17-422 (IET 30533) (HKR 98-476 / CSR 30) is basmati culture with flowering duration of 96 days, aromatic extra-long slender grain, and has a HRR of 57.9%. Moderately resistant to leaf folder. Based on its yield superiority it is identified for Basmati GI region for the states of Delhi, Haryana, Punjab, and Jammu & Kashmir.

Proposal No. 8.2 Basmati CSR111 (IET 30535)

Basmati CSR111 (IET 30535) (PS 5 / CSR 10) is not identified due to undesirable overall acceptability score of 1.0 out of 5 in the panel test and further it was ranked poor with low panel test scores across all three years of testing.

Proposal No. 8.3 Pusa 3136-49-2-105-19 (IET 31307)

Pusa3136-49-2-105-19 (IET 31307) (Pusa 3037 /Pusa3060 // Pusa 3135) is a basmati culture with flowering duration of 90 days, aromatic extra-long slender grain, and has a HRR of 48.3%. It has resistance to Bacterial Blight (*xa13+Xa21+Xa38*), Blast (*Pi9+Pib*) and Bakanae (*qBK1.1+qBK1.2*). Based on its yield superiority it is identified for Zone II (Delhi, Punjab and Western UP).

Late duration

Proposal No. 9.1 CSR-389-16-23-42 (IET 32053)

CSR-389-16-23-42 (IET 32053) (Pusa 44*3 / FL 478// Pusa 44*3 / IRBB 60) is a NIL in the background of Pusa 44. Since the entry is of late maturity similar to recurrent parent, Pusa 44, which is undesirable, hence not identified.

Proposal No. 9.2 DRR Dhan 89 (IET 32064)

DRR Dhan 89 (IET 32064) [Swarna-NIL-IR121047-2-2-1 (*OsSPL14*) *2 / Improved Samba Mahsuri-NIL-12-3050106 (*Xa21+Pi54*)] is a NIL in the background of Swarna with BLB (*Xa21*), and Blast (*Pi54*) resistance and yield gene (*OsSPL14*). It has a flowering duration of 105 days, medium slender grain, and HRR of 60.3%. Resistant to blast and moderate

resistance leaf folder and stem borer. Based on its yield superiority it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh).

Proposal No. 9.3 CR Dhan 812 (IET 32123)

CR Dhan 812 (IET 32123) (Swarna-Sub1*4 / Robin) is a NIL in the background of Swarna Sub1 with herbicide tolerance. It has flowering duration of 113 days, short bold grain, and HRR of 57.8%. It is tolerant to herbicide imazethapyr and moderately resistant to brown spot and sheath rot. Based on its yield superiority it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh) and Zone IV (Tripura and Assam) under Dry DSR conditions only.

Early Direct Seeded

Proposal No. 10.1ORJ1356 (IET 30336)

ORJ1356 (IET 30336) (Sampada /IRGC 25966 // RP Bio 226) has a flowering duration of 82 days, medium slender grain with HRR of 60.0%. It is moderately resistant to leaf blast and BPH. Based on its yield superiority it is identified for Zone III (Odisha, West Bengal and Jharkhand).

List of VIC Proposals (Hybrid entries) received for 60th ARGM 2025

Proposal	IET No	Designation	Submitted by
Irrigated Early Transplanted			
1	30561	JKRH-1170	JK Agri Genetics Limited
2	28956	JKRH-1601	JK Agri Genetics Limited
3	30555	RRX-3276	Rasi Seeds Private Limited
4	30565	Kaveri-7374	Kaveri Seeds Co. Limited
5	29694	UPLRH-181325 (Resubmission)	Advanta Enterprises Limited
6	29700	JKRH-1004 (Resubmission)	JK Agri Genetics Ltd
Irrigated Mid-Early			
7	30575	Rallis-21304	Rallis India Limited
8	30593	LG-90303	Limagrain India Private Limited
9	30579	JKRH-1135	JK Agri Genetics Limited
10	30574	RRX-3366	Rasi Seeds Private Limited
11	30573	SRH-333	Eldorado Agri-tech. Private Limited
12	30578	RNC-0752	Syngenta India Private Limited
13	30589	MEPH-168	Mahyco Private Limited
Irrigated Medium			
14	30613	CRHR-169	ICAR-CRRI, Cuttack
15	30603	RNE-0456	Syngenta India Private Limited
16	30605	RNE-0463	Syngenta India Private Limited
17	30604	Indam 200-055	Indo-American Hybrid Seed India Private Limited
18	30608	MEPH-170	Mahyco Private Limited
Early Direct Seeding			
19	31193	Kaveri-7117	Kaveri Seed Company Limited

Proposal	IET No	Designation	Submitted by
Saline (AL&ISTVT)			
20	30165	DRRH-7 (Resubmission)	ICAR-IIRR, Hyderabad
Irrigated Basmati			
21	28579	Taj	Shakthi Seeds Ltd

Irrigated Early Transplanted

Proposal No. 1 JKRH-1170 (IET 30561)

The hybrid IET 30561 was submitted for irrigated early transplanted ecology. It has DFF: 85-90 days; Grain type- Long Bold; HRR-57.7%. Moderately resistant to leaf blast, neck blast and glume discoloration, tolerant to stem borer and leaf folder. Based on its yield superiority over the checks it is identified for Zone II (Haryana, Rajasthan, Uttarakhand, Punjab and Uttar Pradesh).

Proposal No. 2 IET 28956 (JKRH-1601)

The hybrid IET 28956 was submitted for irrigated early transplanted ecology. It has DFF: 90 days; Grain type- Long Bold; HRR-65.3%. Moderately resistant to leaf blast, neck blast and glume discoloration, tolerant to stem borer and leaf folder. Based on its yield superiority over the checks, it is identified for Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh) and Zone VI (Maharashtra and Gujarat).

Proposal No. 3 IET 30555 (RRX-3276)

The hybrid IET 30555 was submitted for irrigated early transplanted ecology. It has DFF: 85-90 days; As it showed inferior quality performance i.e., low HRR (37.3%), it was not identified.

Proposal No. 4 IET 30565 (Kaveri-7374)

The hybrid IET 30565 was submitted for irrigated early transplanted ecology. It has DFF: 85-90 days; Grain type – Short Bold; HRR-57.1%. Moderately resistant to leaf blast, neck blast and BLB. Based on its yield superiority over the checks, it is identified for Zone II (Haryana, Rajasthan, Uttarakhand, Punjab and Uttar Pradesh).

Proposal No. 5 IET 29694 (UPLRH-181325) (Resubmission)

The hybrid IET 29694 proposal was resubmitted (based on last year's recommendation) for irrigated early transplanted ecology. It has DFF: 85-90 days; Grain type – Long Bold; HRR-60.6%. Moderately resistant to leaf blast, neck blast, brown spot and glume discoloration. Based on its yield superiority over the checks, it is identified for Zone II (Haryana, Rajasthan, Uttarakhand, Punjab and Uttar Pradesh), Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh), Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh) and Zone VI (Maharashtra and Gujarat).

Proposal No. 6 IET 29700 (JKRH-1004) (Resubmission)

The hybrid IET 29700 proposal was resubmitted (based on last year's recommendation) for irrigated early transplanted ecology. It has DFF: 80-85 days; Grain type – Long Slender; HRR – 60%. Moderately tolerant to leaf blast, sheath rot, BPH, stem borer and

gall midge. Based on its yield superiority over the checks, it is identified for Zone II (Haryana, Rajasthan, Uttarakhand, Punjab and Uttar Pradesh).

Irrigated Mid-Early

Proposal No. 7 IET 30575 (Rallis-21304)

The hybrid IET 30575 was submitted for irrigated mid-early transplanted ecology. It has DFF: 95-100 days; As it showed inferior quality performance i.e., low HRR% (52.2), hence it was not identified.

Proposal No. 8 IET 30593 (LG-90303)

The hybrid IET 30593 was submitted for irrigated mid-early transplanted ecology. It has DFF: 93-97 days; Grain type- Long Bold; HRR-55.2%. Resistance to leaf blast, neck blast, moderately resistant to BLB. Based on its yield superiority over the checks, it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh), Zone V (Maharashtra, Madhya Pradesh and Chhattisgarh) and Zone VII (Tamil Nadu, Kerala, Karnataka, Puducherry, Telangana and Andhra Pradesh).

Proposal No. 9 IET 30579 (JKRH-1135)

The hybrid IET 30579 was submitted for irrigated mid-early transplanted ecology. It has DFF: 98 days; Grain type- Long Bold; HRR-58.9%. Moderately resistant to leaf blast, neck blast and sheath blight. Based on its yield superiority over the checks, it is identified d for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh).

Proposal No. 10 IET 30574(RRX-3366)

The hybrid IET 30574 was submitted for irrigated mid-early transplanted ecology. It has DFF: 91-95 days; Grain type – Long Slender; HRR-57.3%. Based on its yield superiority over the checks, it is identified for Zone II (Haryana, Uttarakhand, Punjab and Uttar Pradesh).

Proposal No. 11 IET 30573 (SRH-333)

The hybrid IET 30573 was submitted for irrigated mid-early transplanted ecology. It has DFF: 85-95 days; Grain type – Long Bold; HRR-55%. Moderately resistant to leaf blast, neck blast, brown spot and leaf folder, tolerant to gall midge. Based on its yield superiority over the checks, it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh) and Zone IV (Tripura and Assam).

Proposal No. 12 IET 30578 (RNC-0752)

The hybrid IET 30578 was submitted for irrigated mid-early transplanted ecology. As it showed inferior quality performance i.e., low HRR% (52.1), it was not identified.

Proposal No. 13 IET 30589 (MEPH-168)

The hybrid IET 30589 was submitted for irrigated mid-early transplanted ecology. As it showed inferior quality performance i.e., low HRR% (53.8), it was not identified.

Irrigated Medium

Proposal No. 14 IET 30613 (CRHR-169)

The hybrid IET 30613 was submitted for irrigated medium transplanted ecology. It has DFF: 105-109 days; Grain type- Long Bold; HRR-56.83%. Resistant to leaf blast, neck blast, and glume discoloration. Moderately resistant to leaf folder, case worn, BPH and WBPH. Based on its yield superiority over the checks, it is identified for Zone III (Odisha, West Bengal, Uttar Pradesh, Jharkhand and Bihar).

Proposal No. 15 IET 30603 (RNE-0456)

The hybrid IET 30603 was submitted for irrigated medium transplanted ecology. It has DFF: 105 days; Grain type- Long Slender; HRR-56.73%. Moderately resistant to leaf blast, neck blast, sheath blight, sheath rot, BLB and brown spot. Based on its yield superiority over the checks, it is identified for Zone VII (Tamil Nadu, Kerala, Karnataka, Puducherry, Telangana and Andhra Pradesh).

Proposal No. 16 IET 30605 (RNE-0463)

The hybrid IET 30605 was submitted for irrigated medium transplanted ecology. It has DFF: 105 days; Grain type – Long Slender, HRR-58.3%. Moderately resistant to leaf blast, neck blast, brown spot, sheath blight, sheath rot and BLB. Based on its yield superiority over the checks, it is identified for Zone III (Odisha, West Bengal, Jharkhand, Uttar Pradesh and Bihar).

Proposal No. 17 IET 30604 (Indam 200-055)

The hybrid IET 30604 was submitted for irrigated medium transplanted ecology. It has DFF: 105 days; Grain type- Long Bold; HRR-59%. Moderately resistant to leaf blast, neck blast, sheath rot, leaf folder and cut worm. Based on its yield superiority over the checks, it is identified for Zone III (Odisha, West Bengal, Jharkhand, Bihar and Uttar Pradesh).

Proposal No. 18 IET 30608 (MEPH-170)

The hybrid IET 30608 was submitted for irrigated medium transplanted ecology. It has DFF: 97-100 days; Grain type- Long Slender; HRR-56.5%. Tolerance to leaf blast, neck blast, sheath rot and whorl maggot. Based on its yield superiority over the checks, it is identified for Zone II (Haryana, Uttarakhand, Punjab and Uttar Pradesh).

Early direct seeding ecology

Proposal No. 19 IET 31193 (Kaveri-7117)

The hybrid IET 31193 was submitted for early direct seeded conditions. It has DFF: 85-90 days; Grain type – Long Bold, HRR – 54.6% and moderately resistant to leaf blast, brown spot. Based on its yield superiority over the checks, it is identified for Zone VI (Maharashtra and Gujarat).

Saline (AL&ISTVT) Ecology

Proposal No. 20 IET 30165 (DRRH-7) (Resubmission)

The hybrid IET 30165 was resubmitted and the proposal was examined. It has DFF: 95-100 days; Grain type: Long Slender and HRR-61.97%. Moderately resistant to Leaf Blast, Neck Blast, Brown Spot, Grain Discoloration and Plant hoppers. Based on its yield superiority over the checks, it is identified for Zone II (Haryana and Uttar Pradesh), Zone III (Uttar Pradesh), and Zone VII (Tamil Nadu).

Irrigated Basmati

Proposal No. 21 IET 28579 (Taj)

The Committee has examined the proposal critically and the VIC recommendations of 2022, 2023 and 2024. As the entry is not meeting the minimum requirements of Basmati grain quality, it is not identified.

Annexure-A

List of members participated in the VIC Committee Meeting during 60th ARGM, 2025 at ICAR-IIRR, Hyderabad

1	**Dr. D.K. Yadava, DDG(CS), ICAR, New Delhi**	**Chairman**
2	Dr. S.K. Pradhan, Assistant Director General (FFC), ICAR, New Delhi	Member
3	Dr Sanjay Gupta, ADG-Seed (Acting), ICAR (attended online)	Member
4	Dr. Sanjay Kumar, Director, ICAR-National Institute of Seed Science & Technology, Mau-275103, Uttar Pradesh	Member
5	Dr M. Balram, Director of Research, PJTAU, Hyderabad, 500030	Member
6	Dr. Ritesh Sharma, Joint Director, Basmati Export Development Foundation (BEDF), Modipuram, Meerut 250 110 (UP)	Member
7	Sh. Yaganti Venkateswarlu, Director and CEO, (YVR Group of Companies)	Member
8	Mr. Ajay Balotiya, Proprietor, Fortune Rice Ltd, G.T. Road, Dadri, G.B. Nagar, UP-201307	Member
9	Dr. A.K. Singh, Emeritus Professor, IARI, New Delhi	Member
10	Dr. V Ravindra Babu, Former Director, ICAR-IIRR, Hyderabad	Member
11	**Dr. R.M. Sundaram, Director, ICAR-Indian Institute of Rice Research, Hyderabad 500030**	**Member Secretary**
12	Dr. SV Sai Prasad, PS&PI, Plant Breeding, ICAR-IIRR, Hyderabad	Resource Person
13	Dr. A.S. Hariprasad PS & PI Hybrid Rice, ICAR-IIRR, Hyderabad	Resource Person
14	Dr. R. Mahender Kumar, PS & PI, Agronomy, ICAR-IIRR, Hyderabad	Resource Person
15	Dr. AP Padma Kumari, PS & PI, Entomology, ICAR-IIRR, Hyderabad	Resource Person
16	Dr. M. Srinivas Prasad, PS & PI, Pathology, ICAR-IIRR, Hyderabad	Resource Person
17	Dr. CN Neeraja, PS & Head (Biotechnology), ICAR-IIRR, Hyderabad	Resource Person
18	Dr. Aravind Kumar, PI (Quality), ICAR-IIRR, Hyderabad	Resource Person
19	Dr. Jyothi Badri, Senior Scientist, ICAR-IIRR, Hyderabad	Rapporteur
20	Dr. R. Abdul Fiyaz, Senior Scientist, ICAR-IIRR, Hyderabad	Rapporteur

***

Appendices

Appendix-1

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, Larnoo, Bandipore, Badarvah (6)
Himachal Pradesh	Malan (1)	Palampur, Dhaulakhan, Sundernagar, Bajaura, Bhertin (5)
Uttarakhand		ICAR-Almora, Bageshwar, (2)
North Eastern Hills		
Manipur	Wangbal (1)	Imphal-CAU (1)
Nagaland	Kohima (1)	ICAR- Mezdiphema, (1)
Sikkim		ICAR-Gangtok (1)
Meghalaya	Upper Shillong (1)	ICAR-Umiam, CAU-Umiam (2)
Southern Hills		
Karnataka	Ponnampet (1)	Sirsi (1)
Tamil Nadu		Gudaluru (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), , Jind, Rohtak, ,Anjanitel, Kurukshetra, Panipat (6)
Uttar Pradesh	Nagina, Kanpur (2)	
Jammu & Kashmir	Chatha (R.S. Pura) (1)	
Rajasthan	Kota (1)	
ZONE III – EASTERN		
Orissa	Jeypore, Chiplima (2)	Bhubaneswar, NRRI (Cuttack), Ranital (3)
Bihar	Bikramganj (Dhangain), Pusa (2)	Patna- ICAR, Sabour(2)
Jharkhand	Ranchi (1)	Hazaribagh, (1)
West Bengal	Bankura, Chinsurah (2)	ICAR-Canning, Gosaba, Pundibari, Chakdha, Hathwara , Malda (6)
Uttar Pradesh	Masodha ,Ghaghraghat, Varanasi (3)	ICAR-Lucknow, BEDF-Modipuram, Gautam Budha Nagar, Gorakhpur, SVPUAT, Meerut(5)
ZONE IV – NORTH EASTERN		
Assam	Titabar (1)	ICAR-Gerua, Karimganj, Shillongani (3)
Manipur	Wangbal (1)	ICAR-Lamphalpat, (1)
Tripura	Arundhutinagar (1)	ICAR-Lembucherra (1)
Nagaland		Nagaland Univ-Mezdiphema
ZONE V – CENTRAL		
Madhya Pradesh	Rewa (1)	Waraseoni, Jabalpur (2)
Chhattisgarh	Raipur, Jagadalpur (2)	Bilaspur, Ambikapur (2)
Maharashtra	Sakoli (1)	Sindewahi (1)
ZONE VI - WESTERN		
Maharashtra	Karjat, Tuljapur (2)	Panvel, Radhanagari, Shirgaon, Phondaghat, Vadagaon, Parbhani, (6),
Gujarat	Nawagam, Navsari (2)	Derol, Vyra, Danti, Dabhoi, Baruch (5)
Goa		ICAR-Goa (1)
ZONE VII - SOUTHERN		
Andaman&Nicobar		ICAR-Port Blair (1)
Andhra Pradesh	Maruteru (1)	Ragolu, Bapatla, Machilipatnam, Nellore, (4)
Telangana	Rajendranagar, Warangal (2)	ICAR-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, Kathalgere (4)
Puducherry	Kurumbapet (1)	Karaikal (1)
Total locations	**45**	**88**

Underline:ICAR Institutions

Appendix-2

List of Coordinated Trials, *Kharif*, 2025

Ecosystem	AVT 2	AVT 1	IVT	IHRT
Upland- DS	AVT 2- E DS	AVT 1-E DS	IVT-E-DS	
Rainfed shallow	AVT 2-RSL	AVT 1-RSL	IVT-RSL	
Semi-deep water	AVT 2-SDW	AVT 1-SDW	IVT-SDW	
Deep water		AVT 1-DW	IVT-DW	
Early – TP	AVT2-E TP	AVT1-E TP	IVT-E TP	IHRT-E
Irrigated Mid Early	AVT 2-IME	AVT 1-IME	IVT-IME	IHRT-ME
Medium	AVT2–IM	AVT1–IM	IVT-IM	IHRT-IM
Late	AVT2–Late	AVT1–Late	IVT–Late	
Basmati		AVT1-BT	IVT-BT	
Aerobic	AVT2-Aerobic	AVT1-Aerobic	IVT-Aerobic	
Medium Slender	AVT 2-MS	AVT 1-MS	IVT-MS	IHRT-MS
Bio-fortification		AVT 1-Biofort	IVT-Biofort.	
Saline alkaline	AVT 2-AL & ISTVT	AVT1-AL & ISTVT	IVT-AL & ISTVT	
	AVT 2-CSTVT	AVT 1-CSTVT	IVT-CSTVT	
Low Phosphorous	AVT 2- LPT	AVT 1- LPT	IVT - LPT	
Low Nitrogen	AVT 2- LNT	AVT 1- LNT	IVT - LNT	
Coloured Rice			IVT-Coloured Rice	
Hills			IVT-E(H)	
		AVT1-M (H)	IVT-M(H)	
			IVT-U(H)	
			IVT-J	
Boro		AVT 1-Boro	IVT-Boro	
Early Rabi			IVT-Early Rabi	
Near Isogenic lines (Sub)		AVT 1-NIL		
Near Isogenic Lines (Drt).		AVT 1-NIL		
Near Isogenic Lines (Blast, BLB, BPH)	AVT 2-NIL	AVT 1-NIL		
Near Isogenic Lines (CS)		AVT 1-NIL		
Near Isogenic Lines (Herbicide)				

Appendix 3 a

Seed Requirement for New Nominations, *Kharif,* 2025

Trials		Quantity
Early, Mid-early, Medium, Late, Biofortification, MS Grain,	:	12 Kg
Aerobic, Biofortification, Aromatic Short Grain, Shallow Water, Saline/Alkaline, Basmati, Near Isogenic Lines, Semi-deep water	:	10 kg
Boro, Phosphorus, Nitrogen		6kg

Note:

1. **Please specify clearly on the label, whether the seed is a new nomination OR a repeat entry.**
2. **For repeat entry please give the IET No. along with trial name and pedigree.**
3. **When supplying the seed of check varieties, please label the name of the checks clearly in CAPITAL LETTERS**

Appendix 3 b

Nominations for AICRPR Trials, *Kharif*, 2025*

Please provide the **mandatory details** of the nominations such as cross combination, duration, performance against check varieties, additional information viz., pest/disease reaction, quality etc., for all the new nominations in the following proforma;

Trial	Designation/ Pedigree	Cross Combination#	Days to 50% flow.		Grain type	Local trial yield (kg/ha)**		Quality Characters	Pest/disease reaction@		Remarks (any other special character)
			I year	II year		I year	II year		I year	II year	
	(Name of National Check)										
	(Name of Regional Check)										
	(Name of Local Check)										
	CD (0.05)										
	CV%										

* :**Without the details especially cross combination and source of material the entries will not be included in IVT trials;**

**: Yield as compared to check varieties. It is mandatory to give the yield of check varieties along with the nominations from local (station) trials.

#: Source of material (IRRI-INGER, IRRI Collaboration; any other within country programme;

@: Artificial / natural screening please specify (use more sheets if required to fill the details)

Name of the Centre:

Signature of the Breeder:

Name & Designation:

Complete Address:

Date:

(Signature of Breeder)

Appendix 4

Guidelines for Submission of Variety Identification proposal to VIC meeting to be held in Annual Rice Research Group Meetings – 2026

1.	For entries which have been tested for 3 years	:	Last date of receipt: **31st December, 2025**
2.	For entries which are in 3rd year (final) of testing.	:	Last date of receipt: **10th March, 2026**
3.	No. of copies for submission	:	30
4.	The proposal should be duly signed and forwarded through proper channel		
5.	Weighted average of yield data to be computed against the checks and qualifying varieties for Table 1 and the guidelines and the format for preparation of the proposal should be adhered to.		
6.	The proforma for submission of VIC proposal is available in IIRR Web site in the draft proceedings. (www.drricar.org)		

Appendix 5

Guidelines for Submission of CVRC variety proposal for Central Sub Committee on Crop Standards, Notification & Release of Varieties (CSC on CSN&RV) for Meeting during 2025

1.	For those which are identified by VIC	:	Latest by 15thJuly, 2025
2.	Number of copies for submission **35 copies of the proposal should be sent to:** **5 copies of the proposal should be sent to:**	:	40 Copies Deputy Commissioner (QC)-cum Member Secretary of CSC on CSN&RV Ministry of Agriculture & Cooperation F212, Shastry Bhavan **NEW DELHI-110002** The Director ICAR-Indian Institute of Rice Research Rajendranagar **HYDERABAD-500030**
3.	Weighted average of yield data to be computed against the checks and qualifying checks for Table 1 and the guidelines and the format for preparation of the proposal should be adhered to.		
4.	Seed material should be deposited with NBPGR and acknowledgement to be furnished duly with the proposal, by giving the IC Number in the column.		
5.	Complete morphological description of the proposed variety given in VIC proposal must be included in the CVRC proposal.		
6.	The proforma for submission of CVRC proposal is available in IIRR Web site https://www.icar-iirr.org/New_Proforma_for_CVRC_Proposal.pdf		

Appendix 6a

Proceedings of the meeting of the committee constituted to deliberate on formulation of criteria for nomination of entries under Advanced Variety Trial 1-Near Isogenic Lines (AVT1-NIL) of AICRIP

As per the directions of Dr. S.N. Shukla, Assistant Director General (FFC), ICAR, a committee was constituted for the above mentioned purpose during the 44th Annual Rice Research Group Meeting held at ANGRAU, Hyderabad during May 2009. The members of the committee met on 11th May 2009 at Seminar Hall I of ANGRAU Auditorium, Hyderabad with Dr. M.P. Pandey, Vice Chancellor, IGAU, Raipur as Chairman and Dr. N. Shobha Rani, PI, Varietal Improvement programme, AICRIP for discussion and finalization of criteria for nomination of entries under AVT1-NIL trial of AICRIP.

The following members attended the meeting. Dr. J.L. Dwivedi, Dr. K.V. Prabhu, Dr. A.K. Singh, Dr. G.J.N. Rao, Dr. J.N. Reddy, Dr. P.K. Agarwal, Dr. N. Sarla, Dr. S.M. Balachandran, Dr. C.N. Neeraja, Dr. R.M. Sundaram, Dr. P. V. Satyanarayana, Dr. S. Manonmani.

Dr. M.P. Pandey welcomed the participants and informed that a set of guidelines for nomination and testing of NILs have been framed by a committee constituted by Ministry of Agriculture in the year 2007 and approved by DDG (CS), ICAR. The present meeting has been convened to mainly discuss issues related to operationalizing the guidelines.

The committee examined the guidelines and gave the following recommendations to facilitate the implementation of the guidelines in a practical manner.

1. **Choice of recurrent parent**: The recurrent parent selected for the marker-assisted breeding programs should be a notified variety/parental line of a hybrid which is widely cultivated and accepted by farmers which has been suffering some production bottlenecks or lacking some traits that can be improved to add value to it. For this purpose, the selection of the recurrent parent for development of NILs under AICRIP is to be decided by a committee identified by Project Director for which approval of DDG (CS), ICAR is to be obtained. Further the recurrent parent needs to be selected with appropriate concurrence of the concerned breeder/organization/institution wherever applicable.

2. **Conformity of the NILs to the recurrent parent**: The breeder has to substantiate the proposed near isogenic lines (NILs) for its conformity to the parental variety with appropriate phenotypic data such as morphological and DUS data and molecular marker data before nomination for trial. In order to ensure this, the breeder has to provide details in terms of list of all the morphological/DUS characteristics for which the NILs are similar to and different from the recurrent parent at the time of nomination of the NILs. The NILs should definitely not be inferior to the recurrent parent in terms of yield related traits.

The NIL should have minimum two phenotypic characters (which can be easily assessed in the field) for the purpose of its identification and distinction from the parental variety. This will facilitate seed certification agency/seed law enforcement authority in the certification process.

The breeder nominating entries under AVT1-NIL should enclose the list of molecular markers used for marker-assisted breeding including those used for both foreground and background selection. The NILs should have a minimum of 80% introgression as estimated from parental polymorphic SSR markers through background selection. A minimum of 6 parental polymorphic markers per chromosome should be used for this estimation (i.e. a minimum of 96 parental polymorphic markers covering the entire genome).
The breeder nominating entries under AVT1-NIL trial should furnish details in a prescribed proforma at the time of nominating the entries. A committee constituted by the Project Director will examine the proposal and approve/reject the nominations.

3. **Testing/evaluation of NILs**: Under AICRIP, the NILs would be tested along with the recurrent parent as check for two years to verify the traits that are introgressed. For yield purposes, the NILs has to be compared with the recurrent parent variety to establish its performance vis-à-vis parent variety. For validation of the introgressed trait, the NILs have to be tested along with donor parent, recurrent parent and appropriate checks. The NIL testing has to be carried out under natural and artificial conditions (where pest/disease/stress resistance is targeted) and other traits following standard experimental procedures and techniques along with the recurrent parent. The test centres and the experimental layout should be decided by the Project Directorate on a case to case basis based on the nominations.

4. **Monitoring of AVT1-NIL trial**: The final trait verification would be based on the recommendation of the monitoring team constituted by the Project Director for such trials. The monitoring of the trials is mandatory. the monitoring committee should involve at least one specialist associated with the target trait. Monitoring needs to be stringently carried out by the monitoring team both for the trait introgressed in the NILs and for equivalence to the recurrent parent.

5. **Identification, notification and release of NILs**: The NILs which have successfully completed two years of testing under AVT1-NIL as per the guidelines/criteria mentioned above should be identified, released and notified as a new variety.

Appendix 6b

Proceedings of the meeting of the Committee constituted to deliberate on revision of criteria for nomination and evaluation of entries under Advanced Variety Trial -Near-Isogenic Lines (AVT-NIL) of AICRIP during 52nd ARGM held at AAU, Jorhat.

As per the directions of Dr. J.S. Sandhu, Deputy Director General (Crop Sciences), ICAR, a committee was constituted for the above mentioned purpose during the 52nd Annual Rice Research Group Meeting held at Assam Agricultural University, Jorhat, Assam during 8-11, April 2017. The members of the committee met on 10th April 2017 at Board Room of AAU under the chairmanship of Dr. M.P. Pandey, Former Vice Chancellor, IGKV, Raipur and BAU, Ranchi for discussion on revision of criteria for nomination of entries under AVT1-NIL trial of AICRIP. It is to be mentioned that the criteria were formulated earlier by a committee constituted by ICAR under the chairmanship of Dr. M.P. Pandey during May 2009 in the 44th Annual Rice Research Group Meeting held at ANGRAU, Hyderabad.

The following dignitaries attended the meeting.

1. Dr. M. P. Pandey (Chairperson)
2. Dr. I.S. Solanki, ADG (FFC), ICAR, New Delhi (Member)
3. Dr. P. K. Agarwal, ADG (NASF), ICAR, New Delhi (Member)
4. Dr. Kuldeep Singh, Director, ICAR-NBPGR, New Delhi (Member)
5. Dr. A.K. Singh, Head, Division of Genetics, ICAR-IARI, New Delhi (Member)
6. Dr. P.V. Satyanarayana, Director, APRRI, Maruteru, AP (Member)
7. Dr. S. Robin, Dean (PGS), TNAU, Coimbatore (Member)
8. Dr. Ish Kumar, President (R & D), Rasi Seeds, Hyderabad (Member)
9. Dr. S K Pradhan, Principal Scientist (Plant Breeding), ICAR-NRRI, Cuttack (Member)
10. Dr. T. Ram, Principal Scientist (Plant Breeding), ICAR-IIRR, Hyderabad (Member)
11. Dr. R.M. Sundaram, Principal Scientist (Biotechnology), ICAR-IIRR, Hyderabad (Member Secretary)

Dr. Jyothi Badri, Scientist (SS, Plant Breeding), ICAR-IIRR, Hyderabad and Dr. R. Abdul Fiyaz, Scientist (SS, Plant Breeding), ICAR-IIRR, Hyderabad assisted in recording of the proceedings.

Dr. M. P. Pandey welcomed the participants and informed them that the meeting has been constituted specifically by ICAR to examine and revise the criteria for nomination of entries under AVT1-NIL trials, which was earlier set by a committee in 2009.

The committee examined the existing guidelines and criteria and gave the following recommendations to facilitate the evaluation of NILs in AICRIP trials in a pragmatic manner broadly under the following five categories.

1. Choice of the recurrent parent: The recurrent parent selected for the marker-assisted breeding programs should be a notified popular variety/parental line of a hybrid, which has been suffering from some production bottlenecks or lacking some traits (particularly biotic and abiotic stress resistance/tolerance) that can be improved to add value to it. In case of biotic stress resistance, the choice of gene combinations selected for deployment in the recurrent parent should be based on the pest population/biotypes and/or pathogen population/race composition prevalent in the States/Zones for which the recurrent parent was originally

released. The recurrent parent needs to be selected with appropriate concurrence of the concerned parent Organization/Institute.

2. Conformity of the NILs to the recurrent parent: The breeder has to substantiate the proposed NILs for their conformity to the parental variety/genotype (i.e. the recurrent parent) with appropriate phenotypic data such as morphological trait data/DUS trait data and molecular marker data before nomination for trial. In order to ensure this, breeder has to provide details, in terms of list of all the morphological/DUS characteristics for which the NILs are similar/ different from the recurrent parent at the time of nomination of the NILs. The NILs must be statistically at par or superior to the recurrent parent in terms of grain yield.
3. The breeder nominating the entries under AVT1-NIL should enclose the list of molecular markers used for marker-assisted breeding including those used for foreground, recombinant and/or background selection. The NILs should have a minimum of 90% recovery of the recurrent parent genome with respect to the parental polymorphic co-dominant markers (like SSRs/SNPs) analyzed. A minimum of 400 co-dominant markers (i.e. ~ 1 marker per Mb), which are distributed uniformly across the rice genome should be used for parental polymorphism analysis.
4. The breeder nominating the entries under AVT1-NIL trial should furnish details in a prescribed proforma at the time of nominating the entries. A committee constituted by Director, ICAR-IIRR will examine the proposal and approve/reject the nominations.
5. Testing/evaluation of NILs: Under AICRIP, the NILs would be tested along with the recurrent parent as check for two years (i.e. AVT1-NIL and AVT2-NIL) to verify the traits that are introgressed. For yield purposes, the NILs have to be compared with the recurrent parent variety to establish its performance vis-à-vis parent variety/genotype (i.e. the recurrent parent). For validation of the introgressed trait, the NILs have to be tested along with donor parent, recurrent parent and appropriate checks. The testing of NILs has to be carried out under natural condition in the target locations/hot-spots and under artificial conditions (in case of pest/disease/stress resistance or tolerance) and other target traits including agronomic and quality traits following standard experimental procedures and techniques along with the recurrent parent. The test centres and the experimental layout should be decided by the Director, ICAR-IIRR on a case to case basis, depending on the lines nominated.
6. Monitoring of AVT1-NIL trial: The final trait verification would be based on the recommendations of the monitoring team constituted by Director, ICAR-IIRR for such trials. The monitoring of the trials is mandatory and the monitoring committee should involve at least one specialist associated with the target trait. Monitoring needs to be stringently carried out by the monitoring team both for the trait introgressed in the NILs and for equivalence to the recurrent parent.
7. Identification, notification and release of NILs: The NILs, which have successfully completed two years of testing under AVT1-NIL as per the guidelines/criteria mentioned above should be identified, released and notified as a new variety only for the States/Zones in which the recurrent parent has been notified and released. These criteria will be applicable for entries nominated from *Kharif* 2017 onwards.

Appendix 6c

Proforma for nominating entries under AVT1-NIL trial of AICRIP

Trial	Designation	Cross combination	Target trait introgressed	Days to 50% flowering		Grain type and quality characteristics		Local yield trial (kg/ha)#		Reaction for target trait introgressed			No. of markers used for background selection and No. of markers which have become homozygous for recurrent parent genome	Percentage recurrent parent genome recovery	No. of traits for which the recurrent parent and NIL are similar*	No. of traits for which the recurrent parent and NIL are different*
				Recurrent parent	NIL	Recurrent parent	NIL	Recurrent parent	NIL	Donor parent	Recurrent parent	NIL				

#average of two seasons yield data

*a separate table showing a comparison between the recurrent parent and NIL with respect to morphological traits/DUS traits needs to be enclosed

Appendix 7

Proforma for Submission of Proposal for Identification of Crop Varieties/ Hybrids at workshops/State Variety Identification Committee (VIC) meetings

Content

S. No. Item

Summary of the Proposal (in bullets only)

Proforma for Submission of Proposal for Identification of Crop Varieties/ Hybrids at Workshops

1	Name of the crop and species			
2	a)Name of the variety under which tested in the AICRIP trials			
	b) Proposed name of the variety			
3	Sponsoring institute			
4	a)Institution or agency responsible for developing variety (with full Address)			
	b)Person name, who helped developing variety			
	Developers			
	Collaborators			
5	a)Parentage (with details of pedigree, including the source from which variety/inbred/A,B and R lines of hybrid have been developed)			
	b)Source of the material in case of introduction			
	c)DNA profile of variety/hybrid/inbred/A,B,R lines of the hybrid vis-a vis check variety/line			
	d)Breeding method used			
	E)Breeding objective			
6	State varieties which most closely resemble the proposed variety in general characters			
7	Recommended production ecology (rainfed/irrigated; high/low fertility; season)			
8	Specific area of its adaptation (zones and states for which variety is proposed) and the recommended production ecology			
9	Description of hybrid/variety			
	a)Plant height			
	b)Distinguishing morphological characters			
	c)Maturity (range in number of days) (from			

	seedling/transplanting to flowering, seed-to-seed)			
	d)Maturity group (early, medium and late, wherever such classification exists)			
	e)Reaction to major diseases under field and controlled conditions (reaction to physiological strains/races/pathotypes/bio-types is to be indicated, wherever possible)			
	f)Reaction to major pests (under field and controlled conditions, including storage pests)			
	g)agronomic features (e.g., resistance to lodging, shattering, fertilizer responsiveness, suitability to early or late sown conditions, seed rate, etc.			
	h)Quality of produce a)Grain quality b)Fodder quality i) Reaction to Stresses			
10	Description of parents of hybrid	A line/ inbred 1	B line/ inbred 2	R line
	a)Plant height (cm)			
	b) Distinguishing morphological characters			
	c)Days to flowering			
	d) Days to maturity (range in number of days-from seed-to-seed)			
	e) Is there any problem of synchronization? If yes, its method to overcome			
	f)Reaction to major diseases (under field and controlled conditions, reaction to physiological strains/races/bio-types/pathotypes to be indicated wherever possible)			
	g) Reaction to major pests (uder field and controlled conditions, including storage pests)			
	h)Agronomic features (e.g., resistance to lodging, shattering fertilizer responsiveness, suitability to early or late-sown conditions, seed rate, etc.)			
	i)Reaction to stresses			
11	a)Yield data in the coordinated trials (breeding, agronomy, pathology entomology, quality etc) and regional/inter regional district trials year-wise (level of fertilizer application, density of plant population and superiority over local control/standard variety) to be indicated (to be attached)			
	b)Yield data from national demonstration/large-scale demonstrations(to be attached)			
12	a)Agency responsible for maintaining the breeder seed			
	b)Quantity of breeder seed in stock (kg) Variety/A line/B line/R line/Hybrid			
13	Specific recommendations, if any, for seed production (e.g., staggered sowing, planting ratio of parental lines of hybrids in foundation and certified seeds production, probable areas of seed production)			
14	Vivid presentation (field view, close-up of a single plant and seeds/economic parts)			
15	Package of practices along with attainable yield levels			
16	Any other pertinent information			

Signature of All Contributors

Signature of the Head of the Institution

Checklist for Proforma for Submission of Proposal for Identification of Crop Varieties/ Hybrids at Workshops

Details/documents	**Attached**	
Parentage with details on pedigree, including the source from which variety/inbred/A,B and R lines of the hybrid has been developed	YES	NO
Source of the material in case of introduction (IC/EC numbers provided by the NBPGR)	YES	NO
Flow chart of details of development of variety/parental lines of hybrids	YES	NO
Molecular/DNA profile of variety/hybrid/A,B,R lines of the hybrid vis-à-vis check variety/line (details of unique amplicons that distinguish markers) with photographs	YES	NO
Detailed description of the parental lines of the hybrid	YES	NO
Yield data & other data on diseases, insect-pests, quality,etc. from the coordinated trials	YES	NO
Yield data from the national demonstration/large-scale demonstrations	YES	NO
Specific recommendations, if any, for seed production (eg., staggered sowing, planting ratio of parental lines of hybrids in foundation and certified seeds production, probable areas of seed production etc.)	YES	NO
Vivid presentations (field view, close-up of a single plant and seeds) with photographs of the Variety)	YES	NO
Package of practices	YES	NO
Proforma signed by all co-authors and Head of Organization	YES	NO
Any other pertinent information	YES	NO

Signature of the Head of the Institution

Table 1: Summarized yield data of the coordinated varietal trials

Name of the proposed variety/hybrid: Adaptability Zone:
Production Conditions:

Item	Year of testing	No. of trials/ Locations	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qualifying variety*		
								Var.1	Var.2	Var.3
Mean yield (q/ha) a)Zonal b)Across zones (if applicable)	1st year 2nd year 3rd year									
	Weighted mean									
Percentage increase or decrease over checks & qualifying varieties Frequency in the top three groups (pooled for three years)	1ST year 2nd year 3rd year Weighted mean									

Note: Qualifying variety is one which has completed three years of testing in the coordinated trials; Centre-wise and year-wise data must be appended, otherwise proposal will not be considered

Table 2. Adaptability to agronomic variables

Name of the proposed variety/hybrid: Adaptability Zone:
Production Conditions:

Nature of experiments	No. of trials/locations	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qualifying variety*		
							Var.1	Var. 2	Var. 3
Sowing date experiments	Yield (q/ha) under recommended showing date, Percentage gain or loss when sown	(i)Early (ii)Normal (iii)Late							
Fertilizer experiments	Yield (q/ha) under recommended dose Percent gain or loss under other doses	(i)F0 (ii)F1 (iii)F2							
Irrigation experiments (wherever applicable)	Yield (q/ha) with adequate irrigation Percentage gain or loss with irrigation level	(i)Level 1 (ii)Level 2 (iii)level 3							

Note: specify each date of sowing, fertilizer level and number of irrigations at i, ii, iii

Table 3. Reaction to major diseases

Name of the proposed variety/hybrid: Adaptability Zone:
Production Conditions:

Disease name		Item	Proposed variety	National check 1	Zonal check 2	Local Check3	Latest released check 4	Qualifying variety*		
								Var. 1	Var.2	Var. 3
Disease 1	Natural	1st year 2nd year 3rd year								
	Artificial	1st year 2nd year 3rd year								
Disease 2	Natural	1st year 2nd year 3rd year								
	Artificial	1st year 2nd year 3rd year								
Disease 3	Natural	1st year 2nd year 3rd year								
	Artificial	1st year 2nd year 3rd year								
Disease 4	Natural	1st year 2nd year 3rd year								
	Artificial	1st year 2nd year 3rd year								

Table 4. Reaction to insect-pests

Name of the proposed variety/hybrid Adaptability Zone:
Production Conditions:

Pest name		Item	Proposed variety	National check 1	Zonal check 2	Local Check 3	Latest released check 4	Qualifying variety*		
								Var. 1	Var.2	Var. 3
Pest 1	Natural	1st year 2nd year 3rd year								
	Artificial	1st year 2nd year 3rd year								
Pest 2	Natural	1st year 2nd year 3rd year								
	Artificial	1st year 2nd year 3rd year								
Pest 3	Natural	1st year 2nd year 3rd year								
	Artificial	1st year 2nd year 3rd year								

Table 5. Data on the quality characteristics

Quality characteristics	Item	National check 1	Zonal check 2	Local Check 3	Latest released check 4	Qualifying variety*		
						Var. 1	Var.2	Var. 3
Parameter-1								
Parameter-2								
Parameter-3								
Parameter-4								

Note: First Specify parameters at 1 to 4 under first column

Table 6. Data on the other important characters

Name of the proposed variety/hybrid: Adaptability zone:
Production conditions:

S.No		Item	Proposed variety	National check 1	Zonal check 2	Local Check 3	Latest released check 4	Qual. Var. 1	Qual. Var.2	Qual. Var. 3
1	Plant height	1st year 2nd year 3rd year								
2	Days to flowering	1st year 2nd year 3rd year								
3	Days to maturity	1st year 2nd year 3rd year								
4	1000-grain weight	1st year 2nd year 3rd year								
5	Lodging	1st year 2nd year 3rd year								
6	Others	1st year 2nd year 3rd year								

Guidelines for Filling-up Proforma for Submission of Proposal for Identification of Crop Varieties/Hybrids during Workshops

1. Name of the crop and the species: The name given to the variety may be indicative of crop name, institute name/code, and number, if any.
2. Name of the variety under which tested: This should include the name under which the variety was tested in the coordinated trials.
3. Proposed name of the variety: This should include the name of the variety that is proposed for its commercial use as per the existing guidelines.
4. Sponsoring institute : This should include the name of the institute/organization that sponsoring the variety
5. Institution or agency responsible for developing variety (with full address) : This should give name of the Institute or organization where the variety has been developed along with the full address
6. Name of the person who helped in the development of the variety: Only those workers should be included who have contributed in the development of the variety/hybrid. The Co-workers can be grouped in 2 categories as the 'Developer' and as the 'Collaborator'.

   The co-worker should be associated with the project (from which cultivar has been developed) for a period of minimum of 2 years. The proposal should be signed by each of the co-worker and validated by the Head of the Organization.
7. Parentage (with details of pedigree including the source from which variety/inbred/A, B and R lines of the hybrid lines has been developed). This should essential ly include details of the base population/source of material used for developing variety/parental lines of the hybrid.

   Pedigree and parentage have to be furnished in details as to how the parents have been developed with flow charts, instead of just giving code numbers. Flow chart should depict clearly development of the proposal culture with year-wise details of attempting initial cross, followed by handling of segregating generation.

   Details, weather collection is indigenous (IC) or exotic (EC), accession no provided by the NBPGR if used, in the development of the variety or parental lines of hybrids, must be provided, Please note that this IC number should be different from the one provided by the NBPGR, upon submission of the seed sample of the line/hybrid/variety, the once variety/hybrid is recommended by the Variety Identification Committee (VIC).
8. Source of material in case of introduction: Details of the EC (Exotic collection) number, may be given provided by the NBPGR, for the imported material used in the variety development.
9. DNA profile of variety/hybrid/inbred/ A,B,R lines of the hybrid vis-à-vis check variety/line Detailed information on the molecular discrimination should be provided. Such information can be developed at crop-based institutes/NBPGR/Other labs. The information should include details of amplicons (name, sequence number, primer sequence) with reference to polymorphic markers.

   The relevant photographs should also be attached.
10. Breeding method used : The method used in developing the variety/parental line may be given
11. Breeding objective : The breeding objective for developing the variety
12. State varieties which most closely resemble the proposed variety in general characters.

    The information should include name of the varieties resembling most closely to the proposed variety with reference to different phenotypic traits.
13. Specific area of its adaptation (zones and states for which variety is proposed) and recommended productions ecology

    The information on zones (name of the states), season and production conditions, whether Rainfed or irrigated, should be mentioned.

14. Description of the hybrid/variety: The average and expected normal range with respect to various characters may be mentioned.
15. Description of parents of the hybrid: The average and expected normal range with respect to characters may be mentioned with reference to inbred/A line/B line/R line.
16. Yield data in coordinated trials (breeding, agronomy, pathology, entomology, quality etc) and regional/inter-regional district trials year-wise (level of fertilizer application, density of plant population and superiority over local control/standard variety) are to be indicated (to be attached) The yield data and other data of coordinated trials and other details as per the format of tables should be appended. Please not that mean is 'weighted mean' and not the 'arithmetic mean'.
17. Yield data from the national demonstration/large-scale demonstrations (to be attached) : The yield and other details as per the format of the tables should be appended.
18. Agency responsible for maintaining breeder seed : Name of the institute/organization/agency responsible to maintain the breeder seed of variety/parental line of hybrid should be given
19. Quantity of the breeder seed n stock (kg): Quantity (kg) of available seeds with reference to variety, hybrid, inbred A/B/R lines of the hybrid are to be clearly indicated.
20. Information on acceptability of the variety by farmers/ consumers/ industry: Any information on such aspects can be given.
21. Specific recommendations, if any, for seed production (e.g. staggered sowing, planting ratio of parental lines of hybrids in foundation and certified seed production, probable areas of seed production)

    The seed production technology and specific requirements should be mentioned clearly along with the proposal. With respect to seed production of hybrid, the staggered sowing of parental lines, if required, should be clearly indicated. The planting ration of male and female parents in the seed production plots should be indicated. In addition, if there are some other precautions to be taken they are to be mentioned clearly. The probable areas of seed production need to be given.
22. Vivid presentation (field view, close-up of a single plant and a seed/economic parts) : The proposal should invariably have colored pictures with a clear field view of the variety, a close-up of a single plant and a seeds/economic parts. Photograph of other plant parts which may help in identification of varieties can also be given. The cover page of the proposal should also have a colored photograph of the variety and should be designed well.
23. Package of practices along with attainable yield levels: A note on the package of practices of the crop with respect of the variety needs to be provided, highlighting particularly specific requirements of the variety to realize its attainable yield levels.
24. Any other pertinent information: Any relevant information, which is seemingly important with reference to variety, hybrid or parental lines of the hybrids, should also be given.
25. Others

    One-page 'executive summary' of the proposal may be provided in the beginning, highlighting specific features of the variety/hybrid. Excessive presentation in executive summary should be avoided.

    Each page of the proposal should be numbered.

    Checklist needs to be part of the proposal.

Appendix 8

Proforma for Submission of Proposal for Release of Crop Varieties/Hybrids to the Central Sub-Committee on Crop Standards, Notification and Release of Varieties

Content

Summary of the Proposal (in bullets only)

Proforma for Submission of Proposal for Release of Crop Varieties/ Hybrids to the Central Sub-Committee on Crop Standards Notification and Release of Varieties

1	Name	
2	Name of the Crop and the species	
	a)Name of the variety under which tested in the AICRIP trials	
	B) Proposed name of the variety	
3	Sponsoring institute	
4	a)Institution or agency responsible for developing variety (with full Address)	
	b)Name of the person, who helped development of the variety	
	Developers	
	Collaborators	
5	A)Parentage (with details of pedigree, including the source from which variety/inbred/A,B and R lines of the hybrid has been developed)	
	b)Source of the material in case of introduction	
	c)DNA profile of variety/hybrid/inbred/A,B,R lines of the hybrid vis-a vis check variety/line	
	d)Breeding method used	
	E)Breeding objective	
6	State varieties which most closely resemble the proposed variety in general characters	
7	Recommended production ecology (rainfed/irrigated; high/low fertility; season)	
8	Specific area of its adaptation (zones and states for which variety has been proposed) and the recommended production ecology	
9	Description of hybrid/variety	
	a)Plant height	
	b)Distinguishing morphological characters	
	c)Maturity (range in number of days) (from seedling/transplanting to flowering, seed-to-seed)	
	d)Maturity group (early, medium & late, wherever such classification exists)	
	e)Reaction to major diseases under field and controlled condition s(reaction	

	to physiological strains/races/pathotypes/bio-types is to be indicated, wherever possible)			
	f)Reaction to major pests (under field and controlled conditions, including storage pests)			
	g)agronomic features (e.g.,resistance to lodging, shattering, fertilizer responsiveness, suitability to early/ late sown conditions, seed rate, etc.			
	h)Quality of produce a)Grain quality b)Fodder quality			
10	Description of the parents of the hybrid	A line/ inbred 1	B line/ inbred 2	R line
	a)Plant height (cm)			
	b) Distinguishing morphological characters			
	c)Days to flowering			
	d) Days to maturity (range in number of days-from seed-to-seed)			
	e) Is there any problem of synchronization? If yes, its method to overcome			
	f)Reaction to major diseases (under field and controlled conditions, reaction to physiological strains/races/bio-types/pathotypes needs to be indicated wherever possible)			
	g) Reaction to major pests (uder field and controlled conditions, including storage pests)			
	h)Agronomic features (e.g., resistance to lodging, shattering fertilizer responsiveness, suitability to early or late-sown conditions, seed rate, etc.)			
	i)Reaction to stresses			
11	a)Yield data in the coordinated trials (breeding, agronomy, pathology entomology, quality etc) and regional/inter regional district trials year-wise (level of fertilizer application, density of plant population and superiority over local control/standard variety) are to be indicated (to be attached)			
	b)Yield data from national demonstration/large-scale demonstrations(to be attached)			
12	a)Agency responsible for maintaining the breeder seed			
	b)Quantity of breeder seed in stock (kg) Variety/A line/B line/R line/Hybrid			
13	Specific recommendations, if any, for seed production (e.g., staggered sowing, planting ratio of parental lines of hybrids in foundation and certified seeds production, probable areas of seed production)			
14	Vivid presentation (field view, close-up of a single plant and seeds/economic parts)			
15	a)Whether recommended by any workshop, seminar, conference, state seed committee etc.			
	b)If so, the recommendations with specific justifications for release of the proposed variety			
16	Specific area of its adaptation			
17	Acknowledgement of the submission of seed samples of variety/hybrid/inbred/ A, B and R lines of the hybrid from the NBPGR and IC numbers			
18	Package of practices along with attainable yield levels			
19	Information on the acceptability of the variety by farmers/consumers/industry			
20	Any other pertinent information			

Signature of all Contributors

Signature of the Head of the Institution

Checklist for Proforma for Submission of Proposal for Release of Crop Varieties/Hybrids to the Central Sub-Committee on Crop Standards Notification and Release of Varieties

Details/documents	**Attached**	
Parentage with details of pedigree, including the source from which variety/inbred/A,B and R lines of the hybrid has been developed	YES	NO
Source of the material in case of introduction (IC/EC numbers provided by the NBPGR)	YES	NO
Flow chart of details of development of variety/parental lines of hybrids	YES	NO
Molecular/DNA profile of variety/hybrid/A,B,R lines of the hybrid vis-à-vis check variety/line (details of unique amplicons that distinguish markers) with photographs	YES	NO
Detailed description of the hybrid/variety		
Detailed description of the parental lines of the hybrid	YES	NO
Yield data and other data on diseases, insect-pests, quality,etc. from the coordinated trials	YES	NO
Yield data from the national demonstration/large-scale demonstrations	YES	NO
Specific recommendations, if any, for seed production (eg., staggered sowing, planting ratio of parental lines of hybrids in foundation and certified seeds production, probable areas of seed production etc.)	YES	NO
Vivid presentations (field view, close-up of a single plant and seeds) with the help of photographs)	YES	NO
Recommendations of the workshop, conference	YES	NO
Acknowledgement of the submission of seed sample of variety/hybrid/A,B and R lines of the hybrid submitted to the NBPGR	YES	NO
Package of practices	YES	NO
Proforma signed by all co-authors and head of organization	YES	NO
Any other pertinent information	YES	NO

Signature of the Head of the Institution

Table 1. Summarized yield data of the coordinated varietal trials

Name of the proposed variety/hybrid: Adaptability zone :
Production conditions :

Item	Year of testing	No. of trials/ locations	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qual. Var.1	Qual. Var.2	Qual. Var.3
Mean yield (q/ha) a)Zonal	1st year									
	2nd year									
b)Across zones (if applicable)	3rd year									
Percentage increase or decrease over the checks and qualifying varieties	Weighted mean 2nd year 3rd year weighted mean									
Frequency in the top three groups (pooled for three years)										

Note: Qualifying variety is one which has completed three years of testing in the coordinated trials; Centre-wise data must be appended, otherwise proposal will not be considered

Table 2. Adaptability to agronomic variables

Name of the proposed variety/hybrid: Adaptability zone :
Production conditions :

Nature of experiments	Item	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qual. Var.1	Qual. Var.2	Qual. Var.3
Sowing date experiments	Yield (q/ha) under recommended sowing date Percentage gain or loss when sown	(i)Early (ii)Normal (iii)Late							
Fertilizer experiments	Yield (q/ha) under recommended dose percentage gain or loss under other doses								
Irrigation experiments (wherever applicable)	Yield(q/ha) with adequate irrigation Percentage gain or loss with irrigation level	(i)Level1 (ii)Level2 (iii)Level3							

Note: specify each date of sowing, fertilizer level and number of irrigations at I, ii, iii

Table 3. Reaction to major diseases

Name of the proposed variety/hybrid: Adaptability zone :
Production conditions :

Disease Name		Item	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qual. Var.1	Qual. Var.2	Qual. Var.3
Disease 1	Natural	1st year								
		2nd year								
		3rd year								
	Artificial	1st year								
		2nd year								
		3rd year								
Disease 2	Natural	1st year								
		2nd year								
		3rd year								
	Artificial	1st year								
		2nd year								
		3rd year								
Disease 3	Natural	1st year								
		2nd year								
		3rd year								
	Artificial	1st year								
		2nd year								
		3rd year								
	Natural	1st year								
		2nd year								
		3rd year								
Disease 4	Artificial	1st year								
		2nd year								
		3rd year								

Table 4. Reaction to insect-pests

Name of the proposed variety/hybrid Adaptability zone :
Production conditions :

Pest		Item	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qual. Var.1	Qual. Var.2	Qual. Var.3
Pest 1	Natural	1st year								
		2nd year								
		3rd year								
	Artificial	1st year								
		2nd year								
		3rd year								
Pest 2	Natural	1st year								
		2nd year								
		3rd year								
	Artificial	1st year								
		2nd year								
		3rd year								
Pest 3	Natural	1st year								
		2nd year								
		3rd year								
	Artificial	1st year								
		2nd year								
		3rd year								

Table 5.Data on the quality characteristics

Quality Characteristics	Item	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qual. Var.1	Qual. Var.2	Qual. Var.3
Parameter-1									
Parameter-2									
Parameter-3									
Parameter-4									

Note: Specify the parameters under first column at 1-14

Table 6. Data on the other important characters

Name of the proposed variety/hybrid Adaptability zone :
Production conditions :

		Item	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qual. Var.1	Qual. Var.2	Qual. Var.3
1.	Plant height	1st year								
		2nd year								
		3rd year								
2	Days of flowering	1st year								
		2nd year								
		3rd year								
3	Days to maturity	1st year								
		2nd year								
		3rd year								
4	1,000-grain weight	1st year								
		2nd year								
		3rd year								

		Item	Proposed variety	National check 1	Zonal check 2	Local check 3	Latest released check 4	Qual. Var.1	Qual. Var.2	Qual. Var.3
5	Lodging	1st year								
		2nd year								
		3rd year								
6	Others	1st year								
		2nd year								
		3rd year								

Guidelines for Filling-up Proforma for Submission of the Proposal for Release of Crop Varieties/Hybrids to the Central Sub-Committee on Crop Standards Notification and Release of Varieties

1. Name of the crop and the species: The name given to the variety may be indicative of crop name, institute name/code, and number, if any.
2. Name of the variety under which tested: This should include the name under which the variety was tested in the coordinated trials.
3. Proposed name of the variety: This should include the name of the variety that is proposed for its commercial use as per the existing guidelines.
4. Sponsoring institute : This should include the name of the institute/organization that sponsors the variety
5. Institution or agency responsible for developing variety (with full address) : Institute or organization where the variety has been developed along with the full address
6. Name of the person who helped in the development of the variety: Only those workers should be included who have contributed in the development of the variety/hybrid. The Co-workers can be grouped in 2 categories as the 'Developer' and as the 'Collaborator'.

The co-worker should be associated with the project (from which cultivar has been developed) for a period of minimum of 2 years. The proposal should be signed by each of the co-worker and validated by the Head of the Organization.

7. Parentage (with details of pedigree including the source from which variety/inbred/A,B and R lines of the hybrid has been developed).

   This should essentially include the details of the base population/source of the material used for developing the variety/parental lines of the hybrid. Pedigree and parentage have to be furnished in details as to how the parents have been developed with flow charts, instead of just code numbers. Flow chart should clearly present the development of the proposed culture with year-wise details of attempting initial cross, followed by handling of segregating generation.

   Details, indigenous (IC) or exotic (EC) collections and the number of accessions (Provided by the NBPGR) if used, in the development of the variety or parental lines of hybrids, are to be provided, Please note that this IC number should be different from the one provided by the NBPGR at the submission of the seed sample of the line/hybrid/variety, the once variety/hybrid is recommended by the Variety Identification Committee (VIC).

8. Source of material in case of introduction: Details of the EC (Exotic collection) number, provided by the NBPGR, for the imported material used in the variety development, are to be given.
9. DNA profile of variety/hybrid/inbred/ A,B,R lines of the hybrid vis-à-vis check variety/line Detailed information on the molecular discrimination should be provided. Such information can be developed at crop-based institutes/NBPGR/Other labs. The information should include details of amplicons (name, sequence number, primer sequence) with reference to polymorphic markers.
10. The relevant good quality high resolution photographs should also be attached.

11. Breeding method used : The method used in developing the variety/parental line
12. Breeding objective : The breeding objective for developing the variety
13. State varieties which most closely resemble the proposed variety in general characters. The information should include name of the varieties resembling most closely to the proposed variety with reference to different phenotypic traits.
14. Recommended production ecology: The information on zones (name of the states), season and production conditions, whether Rainfed or irrigated, should be mentioned.
15. Description of the hybrid/variety: The average and expected normal range with respect to various characters may be mentioned.
16. Description of parents of the hybrid: The average and expected normal range with respect to characters may be mentioned with reference to inbred/A line/B line/R line.
17. Yield data in coordinated trials (breeding, agronomy, pathology, entomology, quality etc) and regional/inter-regional district trials year-wise (level of fertilizer application, density of plant population and superiority over local control/standard variety) are to be indicated (to be attached) The yield data and other data of coordinated trials and other details as per the format of tables should be appended. Please not that mean is 'weighted mean' and not the 'arithmetic mean'.
18. Yield data from the national demonstration/large-scale demonstrations (to be attached) : The yield and other details as per the format of the tables should be appended.
19. Agency responsible for maintaining breeder seed : Name of the institute/organization/agency responsible for maintenance of the breeder seed of variety/parental line of hybrid
20. Quantity of the breeder seed in stock (kg) : Quantity (kg) of available seeds with reference to variety, hybrid, inbred/AB/R lines of the hybrid are to be indicated clearly.
21. Information on acceptability of the variety by farmers/ consumers/ industry : Any information on such aspects can be given.
22. Specific recommendations, if any, for seed production (e.g. staggered sowing, planting ratio of parental lines of hybrids in foundation and certified seeds production, probable areas of seed production)

    The seed production technology and specific requirements should be mentioned clearly along with the proposal. With respect to seed production of hybrid, the staggered sowing of parental lines, if required, should also be clearly indicated. The planting ration of male and female parents in the seed production plots should be indicated. In addition, if there are some other precautions needed, they are to be mentioned clearly. The probable areas of seed production need to be give.
23. Vivid presentation (field view, close-up of a single plant and a seed/economic parts) : The proposal should invariably have coloured pictures with a clear field view of the variety, a close-up of a single plant and seeds/economic parts. Photograph of other plant parts which may help in identification of varieties can also be given. The cover page of the proposal should also have a colored photograph of the variety and should be well-designed.
24. whether recommended by any workshop, seminar, conference, state seed committee etc., Details of workshop/ conference/ seminar/ or state variety release committee be given, which recommended the variety for release.
25. If so, its recommendations with specific justifications for release of the proposed variety: The specific recommendations of the workshop/conference/state variety release committee along with the documents should be attached.
26. Specific area of its adaptation. The zone and states for which variety is proposed.
27. Acknowledgement of the submission of the seed sample of variety/hybrid/inbred/ A,B and R lines of the hybrid from the NBPGR and IC numbers : The acknowledgement certificate issued by

the NBPGR providing details of the IC number with respect to variety, hybrid and parental lines of hybrids should be part of the proposal

28. Package of practices along with the attainable yield levels: A note on the package of practices of crop with respect to the variety needs to be provided, highlighting particularly specific requirements of the variety to realize its attainable yield levels.

29. Others

One-page 'executive summary' of the proposal may be provided in the beginning, highlighting specific features of the variety/hybrid. Exaggerated presentation in executive summary needs to be avoided.

Each page of the proposal should be numbered.

Checklist needs to be part of the proposal.

The CVRC proposal should be scrutinized at the level of the Project Coordinator/Project Director before submission to the CVRC. PCs/PDs will give their opinion on the proposal to member-secretary (CVRC).

30. Any other pertinent information: Any other relevant information which is important in reference to the variety, hybrid or parental lines of the hybrids is also required.

Appendix 9

Monitoring of AICRIP Trials with list of observations to be recorded by the cooperators during *kharif,* 2024

Trial name	:	
Date of sowing	:	
Date of planting	:	
Plot size (Gross) m^2	:	
Plot size (Net)m^2	:	
Spacing cm	:	
No of entries	:	
Name of the checks (including local check)	:	
Cultures flowered earlier than the check	:	
Cultures flowered later than checks	:	
Highly promising entries	:	
Poor performing entries	:	
Shift based on duration	:	
Rejection based on (a) mixtures or off types (b) non-uniformity/or segregation and high degree of susceptibility to biotic/abiotic stress.	:	
Any other comments	:	

Note:	Please use additional copies for taking observations in each of the AICRIP trials allotted to the centre & return the same positively to the PI in December month.

Date:

Signature of the Breeder (with seal)

Appendix 10

Proceedings of the meeting for promotion and release in problem prone ecologies under rainfed and irrigated conditions

A committee was constituted to review the criteria for identification of suitable entries for promotion and release in problem prone ecologies under rainfed and irrigated conditions (Early Direct Seeded, Rainfed Shallow Lowland, Semi Deep Water, Deep-Water, Inland Salinity/Alkalinity and Coastal Salinity) in the pre-group meeting (Plant Breeding) of AICRP on Rice at NASC, New Delhi. The committee comprised the following members:

1. Dr. A.K. Nayak, Director, ICAR-NRRI (Co-Chairman)
2. Dr. R.M. Sundaram, Director, ICAR-IIRR (Co-Chairman)
3. Dr. S. Gopala Krishnan, Head, Division of Genetics, ICAR-IARI, New Delhi (Member)
4. Dr. B.N. Singh, Ex-Director, ICAR-NRRI (Member)
5. Dr. S. K. Dash, Principal Scientist, ICAR-NRRI (Member)
6. Dr. M. Chakraborti, Senior Scientist, ICAR-NRRI (Member)
7. Dr. Santosha Rathod, Senior Scientist, ICAR-IIRR (Member)

The committee met virtually on 071h May 2024. The following points were discussed and agreed by the committee for data analysis and interpretation in Early Direct Seeded, Rainfed Shallow Lowland, Semi Deep Water (Medium Deep Water as per International Nomenclature) , Deep-Water , Inland Salinity/Alkalinity and Coastal Salinity trials.

1. Minimum CV (%) will remain at 5% and the upper limit of CV for problem prone ecologies under rainfed and coastal saline conditions shall be increased to 40% from the existing cut-off level of 30%. Furthermore, locations with even higher CVs may be deemed acceptable based on the observed mortality or complete yield loss levels in the trials which may be decided on a case-to-case basis based on monitoring team reports.
2. The level of significance in problem prone ecology shall be increased to 10% in place of the existing value of 5% level of significance.
3. Pooled analysis to be carried out based on statistical procedures of combined group analysis. Error homogeneity testing will be done for pooled analysis. If the location error shows homogeneity, pooling can proceed directly without transformation. However, if locations exhibit heterogeneity, data will be transformed through Atkinson transformation before being pooled for analysis.
4. Identification of promising entries is proposed to be done for the states of a zone through pooled analysis where multiple types of data sets under different situations are required for release of a variety (ex. EDS entries with data for normal rainfall and drought locations) and/or the trial locations are limited in numbers, rather than state specific release. Variety identification proposal will include only the states of the zone where trials were conducted, not all states of the zone.

5. Considering the complex nature of the early direct seeded (EDS) rice trials, the specific criteria for promotion/promising entry identification as listed below are recommended:

Test levels	**Normal/ Favorable Rainfall**	**Moderate drought**	**Severe drought**	**Recommendation**
IVT(A)	At-par (BVC) in addition to being superior under moderate stress at locations in the same zone	Superior (BVC-Drought tolerant check)	Severe drought will be for consideration of germplasm registration or identification of novel donor lines. However, for release of variety performance in moderate drought and normal rainfall will be compared.	Promoted to AVT 1
IVT(B)	At-par (BVC) in addition to being superior under severe stress compared to BVC-Drought tolerant check	At-par (BVC-Drought tolerant check)		Promoted to AVT 1
AVT-1	At-par (BVC) in addition to being superior under moderate stress at locations in the same zone	Superior (BVC-Drought tolerant check)		Both IVT (A) and IVT (B) promoted to AVT2
AVT-1	At-par (BVC) in addition to being superior under severe stress compared to BVC-Drought tolerant check	At-par (BVC-Drought tolerant check)		IVT(A) to be dropped IVT(B) to be discontinued but identified as valuable drought tolerant germplasm which. may be registered to PGRC if performance is superior under severe drought
AVT-1	At-par (BVC)	At-par (BVC-Drought tolerant check)		Entries to be dropped

Test levels	Normal/ Favorable Rainfall	Moderate drought	Severe drought	Recommendation
AVT-2	At-par (BVC) in addition to being superior under moderate stress at locations in the same zone	Superior (BVC-Drought tolerant check)		Both IVT (A) and IVT (B) may be considered promising. However, at-least 02 years significant superior performance required for IVT (B) category of entries. In both cases, superior testing under moderate drought during 3rd year of testing to be mandatory.
AVT-2	At-par (BVC)	At-par (BVC-Drought tolerant check)		Entries to be dropped
All Trials	-	Only one location under moderate drought		Decision for promotion/ repeat/ deletion/ promising performance based on pooled analysis with normal rainfall locations (At-par or superior in pooled analysis). However, at least 02 years significant superior performance in the locations experiencing moderate drought stress is mandatory for classifying the nomination as promising entry.

BVC: Best Varietal Check

Appendix 11

CENTRE WISE BREEDER SEED PRODUCTION DURING *KHARIF*, 2024 (AS PER DAC INDENT)

(Quantity in Quintals)

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
1	AAU, Anand (Nawagam)	Gujarat Anand Rice 13 (GAR 13) (IET 20930)	2010	1.70	1.70	0.00	1.70	0.00
		Gujarat Anand Rice 14 (GAR 14) (IET 24619)	2018	5.70	5.70	0.00	5.70	0.00
		Gurjari	1999	7.50	7.50	0.00	7.50	0.00
		Mahisagar (IET 22100)	2018	0.50	0.50	0.00	0.50	0.00
		GR 103	1992	0.02	0.02	0.00	0.02	0.00
		Total		**15.42**	**15.42**	**0.00**	**15.42**	**0.00**
2	AAU, Jorhat (Titabar)	Bahadur Sub 1	2018	3.65	31.90	0.00	31.90	28.25
		Garima	1982	0.00	0.00	0.00	0.00	0.00
		Gitesh (TTB 283-1-26)	2017	1.90	26.40	0.00	26.40	24.50
		Ketekijoha (IET 18669)	2006	2.00	17.10	0.00	17.10	15.10
		Numali (IET 27405)	2020	2.00	18.95	0.00	18.95	16.95
		Ranjeet	1994	2.80	43.70	0.00	43.70	40.90
		Ranjit SUB 1	2018	7.80	120.70	0.00	120.70	112.90
		Total		**20.15**	**258.75**	**0.00**	**258.75**	**238.60**
3	ANGRAU, Guntur	BPT 2231 (Akshaya)	2011	0.30	0.50	0.00	0.50	0.20
		BPT 2295 (Bapatla Mahsuri) (IET 22188)	2019	0.05	0.10	0.00	0.10	0.05
		BPT 2411 (Sasya) (IET 23081)	2020	0.40	0.50	0.00	0.50	0.10
		BPT 2595 (Teja) (IET 25486)	2020	0.65	0.75	0.00	0.75	0.10
		BPT 2782 (Bhavathi) (IET 27124)	2020	1.00	1.20	0.00	1.20	0.20
		BPT 3291 (Sonamasuri)	2005	0.30	0.50	0.00	0.50	0.20
		BPT 5204 (Samba Mahsuri)	1989	84.60	85.00	0.00	85.00	0.40
		Kotha Malagolukulu 72	1978	0.20	1.00	0.00	1.00	0.80
		MCM Rice 103	2023	1.10	1.10	0.00	1.10	0.00
		MTU 1001 (Vijetha)	1997	129.45	70.00	80.00	150.00	20.55
		MTU 1010 (Cottondora Sannalu)	2000	157.60	160.00	0.00	160.00	2.40
		MTU 1061 (Indra)	2007	7.10	62.00	0.00	62.00	54.90
		MTU 1064 (Amara)	2010	8.20	17.40	0.00	17.40	9.20
		MTU 1075 (IET 18482)	2008	12.25		25.00	25.00	12.75
		MTU 1121 (Sri Dhruthi)	2016	12.95	90.00	60.00	150.00	137.05
		MTU 1140 (Bheema/Dheera)	2017	3.40	5.00	0.00	5.00	1.60
		MTU 1153 (Chandra) (IET 23409)	2016	37.30	100.00	75.00	175.00	137.70
		MTU 1155 (Samvruddhi) (IET 23272)	2019	1.10	2.00	0.00	2.00	0.90
		MTU 1156 (Tarangini)	2017	122.50	122.00	100.00	222.00	99.50
		MTU 1172 (IET 24495) (Ksheera)	2019	0.60	0.00	2.00	2.00	1.40
		MTU 1190 (Varam) (IET 25495)	2019	0.20	0.00	2.00	2.00	1.80
		MTU 1210 (Maruteru Sujatha) (IET 2s305)	2020	2.30	0.00	4.00	4.00	1.70
		MTU 1212	2021	15.00	10.00	10.00	20.00	5.00
		MTU 1223 (IET 25856)	2021	0.65	2.00	0.00	2.00	1.35

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		MTU 1224 (Maruteru Samba) (IET 26225)	2020	15.25	45.00	45.00	90.00	74.75
		MTU 1239	2021	20.60	20.00	5.00	25.00	4.40
		MTU 1262 (Maruteru Mahsuri) (IET 27151)	2020	9.30	70.00	70.00	140.00	130.70
		MTU 1280	2021	0.10	0.00	5.00	5.00	4.90
		MTU 1281	2021	0.20	0.00	2.00	2.00	1.80
		MTU 2077 (Krishnaveni)	1990	0.60	6.00	0.00	6.00	5.40
		MTU 5182 (Nandi)	1993	0.00	0.00	0.00	0.00	0.00
		MTU 6024	1985	0.00	0.00	0.00	0.00	0.00
		MTU 7029 (Swarna)	1985	260.85	265.00	0.00	265.00	4.15
		MTU Rice 1232 (IET 26422)	2023	0.20	0.00	2.00	2.00	1.80
		MTU Rice 1239 (IET 26263)	2021	0.20	20.00	5.00	25.00	24.80
		MTU Rice 1271 (IET 27416)	2024	0.05	0.00	15.00	15.00	14.95
		MTU Rice 1273	2022	0.40	0.00	4.00	4.00	3.60
		MTU Rice 1293	2022	0.30	10.00	15.00	25.00	24.70
		MTU Rice 1310	2022	0.10	0.00	2.00	2.00	1.90
		MTU RICE 1318 (IET 28527)	2023	42.05	100.00	0.00	100.00	57.95
		MTU Rice 1321	2022	0.15	0.00	2.00	2.00	1.85
		NDLR 7 (Nandyala Sona) (IET 23715)	2018	1.00	18.00	0.00	18.00	17.00
		NLR 33358 (Somasila)	2000	0.20	1.00	0.00	1.00	0.80
		NLR 3354	2020	0.05	0.00	2.00	2.00	1.95
		NLR 33641 (Vedagiri)	2000	0.20	1.00	0.00	1.00	0.80
		NLR 33892 (Pardhiva)	2007	0.65	4.00	0.00	4.00	3.35
		NLR 4001 (Nellore Siri) (IET 25273)	2020	0.15	0.00	2.00	2.00	1.85
		NLR 40024	2021	0.60	0.00	1.00	1.00	0.40
		NLR 40054 (Nellore Sugandha) (IET 23194)	2020	0.10	0.00	1.00	1.00	0.90
		NLR-34449 (Nellore Mahsuri)	2010	37.70	0.00	100.00	100.00	62.30
		Prabhat	1978	1.90	10.00	8.00	18.00	16.10
		RGL 2537 (Srikakulam Sannalu)	2000	2.20	45.00	0.00	45.00	42.80
		Vajram	1987	0.00	0.00	0.00	0.00	0.00
		Total		**994.30**	**1346.05**	**644.00**	**1990.05**	**995.75**
4	MPKV, Rahuri,	Bhogavati	2007	0.60	3.00	0.00	3.00	2.40
		Indrayani (IET 12897)	1993	14.50	97.00	0.00	97.00	82.50
		Phule Samruddhi (VDN-99-29)	2010	0.80	2.00	0.00	2.00	1.20
		Total		**15.90**	**102.00**	**0.00**	**102.00**	**86.10**
5	PDKV, Akola (ARS, Sakoli)	Sakoli 7 (IET 10651)	1990	0.20	0.80	0.00	0.80	0.60
		Sakoli 9 (SKL-2-50-56-45-30-60)	2019	0.20	59.80	0.00	59.80	59.60
		SYE-ER-1 (IET 9296)	1990	0.20	0.20	0.00	0.20	0.00
	PDKV, Akola (ARS, Sindewahi)	PDKV Kisan (SKL-22-39-31-25-31-34)	2018	0.20	28.34	0.00	28.34	28.14
		PDKV Sadhana	2023	0.20	5.00	0.00	5.00	4.80
		PDKV Tilak (SYE-503-78-34-2)	2019	2.00	181.80	0.00	181.80	179.80
		PKV HMT	2008	43.00	51.60	0.00	51.60	8.60
		Total		**46.00**	**327.54**	**0.00**	**327.54**	**281.54**
6	BSKKV, Dapoli (ARS,	Ratnagiri 1	1990	0.30	9.00	0.00	9.00	8.70

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
	Shirgaon)							
		Ratnagiri 2	1990	0.50	0.23	0.00	0.23	-0.27
		Ratnagiri 6 (RTN 65-1-2-2-2) (IET 25529)	2019	0.20	5.40	3.00	8.40	8.20
		Ratnagiri 68-1	1986	0.00	0.00	0.00	0.00	0.00
		Ratnagiri 8 (RTN 28-1-5-3-2) (IET 25493)	2019	2.25	13.00	8.00	21.00	18.75
	BSKKV, Dapoli (RARS, Karjat)	Karjat 1	1990	0.20	0.00	0.00	0.00	-0.20
		Karjat 2	1996	0.20	3.50	0.00	3.50	3.30
		Karjat 3	1996	4.30	13.50	0.00	13.50	9.20
		Karjat 5	2007	0.40	2.50	0.00	2.50	2.10
		Karjat 7	2009	1.00	6.50	0.00	6.50	5.50
		Karjat 8	2017	0.20	3.50	0.00	3.50	3.30
		Karjat 9	2017	0.20	6.70	0.00	6.70	6.50
		Trombay Karjat Kolam (BARCKKV 13) (IET 27000)	2020	0.20	1.20	0.00	1.20	1.00
		Total		**9.95**	**65.03**	**11.00**	**76.03**	**66.08**
7	MPUAT, Udaipur	BK 190	1983	0.00	0.00	0.00	0.00	0.00
		Total		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
8	BAU, Ranchi	Birsa Vikas Dhan 111 (PY-84) (IET 19848)	2015	1.00	1.00	0.00	1.00	0.00
		Birsa Vikas Sugandha 1 (IET 18941)	2015	5.00	9.90	0.00	9.90	4.90
		Total		**6.00**	**10.90**	**0.00**	**10.90**	**4.90**
9	BAU, Sabour	Heera (IET 10973)	1989	0.00	0.00	0.00	0.00	0.00
		Kanak (BIET 1009)	1989	0.00	0.00	0.00	0.00	0.00
		Sabour Deep (RAU 3055)	2017	15.00	30.00	30.00	60.00	45.00
		Sabour Harshit Dhan (IET 25342)	2020	24.00	70.00	70.00	140.00	116.00
		Sabour Sampanna Dhan (IET 25960)	2021	24.00	130.00	130.00	260.00	236.00
		Sita	1978	0.10	0.00	0.00	0.00	-0.10
		Total		**63.10**	**230.00**	**230.00**	**460.00**	**396.90**
10	BCKV, Nadia	Bidhan Suruchi (IET 25701)	2019	2.30	6.00	0.00	6.00	3.70
		Gontra Bidhan 1 (IET 17430)	2008	12.15	15.00	0.00	15.00	2.85
		Gontra Bindhan 3 (IET 22752)	2014	5.40	7.00	0.00	7.00	1.60
		Total		**19.85**	**28.00**	**0.00**	**28.00**	**8.15**
11	BHU, Varanasi	HUR 917	2017	4.50	7.50	0.00	7.50	3.00
		Total		**4.50**	**7.50**	**0.00**	**7.50**	**3.00**
12	SKUAST, Jammu	GIZA 14	1978	6.00	6.00	0.00	6.00	0.00
		Jammu Basmati 118 (SJBR 118)	2021	5.00	3.52	0.00	3.52	-1.48
		Basmati 370		0.00	46.08	0.00	46.08	46.08
		K 343		0.00	1.50	0.00	1.50	1.50
		K 39		0.00	1.75	0.00	1.75	1.75
		K 448		0.00	1.00	0.00	1.00	1.00
		JB 123		0.00	0.72	0.00	0.72	0.72
		JB 138		0.00	0.36	0.00	0.36	0.36
		Total		**11.00**	**60.93**	**0.00**	**60.93**	**49.93**

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
13	CSSRI, Karnal	CSR 76 (IET 27070)	2021	0.90	1.50	0.00	1.50	0.60
		Total		**0.90**	**1.50**	**0.00**	**1.50**	**0.60**
14	NDUAT, Ayodhya	IR 64 Sub 1 (IET 21247)	2020	15.10	36.36	0.00	36.36	21.26
		NDR 1	1983	0.00	0.00	0.00	0.00	0.00
		NDR 1045-2 (Shusk Samrat) (IET 17458)	2007	0.00	0.00	0.00	0.00	0.00
		NDR 2065 (IET 17476)	2011	2.00	29.75	0.00	29.75	27.75
		NDR 3112-1 (Narendra Dhan 3112-1 Prakhar) (IET 19335)	2009	0.90	0.90	0.00	0.90	0.00
		NDR 359 (Narendra Dhan-359)	1994	0.20	30.34	0.00	30.34	30.14
		NDR 9930111 (IET 19117)	2021	10.00	24.75	0.00	24.75	14.75
		Sarjoo-52	1982	0.50	117.25	0.00	117.25	116.75
		Pusa Narendra Kalanamak-1	2023	0.00	29.40	0.00	29.40	29.40
		Pusa CRD Kalanamak-2	2023	0.00	14.10	0.00	14.10	14.10
		Total		**28.70**	**282.85**	**0.00**	**282.85**	**254.15**
15	GBPUAT, Pantnagar	Pant Basmati 1 (RP 36444-1-9-5-5)	2015	0.20	8.00	0.00	8.00	7.80
		Pant Basmati 2 (IET 21953)	2015	0.20	2.40	0.00	2.40	2.20
		Pant Dhan 18 (IET 17920) (UPRI 99-1)	2007	0.45	5.49	0.00	5.49	5.04
		Pant Dhan 24 (IET 22096)	2015	0.40	9.25	0.00	9.25	8.85
		Pant Dhan 26 (UPR 3425-14-3-1)	2017	5.30	5.85	0.00	5.85	0.55
		Total		**6.55**	**30.99**	**0.00**	**30.99**	**24.44**
16	ICAR-NRRI, Cuttack, Odisha	Amulya (IET 8989)	1989	0.00	0.00	0.00	0.00	0.00
		Anjali (RR-347-166) (IET 16430)	2002	0.40	5.00	0.00	5.00	4.60
		CR 1014	1989	0.30	0.70	0.00	0.70	0.40
		CR Dhan 102 (IET 25121)	2020	2.80	0.00	0.90	0.90	-1.90
		CR Dhan 202 (IET 21917)	2014	0.30	0.00	3.60	3.60	3.30
		CR Dhan 203 (Sachala lET- 2717-10-IR 84899-B-185) (IET 22731)	2015	0.50	0.00	0.90	0.90	0.40
		CR Dhan 204 (IET 21692)	2019	0.30	0.00	0.50	0.50	0.20
		CR Dhan 205 (IET 22737)	2019	0.30	0.00	0.90	0.90	0.60
		CR Dhan 206 (Gopinath) (CR 2996-1-14-29-3-1) (IET 22731)	2015	0.30	0.00	3.60	3.60	3.30
		CR Dhan 300 (CR2301-5) (IET 19816)	2014	0.40	1.50	0.00	1.50	1.10
		CR Dhan 305 (IET 21287)	2014	2.50	2.10	0.00	2.10	-0.40
		CR Dhan 306 (IET 22084)	2019	0.30	0.35	0.00	0.35	0.05
		CR Dhan 307 (Maudamani) (CR 2599) (IET 20925)	2015	0.30	1.70	0.00	1.70	1.40
		CR Dhan 310	2022	10.85	0.00	18.00	18.00	7.15
		CR Dhan 311 (Mukul) (CR 2829-PLN-100) (IET 24772)	2019	0.65	0.00	4.50	4.50	3.85
		CR Dhan 314 (IET 27263)	2022	15.40	8.50	8.10	16.60	1.20
		CR Dhan 315 (IET 27179)	2021	0.60	2.50	0.00	2.50	1.90
		CR Dhan 316 (CRRI Gaurav-1)	2021	1.40	2.10	0.00	2.10	0.70
		CR Dhan 317 (Roshan)	2021	1.30	0.85	0.00	0.85	-0.45
		CR Dhan 318 (IET 27803)	2021	0.20	0.00	3.60	3.60	3.40
		CR Dhan 319	2021	0.40	0.60	0.00	0.60	0.20
		CR Dhan 321 (IET 28354)	2022	10.00	5.90	22.00	27.90	17.90

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		CR Dhan 323 (Jyotsna)	2023	0.70	0.70	0.90	1.60	0.90
		CR Dhan 324 (Abhaya Paushtik)	2023	0.70	0.70	0.00	0.70	0.00
		CR Dhan 326 (Panchatatva)	2023	0.70	0.50	0.00	0.50	-0.20
		CR Dhan 327 (Madhumita)	2023	0.70		1.80	1.80	1.10
		CR Dhan 328	2023	0.70	0.90	0.00	0.90	0.20
		CR Dhan 407 (IET 21974)	2014	0.30	1.20	0.00	1.20	0.90
		CR Dhan 408 (Chakaakhi) (CR491-1590-330-2-1) (IET 20265)	2018	0.30	0.90	0.00	0.90	0.60
		CR Dhan 410 (IET 24471)	2020	0.10	0.50	0.00	0.50	0.40
		CR Dhan 411 (Swaranjali) (IET 27852)	2021	1.30	14.70	0.00	14.70	13.40
		CR Dhan 413 (Reeta-Panidhan)	2021	0.30	0.90	0.00	0.90	0.60
		CR Dhan 414 (IET 27051)	2022	0.50	1.00	0.00	1.00	0.50
		CR Dhan 508 (CR3835-1-7-2-1-1)	2017	0.40	1.50	0.00	1.50	1.10
		CR Dhan 510 (CR 2593-1-1-1-1) (IET 23895)	2019	0.30	2.80	0.00	2.80	2.50
		CR Dhan 511 (CR 2789-9-2) (IET 23906)	2019	0.20	0.60	0.00	0.60	0.40
		CR Dhan 512 (Satrughan)	2021	0.30	0.70	0.00	0.70	0.40
		CR Dhan 704 (Shyamdev)	2023	0.20	0.20	0.00	0.20	0.00
		CR Dhan 800 (Swarna MAS) (CRMAS 2232- 85)	2018	3.65	6.00	0.00	6.00	2.35
		CR Dhan 801 (IR96322-34-223-B-1-1-1-CR3955-2) (IET 25667)	2019	0.30	0.25	0.50	0.75	0.45
		CR Dhan 802 (Subhas) (CR 3925-22-7) (IET 25673)	2019	5.30	5.00	0.90	5.90	0.60
		CR Dhan 803 (Trilochan) (IET 26398)	2021	10.30	18.60		18.60	8.30
		CR Dhan 805 (Naveen Shakti)	2023	0.70	0.85	1.80	2.65	1.95
		CR Dhan 806 (Varsadhan Sub 1)	2023	2.20	0.00	0.00	0.00	-2.20
		CR Dhan 911 (Basudev)	2023	1.20	0.85	3.60	4.45	3.25
		CR Sugandh Dhan 910 (CR 2713- 180) (IET 22649)	2018	0.20	0.00	0.00	0.00	-0.20
		CR-36-148 (Supriya)	1997	0.20	0.20	0.00	0.20	0.00
		Dharitri (IET 6272)	1989	1.45	17.10	0.00	17.10	15.65
		Gayatri (IET 8022)	1989	1.40	12.30	0.00	12.30	10.90
		Geetanjali (CRM-2007-1) (IET 17276)	2006	0.10	0.50	0.00	0.50	0.40
		Improved Lalat (CRMAS 2621-7-1)	2013	1.25	1.70	4.50	6.20	4.95
		Luna Sampad (IET 19470)	2011	0.20	0.05	0.00	0.05	-0.15
		Luna Sankhi	2013	0.50	0.30	1.80	2.10	1.60
		Luna Suvarna (IET 18697)	2011	0.05	0.10	0.00	0.10	0.05
		Lunisree	1992	0.10	0.10	0.00	0.10	0.00
		Naveen (CR-749-20-2) (IET 14461)	2006	0.40	0.00	0.90	0.90	0.50
		Padmini (IET 10561)	1989	0.60	0.45	0.00	0.45	-0.15
		Pooja (IET 12241)	1999	7.85	30.00	0.00	30.00	22.15
		Pradhan Dhan (CR 409) (CR 2690-2- 2-1-1-1) (IET 23110)	2018	0.20	8.00	0.00	8.00	7.80
		Purna (IET 18654)	2017	0.20	0.00	0.00	0.00	-0.20
		Purnendu (IET 10029)	1997	0.00	0.00	0.00	0.00	0.00
		Reeta (IET 19969)	2011	0.20	0.40	0.00	0.40	0.20
		Sarla CR-260-77 (IET 10279)	2002	1.20	15.30	0.00	15.30	14.10
		Savitri (CR 1009) (IET 5897)	1983	0.65	4.20	0.00	4.20	3.55
		Swarna-SUB 1 (CR 2539-1) (IET 20266)	2009	101.85	160.50	0.00	160.50	58.65
		Vandana (RR-167-982)	2002	0.60	4.50	0.00	4.50	3.90

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		Varshadhan (CRLC-899) (IET 16481)	2006	2.10	2.00	0.00	2.00	-0.10
		Virender (RR 347-2) (IET 17901)	2007	0.20	0.00	0.00	0.00	-0.20
	NRRI, Cuttack (CRUSS, Hazaribagh)	Sahbhagi Dhan (IET 19576) (IR74371-70-1-1-CRR-1)	2011	3.85	11.40	2.70	14.10	10.25
		Abhishek (RR-272-829) (IET 17868)	2007	0.10	0.00	0.00	0.00	-0.10
		CR Dhan 320 (IET 27914)	2021	0.30	0.50	0.00	0.50	0.20
		CR Dhan 312	2020	1.00	1.00	0.00	1.00	0.00
		CR 1009 sub1	2017	0.00	12.30	0.00	12.30	12.30
		CR Dhan 507	2018	0.00	1.60	0.00	1.60	1.60
		CR Sugandhdhan 3	2008	0.00	0.70	0.00	0.70	0.70
		CR Sugandh Dhan 908	2017	0.00	1.40	0.00	1.40	1.40
		CR Sugandh Dhan 909	2018	0.00	1.60	0.00	1.60	1.60
		Khitish	1982	0.00	0.85	0.00	0.85	0.85
		Ketekijoha	2006	0.00	0.75	0.00	0.75	0.75
		Nua Chinikamini	2010	0.00	0.90	0.00	0.90	0.90
		Nua Kalajeera	2008	0.00	0.15	0.00	0.15	0.15
		Shatabdi	2000	0.00	1.90	0.00	1.90	1.90
		Ratna	1970	0.00	0.00	0.50	0.50	0.50
		CR Dhan 416	2024	0.00	0.00	3.15	3.15	3.15
		CR Dhan 108	2024	0.00	0.00	7.20	7.20	7.20
		CR Dhan 301	2012	0.00	0.00	0.90	0.90	0.90
		CR Dhan 212	2024	0.00	0.00	3.60	3.60	3.60
		Total		**207.60**	**383.90**	**101.35**	**485.25**	**277.65**
17	BEDF, Meerut	Improved Pusa Basmati 1 (IET 18990) (Pusa 1460-01-32-6-7-67)	2007	0.50	1.60	0.00	1.60	1.10
		Pusa Basmati 1 (IET 10364)	1989	1.16	8.00	0.00	8.00	6.84
		Pusa Basmati 1121 (Pusa Sugandh 4)	2005	50.50	24.50	0.00	24.50	-26.00
		Pusa Basmati 6 (IET 18005)	2010	1.90	17.80	0.00	17.80	15.90
		Total		**54.06**	**51.90**	**0.00**	**51.90**	**-2.16**
18	ICAR-IARI, RS, Karnal	PUSA 44	1994	0.00	0.00	0.00	0.00	0.00
		Pusa Basmati 1509	2013	30.24	20.00	0.00	20.00	-10.24
		Pusa Basmati 1692 (IET 26995)	2020	22.80	20.00	0.00	20.00	-2.80
		Pusa Basmati 1718	2017	39.70	20.00	0.00	20.00	-19.70
		Pusa Basmati 1728	2016	3.10	4.00	0.00	4.00	0.90
		Pusa Basmati 1847	2021	20.42	22.00	0.00	22.00	1.58
		Pusa Basmati 1885	2021	4.90	5.00	0.00	5.00	0.10
		Pusa Basmati 1886	2021	2.76	4.00	0.00	4.00	1.24
		Pusa Basmati 1979	2021	5.53	7.00	0.00	7.00	1.47
		Pusa Basmati 1985	2021	13.62	14.12	0.00	14.12	0.50
		Pusa Basmati 1882 (IET 28788)	2022	7.40	7.40	0.00	7.40	0.00
		Pusa Basmati 1121 (Pusa Sugandh 4)		0.00	20.00	0.00	20.00	20.00
		Total		**150.47**	**143.52**	**0.00**	**143.52**	**-6.95**
19	ICAR-IARI, New Delhi	Jaldi Dhan 13 (PNR-591-18)	2006	0.20	0.00	0.00	0.00	-0.20
		Pusa 6 (Pusa 1612-7-6-5)	2013	1.00	4.00	0.00	4.00	3.00
		Pusa CRD KN2 (Pusa1638-07-171-1-81-1-2)	2023	1.05	1.50	0.00	1.50	0.45
		Pusa Narendra KN1 (Pusa1638-07-130-	2023	1.10	1.50	0.00	1.50	0.40

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		2-67-1-1)						
		Pusa Samba 1850 (Pusa 1850-27) (IET 25480)	2018	0.10	13.00	0.00	13.00	12.90
		Pusa Samba 1853 (IET 28014)	2022	0.10	5.00	0.00	5.00	4.90
		Pusa Sugandh 5 (IET 17021)	2005	0.50	4.20	0.00	4.20	3.70
		Total		**4.05**	**29.20**	**0.00**	**29.20**	**25.15**
20	ICAR-IIRR, Hyderabad	Bina Dhan 11	2015	21.00	0.00	25.00	25.00	4.00
		Bina Dhan 17 GSR (SAGC7) (IET 24460)	2018	12.25	5.00	8.00	13.00	0.75
		BRRI Dhan 75 (Hua 565) (IET 24459)	2018	0.05	0.00	5.00	5.00	4.95
		Dhanrasi (IET 15358)	2003	0.20	0.20	0.00	0.20	0.00
		DRR Dhan 42 (IR 64 Drt I)(IR 87707-44-5-B-B-B)	2015	2.15	0.00	3.00	3.00	0.85
		DRR Dhan 43 (IET 22080)	2015	25.10	0.00	30.00	30.00	4.90
		DRR Dhan 45 (IET 23832) (RP5886-HP 3-IR80463-B39)	2016	13.40	6.00	8.00	14.00	0.60
		DRR Dhan 46 (IET 23420)	2016	0.75	0.75	0.00	0.75	0.00
		DRR Dhan 47 (IET 23356)	2018	0.10	0.15	0.00	0.15	0.05
		DRR Dhan 48 (IET 24555)	2018	0.95	22.00	0.00	22.00	21.05
		DRR Dhan 50 (IET 25671)	2018	10.60	12.00	0.00	12.00	1.40
		DRR Dhan 51 (IET 25484)	2018	0.60	1.00	0.00	1.00	0.40
		DRR Dhan 53 (RP-6113-Partho-BB9) (IET 27294)	2021	35.10	57.00	0.00	57.00	21.90
		DRR Dhan 54 (RP 5943-421-16-1-1-B) (IET 25653)	2021	24.25	0.00	30.00	30.00	5.75
		DRR Dhan 55 (RP 5591-123-16-2) (IET 26194)	2021	18.30	0.00	25.00	25.00	6.70
		DRR Dhan 56 (IET 26803)	2021	0.40	15.60	0.00	15.60	15.20
		DRR Dhan 57	2021	0.05	0.10	0.00	0.10	0.05
		DRR Dhan 58	2021	0.10	3.00	0.00	3.00	2.90
		DRR Dhan 59	2021	0.10	0.10	0.00	0.10	0.00
		DRR Dhan 60	2021	0.70	1.00	25.00	26.00	25.30
		DRR Dhan 63 (IET 26596)	2021	0.90	1.00	0.00	1.00	0.10
		DRR Dhan 64 (IET 28358)	2022	18.00	0.00	25.00	25.00	7.00
		DRR Dhan 65 (IET 27641)	2022	1.32	1.50	0.00	1.50	0.18
		DRR Dhan 67 (BRRI Dhan 84)	2022	0.10	0.15	0.00	0.15	0.05
		DRR Dhan 68 (BRRI Dhan 99)	2022	0.10	0.00	0.10	0.10	0.00
		DRR Dhan 69 (BRRI Dhan 100)	2022	0.10	0.10	0.00	0.10	0.00
		DRRH 3 (DRRH 44)	2010	0.10	0.10	0.00	0.10	0.00
		Improved Samba Mahsuri	2008	2.65	3.00	0.50	3.50	0.85
		Jarava (IET 15420)	2005	0.20	0.20	0.00	0.20	0.00
		Jaya	1978	11.15	11.50	0.00	11.50	0.35
		Masuri	1978	0.60	0.60	0.00	0.60	0.00
		Sampada (IET 19424)	2008	1.20	1.50	0.00	1.50	0.30
		Vibhava (IET 6080)	1991	0.20	0.20	0.00	0.20	0.00
		Vikas	1983	0.20	0.20	0.00	0.20	0.00
		Vikramarya (lET 7302)	1986	0.20	0.20	0.00	0.20	0.00
		Total		**203.17**	**144.15**	**184.60**	**328.75**	**125.58**
21	ICAR-NEHR, Meghalaya (NEH	Bha Lum 1 (RCPL 1-27)	2003	0.30	0.50	0.00	0.50	0.20

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
	Manipur)							
		Bha Lum 2 (RCPL 1-29)	2003	0.30	0.00	0.00	0.00	-0.30
		Lam Pnah-1 (RCPL 1-87-4)	2003	0.20	0.00	0.00	0.00	-0.20
		Shah Sarang 1 (RCPL 1-87-8)	2003	0.20	1.00	0.00	1.00	0.80
		Total		**1.00**	**1.50**	**0.00**	**1.50**	**0.50**
	ICAR-NEHR, Tripura, Lembucherra	Gomati Dhan TRC-2005-1 (TRC-05-8-4-42-8-3-7) (IET 21512)	2018	0.40	4.50	0.00	4.50	4.10
		Kali Khasa	2004	0.50	2.80	0.00	2.80	2.30
		Tripura Chikan Dhan	2018	0.20	4.20	0.00	4.20	4.00
		Tripura Nirog	2018	0.10	4.20	0.00	4.20	4.10
		Total		**1.20**	**15.70**	**0.00**	**15.70**	**14.50**
22	IGKV, Raipur	Badshabhog Selection 1	2016	20.70	23.10	0.00	23.10	2.40
		Bastar Dhan 1 (IET 26624)	2020	0.60	2.95	0.00	2.95	2.35
		CG Barani Dhan 2 (R-RF-105) (IET 24690)	2021	0.60	7.22	0.00	7.22	6.62
		CG Jawaphool Trombay (RTR-31)	2021	1.00	9.66	0.00	9.66	8.66
		CG Tejaswi Dhan (IGKV DH Rice 1)	2021	1.00	13.45	0.00	13.45	12.45
		Chhattisgarh Devbhog (R-1656-1146-5-513-1) (IET 23879)	2019	11.50	62.34	0.00	62.34	50.84
		Chhattisgarh Dhan 1919	2021	2.20	13.45	0.00	13.45	11.25
		Chhattisgarh Madhuraj Dhan 55	2016	5.30	18.00	0.00	18.00	12.70
		Chhattisgarh Zinc Rice 1	2016	0.60	12.14	0.00	12.14	11.54
		Chhattisgarh Zinc Rice 2 (CGZR-2) (IET 23829)	2019	0.60	11.40	0.00	11.40	10.80
		Dubraj Selection 1	2016	10.30	22.50	0.00	22.50	12.20
		IGKVR 1 (IET 19569)	2011	23.60	63.00	0.00	63.00	39.40
		IGRKVR 1244 (R1244-1246-1-605-1) (IET 19796)	2012	0.30	9.00	0.00	9.00	8.70
		Indira Aerobic 1 (R1570-2649-1-1546-1) (IET 21686)	2015	11.00	9.00	0.00	9.00	-2.00
		Indira Barani Dhan 1 (RF-17-38-70) (IET 21205)	2012	0.30	12.60	0.00	12.60	12.30
		IR 36	1982	2.50	22.50	0.00	22.50	20.00
		IR 64	1991	50.65	84.00	0.00	84.00	33.35
		Mahamaya	1996	107.10	189.90	0.00	189.90	82.80
		Protezin (R-RHZ-R-56) (IET 25470)	2020	3.00	17.72	0.00	17.72	14.72
		Tarunbhog Selection 1	2016	5.30	15.60	0.00	15.60	10.30
		Trombay Chattisgarh Vikram - TCR (Vikram)	2021	6.00	48.56	0.00	48.56	42.56
		Trombay Chhattisgarh Dubraj Mutant 1 (TCDM-1) (IET 23829)	2019	3.00	18.38	0.00	18.38	15.38
		Trombay Chhattisgarh Sonagathi mutant (TCSM)	2021	1.00	7.88	0.00	7.88	6.88
		Trombay Chhattisgarh Vishnubhog mutant (TCVM)	2021	1.00	12.47	0.00	12.47	11.47
		Vishnubhog Selection 1	2016	5.30	16.50	0.00	16.50	11.20
		Zinco Rice MS	2019	5.60	9.00	0.00	9.00	3.40
		IGKVR 2 (IET 19795)	2011	0.00	6.60	0.00	6.60	6.60
		Shyamla	1997	0.00	6.23	0.00	6.23	6.23
		Total		**280.05**	**745.15**	**0.00**	**738.92**	**458.87**
23	JNKVV,	Improved Chinnor	2018	20.00	9.27	0.00	9.27	-10.73

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
	Jabalpur							
		Improved Jeera Shankar	2018	1.20	6.89	0.00	6.89	5.69
		JR 10	2021	80.00	129.75	0.00	129.75	49.75
		JR 206 (IET 26079)	2019	57.15	1425.82	0.00	1425.82	1368.67
		JR 21 (JR 81-01)	2023	76.29	424.76	0.00	424.76	348.47
		JR 81	2018	40.00	190.44	0.00	190.44	150.44
		Kranti (R-2022)	1982	5.15	1194.71	0.00	1194.71	1189.56
		Lallu 14	1976	0.20	2.00	0.00	2.00	1.80
		JRB 1	2018	0.00	22.08	0.00	22.08	22.08
		MTU 1010	2000	0.00	37.40	0.00	37.40	37.40
		Pusa 1460	2007	0.00	2.30	0.00	2.30	2.30
		Pusa Basmati 1	1989	0.00	252.91	0.00	252.91	252.91
		Pusa 1509	2013	0.00	16.07	0.00	16.07	16.07
		Pusa Sugandha 4	2005	0.00	45.91	0.00	45.91	45.91
		Pusa Sugandha 5	2005	0.00	7.74	0.00	7.74	7.74
		IR 64	2020	0.00	62.77	0.00	62.77	62.77
		IR 36	1982	0.00	31.29	0.00	31.29	31.29
		Total		**279.99**	**3862.1**	**0.00**	**3862.11**	**3582.12**
24	KAU, Thrissur (Kayamkulam)	Chingam	2006	0.30	0.00	0.00	0.00	-0.30
	KAU, Thrissur (Mannuthy)	Kau Manu Rathna (HS-16)	2021	0.15	0.93	0.50	1.43	1.28
	KAU, Thrissur (Moncompu)	Bhadra (MO 4)	1980	2.50	0.00	2.50	2.50	0.00
		Kau Pournami (MO 23)	2021	0.30	0.00	0.70	0.70	0.40
		KAUM 42-6-3 (D1) (MO 16-Uma) (IET 14758)	2002	14.50	0.00	14.50	14.50	0.00
		KAUM 59-29-2-1-2 (GM-1) (MO 13-Pavithra) (IET 13983)	2002	0.20	0.00	0.00	0.00	-0.20
		KAUM 61-6-1-1-2 (GM-9) (MO 14-Pancham) (IET 14260)	2002	0.20	0.00	0.00	0.00	-0.20
		MO 21 (P)	2010	1.10	0.00	1.10	1.10	0.00
		MO 5	1984	0.20	0.00	0.00	0.00	-0.20
	KAU, Thrissur (Pattambi)	Jyothi	1977	7.25	3.82	21.50	25.32	18.07
		KAU 87117 (Karuna)	2002	0.20	0.00	0.80	0.80	0.60
		Kau Akshya (PTB 62) (Kau PTB 0615-01-25-17)	2021	0.20	0.00	0.80	0.80	0.60
		Kau Supriya (PTB 61) KAU PTB 0614-7-8-24 (Cul 06-6)	2021	0.20	0.00	0.25	0.25	0.05
		KAUA 4-4-2 (Harsha)	2002	0.20	0.60	0.30	0.90	0.70
		PTB 51 (Aathira)	2006	0.35	0.00	1.00	1.00	0.65
		Swetha (lET 14735)	2006	0.60	0.10	0.80	0.90	0.30
		Trivani (PTB 38)	1973	0.20	0.15	0.20	0.35	0.15
		Varsha (PTB 56)	2006	0.10	1.62	0.00	1.62	1.52
	KAU, Thrissur	Kau-VTL-10 (Lavanya) KAUVTL- 51-5	2021	0.20	0.00	0.20	0.20	0.00

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
	(Vytilla)							
		Total		**28.95**	**7.22**	**45.15**	**52.37**	**23.42**
25	CSKHPKV, Palampur	Him Palam Dhan 1 (HPR 2656)	2020	0.50	9.50	0.00	9.50	9.00
		HPR 1156 (IET 16007)	2004	0.20	0.40	0.00	0.40	0.20
		HPR 2143	2006	3.35	9.54	0.00	9.54	6.19
		Kasturi (IET 8580)	1989	1.25	6.20	0.00	6.20	4.95
		RP-732	1995	0.20	0.00	0.00	0.00	-0.20
		Total		**5.50**	**25.64**	**0.00**	**25.64**	**20.14**
26	SVPUAT, Meerut	Vallabh Basmati 24 (MAUB-171) (IET 20827)	2015	0.20	0.50	0.00	0.50	0.30
		Total		**0.20**	**0.50**	**0.00**	**0.50**	**0.30**
27	NAU, Navasari	GNR 5	2015	3.00	3.00	0.00	3.00	0.00
		GR 103	1992	0.00	0.00	0.00	0.00	0.00
		Total		**3.00**	**3.00**	**0.00**	**3.00**	**0.00**
28	OUAT, Bhubaneswar	Hasanta (OR 2328-5) (IET 21477)	2018	1.20	14.00	0.00	14.00	12.80
		Jagannath	1975	0.20	0.40	0.00	0.40	0.20
		Kalachampa	2015	36.60	82.00	0.00	82.00	45.40
		Kalinga Dhan 1203 (IET 27117)	2021	1.00	6.40	0.00	6.40	5.40
		Kalinga Dhan 1204	2021	0.50	2.00	0.00	2.00	1.50
		Kalinga Dhan 1205 (IET 22579)	2021	1.00	7.20	0.00	7.20	6.20
		Kalinga Dhan 1401	2021	0.50	1.00	0.00	1.00	0.50
		Kalinga Dhan 1501	2021	0.50	1.60	0.00	1.60	1.10
		Kalinga Dhan 1502	2021	0.50	6.00	0.00	6.00	5.50
		Khandagiri	1994	2.35	6.00	0.00	6.00	3.65
		Kharavela (IET 13253)	1999	0.20	0.20	0.00	0.20	0.00
		Lalat (IET 9947)	1989	11.65	15.00	0.00	15.00	3.35
		Mandakini (OR 2077-4) (IET 17847)	2011	0.40	1.50	0.00	1.50	1.10
		Mrunalini (OR 1898-18) (IET 18649)	2011	0.20	1.80	0.00	1.80	1.60
		OUAT Kalinga Rice 1 (Kolab)	2023	0.50	7.00	0.00	7.00	6.50
		OUAT Kalinga Rice 2 (Salandi)	2023	0.50	5.00	0.00	5.00	4.50
		OUAT Kalinga Rice 5 (Nabanna)	2023	4.00	0.00	8.00	8.00	4.00
		OUAT Kalinga Rice 6 (Bhargavi)	2023	0.50	1.00	0.00	1.00	0.50
		OUAT Kalinga Rice 7 (Barunei)	2023	0.70	1.40	0.00	1.40	0.70
		OUAT Kalinga Rice 8 (Surya Shree)	2023	0.70	0.00	0.00	0.00	-0.70
		Parijat (IET 2684)	1985	2.15	1.80	0.00	1.80	-0.35
		Pratibha (OR 2172-7) (IET 21582)	2018	0.20	0.20	0.00	0.20	0.00
		Pratikshya (ORS 201-5) (IET 15191)	2006	9.71	30.00	0.00	30.00	20.29
		Rani Dhan (IET 19148)	2009	0.95	0.80	0.00	0.80	-0.15
		Satya	1988	0.20	0.00	0.00	0.00	-0.20
		Sidhanta (ORS-102-4) IET 15296)	2006	0.20	0.00	0.20	0.20	0.00
		Surendra (IET 12815)	1999	0.60	0.30	0.00	0.30	-0.30
		Upahar (OR 1234-12-1) (IET 17318)	2006	0.80	6.20	0.00	6.20	5.40
		Total		**78.51**	**198.80**	**8.20**	**207.00**	**128.49**
29	ICAR-RCER, Patna	Swarna Purvi Dhan 1	2023	0.20	2.40	0.00	2.40	2.20
		Swarna Purvi Dhan 2	2023	0.20	4.00	0.00	4.00	3.80
		Swarna Purvi Dhan 3 (IET 28014)	2022	30.90	31.10	0.00	31.10	0.20

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		Swarna Shakti Dhan (RCPF-22-IR84899-B-183-20-1-1-1) (IET 25640)	2020	25.00	25.20	0.00	25.20	0.20
		Swarna Shreya (IET 24003)	2018	2.00	17.40	0.00	17.40	15.40
		Swarna Shusk Dhan	2023	1.10	4.50	0.00	4.50	3.40
		Swarna Smriddhi Dhan (IET 24306)	2021	29.40	42.30	0.00	42.30	12.90
		Swarna Unnat Dhan (IET 27892)	2021	30.00	30.30	0.00	30.30	0.30
		Total		**118.80**	**157.20**	**0.00**	**157.20**	**38.40**
30	PAU, Ludhiana	PR 113	2001	0.49	60.00	0.00	60.00	59.51
		PR 114	2001	7.20	55.00	0.00	55.00	47.80
		PR 118	2007	0.48	12.00	0.00	12.00	11.52
		PR 121 (RYT 3240)	2015	0.58	30.00	0.00	30.00	29.42
		PR 122 (RYT 3129)	2015	1.24	22.00	0.00	22.00	20.76
		PR 126 (RYT 3379) (IET 24721)	2018	18.84	28.00	0.00	28.00	9.16
		PR 127 (RYT 13316)	2020	1.00	10.00	0.00	10.00	9.00
		PR 128 (RYT 3437)	2021	2.35	18.00	0.00	18.00	15.65
		PR 129 (RYT 3468)	2021	0.08	18.00	0.00	18.00	17.92
		PR 130 (PRYT 3797)	2023	3.98	12.00	0.00	12.00	8.02
		PR 131	2024	0.00	30.00	0.00	30.00	30.00
		Punjab Basmati 7	2022	0.48	30.00	0.00	30.00	29.52
		Total		**36.72**	**325.00**	**0.00**	**325.00**	**288.28**
31	PJTAU, Hyderabad	Indur Samba (PDR 763)	1998	0.20	0.03	0.00	0.03	-0.17
		Jagtiala Vari 2	2023	0.20	0.20	0.00	0.20	0.00
		Jatiala Vari 3	2023	0.20	0.20	0.00	0.20	0.00
		JGL 11118 (Anjana)	2019	0.20	0.20	0.00	0.20	0.00
		JGL 11727 (Pranahitha)	2019	0.20	0.20	0.00	0.20	0.00
		JGL 17004 (Prathyumna)	2019	0.20	0.20	0.00	0.20	0.00
		JGL 1798	2004	12.30	12.30	0.00	12.30	0.00
		JGL 18047 (Bathukamma)	2016	2.70	3.00	0.00	3.00	0.30
		JGL 21078 (Telangana Vari 3) (IET 26125)	2021	0.25	0.30	0.00	0.30	0.05
		JGL 3844 (Jagtial Samba)	2012	0.20	0.20	0.25	0.45	0.25
		JGL24423 (Jagtiala Rice 1) (IET 25310)	2020	5.35	6.00	0.00	6.00	0.65
		KNM 118(Kunaram Sannalu)(IET 23748)	2016	0.30	0.30	0.00	0.30	0.00
		KNM 1638 (Kunaram Vari 2)	2021	4.05	4.05	0.00	4.05	0.00
		KNM 6965 (Telangana Rice 7) (IET 28343)	2022	0.10	0.10	0.00	0.10	0.00
		KNM 7048 (Telangana Rice 6) (IET 28332)	2022	0.60	0.60	0.00	0.60	0.00
		KNM 733 (Kunaram Rice 1) (IET 27405)	2020	0.35	0.35	0.00	0.35	0.00
		Raja Vadlu	1995	0.20	0.00	0.00	0.00	-0.20
		Rajendra	1978	0.20	0.20	0.00	0.20	0.00
		RNR 15048 (Telangana Sona) (IET23746)	2016	54.95	45.75	10.00	55.75	0.80
		RNR 2354 (Shobhini) (IET 21260)	2014	6.20	0.00	4.00	4.00	-2.20
		RNR 2458 (Krishna) (IET 21492)	2019	0.20	0.20	0.00	0.20	0.00
		RNR 2465 (Sugandha Samba)	2011	0.10	0.10	0.00	0.10	0.00
		RNRM 7 (Early Sambha)	2001	0.30	0.00	0.00	0.00	-0.30
		Tellahamsa	1975	0.70	0.00	0.70	0.70	0.00

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		WGL 1487 (Telangana Vari 8) (IET 28818)	2022	0.10	0.00	0.10	0.10	0.00
		WGL 20471 (Erra Mallelu)	1993	1.95	0.00	1.95	1.95	0.00
		WGL 32100 (Warangal Sannalu) (IET 18044)	2007	0.10	0.00	0.10	0.10	0.00
		WGL 3962	1999	0.20	0.00	0.20	0.20	0.00
		WGL 44 (Siddhi) (IET 19387)	2013	0.20	0.20	0.00	0.20	0.00
		WGL 48684 (Kavya)	1993	0.80	0.00	0.80	0.80	0.00
		WGL 697 (IET 26027)	2021	0.25	0.00	0.25	0.25	0.00
		WGL 915 (Warangal Rice 1) (IET 25284)	2020	0.10	0.10	0.00	0.10	0.00
		WL 13400	1978	0.20	0.00	0.20	0.20	0.00
		Total		**94.15**	**74.78**	**18.55**	**93.33**	**-0.82**
32	PRDF, Gorakhpur	Bauna Kalanamak 101	2016	0.60	1.00	0.00	1.00	0.40
		Bauna Kalanamak 102	2017	0.30	1.00	0.00	1.00	0.70
		Kalanamak Kiran (PRDF-2-14-10) (IET 24753)	2019	3.00	3.00	0.00	3.00	0.00
		Total		**3.90**	**5.00**	**0.00**	**5.00**	**1.10**
33	RRS, Bankura, W. B.	BNKR 1 (Dhiren) (IET 20760)	2015	1.55	2.15	0.00	2.15	0.60
		BNKR 2 (Dhruba)	2017	0.60	0.60	0.00	0.60	0.00
		BNKR 3 (Sampriti) (IET 21987)	2016	0.10	0.26	0.00	0.26	0.16
		Total		**2.25**	**3.01**	**0.00**	**3.01**	**0.76**
34	RRS, Chinsurah, W.B.	Bhupesh (IET 23324) (CN 1752-18-1-9-MLD19)	2019	0.20	0.45		0.45	0.25
		CNM-539 (Biraj)	1984	0.30	0.00		0.00	-0.30
		Gosaba 5 (Chinsurah Nona-1) (IET 23403)	2016	0.05	0.60		0.60	0.55
		IET 1136	1978	0.20	0.00		0.00	-0.20
		Khitish (IET 4094)	1984	4.45	6.00		6.00	1.55
		Manisha (IET 23770) (CN-2015-5-4)	2019	0.10	0.40		0.40	0.30
		Muktashree (IET 21845)	2019	0.15	1.00		1.00	0.85
		Sabita (IET 8970)	1987	0.70	2.00		2.00	1.30
		Shatabdi (IET 4786)	2000	16.95	18.50		18.50	1.55
		Sukumar (IET 21261)	2020	0.40	1.50		1.50	1.10
		Total		**23.50**	**30.45**	**0.00**	**30.45**	**6.95**
35	RPCAU, Pusa	Gautam B	1996	0.20	0.20	0.00	0.20	0.00
		Rajendra Bhagvati	2010	0.05	2.80	0.00	2.80	2.75
		Rajendra Mahsuri 1	2007	9.45	10.53	0.00	10.53	1.08
		Rajendra Nilam (RAU-1484-Aer- 04) (IET 24010)	2017	24.00	24.20	0.00	24.20	0.20
		Rajendra Saraswati (IET 23423)	2020	20.00	20.80	0.00	20.80	0.80
		Rajendra Suwasini	2007	0.60	7.23	0.00	7.23	6.63
		Rajendra Sweta	2007	1.70	8.65	0.00	8.65	6.95
		TCA-72 (Sudha) (IET 8977)	1989	0.60	2.05	0.00	2.05	1.45
		TCA-80-4 (Rajshree) (IET 7970)	1989	0.20	7.15	0.00	7.15	6.95
		Total		**56.80**	**83.61**	**0.00**	**83.61**	**26.81**
36	CCSHAU, Hisar (Kaul)	Basmati 370	1973	15.00	10.00	0.00	10.00	-5.00

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		Haryana Basmati 2 (HKR 06-443)	2019	0.20	0.50	0.00	0.50	0.30
		Total		**15.20**	**10.50**	**0.00**	**10.50**	**-4.70**
37	SHUATS, Prayagraj	SHIATS Dhan 2 (AAIR 203)	2017	0.30	0.30	0.00	0.30	0.00
		Total		**0.30**	**0.30**	**0.00**	**0.30**	**0.00**
38	SKUAST K, Srinagar	Shalimar Rice 2	2015	1.00	3.00	0.00	3.00	2.00
		Shalimar Rice 3	2015	0.32	1.00	0.00	1.00	0.68
		Shalimar Rice 4 (SKUA-408)	2019	11.00	27.00	0.00	27.00	16.00
		Shalimar Rice 5 (SKUA-402)	2019	1.00	1.60	0.00	1.60	0.60
		Shalimar Rice 6 (SKUA-485)	2023	0.02	0.10	0.00	0.10	0.08
		Shalimar Sugandh 1 (SKUA-494)	2022	0.03	3.00	0.00	3.00	2.97
		Shalimar Rice 7	2024	0.60	1.00	0.00	1.00	0.40
		Shalimar Rice 8	2024	0.30	0.50	0.00	0.50	0.20
		Shalimar Rice 9	2024	0.30	1.50	0.00	1.50	1.20
		Total		**14.57**	**38.70**	**0.00**	**38.70**	**24.13**
39	TNAU, Coimbatore	ADT (R) 45 (IET 15924)	2001	0.10	0.00	0.10	0.10	0.00
		ADT (R) 46	2005	0.20	0.00	0.20	0.20	0.00
		ADT 37	1989	0.65	0.00	0.65	0.65	0.00
		ADT 39	1989	0.90	0.00	0.90	0.90	0.00
		ADT 44	2000	0.00	0.00	0.00	0.00	0.00
		ADT 56 (IET 27920)	2022	10.00	6.00	4.00	10.00	0.00
		ADT 58 (AD 12132)	2023	0.30	0.00	0.30	0.30	0.00
		Rice ADT 57 (AD 09219)	2022	0.10	0.10	0.00	0.10	0.00
		ASD 16	1986	0.40	0.40	0.00	0.40	0.00
		ASD 17	1989	0.00	0.00	0.00	0.00	0.00
		ASD 18 (IET 11749)	1993	0.00	0.00	0.00	0.00	0.00
		ASD 21 (AS 15024)	2023	0.20	0.00	0.20	0.20	0.00
		CO 51	2017	7.25	0.00	7.50	7.50	0.25
		CO 55 (CB 15714) 4	2022	0.30	0.00	0.40	0.40	0.10
		CO 56 (CB12132)	2023	0.20	0.00	0.30	0.30	0.10
		CORH 1	1997	0.00	0.00	0.00	0.00	0.00
		Improved White Ponni	1989	0.20	0.00	0.30	0.30	0.10
		MDU 2 (9353)	1989	0.00	0.00	0.00	0.00	0.00
		Rice CR 1009 Sub1	2016	16.65	0.00	16.65	16.65	0.00
		TPS-1	1991	0.00	0.00	0.00	0.00	0.00
		Total		**37.45**	**6.50**	**31.50**	**38.00**	**0.55**
40	UAHS, Shivamoga	KHP 13 (Bharath) (IET 21479)	2018	0.25	0.25	0.00	0.25	0.25
		Sahyadri Kempumukthi	2022	1.00	1.00	0.00	1.00	1.00
		Sahyadri Panchmukhi	2021	0.50	0.50	0.00	0.50	0.50
		Tunga (IET 13901)	2006	4.15	4.00	0.00	4.00	4.00
		Total		**5.90**	**5.75**	**0.00**	**5.75**	**5.75**
41	UAS, Bangalore	KMP 1 (Mandya Vani)	1984	0.00	0.00	0.00	0.00	0.00
		KMP 220 (Mandya Jyothi)	2023	0.70	3.64	0.00	3.64	2.94
		Thanu	2008	0.95	3.90	0.00	3.90	2.95
	UAS, Bangalore (Mandya)	BR 2655	2006	1.35	5.08	0.00	5.08	3.73

Sl. No.	Centre	Variety	Year of Notif.	Indent (q)	Production (q)			Surplus/ Deficit
					Kharif 2024	Expected Rabi/ Summer	Total	
		Cauveri	1978	0.00	0.00	0.00	0.00	0.00
		Karna (lET 7209)	1986	0.00	0.00	0.00	0.00	0.00
		MSN 99 (Samruddhi) (Mandya Source Nursery)	2023	0.50	2.55	0.00	2.55	2.05
		RM 1 (Mangala Mansuri) (IET 14083)	2002	0.20	0.00	0.00	0.00	-0.20
		Total		**3.70**	**15.17**	**0.00**	**15.17**	**11.47**
42	UAS, Dharwad (Mugad)	Intan	1992	1.00	6.00	0.00	6.00	5.00
		KMD 2 (Abhilash)	1987	1.75	6.00	0.00	6.00	4.25
		KPR 1 (IET 23077)	2016	0.00	0.00	0.00	0.00	0.00
		Total		**2.75**	**12.00**	**0.00**	**12.00**	**9.25**
43	UBKV, Pundibari	Parag 401 (PBNR-90-3-401)	2000	4.00	0.00	0.00	0.00	-4.00
		Uttar Ganga (PUR-B-190) (IET 28840)	2024	1.30	5.00	0.00	5.00	3.70
		Uttar Lakshmi (UBKVR-15) (IET 24173)	2020	0.45	6.50	0.00	6.50	6.05
		Uttar Samir (PUR-B-36) (IET 26453)	2022	0.35	5.50	0.00	5.50	5.15
		Uttar Sona (UBKVR -1) (IET 24171)	2019	0.65	6.00	0.00	6.00	5.35
		Uttar Sugandhi (UBKVRA-2) (IET 24616)	2022	0.20	1.00	0.00	1.00	0.80
		Total		**6.95**	**24.00**	**0.00**	**24.00**	**17.05**
44	VPKAS, Almora	VL Dhan 159 (VL 20083) (IET 26598)	2021	0.30	0.50	0.00	0.50	0.20
		VL DHAN 69 (IET 26596)	2021	1.60	3.00	0.00	3.00	1.40
		VL Dhan 70	2022	3.10	8.00	0.00	8.00	4.90
		VL Dhan 88 (VL 32224) (IET 25819)	2021	3.00	3.00	0.00	3.00	0.00
		Total		**8.00**	**14.50**	**0.00**	**14.50**	**6.50**
		Grand Total		**2971.01**	**9186.22**	**1274.35**	**10454.34**	**7489.23**

***Appendix*-12**

VARIETY WISE BREEDER SEED PRODUCTION DURING KHARIF, 2024 (AS PER DAC INDENT)

(Quantity in Quintals)

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
1	Abhishek (RR-272-829) (IET 17868)	2007	0.10	0.00	0.00	0.00	-0.10
2	ADT (R) 45 (IET 15924)	2001	0.10	0.00	0.10	0.10	0.00
3	ADT (R) 46	2005	0.20	0.00	0.20	0.20	0.00
4	ADT 37	1989	0.65	0.00	0.65	0.65	0.00
5	ADT 39	1989	0.90	0.00	0.90	0.90	0.00
6	ADT 44	2000	0.00	0.00	0.00	0.00	0.00
7	ADT 56 (IET 27920)	2022	10.00	6.00	4.00	10.00	0.00
8	ADT 58 (AD 12132)	2023	0.30	0.00	0.30	0.30	0.00
9	Amulya (IET 8989)	1989	0.00	0.00	0.00	0.00	0.00
10	Anjali (RR-347-166) (IET 16430)	2002	0.40	5.00	0.00	5.00	4.60
11	ASD 16	1986	0.40	0.40	0.00	0.40	0.00
12	ASD 17	1989	0.00	0.00	0.00	0.00	0.00
13	ASD 18 (IET 11749)	1993	0.00	0.00	0.00	0.00	0.00
14	ASD 21 (AS 15024)	2023	0.20	0.00	0.20	0.20	0.00
15	Badshabhog Selection 1	2016	20.70	23.10	0.00	23.10	2.40
16	Bahadur Sub 1	2018	3.65	31.90	0.00	31.90	28.25
17	Basmati 370	1973	15.00	56.08	0.00	56.08	41.08
18	Bastar Dhan 1 (IET 26624)	2020	0.60	2.95	0.00	2.95	2.35
19	Bauna Kalanamak 101	2016	0.60	1.00	0.00	1.00	0.40
20	Bauna Kalanamak 102	2017	0.30	1.00	0.00	1.00	0.70
21	Bha Lum 1 (RCPL 1-27)	2003	0.30	0.50	0.00	0.50	0.20
22	Bha Lum 2 (RCPL 1-29)	2003	0.30	0.00	0.00	0.00	-0.30
23	Bhadra (MO 4)	1980	2.50	0.00	2.50	2.50	0.00
24	Bhogavati	2007	0.60	3.00	0.00	3.00	2.40
25	Bhupesh (IET 23324) (CN 1752-18-1-9-MLD19)	2019	0.20	0.45		0.45	0.25
26	Bidhan Suruchi (IET 25701)	2019	2.30	6.00	0.00	6.00	3.70
27	Bina Dhan 11	2015	21.00	0.00	25.00	25.00	4.00
28	Bina Dhan 17 GSR (SAGC7) (IET 24460)	2018	12.25	5.00	8.00	13.00	0.75
29	Birsa Vikas Dhan 111 (PY-84) (IET 19848)	2015	1.00	1.00	0.00	1.00	0.00
30	Birsa Vikas Sugandha 1 (IET 18941)	2015	5.00	9.90	0.00	9.90	4.90
31	BK 190	1983	0.00	0.00	0.00	0.00	0.00
32	BNKR 1 (Dhiren) (IET 20760)	2015	1.55	2.15	0.00	2.15	0.60
33	BNKR 2 (Dhruba)	2017	0.60	0.60	0.00	0.60	0.00
34	BNKR 3 (Sampriti) (IET 21987)	2016	0.10	0.26	0.00	0.26	0.16
35	BPT 2231 (Akshaya)	2011	0.30	0.50	0.00	0.50	0.20
36	BPT 2295 (Bapatla Mahsuri) (IET 22188)	2019	0.05	0.10	0.00	0.10	0.05
37	BPT 2411 (Sasya) (IET 23081)	2020	0.40	0.50	0.00	0.50	0.10
38	BPT 2595 (Teja) (IET 25486)	2020	0.65	0.75	0.00	0.75	0.10
39	BPT 2782 (Bhavathi) (IET 27124)	2020	1.00	1.20	0.00	1.20	0.20
40	BPT 3291 (Sonamasuri)	2005	0.30	0.50	0.00	0.50	0.20
41	BPT 5204 (Samba Mahsuri)	1989	84.60	85.00	0.00	85.00	0.40
42	BR 2655	2006	1.35	5.08	0.00	5.08	3.73
43	BRRI Dhan 75 (Hua 565) (IET 24459)	2018	0.05	0.00	5.00	5.00	4.95
44	Cauveri	1978	0.00	0.00	0.00	0.00	0.00
45	CG Barani Dhan 2 (R-RF-105) (IET 24690)	2021	0.60	7.22	0.00	7.22	6.62

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
46	CG Jawaphool Trombay (RTR-31)	2021	1.00	9.66	0.00	9.66	8.66
47	CG Tejaswi Dhan (IGKV DH Rice 1)	2021	1.00	13.45	0.00	13.45	12.45
48	Chhattisgarh Devbhog (R-1656-1146-5-513-1) (IET 23879)	2019	11.50	62.34	0.00	62.34	50.84
49	Chhattisgarh Dhan 1919	2021	2.20	13.45	0.00	13.45	11.25
50	Chhattisgarh Madhuraj Dhan 55	2016	5.30	18.00	0.00	18.00	12.70
51	Chhattisgarh Zinc Rice 1	2016	0.60	12.14	0.00	12.14	11.54
52	Chhattisgarh Zinc Rice 2 (CGZR-2) (IET 23829)	2019	0.60	11.40	0.00	11.40	10.80
53	Chingam	2006	0.30	0.00	0.00	0.00	-0.30
54	CNM-539 (Biraj)	1984	0.30	0.00		0.00	-0.30
55	CO 51	2017	7.25	0.00	7.50	7.50	0.25
56	CO 55 (CB 15714) 4	2022	0.30	0.00	0.40	0.40	0.10
57	CO 56 (CB12132)	2023	0.20	0.00	0.30	0.30	0.10
58	CORH 1	1997	0.00	0.00	0.00	0.00	0.00
59	CR 1009 sub1	2017	0.00	12.30	0.00	12.30	12.30
60	CR 1014	1989	0.30	0.70	0.00	0.70	0.40
61	CR Dhan 102 (IET 25121)	2020	2.80	0.00	0.90	0.90	-1.90
62	CR Dhan 108	2024	0.00	0.00	7.20	7.20	7.20
63	CR Dhan 202 (IET 21917)	2014	0.30	0.00	3.60	3.60	3.30
64	CR Dhan 203 (Sachala lET- 2717-10-IR 84899-B-185) (IET 22731)	2015	0.50	0.00	0.90	0.90	0.40
65	CR Dhan 204 (IET 21692)	2019	0.30	0.00	0.50	0.50	0.20
66	CR Dhan 205 (IET 22737)	2019	0.30	0.00	0.90	0.90	0.60
67	CR Dhan 206 (Gopinath) (CR 2996-1-14-29-3-1) (IET 22731)	2015	0.30	0.00	3.60	3.60	3.30
68	CR Dhan 212	2024	0.00	0.00	3.60	3.60	3.60
69	CR Dhan 300 (CR2301-5) (IET 19816)	2014	0.40	1.50	0.00	1.50	1.10
70	CR Dhan 301	2012	0.00	0.00	0.90	0.90	0.90
71	CR Dhan 305 (IET 21287)	2014	2.50	2.10	0.00	2.10	-0.40
72	CR Dhan 306 (IET 22084)	2019	0.30	0.35	0.00	0.35	0.05
73	CR Dhan 307 (Maudamani) (CR 2599) (IET 20925)	2015	0.30	1.70	0.00	1.70	1.40
74	CR Dhan 310	2022	10.85	0.00	18.00	18.00	7.15
75	CR Dhan 311 (Mukul) (CR 2829-PLN-100) (IET 24772)	2019	0.65	0.00	4.50	4.50	3.85
76	CR Dhan 312	2020	1.00	1.00	0.00	1.00	0.00
77	CR Dhan 314 (IET 27263)	2022	15.40	8.50	8.10	16.60	1.20
78	CR Dhan 315 (IET 27179)	2021	0.60	2.50	0.00	2.50	1.90
79	CR Dhan 316 (CRRI Gaurav-1)	2021	1.40	2.10	0.00	2.10	0.70
80	CR Dhan 317 (Roshan)	2021	1.30	0.85	0.00	0.85	-0.45
81	CR Dhan 318 (IET 27803)	2021	0.20	0.00	3.60	3.60	3.40
82	CR Dhan 319	2021	0.40	0.60	0.00	0.60	0.20
83	CR Dhan 320 (IET 27914)	2021	0.30	0.50	0.00	0.50	0.20
84	CR Dhan 321 (IET 28354)	2022	10.00	5.90	22.00	27.90	17.90
85	CR Dhan 323 (Jyotsna)	2023	0.70	0.70	0.90	1.60	0.90
86	CR Dhan 324 (Abhaya Paushtik)	2023	0.70	0.70	0.00	0.70	0.00
87	CR Dhan 326 (Panchatatva)	2023	0.70	0.50	0.00	0.50	-0.20
88	CR Dhan 327 (Madhumita)	2023	0.70		1.80	1.80	1.10
89	CR Dhan 328	2023	0.70	0.90	0.00	0.90	0.20
90	CR Dhan 407 (IET 21974)	2014	0.30	1.20	0.00	1.20	0.90
91	CR Dhan 408 (Chakaakhi) (CR491-1590- 330-2-1) (IET 20265)	2018	0.30	0.90	0.00	0.90	0.60

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
92	CR Dhan 410 (IET 24471)	2020	0.10	0.50	0.00	0.50	0.40
93	CR Dhan 411 (Swaranjali) (IET 27852)	2021	1.30	14.70	0.00	14.70	13.40
94	CR Dhan 413 (Reeta-Panidhan)	2021	0.30	0.90	0.00	0.90	0.60
95	CR Dhan 414 (IET 27051)	2022	0.50	1.00	0.00	1.00	0.50
96	CR Dhan 416	2024	0.00	0.00	3.15	3.15	3.15
97	CR Dhan 507	2018	0.00	1.60	0.00	1.60	1.60
98	CR Dhan 508 (CR3835-1-7-2-1-1)	2017	0.40	1.50	0.00	1.50	1.10
99	CR Dhan 510 (CR 2593-1-1-1-1) (IET 23895)	2019	0.30	2.80	0.00	2.80	2.50
100	CR Dhan 511 (CR 2789-9-2) (IET 23906)	2019	0.20	0.60	0.00	0.60	0.40
101	CR Dhan 512 (Satrughan)	2021	0.30	0.70	0.00	0.70	0.40
102	CR Dhan 704 (Shyamdev)	2023	0.20	0.20	0.00	0.20	0.00
103	CR Dhan 800 (Swarna MAS) (CRMAS 2232- 85)	2018	3.65	6.00	0.00	6.00	2.35
104	CR Dhan 801 (IR96322-34-223-B-1-1-1-CR3955-2) (IET 25667)	2019	0.30	0.25	0.50	0.75	0.45
105	CR Dhan 802 (Subhas) (CR 3925-22-7) (IET 25673)	2019	5.30	5.00	0.90	5.90	0.60
106	CR Dhan 803 (Trilochan) (IET 26398)	2021	10.30	18.60		18.60	8.30
107	CR Dhan 805 (Naveen Shakti)	2023	0.70	0.85	1.80	2.65	1.95
108	CR Dhan 806 (Varsadhan Sub 1)	2023	2.20	0.00	0.00	0.00	-2.20
109	CR Dhan 911 (Basudev)	2023	1.20	0.85	3.60	4.45	3.25
110	CR Sugandh Dhan 908	2017	0.00	1.40	0.00	1.40	1.40
111	CR Sugandh Dhan 909	2018	0.00	1.60	0.00	1.60	1.60
112	CR Sugandh Dhan 910 (CR 2713- 180) (IET 22649)	2018	0.20	0.00	0.00	0.00	-0.20
113	CR Sugandhdhan 3	2008	0.00	0.70	0.00	0.70	0.70
114	CR-36-148 (Supriya)	1997	0.20	0.20	0.00	0.20	0.00
115	CSR 76 (IET 27070)	2021	0.90	1.50	0.00	1.50	0.60
116	Dhanrasi (IET 15358)	2003	0.20	0.20	0.00	0.20	0.00
117	Dharitri (IET 6272)	1989	1.45	17.10	0.00	17.10	15.65
118	DRR Dhan 42 (IR 64 Drt I) (IR 87707-44-5-B-B-B)	2015	2.15	0.00	3.00	3.00	0.85
119	DRR Dhan 43 (IET 22080)	2015	25.10	0.00	30.00	30.00	4.90
120	DRR Dhan 45 (IET 23832) (RP5886-HP 3-IR80463-B39)	2016	13.40	6.00	8.00	14.00	0.60
121	DRR Dhan 46 (IET 23420)	2016	0.75	0.75	0.00	0.75	0.00
122	DRR Dhan 47 (IET 23356)	2018	0.10	0.15	0.00	0.15	0.05
123	DRR Dhan 48 (IET 24555)	2018	0.95	22.00	0.00	22.00	21.05
124	DRR Dhan 50 (IET 25671)	2018	10.60	12.00	0.00	12.00	1.40
125	DRR Dhan 51 (IET 25484)	2018	0.60	1.00	0.00	1.00	0.40
126	DRR Dhan 53 (RP-6113-Partho-BB9) (IET 27294)	2021	35.10	57.00	0.00	57.00	21.90
127	DRR Dhan 54 (RP 5943-421-16-1-1-B) (IET 25653)	2021	24.25	0.00	30.00	30.00	5.75
128	DRR Dhan 55 (RP 5591-123-16-2) (IET 26194)	2021	18.30	0.00	25.00	25.00	6.70
129	DRR Dhan 56 (IET 26803)	2021	0.40	15.60	0.00	15.60	15.20
130	DRR Dhan 57	2021	0.05	0.10	0.00	0.10	0.05
131	DRR Dhan 58	2021	0.10	3.00	0.00	3.00	2.90
132	DRR Dhan 59	2021	0.10	0.10	0.00	0.10	0.00
133	DRR Dhan 60	2021	0.70	1.00	25.00	26.00	25.30
134	DRR Dhan 63 (IET 26596)	2021	0.90	1.00	0.00	1.00	0.10
135	DRR Dhan 64 (IET 28358)	2022	18.00	0.00	25.00	25.00	7.00
136	DRR Dhan 65 (IET 27641)	2022	1.32	1.50	0.00	1.50	0.18

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
137	DRR Dhan 67 (BRRI Dhan 84)	2022	0.10	0.15	0.00	0.15	0.05
138	DRR Dhan 68 (BRRI Dhan 99)	2022	0.10	0.00	0.10	0.10	0.00
139	DRR Dhan 69 (BRRI Dhan 100)	2022	0.10	0.10	0.00	0.10	0.00
140	DRRH 3 (DRRH 44)	2010	0.10	0.10	0.00	0.10	0.00
141	Dubraj Selection 1	2016	10.30	22.50	0.00	22.50	12.20
142	Garima	1982	0.00	0.00	0.00	0.00	0.00
143	Gautam B	1996	0.20	0.20	0.00	0.20	0.00
144	Gayatri (IET 8022)	1989	1.40	12.30	0.00	12.30	10.90
145	Geetanjali (CRM-2007-1) (IET 17276)	2006	0.10	0.50	0.00	0.50	0.40
146	Gitesh (TTB 283-1-26)	2017	1.90	26.40	0.00	26.40	24.50
147	GIZA 14	1978	6.00	6.00	0.00	6.00	0.00
148	GNR 5	2015	3.00	3.00	0.00	3.00	0.00
149	Gomati Dhan TRC-2005-1 (TRC-05-8-4-42-8-3-7) (IET 21512)	2018	0.40	4.50	0.00	4.50	4.10
150	Gontra Bidhan 1 (IET 17430)	2008	12.15	15.00	0.00	15.00	2.85
151	Gontra Bindhan 3 (IET 22752)	2014	5.40	7.00	0.00	7.00	1.60
152	Gosaba 5 (Chinsurah Nona-1) (IET 23403)	2016	0.05	0.60		0.60	0.55
153	GR 103	1992	0.02	0.02	0.00	0.02	0.00
154	GR 103	1992	0.00	0.00	0.00	0.00	0.00
155	Gujarat Anand Rice 13 (GAR 13) (IET 20930)	2010	1.70	1.70	0.00	1.70	0.00
156	Gujarat Anand Rice 14 (GAR 14) (IET 24619)	2018	5.70	5.70	0.00	5.70	0.00
157	Gurjari	1999	7.50	7.50	0.00	7.50	0.00
158	Haryana Basmati 2 (HKR 06-443)	2019	0.20	0.50	0.00	0.50	0.30
159	Hasanta (OR 2328-5) (IET 21477)	2018	1.20	14.00	0.00	14.00	12.80
160	Heera (IET 10973)	1989	0.00	0.00	0.00	0.00	0.00
161	Him Palam Dhan 1 (HPR 2656)	2020	0.50	9.50	0.00	9.50	9.00
162	HPR 1156 (IET 16007)	2004	0.20	0.40	0.00	0.40	0.20
163	HPR 2143	2006	3.35	9.54	0.00	9.54	6.19
164	HUR 917	2017	4.50	7.50	0.00	7.50	3.00
165	IET 1136	1978	0.20	0.00		0.00	-0.20
166	IGKVR 1 (IET 19569)	2011	23.60	63.00	0.00	63.00	39.40
167	IGKVR 2 (IET 19795)	2011	0.00	6.60	0.00	6.60	6.60
168	IGRKVR 1244 (R1244-1246-1-605-1) (IET 19796)	2012	0.30	9.00	0.00	9.00	8.70
169	Improved Chinnor	2018	20.00	9.27	0.00	9.27	-10.73
170	Improved Jeera Shankar	2018	1.20	6.89	0.00	6.89	5.69
171	Improved Lalat (CRMAS 2621-7-1)	2013	1.25	1.70	4.50	6.20	4.95
172	Improved Pusa Basmati 1 (IET 18990) (Pusa 1460-01-32-6-7-67)	2007	0.50	1.60	0.00	1.60	1.10
173	Improved Samba Mahsuri	2008	2.65	3.00	0.50	3.50	0.85
174	Improved White Ponni	1989	0.20	0.00	0.30	0.30	0.10
175	Indira Aerobic 1 (R1570-2649-1-1546-1) (IET 21686)	2015	11.00	9.00	0.00	9.00	-2.00
176	Indira Barani Dhan 1 (RF-17-38-70) (IET 21205)	2012	0.30	12.60	0.00	12.60	12.30
177	Indrayani (IET 12897)	1993	14.50	97.00	0.00	97.00	82.50
178	Indur Samba (PDR 763)	1998	0.20	0.03	0.00	0.03	-0.17
179	Intan	1992	1.00	6.00	0.00	6.00	5.00
180	IR 36	1982	2.50	22.50	0.00	22.50	20.00
181	IR 36	1982	0.00	31.29	0.00	31.29	31.29
182	IR 64	1991	50.65	84.00	0.00	84.00	33.35
183	IR 64	2020	0.00	62.77	0.00	62.77	62.77

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
184	IR 64 Sub 1 (IET 21247)	2020	15.10	36.36	0.00	36.36	21.26
185	Jagannath	1975	0.20	0.40	0.00	0.40	0.20
186	Jagtiala Vari 2	2023	0.20	0.20	0.00	0.20	0.00
187	Jaldi Dhan 13 (PNR-591-18)	2006	0.20	0.00	0.00	0.00	-0.20
188	Jammu Basmati 118 (SJBR 118)	2021	5.00	3.52	0.00	3.52	-1.48
189	Jarava (IET 15420)	2005	0.20	0.20	0.00	0.20	0.00
190	Jatiala Vari 3	2023	0.20	0.20	0.00	0.20	0.00
191	Jaya	1978	11.15	11.50	0.00	11.50	0.35
192	JB 123		0.00	0.72	0.00	0.72	0.72
193	JB 138		0.00	0.36	0.00	0.36	0.36
194	JGL 11118 (Anjana)	2019	0.20	0.20	0.00	0.20	0.00
195	JGL 11727 (Pranahitha)	2019	0.20	0.20	0.00	0.20	0.00
196	JGL 17004 (Prathyumna)	2019	0.20	0.20	0.00	0.20	0.00
197	JGL 1798	2004	12.30	12.30	0.00	12.30	0.00
198	JGL 18047 (Bathukamma)	2016	2.70	3.00	0.00	3.00	0.30
199	JGL 21078 (Telangana Vari 3) (IET 26125)	2021	0.25	0.30	0.00	0.30	0.05
200	JGL 3844 (Jagtial Samba)	2012	0.20	0.20	0.25	0.45	0.25
201	JGL24423 (Jagtiala Rice 1) (IET 25310)	2020	5.35	6.00	0.00	6.00	0.65
202	JR 10	2021	80.00	129.75	0.00	129.75	49.75
203	JR 206 (IET 26079)	2019	57.15	1425.82	0.00	1425.82	1368.67
204	JR 21 (JR 81-01)	2023	76.29	424.76	0.00	424.76	348.47
205	JR 81	2018	40.00	190.44	0.00	190.44	150.44
206	JRB 1	2018	0.00	22.08	0.00	22.08	22.08
207	Jyothi	1977	7.25	3.82	21.50	25.32	18.07
208	K 343		0.00	1.50	0.00	1.50	1.50
209	K 39		0.00	1.75	0.00	1.75	1.75
210	K 448		0.00	1.00	0.00	1.00	1.00
211	Kalachampa	2015	36.60	82.00	0.00	82.00	45.40
212	Kalanamak Kiran (PRDF-2-14-10) (IET 24753)	2019	3.00	3.00	0.00	3.00	0.00
213	Kali Khasa	2004	0.50	2.80	0.00	2.80	2.30
214	Kalinga Dhan 1203 (IET 27117)	2021	1.00	6.40	0.00	6.40	5.40
215	Kalinga Dhan 1204	2021	0.50	2.00	0.00	2.00	1.50
216	Kalinga Dhan 1205 (IET 22579)	2021	1.00	7.20	0.00	7.20	6.20
217	Kalinga Dhan 1401	2021	0.50	1.00	0.00	1.00	0.50
218	Kalinga Dhan 1501	2021	0.50	1.60	0.00	1.60	1.10
219	Kalinga Dhan 1502	2021	0.50	6.00	0.00	6.00	5.50
220	Kanak (BIET 1009)	1989	0.00	0.00	0.00	0.00	0.00
221	Karjat 1	1990	0.20	0.00	0.00	0.00	-0.20
222	Karjat 2	1996	0.20	3.50	0.00	3.50	3.30
223	Karjat 3	1996	4.30	13.50	0.00	13.50	9.20
224	Karjat 5	2007	0.40	2.50	0.00	2.50	2.10
225	Karjat 7	2009	1.00	6.50	0.00	6.50	5.50
226	Karjat 8	2017	0.20	3.50	0.00	3.50	3.30
227	Karjat 9	2017	0.20	6.70	0.00	6.70	6.50
228	Karna (lET 7209)	1986	0.00	0.00	0.00	0.00	0.00
229	Kasturi (IET 8580)	1989	1.25	6.20	0.00	6.20	4.95
230	KAU 87117 (Karuna)	2002	0.20	0.00	0.80	0.80	0.60
231	Kau Akshya (PTB 62) (Kau PTB 0615-01-25-17)	2021	0.20	0.00	0.80	0.80	0.60
232	Kau Manu Rathna (HS-16)	2021	0.15	0.93	0.50	1.43	1.28
233	Kau Pournami (MO 23)	2021	0.30	0.00	0.70	0.70	0.40
234	Kau Supriya (PTB 61) KAU PTB 0614-7-8-24	2021	0.20	0.00	0.25	0.25	0.05

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
	(Cul 06-6)						
235	KAUA 4-4-2 (Harsha)	2002	0.20	0.60	0.30	0.90	0.70
236	KAUM 42-6-3 (D1) (MO 16-Uma) (IET 14758)	2002	14.50	0.00	14.50	14.50	0.00
237	KAUM 59-29-2-1-2 (GM-1) (MO 13-Pavithra) (IET 13983)	2002	0.20	0.00	0.00	0.00	-0.20
238	KAUM 61-6-1-1-2 (GM-9) (MO 14-Pancham) (IET 14260)	2002	0.20	0.00	0.00	0.00	-0.20
239	Kau-VTL-10 (Lavanya) KAUVTL- 51-5	2021	0.20	0.00	0.20	0.20	0.00
240	Ketekijoha	2006	0.00	0.75	0.00	0.75	0.75
241	Ketekijoha (IET 18669)	2006	2.00	17.10	0.00	17.10	15.10
242	Khandagiri	1994	2.35	6.00	0.00	6.00	3.65
243	Kharavela (IET 13253)	1999	0.20	0.20	0.00	0.20	0.00
244	Khitish	1982	0.00	0.85	0.00	0.85	0.85
245	Khitish (IET 4094)	1984	4.45	6.00		6.00	1.55
246	KHP 13 (Bharath) (IET 21479)	2018	0.25	0.25	0.00	0.25	0.25
247	KMD 2 (Abhilash)	1987	1.75	6.00	0.00	6.00	4.25
248	KMP 1 (Mandya Vani)	1984	0.00	0.00	0.00	0.00	0.00
249	KMP 220 (Mandya Jyothi)	2023	0.70	3.64	0.00	3.64	2.94
250	KNM 118(Kunaram Sannalu)(IET 23748)	2016	0.30	0.30	0.00	0.30	0.00
251	KNM 1638 (Kunaram Vari 2)	2021	4.05	4.05	0.00	4.05	0.00
252	KNM 6965 (Telangana Rice 7) (IET 28343)	2022	0.10	0.10	0.00	0.10	0.00
253	KNM 7048 (Telangana Rice 6) (IET 28332)	2022	0.60	0.60	0.00	0.60	0.00
254	KNM 733 (Kunaram Rice 1) (IET 27405)	2020	0.35	0.35	0.00	0.35	0.00
255	Kotha Malagolukulu 72	1978	0.20	1.00	0.00	1.00	0.80
256	KPR 1 (IET 23077)	2016	0.00	0.00	0.00	0.00	0.00
257	Kranti (R-2022)	1982	5.15	1194.71	0.00	1194.71	1189.56
258	Lalat (IET 9947)	1989	11.65	15.00	0.00	15.00	3.35
259	Lallu 14	1976	0.20	2.00	0.00	2.00	1.80
260	Lam Pnah-1 (RCPL 1-87-4)	2003	0.20	0.00	0.00	0.00	-0.20
261	Luna Sampad (IET 19470)	2011	0.20	0.05	0.00	0.05	-0.15
262	Luna Sankhi	2013	0.50	0.30	1.80	2.10	1.60
263	Luna Suvarna (IET 18697)	2011	0.05	0.10	0.00	0.10	0.05
264	Lunisree	1992	0.10	0.10	0.00	0.10	0.00
265	Mahamaya	1996	107.10	189.90	0.00	189.90	82.80
266	Mahisagar (IET 22100)	2018	0.50	0.50	0.00	0.50	0.00
267	Mandakini (OR 2077-4) (IET 17847)	2011	0.40	1.50	0.00	1.50	1.10
268	Manisha (IET 23770) (CN-2015-5-4)	2019	0.10	0.40		0.40	0.30
269	Masuri	1978	0.60	0.60	0.00	0.60	0.00
270	MCM Rice 103	2023	1.10	1.10	0.00	1.10	0.00
271	MDU 2 (9353)	1989	0.00	0.00	0.00	0.00	0.00
272	MO 21 (P)	2010	1.10	0.00	1.10	1.10	0.00
273	MO 5	1984	0.20	0.00	0.00	0.00	-0.20
274	Mrunalini (OR 1898-18) (IET 18649)	2011	0.20	1.80	0.00	1.80	1.60
275	MSN 99 (Samruddhi) (Mandya Source Nursery)	2023	0.50	2.55	0.00	2.55	2.05
276	MTU 1001 (Vijetha)	1997	129.45	70.00	80.00	150.00	20.55
277	MTU 1010	2000	0.00	37.40	0.00	37.40	37.40
278	MTU 1010 (Cottondora Sannalu)	2000	157.60	160.00	0.00	160.00	2.40
279	MTU 1061 (Indra)	2007	7.10	62.00	0.00	62.00	54.90
280	MTU 1064 (Amara)	2010	8.20	17.40	0.00	17.40	9.20
281	MTU 1075 (IET 18482)	2008	12.25		25.00	25.00	12.75
282	MTU 1121 (Sri Dhruthi)	2016	12.95	90.00	60.00	150.00	137.05

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
283	MTU 1140 (Bheema/Dheera)	2017	3.40	5.00	0.00	5.00	1.60
284	MTU 1153 (Chandra) (IET 23409)	2016	37.30	100.00	75.00	175.00	137.70
285	MTU 1155 (Samvruddhi) (IET 23272)	2019	1.10	2.00	0.00	2.00	0.90
286	MTU 1156 (Tarangini)	2017	122.50	122.00	100.00	222.00	99.50
287	MTU 1172 (IET 24495) (Ksheera)	2019	0.60	0.00	2.00	2.00	1.40
288	MTU 1190 (Varam) (IET 25495)	2019	0.20	0.00	2.00	2.00	1.80
289	MTU 1210 (Maruteru Sujatha) (IET 2s305)	2020	2.30	0.00	4.00	4.00	1.70
290	MTU 1212	2021	15.00	10.00	10.00	20.00	5.00
291	MTU 1223 (IET 25856)	2021	0.65	2.00	0.00	2.00	1.35
292	MTU 1224 (Maruteru Samba) (IET 26225)	2020	15.25	45.00	45.00	90.00	74.75
293	MTU 1239	2021	20.60	20.00	5.00	25.00	4.40
294	MTU 1262 (Maruteru Mahsuri) (IET 27151)	2020	9.30	70.00	70.00	140.00	130.70
295	MTU 1280	2021	0.10	0.00	5.00	5.00	4.90
296	MTU 1281	2021	0.20	0.00	2.00	2.00	1.80
297	MTU 2077 (Krishnaveni)	1990	0.60	6.00	0.00	6.00	5.40
298	MTU 5182 (Nandi)	1993	0.00	0.00	0.00	0.00	0.00
299	MTU 6024	1985	0.00	0.00	0.00	0.00	0.00
300	MTU 7029 (Swarna)	1985	260.85	265.00	0.00	265.00	4.15
301	MTU Rice 1232 (IET 26422)	2023	0.20	0.00	2.00	2.00	1.80
302	MTU Rice 1239 (IET 26263)	2021	0.20	20.00	5.00	25.00	24.80
303	MTU Rice 1271 (IET 27416)	2024	0.05	0.00	15.00	15.00	14.95
304	MTU Rice 1273	2022	0.40	0.00	4.00	4.00	3.60
305	MTU Rice 1293	2022	0.30	10.00	15.00	25.00	24.70
306	MTU Rice 1310	2022	0.10	0.00	2.00	2.00	1.90
307	MTU RICE 1318 (IET 28527)	2023	42.05	100.00	0.00	100.00	57.95
308	MTU Rice 1321	2022	0.15	0.00	2.00	2.00	1.85
309	Muktashree (IET 21845)	2019	0.15	1.00		1.00	0.85
310	Naveen (CR-749-20-2) (IET 14461)	2006	0.40	0.00	0.90	0.90	0.50
311	NDLR 7 (Nandyala Sona) (IET 23715)	2018	1.00	18.00	0.00	18.00	17.00
312	NDR 1	1983	0.00	0.00	0.00	0.00	0.00
313	NDR 1045-2 (Shusk Samrat) (IET 17458)	2007	0.00	0.00	0.00	0.00	0.00
314	NDR 2065 (IET 17476)	2011	2.00	29.75	0.00	29.75	27.75
315	NDR 3112-1 (Narendra Dhan 3112-1 Prakhar) (IET 19335)	2009	0.90	0.90	0.00	0.90	0.00
316	NDR 359 (Narendra Dhan-359)	1994	0.20	30.34	0.00	30.34	30.14
317	NDR 9930111 (IET 19117)	2021	10.00	24.75	0.00	24.75	14.75
318	NLR 33358 (Somasila)	2000	0.20	1.00	0.00	1.00	0.80
319	NLR 3354	2020	0.05	0.00	2.00	2.00	1.95
320	NLR 33641 (Vedagiri)	2000	0.20	1.00	0.00	1.00	0.80
321	NLR 33892 (Pardhiva)	2007	0.65	4.00	0.00	4.00	3.35
322	NLR 4001 (Nellore Siri) (IET 25273)	2020	0.15	0.00	2.00	2.00	1.85
323	NLR 40024	2021	0.60	0.00	1.00	1.00	0.40
324	NLR 40054 (Nellore Sugandha) (IET 23194)	2020	0.10	0.00	1.00	1.00	0.90
325	NLR-34449 (Nellore Mahsuri)	2010	37.70	0.00	100.00	100.00	62.30
326	Nua Chinikamini	2010	0.00	0.90	0.00	0.90	0.90
327	Nua Kalajeera	2008	0.00	0.15	0.00	0.15	0.15
328	Numali (IET 27405)	2020	2.00	18.95	0.00	18.95	16.95
329	OUAT Kalinga Rice 1 (Kolab)	2023	0.50	7.00	0.00	7.00	6.50
330	OUAT Kalinga Rice 2 (Salandi)	2023	0.50	5.00	0.00	5.00	4.50
331	OUAT Kalinga Rice 5 (Nabanna)	2023	4.00	0.00	8.00	8.00	4.00
332	OUAT Kalinga Rice 6 (Bhargavi)	2023	0.50	1.00	0.00	1.00	0.50

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
333	OUAT Kalinga Rice 7 (Barunei)	2023	0.70	1.40	0.00	1.40	0.70
334	OUAT Kalinga Rice 8 (Surya Shree)	2023	0.70	0.00	0.00	0.00	-0.70
335	Padmini (IET 10561)	1989	0.60	0.45	0.00	0.45	-0.15
336	Pant Basmati 1 (RP 36444-1-9-5-5)	2015	0.20	8.00	0.00	8.00	7.80
337	Pant Basmati 2 (IET 21953)	2015	0.20	2.40	0.00	2.40	2.20
338	Pant Dhan 18 (IET 17920) (UPRI 99-1)	2007	0.45	5.49	0.00	5.49	5.04
339	Pant Dhan 24 (IET 22096)	2015	0.40	9.25	0.00	9.25	8.85
340	Pant Dhan 26 (UPR 3425-14-3-1)	2017	5.30	5.85	0.00	5.85	0.55
341	Parag 401 (PBNR-90-3-401)	2000	4.00	0.00	0.00	0.00	-4.00
342	Parijat (IET 2684)	1985	2.15	1.80	0.00	1.80	-0.35
343	PDKV Kisan (SKL-22-39-31-25-31-34)	2018	0.20	28.34	0.00	28.34	28.14
344	PDKV Sadhana	2023	0.20	5.00	0.00	5.00	4.80
345	PDKV Tilak (SYE-503-78-34-2)	2019	2.00	181.80	0.00	181.80	179.80
346	Phule Samruddhi (VDN-99-29)	2010	0.80	2.00	0.00	2.00	1.20
347	PKV HMT	2008	43.00	51.60	0.00	51.60	8.60
348	Pooja (IET 12241)	1999	7.85	30.00	0.00	30.00	22.15
349	PR 113	2001	0.49	60.00	0.00	60.00	59.51
350	PR 114	2001	7.20	55.00	0.00	55.00	47.80
351	PR 118	2007	0.48	12.00	0.00	12.00	11.52
352	PR 121 (RYT 3240)	2015	0.58	30.00	0.00	30.00	29.42
353	PR 122 (RYT 3129)	2015	1.24	22.00	0.00	22.00	20.76
354	PR 126 (RYT 3379) (IET 24721)	2018	18.84	28.00	0.00	28.00	9.16
355	PR 127 (RYT 13316)	2020	1.00	10.00	0.00	10.00	9.00
356	PR 128 (RYT 3437)	2021	2.35	18.00	0.00	18.00	15.65
357	PR 129 (RYT 3468)	2021	0.08	18.00	0.00	18.00	17.92
358	PR 130 (PRYT 3797)	2023	3.98	12.00	0.00	12.00	8.02
359	PR 131	2024	0.00	30.00	0.00	30.00	30.00
360	Prabhat	1978	1.90	10.00	8.00	18.00	16.10
361	Pradhan Dhan (CR 409) (CR 2690-2- 2-1-1-1) (IET 23110)	2018	0.20	8.00	0.00	8.00	7.80
362	Pratibha (OR 2172-7) (IET 21582)	2018	0.20	0.20	0.00	0.20	0.00
363	Pratikshya (ORS 201-5) (IET 15191)	2006	9.71	30.00	0.00	30.00	20.29
364	Protezin (R-RHZ-R-56) (IET 25470)	2020	3.00	17.72	0.00	17.72	14.72
365	PTB 51 (Aathira)	2006	0.35	0.00	1.00	1.00	0.65
366	Punjab Basmati 7	2022	0.48	30.00	0.00	30.00	29.52
367	Purna (IET 18654)	2017	0.20	0.00	0.00	0.00	-0.20
368	Purnendu (IET 10029)	1997	0.00	0.00	0.00	0.00	0.00
369	Pusa 1460	2007	0.00	2.30	0.00	2.30	2.30
370	Pusa 1509	2013	0.00	16.07	0.00	16.07	16.07
371	PUSA 44	1994	0.00	0.00	0.00	0.00	0.00
372	Pusa 6 (Pusa 1612-7-6-5)	2013	1.00	4.00	0.00	4.00	3.00
373	Pusa Basmati 1	1989	0.00	252.91	0.00	252.91	252.91
374	Pusa Basmati 1 (IET 10364)	1989	1.16	8.00	0.00	8.00	6.84
375	Pusa Basmati 1121 (Pusa Sugandh 4)	2005	50.50	24.50	0.00	24.50	-26.00
376	Pusa Basmati 1121 (Pusa Sugandh 4)		0.00	20.00	0.00	20.00	20.00
377	Pusa Basmati 1509	2013	30.24	20.00	0.00	20.00	-10.24
378	Pusa Basmati 1692 (IET 26995)	2020	22.80	20.00	0.00	20.00	-2.80
379	Pusa Basmati 1718	2017	39.70	20.00	0.00	20.00	-19.70
380	Pusa Basmati 1728	2016	3.10	4.00	0.00	4.00	0.90
381	Pusa Basmati 1847	2021	20.42	22.00	0.00	22.00	1.58
382	Pusa Basmati 1882 (IET 28788)	2022	7.40	7.40	0.00	7.40	0.00

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
383	Pusa Basmati 1885	2021	4.90	5.00	0.00	5.00	0.10
384	Pusa Basmati 1886	2021	2.76	4.00	0.00	4.00	1.24
385	Pusa Basmati 1979	2021	5.53	7.00	0.00	7.00	1.47
386	Pusa Basmati 1985	2021	13.62	14.12	0.00	14.12	0.50
387	Pusa Basmati 6 (IET 18005)	2010	1.90	17.80	0.00	17.80	15.90
388	Pusa CRD Kalanamak-2	2023	0.00	14.10	0.00	14.10	14.10
389	Pusa CRD KN2 (Pusa1638-07-171-1-81-1-2)	2023	1.05	1.50	0.00	1.50	0.45
390	Pusa Narendra Kalanamak-1	2023	0.00	29.40	0.00	29.40	29.40
391	Pusa Narendra KN1 (Pusa1638-07-130-2-67-1-1)	2023	1.10	1.50	0.00	1.50	0.40
392	Pusa Samba 1850 (Pusa 1850-27) (IET 25480)	2018	0.10	13.00	0.00	13.00	12.90
393	Pusa Samba 1853 (IET 28014)	2022	0.10	5.00	0.00	5.00	4.90
394	Pusa Sugandh 5 (IET 17021)	2005	0.50	4.20	0.00	4.20	3.70
395	Pusa Sugandha 4	2005	0.00	45.91	0.00	45.91	45.91
396	Pusa Sugandha 5	2005	0.00	7.74	0.00	7.74	7.74
397	Raja Vadlu	1995	0.20	0.00	0.00	0.00	-0.20
398	Rajendra	1978	0.20	0.20	0.00	0.20	0.00
399	Rajendra Bhagvati	2010	0.05	2.80	0.00	2.80	2.75
400	Rajendra Mahsuri 1	2007	9.45	10.53	0.00	10.53	1.08
401	Rajendra Nilam (RAU-1484-Aer- 04) (IET 24010)	2017	24.00	24.20	0.00	24.20	0.20
402	Rajendra Saraswati (IET 23423)	2020	20.00	20.80	0.00	20.80	0.80
403	Rajendra Suwasini	2007	0.60	7.23	0.00	7.23	6.63
404	Rajendra Sweta	2007	1.70	8.65	0.00	8.65	6.95
405	Rani Dhan (IET 19148)	2009	0.95	0.80	0.00	0.80	-0.15
406	Ranjeet	1994	2.80	43.70	0.00	43.70	40.90
407	Ranjit SUB 1	2018	7.80	120.70	0.00	120.70	112.90
408	Ratna	1970	0.00	0.00	0.50	0.50	0.50
409	Ratnagiri 1	1990	0.30	9.00	0.00	9.00	8.70
410	Ratnagiri 2	1990	0.50	0.23	0.00	0.23	-0.27
411	Ratnagiri 6 (RTN 65-1-2-2-2) (IET 25529)	2019	0.20	5.40	3.00	8.40	8.20
412	Ratnagiri 68-1	1986	0.00	0.00	0.00	0.00	0.00
413	Ratnagiri 8 (RTN 28-1-5-3-2) (IET 25493)	2019	2.25	13.00	8.00	21.00	18.75
414	Reeta (IET 19969)	2011	0.20	0.40	0.00	0.40	0.20
415	RGL 2537 (Srikakulam Sannalu)	2000	2.20	45.00	0.00	45.00	42.80
416	Rice ADT 57 (AD 09219)	2022	0.10	0.10	0.00	0.10	0.00
417	Rice CR 1009 Sub1	2016	16.65	0.00	16.65	16.65	0.00
418	RM 1 (Mangala Mansuri) (IET 14083)	2002	0.20	0.00	0.00	0.00	-0.20
419	RNR 15048 (Telangana Sona) (IET23746)	2016	54.95	45.75	10.00	55.75	0.80
420	RNR 2354 (Shobhini) (IET 21260)	2014	6.20	0.00	4.00	4.00	-2.20
421	RNR 2458 (Krishna) (IET 21492)	2019	0.20	0.20	0.00	0.20	0.00
422	RNR 2465 (Sugandha Samba)	2011	0.10	0.10	0.00	0.10	0.00
423	RNRM 7 (Early Sambha)	2001	0.30	0.00	0.00	0.00	-0.30
424	RP-732	1995	0.20	0.00	0.00	0.00	-0.20
425	Sabita (IET 8970)	1987	0.70	2.00		2.00	1.30
426	Sabour Deep (RAU 3055)	2017	15.00	30.00	30.00	60.00	45.00
427	Sabour Harshit Dhan (IET 25342)	2020	24.00	70.00	70.00	140.00	116.00
428	Sabour Sampanna Dhan (IET 25960)	2021	24.00	130.00	130.00	260.00	236.00
429	Sahbhagi Dhan (IET 19576) (IR74371-70-1-1-CRR-1)	2011	3.85	11.40	2.70	14.10	10.25
430	Sahyadri Kempumukthi	2022	1.00	1.00	0.00	1.00	1.00

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
431	Sahyadri Panchmukhi	2021	0.50	0.50	0.00	0.50	0.50
432	Sakoli 7 (IET 10651)	1990	0.20	0.80	0.00	0.80	0.60
433	Sakoli 9 (SKL-2-50-56-45-30-60)	2019	0.20	59.80	0.00	59.80	59.60
434	Sampada (IET 19424)	2008	1.20	1.50	0.00	1.50	0.30
435	Sarjoo-52	1982	0.50	117.25	0.00	117.25	116.75
436	Sarla CR-260-77 (IET 10279)	2002	1.20	15.30	0.00	15.30	14.10
437	Satya	1988	0.20	0.00	0.00	0.00	-0.20
438	Savitri (CR 1009) (IET 5897)	1983	0.65	4.20	0.00	4.20	3.55
439	Shah Sarang 1 (RCPL 1-87-8)	2003	0.20	1.00	0.00	1.00	0.80
440	Shalimar Rice 2	2015	1.00	3.00	0.00	3.00	2.00
441	Shalimar Rice 3	2015	0.32	1.00	0.00	1.00	0.68
442	Shalimar Rice 4 (SKUA-408)	2019	11.00	27.00	0.00	27.00	16.00
443	Shalimar Rice 5 (SKUA-402)	2019	1.00	1.60	0.00	1.60	0.60
444	Shalimar Rice 6 (SKUA-485)	2023	0.02	0.10	0.00	0.10	0.08
445	Shalimar Rice 7	2024	0.60	1.00	0.00	1.00	0.40
446	Shalimar Rice 8	2024	0.30	0.50	0.00	0.50	0.20
447	Shalimar Rice 9	2024	0.30	1.50	0.00	1.50	1.20
448	Shalimar Sugandh 1 (SKUA-494)	2022	0.03	3.00	0.00	3.00	2.97
449	Shatabdi	2000	0.00	1.90	0.00	1.90	1.90
450	Shatabdi (IET 4786)	2000	16.95	18.50		18.50	1.55
451	SHIATS Dhan 2 (AAIR 203)	2017	0.30	0.30	0.00	0.30	0.00
452	Shyamla	1997	0.00	6.23	0.00	6.23	6.23
453	Sidhanta (ORS-102-4) IET 15296)	2006	0.20	0.00	0.20	0.20	0.00
454	Sita	1978	0.10	0.00	0.00	0.00	-0.10
455	Sukumar (IET 21261)	2020	0.40	1.50		1.50	1.10
456	Surendra (IET 12815)	1999	0.60	0.30	0.00	0.30	-0.30
457	Swarna Purvi Dhan 1	2023	0.20	2.40	0.00	2.40	2.20
458	Swarna Purvi Dhan 2	2023	0.20	4.00	0.00	4.00	3.80
459	Swarna Purvi Dhan 3 (IET 28014)	2022	30.90	31.10	0.00	31.10	0.20
460	Swarna Shakti Dhan (RCPF-22-IR84899-B-183-20-1-1-1) (IET 25640)	2020	25.00	25.20	0.00	25.20	0.20
461	Swarna Shreya (IET 24003)	2018	2.00	17.40	0.00	17.40	15.40
462	Swarna Shusk Dhan	2023	1.10	4.50	0.00	4.50	3.40
463	Swarna Smriddhi Dhan (IET 24306)	2021	29.40	42.30	0.00	42.30	12.90
464	Swarna Unnat Dhan (IET 27892)	2021	30.00	30.30	0.00	30.30	0.30
465	Swarna-SUB 1 (CR 2539-1) (IET 20266)	2009	101.85	160.50	0.00	160.50	58.65
466	Swetha (lET 14735)	2006	0.60	0.10	0.80	0.90	0.30
467	SYE-ER-1 (IET 9296)	1990	0.20	0.20	0.00	0.20	0.00
468	Tarunbhog Selection 1	2016	5.30	15.60	0.00	15.60	10.30
469	TCA-72 (Sudha) (IET 8977)	1989	0.60	2.05	0.00	2.05	1.45
470	TCA-80-4 (Rajshree) (IET 7970)	1989	0.20	7.15	0.00	7.15	6.95
471	Tellahamsa	1975	0.70	0.00	0.70	0.70	0.00
472	Thanu	2008	0.95	3.90	0.00	3.90	2.95
473	TPS-1	1991	0.00	0.00	0.00	0.00	0.00
474	Tripura Chikan Dhan	2018	0.20	4.20	0.00	4.20	4.00
475	Tripura Nirog	2018	0.10	4.20	0.00	4.20	4.10
476	Trivani (PTB 38)	1973	0.20	0.15	0.20	0.35	0.15
477	Trombay Chattisgarh Vikram - TCR (Vikram)	2021	6.00	48.56	0.00	48.56	42.56
478	Trombay Chhattisgarh Dubraj Mutant 1 (TCDM-1) (IET 23829)	2019	3.00	18.38	0.00	18.38	15.38
479	Trombay Chhattisgarh Sonagathi mutant (TCSM)	2021	1.00	7.88	0.00	7.88	6.88

S.No.	Variety	Notif. Year	Indent (q)	Production (q)			Surplus/ Deficit
				Kharif, 2024	Expected Rabi/ Summer	Total	
480	Trombay Chhattisgarh Vishnubhog mutant (TCVM)	2021	1.00	12.47	0.00	12.47	11.47
481	Trombay Karjat Kolam (BARCKKV 13) (IET 27000)	2020	0.20	1.20	0.00	1.20	1.00
482	Tunga (IET 13901)	2006	4.15	4.00	0.00	4.00	4.00
483	Upahar (OR 1234-12-1) (IET 17318)	2006	0.80	6.20	0.00	6.20	5.40
484	Uttar Ganga (PUR-B-190) (IET 28840)	2024	1.30	5.00	0.00	5.00	3.70
485	Uttar Lakshmi (UBKVR-15) (IET 24173)	2020	0.45	6.50	0.00	6.50	6.05
486	Uttar Samir (PUR-B-36) (IET 26453)	2022	0.35	5.50	0.00	5.50	5.15
487	Uttar Sona (UBKVR -1) (IET 24171)	2019	0.65	6.00	0.00	6.00	5.35
488	Uttar Sugandhi (UBKVRA-2) (IET 24616)	2022	0.20	1.00	0.00	1.00	0.80
489	Vajram	1987	0.00	0.00	0.00	0.00	0.00
490	Vallabh Basmati 24 (MAUB-171) (IET 20827)	2015	0.20	0.50	0.00	0.50	0.30
491	Vandana (RR-167-982)	2002	0.60	4.50	0.00	4.50	3.90
492	Varsha (PTB 56)	2006	0.10	1.62	0.00	1.62	1.52
493	Varshadhan (CRLC-899) (IET 16481)	2006	2.10	2.00	0.00	2.00	-0.10
494	Vibhava (IET 6080)	1991	0.20	0.20	0.00	0.20	0.00
495	Vikas	1983	0.20	0.20	0.00	0.20	0.00
496	Vikramarya (lET 7302)	1986	0.20	0.20	0.00	0.20	0.00
497	Virender (RR 347-2) (IET 17901)	2007	0.20	0.00	0.00	0.00	-0.20
498	Vishnubhog Selection 1	2016	5.30	16.50	0.00	16.50	11.20
499	VL Dhan 159 (VL 20083) (IET 26598)	2021	0.30	0.50	0.00	0.50	0.20
500	VL DHAN 69 (IET 26596)	2021	1.60	3.00	0.00	3.00	1.40
501	VL Dhan 70	2022	3.10	8.00	0.00	8.00	4.90
502	VL Dhan 88 (VL 32224) (IET 25819)	2021	3.00	3.00	0.00	3.00	0.00
503	WGL 1487 (Telangana Vari 8) (IET 28818)	2022	0.10	0.00	0.10	0.10	0.00
504	WGL 20471 (Erra Mallelu)	1993	1.95	0.00	1.95	1.95	0.00
505	WGL 32100 (Warangal Sannalu) (IET 18044)	2007	0.10	0.00	0.10	0.10	0.00
506	WGL 3962	1999	0.20	0.00	0.20	0.20	0.00
507	WGL 44 (Siddhi) (IET 19387)	2013	0.20	0.20	0.00	0.20	0.00
508	WGL 48684 (Kavya)	1993	0.80	0.00	0.80	0.80	0.00
509	WGL 697 (IET 26027)	2021	0.25	0.00	0.25	0.25	0.00
510	WGL 915 (Warangal Rice 1) (IET 25284)	2020	0.10	0.10	0.00	0.10	0.00
511	WL 13400	1978	0.20	0.00	0.20	0.20	0.00
512	Zinco Rice MS	2019	5.60	9.00	0.00	9.00	3.40
	Grand Total		**2971.01**	**9186.2**	**1274.35**	**10460.6**	**7495.46**

Appendix-13

Breeder Seed Production Proformae

The Calendar of events for breeder seed production are as under : **Co-operators are requested to please comply with the schedule**

Proforma BSP I : Allocation of Breeder Seed Production of Varieties/ Parental lines of Rice hybrids

S. No	Variety	Name of the producing Breeder/ Institution	Quantity allotted (Qtls)	Members of monitoring team

Action:

- **BSP I will be sent to respective centres in the last week of April by IIRR after rice workshop.**

Proforma BSP II: Time of production and availability of Breeder Seed

S. No	Variety/ Parental lines	Quantity targeted (Qtls)	Area sown (ha)	D/S	D/P	Field location	Expected fortnight for monito-ring	Expected date of Harvest	Expected Produc-tion (Qtls)	Expected date of availa-bility

Action:

- **BSP II should positively reach IIRR in the last week of September**

Proforma BSP III: Inspection Report of the Monitoring Team

Sl. No	Variety	Area under variety (ha)	Field Location	Authority under which grown		Report of Monitoring Team	Expected Production (Qtls)
				Date of Proforma BSP-I	Date of Proforma BSP-II		

Action:

- **BSP III should positively reach IIRR in the second fortnight of November**

Proforma BSP IV : Report on Breeder Seed Production actually produced

(a) Breeder Seed Produced as per DAC indent

Variety/ Parental lines	Quantity of B.S. allotted as per BSP I	Quantity of B.S. actually produced (Qtls)	Comments of the Monitoring Team (Satisfactory/ Unsatisfactory)

b) Breeder Seed Produced in addition to above allocation, if any

Variety/ Parental lines	Quantity of B.S. produced (Qtls)	Comments of the Monitoring Team (Satisfactory/ unsatisfactory)

(c) Carry over seed, if any

Variety/ Parental lines	Year of Production	Quantity	Germination Percentage	
			Previous year	Current year

Action:

- **BSP IV should positively reach IIRR in the second fortnight of December (*If BSP data is submitted timely, we can minimize the problems of non lifting.)***

Proforma BSP V : Report of Grow Out Test

Proforma BSP VI : Report on the Status of Lifting/Non-lifting /Supply position for the previous season.

- **Status of breeder seed produced in the previous season / year and supplied to various seed agencies / state dept. of Agriculture as per the DAC allotment in other words lifting / non-lifting / supply position may kindly be sent to DRR positively in the second fortnight of September.**

Name of the producing centre	Variety	Target set	Actual production	Allocation (Agency wise)	Lifting (Agency wise)	Balance if, any	Remarks

Action:

- **BSP VI should positively reach DRR in the second fortnight of September**

All the proforma should be distributed to:

1. Asst. Director General (Seeds), ICAR, Krishi Bhavan, New Delhi – 110 001.
2. Deputy Commissioner (Seeds), Department of Agriculture and Co-operation, Ministry of Agriculture, Shastri Bhavan, New Delhi – 110 001
3. Director, ICAR-Indian Institute of Rice Research, Rajendranagar, Hyderabad – 500 030.
4. Director, ICAR-Indian Institute of Seed Science, Village: Kusmaur (P.O.Kaithili), Mau Nath Bhanjan, Uttar Pradesh.
5. General Manager (Production), National Seed Corporation, Beej Bhawan, Pusa Campus, New Delhi – 110 012.

***

Appendix 14

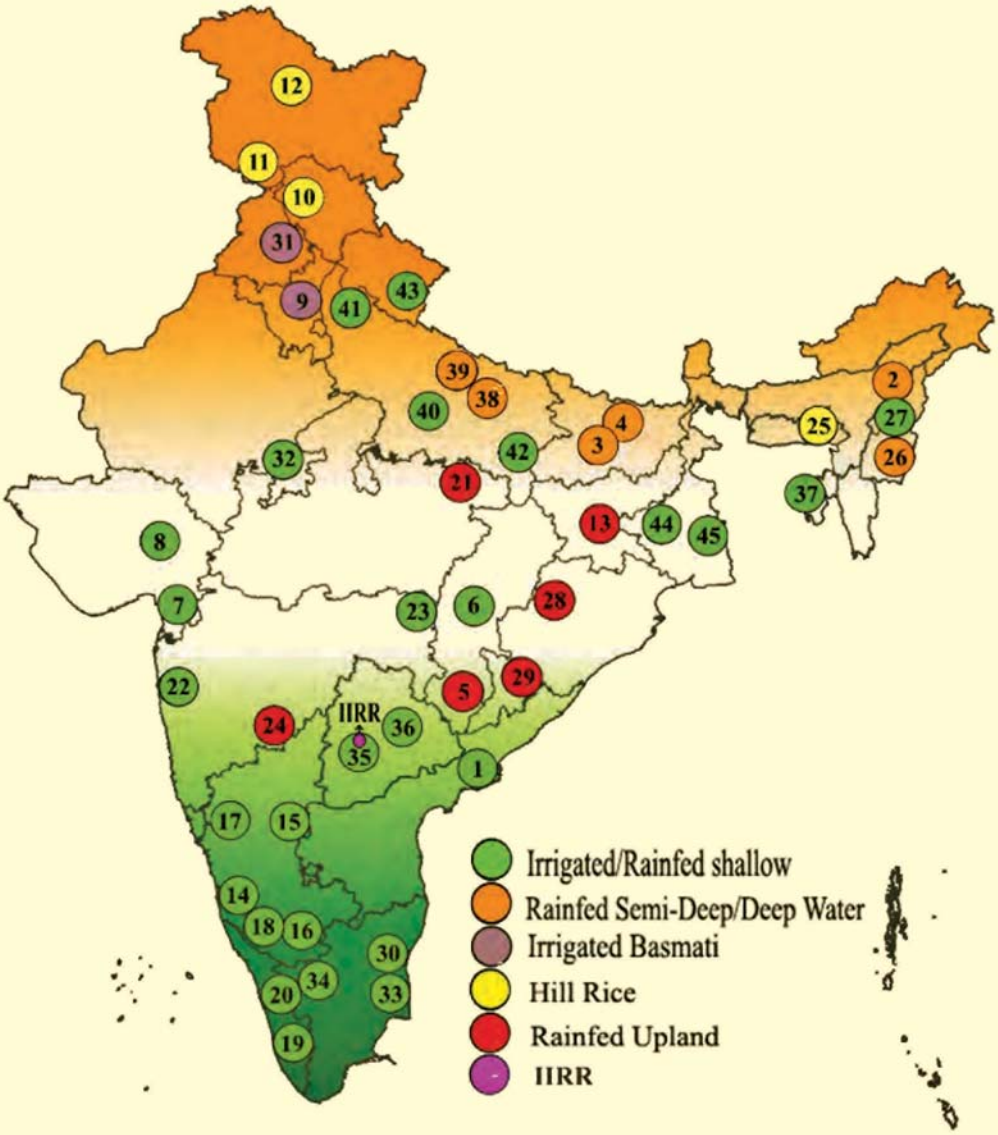
Rice Varieties/Hybrids released during 2024-25 by CVRC/SVRC

S.No	Variety/Hybrid	IET	Ecology	Institute	States
1	HKR – 49	27866	IETP	HAU, KUL	OD, BR, MH, GJ
2	Chhattisgarh Bhavya Dhan	29523	IMS	IGKV, RPR	MH, GJ
3	Telangana Rice-1355 (WGL-1355)	29188	IME	PGTAU, WGL	OD, WB, BR, TG, KL
4	Telangana Rice-34560 (JGL -34560)	29833	IM	PGTAU, JGT	TG & KA
5	Telangana Rice-35085 (JGL-35085)	29142	IETP	PGTAU, JGT	BR & WB
6	ICAR NEH NICRA Aerobic Dhan- 2	29409	I-Aerob	ICAR, Tripura	BR & HR
7	Swarna Purvi Dhan-4	29405	I-Aerob	ICAR, Patna	HR, BR, JH, GJ
8	Swarna Purvi Dhan- 5	29036	R-EDS	ICAR, Patna	BR, WB, JH
9	CR Dhan-108	29052	R-EDS	ICAR, NRRI	OD & BR
10	CR Dhan-332	28506	IETP	ICAR, NRRI	OD & WB
11	CR Dhan-337	29939	IE	ICAR, NRRI	OD, BR, JH, WB
12	CR Dhan-416	30201	Coastal Saline	ICAR, NRRI	WB, MH, GJ
13	CR Dhan-809	30282	IME (NIL)	ICAR, NRRI	OD, BR, JH, WB, TR, AS
14	CR Dhan-810	30409	SUB (NIL)	ICAR, NRRI	OD, WB, AS
15	CR Dhan-811	30410	RSL	ICAR, NRRI	OD & WB
16	VL Bosi Dhan (VL-32585)	28883	IEH	VPKAS, ALM	UK, HP, JK
17	NLR Rice -3684	29947	IETP	ANGRAU, NLR	OD, BR, UP, WB
18	KKL (R) 4	30697	IME (FP)	PAJANCOA, KRK	AP, TG, TN, PY
19	CSR 101	30827	NIL (BLB, ST)	CSSRI, KRL	KL, TN, KA
20	CSR 104	29354	Saline/Alk	CSSRI, KRL	UP & HR
21	CSR 105	30004	I-Aerob	CSSRI, KRL	HR & GJ
22	DRR Dhan-73	30107	LPT	IIRR, Hyd	KA, OD, TG
23	DRR Dhan-74	30252	LPT	IIRR, Hyd	KA, MH, TG, JH
24	DRR Dhan-75	30107	IMS	IIRR, Hyd	TG, AP, TN, UP, OD, JH, BR, GJ, MH
25	DRR Dhan-76	29808	IME	IIRR, Hyd	OD, WB, KL, PY, AP
26	DRR Dhan-77	28636	I-Aerob	IIRR, Hyd	BR, GJ, TN
27	DRR Dhan-78	30240	LPT	IIRR, Hyd	KA & TG
28	DRR Dhan-79	29859	IM (MAS)	IIRR, Hyd	OD, BR, CH, MP, MH, KA, TN
29	DRR Dhan-80	30757	IM (NIL)	IIRR, Hyd	KA & TG
30	BRR2152 (Sabour Pratap Dhan)	30083	IMS	BAU, BKG	BR, JK, OD, UP, CH, MH, GJ, TG, KA, AP, TN
31	BRR2183 (Sabour Vijay Dhan)	30029	I Aerob	BAU, BKG	BR, JH, CH, KA
32	BRR2184 (Sabour Narendra Dhan)	30041	RSL	BAU, BKG	BR, UP, CH
33	BRR2010 (Sabour Shriram Dhan)	30367	RSL	BAU, BKG	BR, UP, OD
34	OUAT Kalinga Rice 18 (Saria) (ORJ-1342) (TP-29409)	29822	IME	OUAT, JYP	OD, BR, WB
35	BRR 2110 (Sabour Heera Dhan)	27538		BAU, BKG	BR & UP
36	Sanjeevani Rice (CGR 22847)		IL	IGKV, RPR	CH
37	Bauna Luchai – CTLM	29944	IETP	IGKV, RPR	CH
38	Sahyadri Siri	30764	IL	KSNAUHS, Shivamogga	KA
39	Sahyadri Jalmukthi (KHP-14)	30872	RL	KSNAUHS, Shivamogga	KA
40	Sahyadri Sapthami (BMR-US-1-24-2)	27776	IME	ZAHRS, BRM	KA
41	KMP-225	29973	IME	KSNAUHS, Shivamogga	KA

S.No	Variety/Hybrid	IET	Ecology	Institute	States
42	Kaje 25-9 (BMR – Kajejaya)	30120	IME	ZAHRS, BRM	KA
43	CG Tejas Dhan (IGKV DH 105)	29898	IM	IGKV, RPR	CH
44	CAU-R 105 (Khingrasong 1)	27496	IL & M Altitude	SVRC, Govt. of Meghalaya	ME
45	CAU-R 107 (Khingrasong 2)	28210	IL & M Altitude	SVRC, Govt. of Meghalaya	ME
46	CAU-R 124 (Khingrasong 3)	28907	IL & M Altitude	SVRC, Govt. of Meghalaya	ME
47	Phule Kolam (VDN-1832)	30956	IMS	MPKV,RHI	MH
48	Pant Sugandh Dhan 25	30219	I Aromatic	GBPAUT, PNT	UK, HP, JK
49	PR – 131 (RYT 3888)	30751	IM	PAU, LDH	PB
50	Konkon Sanjay	29264	IM	RARS, KJT	MH
51	Trombay Konkon Khara (BARCKKV 16)	30185	Coastal Saline	BARC, Trombay	MH
52	Shalimar Rice – 7 (SKUA – 540)	28204	I EH	SKUASTK, KHD	JK
53	Shalimar Rice – 8 (SKUA – 522)	27477	I EH	SKUASTK, KHD	JK
54	Shalimar Rice – 9 (SKUA – 493)	25829	I EH	SKUASTK, KHD	JK
55	Labanga Dhan (CR Dhan 603)	26434	I Boro	ICAR, NRRI	OD
56	Pusa 1824	28442	IME	IARI, NDL	DL
57	Pusa 2090	29217	IME	IARI, NDL	DL
58	ADT 59	29154	IE	TNAU, CBT	TN
59	KKM 1	30079	IME	TNAU, CBT	TN
60	CO 58	25577	IME	TNAU, CBT	TN
61	CO 57	31924	IME	TNAU, CBT	TN
62	CO RH 5	24986	IM	TNAU, CBT	TN
63	Karjat – 10	23649	ETP	RARS, KJT	MH
64	DRRH-6 (IIRRH130)-Hybrid	28123	IETP	IIRR, Hyd	BR, OD, UP
65	27P34 (PHI- 21103)-Hybrid	29726	IME	CTVA, Hyd	OD, UP, AP, TN, KA, PY
66	27P38 (PHI- 21104)-Hybrid	29734	IME	CTVA, Hyd	UP, JH, MH, MP, AP, KL
67	RNC-0457/NK4101-Hybrid	29738	IME	Syngenta, Pune	UP, BR, JH, OD, AP, KL
68	ADV 8222-Hybrid	29692	IETP	Advanta, Hyd	CH & MH
69	ADV 8283-Hybrid	29690	IETP	Advanta, Hyd	BR, UP, CH, MH, MP
70	Arize Dhan DT (HRI-205)-Hybrid	29000	IM	Bayer, Hyd	UP, BR, JH, OD, WB, MP, CH, TG, AP, TN, KA
71	Arize 655 ST (HRI-209)-Hybrid	29741	IM	Bayer, Hyd	HR, PB, UP, BR, JH, OD, MP, CH, MH, GJ
72	HRI- 211 (2)-Hybrid	29743	IM	Bayer, Hyd	HR, PB, UP, BR, KH, OD, WB, MP, CH, MH, GJ
73	Arize 6585 ST (HRI- 214)-Hybrid	29689	IETP	Bayer, Hyd	HR, PB, UP, BR, JH, OD, MP
74	NK 5231-Hybrid		IL	AAU, Jorhat	AS

हर कदम, हर डगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch



भाकृअनुप-भारतीय चावल अनुसंधान संस्थान

भारतीय कृषि अनुसंधान परिषद

ICAR - Indian Institute of Rice Research

Indian Council of Agricultural Research

Rajendranagar, Hyderabad - 500 030, India