

ICAR-INDIAN INSTITUTE OF RICE RESEARCH

Rajendranagar, Hyderabad – 500030

Proceedings of the IIRR - Industry Meet 2022: Display of IIRR Technologies & Services (10.11.2022)

**Chief Guest : Dr DK Yadava, ADG Seeds,
ICAR New Delhi**

**Chairman : Dr RM Sundaram, Director
ICAR- IIRR, Hyderabad**

ICAR-IIRR industry meet was held on 10-11-2022 in the Institute's SVS Shastry Auditorium under the Chairmanship of Dr. RM Sundaram Director, ICAR-IIRR. Hyderabad and Dr DK, Yadava, ADG (Seeds), ICAR, New Delhi was the Chief Guest (who participated virtually in the meeting). Around 50 representatives of 20 private seed companies participated and in the first phase of the meeting, all the latest ICAR-IIRR technologies (varieties/hybrids/genetic stocks/pesticide formulations/soil testing kits/value added products/farm machinery etc.) were displayed for the benefit of the participants and subsequently an interactive meeting was organized.

Dr RM Sundaram, Director ICAR-IIRR in his opening remarks, welcomed the delegates from different private sector, officials from ICAR, sister institutes of ICAR, Hyderabad and briefly underlined the importance of industry meet. He has informed that since 2011, the institute has released 65 climate smart varieties and hybrids, few of them that were released recently are for salinity (DRR Dhan 58), drought and submergence (DRR Dhan 50), bacterial leaf blight (Improved Samba Mahsuri, DRR Dhan 53 and DRR Dhan 59), phosphorus use efficiency (DRR Dhan 60), blast (DRR Dhan 51) aerobic rice varieties (DRR Dhan 54, 55 & 57), country's first aerobic rice hybrid (DRRH-4) and biofortified varieties (DRR Dhan 45, DRR Dhan 48, 49 & 63). He highlighted future research work towards the development of climate resilient varieties and hybrids, utilization of drone-based sowing, supplementary pollination, deployment of herbicides & chemicals, development of weed tolerant and herbicide tolerant rice varieties and hybrids, IOT based water management, low P tolerant varieties, varieties with high N and P use efficiency, use of botanicals and habitat management and microbial consortia to reduce cost of cultivation and increase in production. He welcomed the views and suggestions from industry to make the rice farming profitable with increased production.

Three experts from Industry viz., Dr. Paresh Verma, Director Research, Bioseed Research India; Dr. B.C. Viraktamath, Ankur Seeds Pvt. Ltd; Dr. Ramanathan, Rallis India Ltd were invited to share their views on Industry Expectations. Dr Parvesh Verma, mentioned that best genetics and distribution of quality seeds are need of the hour to reach farmers in time. He suggested that seed companies have strong research programs in genetics, breeding and biotechnology and the capacity to scale up the technology and market. But they do not have access to the germplasm. Hence, he emphasized on the strengthening of partnership model between seed sector and public institutions. He further shared the best example of public-private partnership with IIRR, with the commercialization of DRRH-2, an early duration hybrid and resource generation in a successful way. It is imperative to go forward to start work on collaborative research projects on cutting edge climate resilient, forging genotyping facilities and product-oriented technologies between public and private sectors. He also

opined that the Honorable Director Genral, ICAR is encouraging the opportunity to explore the PPP model and it needs to be strengthened for the larger good of the farmers.

Dr BC Viraktamath welcomed the initiative of Industry meet after COVID pandemic and emphasized that IIRR, the premier institution should have vision to start work on future rice because of constraints in labor and water, so that other public and private institutions can follow and implement. He further emphasized IIRR jointly work either through enabling technologies for licensing or through service model: DRRH-2 licensed to 16 companies is a best example. He urged to join hands together to focus on DSR and herbicide tolerant varieties and same should focus on hybrids, the perfect example being DRRH-4. Special emphasize should be given on sheath blight and false smut, a menace in hybrid breeding. He urged to exploit the exchange of materials; entries nominated to AICRIP also to be available for commercialization. He suggested that the best way to reach farmers is through Private sector which is strong in scaling up and marketing the technology.

Dr Sunil Nayak, on behalf of Dr Ramanathan, TATA Rallis expressed his appreciation for ICAR-IIRR for developing climate resilient rice varieties. He emphasized that neck blast is observed in severe form across varieties, season and maturity groups, hence suggested that IIRR may intensify research work on neck blast resistant loci for various maturity groups and work out the relation between neck blast and leaf blast and find source for the both for the benefit of the farming community. He urged to work towards enhancing nutrient profile by enhancing micronutrients along with low GI. To increase the area under hybrid rice, he suggested for development of more useful molecular markers for hybrid rice related traits and also to analyze the reasons for stagnation in the areas.

Dr DK Yadava, ADG (Seeds), ICAR and Chief Guest congratulated and complimented ICAR-IIRR in resuming industry meet after a span of three years of COVID Pandemic. He highlighted out of 131 ICAR institutions, 28 are in crop science specifically dealing with development of varieties/hybrids and dissemination. The Strong network of AICRP helped in release of 6000 varieties in diverse crops. For the last 7-8 years, 1122 varieties and hybrids in 82 crops were released, where private sector played a pivotal role in equal contribution. He highlighted the first collaboration, where PUSA RH-10 was licensed to private firms which is an example of public private partnership which ICAR is bound to intensify further. He emphasized on harnessing the strength of public private sector, so that outcome will be robust, will fulfill the nutritional security of the country. He also mentioned that revised guidelines for commercialization will be released soon, exploring the possibility of exclusive licensing in which pre-released cultures, soft registration with PPV&FRA and sharing on payment basis will come to place in near future with details of the protocols and processes. He also informed that efforts are going on to launch of Indian Hybrid rice consortium very soon. He mentioned that the points emanated from this meeting can be included in the commercial guidelines and transmitted to other institutes.

Dr LV Subba Rao, PI, AICRIP, ICAR-IIRR presented an overview of the salient features of the varieties and hybrids released by this institute and which have been demonstrated and available for commercialization. Dr AS Hari Prasad, PI, Hybrid rice and Chairman, ITMU presented an overview of the non-varietal technologies developed at the institute such as registered genetic stocks, health products, rapid soil testing kits, farm machinery, services and trainings extended by the institute and also advised the delegates to look into the “Expression of Intent for seed production of the released varieties and hybrids -2022 currently available on ICAR-IIRR website.

This was followed by an interactive session with the participants to seek the requirement of participants for their research programs.

Action points (that emerged) during the meeting

- Robust commercialization guidelines need to be developed for appropriate sharing and licensing of the technologies with the appropriate framework for benefit sharing is the need of the hour for sharing and caring in PPP mode.
- ICAR-IIRR and other ICAR Institutes should explore the possibility of licensing semi-finished (pre-breeding) materials and also mapping populations and unique germplasm, which are not yet registered with ICAR-NBPGR
- Two-line breeding work may be given major focus as an alternate to three-line system of breeding.
- A strong breeding program may be initiated for improvement of head-rice recovery trait.
- Identification and deployment of gene combinations that give durable resistance to neck and leaf blast.
- Training programme on disease and pest phenotyping to be initiated at ICAR-IIRR upon receipt of sufficient on number of nominations.
- Major focus also to be on reduction of labor, wherein herbicide tolerant varieties/hybrids work to be initiated
- Initiation of industry and millers meet in the ensuing season.