Press Note

Presentations on Significant Educational Achievements for the year 2024 by Professors during the 63rd Convocation of ICAR-IARI, New Delhi on 19.03.2025

The third day of the 63rd Convocation week (March 17-22, 2025) of ICAR–Indian Agricultural Research Institute, New Delhi continued on 19th March 2025. The sessions were convened and co-convened by Dr Monika Joshi, Professor, Seed Science and Technology and Dr. Shruti Sethi, PS, Div of FS&PHT, ICAR-IARI, respectively. Dr Anupama Singh, Joint Director (Education) and Dean, ICAR-IARI, welcomed the august gathering and introduced the Honourable Chairmen of different sessions, Dr Raman M Sundaram, Director, ICAR- Indian Institute of Rice Research, Hyderabad; Dr. H C Sharma, Former Vice-chancellor, YS Parmar University of Horticulture and Forestry, Nauni, Solan; Dr. B. Venkateswarlu, Former Vice Chancellor, VNMKV, Parbhani & Former Director, ICAR-CRIDA, Hyderabad and Dr. P Ananda Kumar, Former Director, ICAR-NIPB, New Delhi respectively for schools of Crop Improvement, Crop Protection, Natural Resource Management and Basic Sciences. The session commenced with presentations on the significant educational achievements of 2024 by professors representing these four schools**.**

The School of Crop Improvement has made significant progress in plant genetics, breeding, and biotechnology. The Division of Genetics at IARI, often referred to as the "Seat of Green Revolution," has contributed immensely to the enhancement of productivity and resilience in various crops. Research highlights include: Identification of quantitative trait loci (QTLs) for key agronomic traits in rice and wheat, facilitating marker-assisted selection for high-yielding and stress-tolerant varieties; Exploration of genetic diversity in indigenous Oryza species and colored rice landraces from Jharkhand, paving the way for improved nutritional and yield traits; Development of novel hybrid rice and wheat varieties with superior yield potential and stress resilience through advanced molecular breeding techniques.

The School of Crop Protection has focused on combating biotic stresses through integrated pest and disease management. Notable achievements include: Molecular mapping of resistance genes for rice sheath blight, yellow rust in wheat, and Fusarium wilt in lentil, aiding the development of disease-resistant crop varieties; Identification of effective biocontrol agents and integrated pest management (IPM) strategies to reduce dependency on chemical pesticides; Advanced research on insect-resistant maize hybrids through biochemical and genetic screening, ensuring enhanced resistance against major pests like fall armyworm.

The School of Natural Resource Management has undertaken pioneering research in soil health, water management, and environmental conservation. Key contributions include: Development of phosphorus-efficient rice and lentil genotypes to improve nutrient use efficiency in low-input farming systems; Genome-wide association studies (GWAS) to identify key markers for drought and heat tolerance in wheat and maize, facilitating climate-resilient crop

development; Precision farming technologies and remote sensing applications for real-time monitoring of soil moisture, crop health, and water use efficiency.

The School of Basic Sciences plays a crucial role in deciphering fundamental plant processes and their applications in crop improvement. Groundbreaking research in this domain includes: Identification of key genes regulating seed coat color in winged bean and anthocyanin content in colored rice, promoting bio-fortification efforts; Advances in plant biochemistry and molecular biology, leading to the development of nutritionally enhanced cereals with high folate, methionine, and gamma-aminobutyric acid (GABA) content; Innovative studies on plant-microbe interactions, exploring beneficial microbial strains for sustainable agriculture and soil health improvement.

The ICAR-Indian Agricultural Research Institute (ICAR-IARI) continues to make remarkable strides in the fields of crop improvement, crop protection, natural resource management, and basic sciences. The research outcomes from these four schools reaffirm the institute's dedication to ensuring food security, climate resilience, and sustainable farming practices. The Chairmen of the different sessions complimented the quality of research work carried out by the divisions and encouraged them to continue their excellent contributions.

Courtesy
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