<u>Gold Medal Presentations of 57th Convocation: Day 1 Press Note</u>

The 57th ICAR –IARI Convocation week (Feb.4-8, 2019) started on 4th February, 2019 with presentations of significant research findings of post-graduate and doctorate students under the chairmanship of Dr. B.S. Dhillon, Vice Chancellor, PAU, Ludhiana and convener Dr. Radha Prasanna, Professor, Microbiology. Dr. A. K. Singh, Director, ICAR-IARI and Dr Rashmi Aggarwal, Dean & Joint Director (Education) were present on the dice. Dr. V K Singh Thakur, Director, Extension Education, YSPUAT, Solan, Himachal Pradesh; Dr U C Sood, Former Director, IASRI; Dr K R Kaundal, Former Joint Director (Research), IARI; Dr A K Vyas, ADG (HRD) graced the occasion as jury members. Dr. Rashmi Aggarwal shared in her remarks that from the students' research, more than 300 research publications were published in reputed research journals. It comprised of 37 presentations, out of which there were 21 M.Sc. and 16 Ph.D presentations.

The presentation from crop improvement included the research work on evaluation of genetic variability and validation of candidate genes affecting retention of kernel carotenoids in maize during storage; GA responsive genes and seed production in wheat. The presentation from Molecular Biology and Biotechnology dealt with the characterisation of *Magnaporthe* responsive *WRKY* genes in contrasting rice genotypes for panicle blast resistance.

The presentation from Nematology highlighted the genetic and toxicological variation in the Photox toxin among seven Indian *Photorhabdus* strains and concluded that there is a strong possibility of its use in the development of insect resistant transgenic plants, after suitable optimisation. The presentation from Plant Pathology highlighted the characterisation of viroids infecting grapevine and development of rapid diagnostic protocol in 23 commercial grapevine varieties from Maharashtra and IARI, New Delhi. Out of 5 viroids known to infect grapevine, only 4 were detected in RT-PCR, cloning and sequencing. The Entomology presentation discussed on plant defense system in maize seedlings against Swinhoe. The maize genotypes-CPM 13, CPM 15, CPM 18 and CPM 8 caused detrimental effects on the growth, development and progeny production of Swinhoe and can be utilised in resistance breeding against it. The division of Agricultural Chemicals dealt with Biopesticides with improved shelf life. The presentation from school of natural resource management included development of solar powered air-inflated grain dryer; assessment of soil and crop parameters in wheat under different tillage, residue and nitrogen management using proximal hyperspectral technique;

School of Basic Sciences presentations included studies on design, construction, validation of CRISPR/Cas9 plasmid for precise editing of GmIPK2 gene of soybean; Deciphering the role of melatonin under heat stress of rice; Brown manuring optimisation for weed management in maize and its carry over effects in zero-till wheat; Interactive effect of elevated carbon-dioxide and temperature on nitrogen transformation in soil under rice crop; Potassium supplying capacity in soil under different land use systems of Assam.

School of horticultural Sciences presentations included studies on in *vitro* mass multiplication of doubled haploid line of marigold derived through ovule culture; Genetic and molecular characterisation of fruit traits in eggplant; Morphological and molecular diversity analysis of wild apple germplasm; Valorization of citrus peel: Extraction, Characterisation and Functionalisation.

School of Social Sciences represented research on socio-economic impact of drip irrigation in Northern Maharashtra, effectiveness of training in enhancing core competencies of extension personnel in Kerala, Study of empirical mode decomposition based Neural Network for Agricultural price forecasting. Bioinformatics presentation dealt with development of transcriptome based web genomic resources for drought responsiveness in black pepper. Computer Application highlighted the GIS approach for mapping the mega-environment for maize in India.