Journal Club Presentation

Department of Agriculture, IIAST, Integral University, Lucknow

The Department of Agriculture, Integral Institute of Agricultural, Science and Technology (IIAST) has conducted Journal Club for the month of September. The proposal of conducting journals club by the Department of Agriculture has facilitated awareness amongst the students, scholars and academicians and addressed various apprehensions regarding latest trends and advances in the field & lab of agriculture.

The Journals Club was held on 17th of September, 2024 at 03:00 P.M. in the Seminar Hall of the Department of Agriculture. Mr. Mohammad Said, Research scholar (Plant Pathology), Department of Agriculture, IIAST, continued the same accord by providing a presentation. He presented a research paper entitled “Seed-Borne Fungi Associated with Diverse Rice Varieties Cultivated in the Western North Region of Ghana” published in the Wiley in International Journal of Microbiology (Impact Factor 2.8) in 2023. The paper was discussed thoroughly and it was explained that Plants are affected by fungal diseases. The AGRA rice, a farmer-saved seed from Juaboso, had the highest level of seed discoloration (41.96%). Fungi identified to be associated with the dark brown/brown discolouration of rice seeds were *Bipolaris* spp., *Fusarium* spp., *Macrophomina phaseolina* and *Aspergillus* spp. The only fungus associated with the yellow/pale yellow colour was *Bipolaris* spp. The fungi *Bipolaris* spp., *Curvularia* spp., and *Botryodiplodia* spp. were associated with the dark spot discolouration. *Alternaria* spp., and *Aspergillus* spp. were observed on the greyish white seed discolouration sample. Fungi are associated with rice cultivation and vary according to district and rice variety. A complex of pathogenic and saprophytic fungi therefore infects rice grains both in field and storage conditions. Farmer Awareness and Education: Understanding farmers' reliance on saved seeds and their perceptions can guide targeted educational programs to improve knowledge about seed health and disease management. Identification of Fungal Pathogens: The isolation and identification of 13 fungal genera provide a foundation for developing management strategies tailored to specific fungal threats in different districts. Seed Quality Assessment: The categorization of seed discoloration and the correlation with specific fungi can inform breeding programs aimed at developing disease-resistant rice varieties. Localized Solutions: The variation

in fungal presence by district emphasizes the need for region-specific approaches in pest and disease management, potentially leading to more effective interventions. Impact on Food Security: Addressing seed-borne fungal diseases directly relates to enhancing rice yield and quality, which is vital for food security in the region. Foundation for Future Research: The findings open avenues for further research into the biology of the identified fungi and their interactions with rice plants, as well as potential biological control methods.

Prof. Saba Siddiqui, Head, Department of Agriculture addressed the audience and encouraged students for utilizing the platform for skimming the knowledge. The presentation was concluded with the vote of thanks by Dr. Faria Fatima, Associate Professor, IIAST. The program was successfully coordinated by Dr. Faria Fatima, Associate Professor, IIAST and Dr. Suhail Ahmad Khan, Assistant professor, IIAST, Coordinators, Journal Club. The entire event was conducted under the expert guidance of Professor (Dr.) Mohd Haris Siddiqui, Dean, Faculty of Agricultural Science and Technology and Prof. Saba Siddiqui, Head, Department of Agriculture, IIAST.

Glimpses of the program


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