



Journal Club Presentation
Department of Agriculture, IIAST, Integral University, Lucknow

The Department of Agriculture, Integral Institute of Agricultural Science and Technology (IIAST), organized the Journal Club for the month of May. This initiative enhanced awareness among students, scholars, and academicians by providing valuable insights into the latest trends and advancements in agricultural research, particularly in the field of modern crop breeding and climate-resilient agriculture.

The Journal Club was held on 25th of May, 2026 at 09:30 A.M. in the Seminar Hall, First Floor, Department of Agriculture, IIAST. Ms. Mansi, delivered a presentation on the research paper entitled “Accelerated Breeding Modernization: A Global Blueprint for Driving Genetic Gains, Climate Resilience, and Food Security in Rice” published in *Theoretical and Applied Genetics*, 2025. The paper was discussed thoroughly and it was explained that rice plays a central role in ensuring global food security, particularly in developing countries where it serves as a staple food for billions of people. The study highlighted that climate change, increasing population, and rising food demand are placing enormous pressure on existing rice production systems, thereby necessitating rapid modernization of breeding programmes.

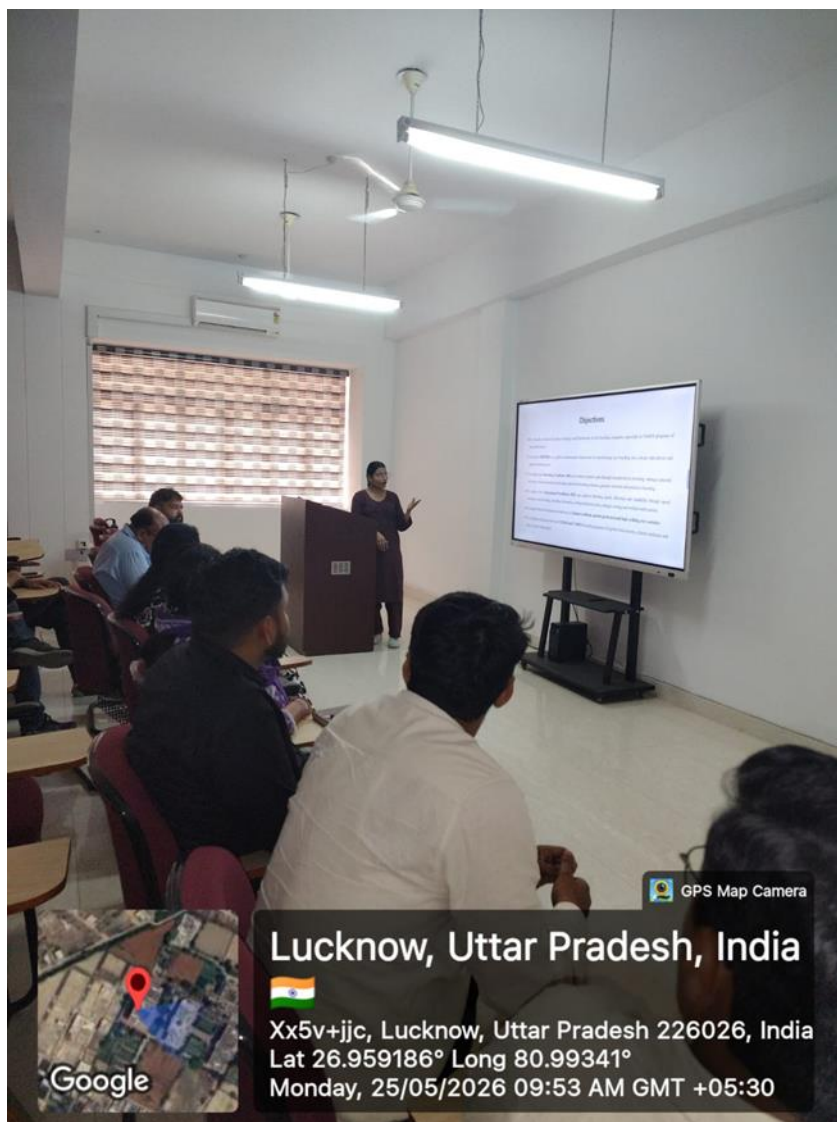
The concept of Accelerated Breeding Modernization–Breeding and Operational Excellence (ABM-BOX), an integrated framework designed to transform traditional rice breeding systems into modern, data-driven, and climate-resilient breeding platforms were elaborated. The framework combines Breeding Excellence and Operational Excellence to accelerate genetic gains, shorten breeding cycles, improve selection accuracy, and develop market-preferred rice varieties with enhanced resilience to climate stress.

It was further explained that the study emphasized modern breeding approaches such as demand-driven breeding, strategic parental selection, recurrent population breeding, genomic selection, predictive breeding, speed breeding, and smart breeding technologies. The integration of breeding informatics, artificial intelligence, high-throughput phenotyping, and digital decision-support systems was highlighted as an effective strategy for improving breeding efficiency and varietal development. The speaker also discussed the importance of collaboration between National Agricultural Research and Extension Systems (NARES) and CGIAR in strengthening rice breeding systems across the Global South to ensure sustainable food security and climate resilience.

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



Glimpse





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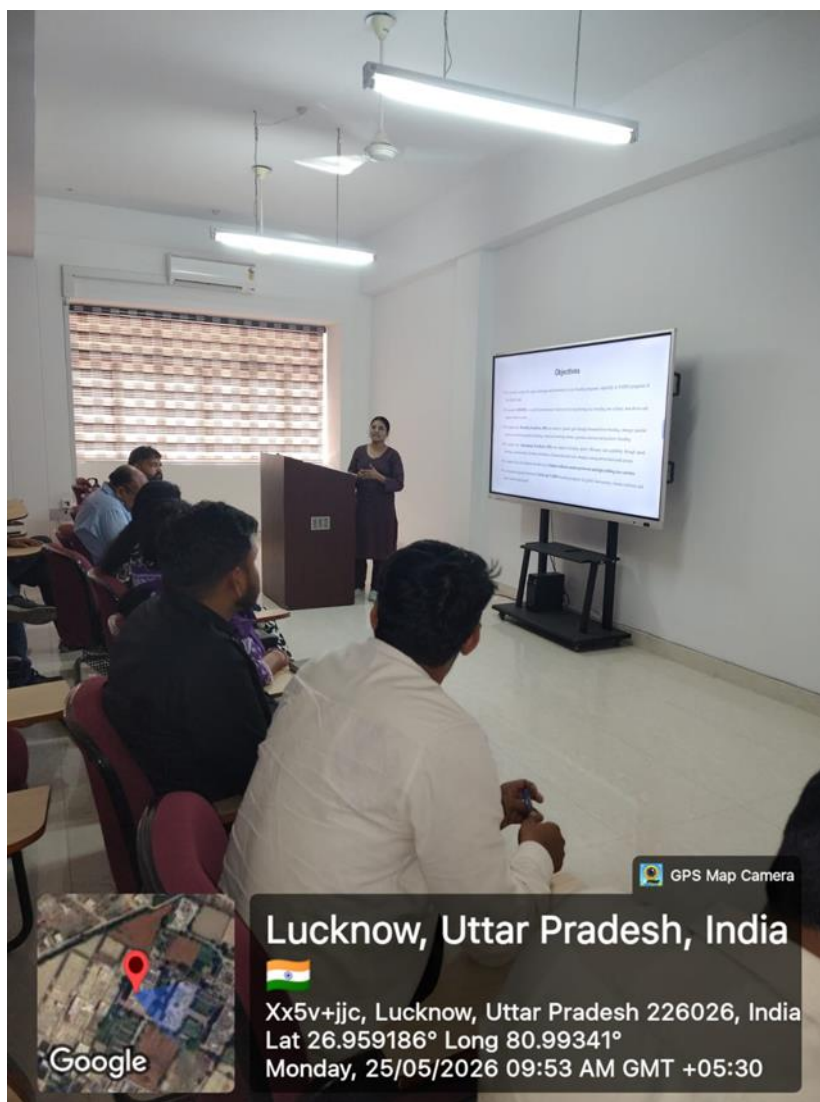
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