Brief Report on

Journal Club Presentation by Department of Agriculture,

Integral Institute of Agricultural Sciences and Technology (IIAST)

Integral University, Lucknow

The Department of Agriculture, Integral Institute of Agricultural Science and Technology (IIAST) organizes Journal Club on regular basis to raise awareness among students, scholars, researchers, and academicians about the ever-evolving trends in the field of agrarian studies. in consistence to this, a journal club was organized on September 9th, 2023, at 10:00 A.M., in the Seminar Hall of the Department of Agriculture.

Mr. Dhreer Pratap Singh, a Research Scholar of the Department of Agriculture, IIAST, diligently delivered a comprehensive presentation in the seminar. He presented a research paper entitled "**Impact of Cultivation Practices and Varieties on Productivity, Profitability and Nutrient Uptake of Rice (*Oryza sativa L.) and* Wheat (*Triticum aestivum L.*) Cropping System in India**" published in the Agriculture in 2022. The study aims to investigate the impact of different cultivation methods, including conventional tillage, reduced tillage, zero tillage, and natural farming, on the productivity and profitability of the rice-wheat cropping system. Specifically, the researchers are interested in understanding how these cultivation practices affect grain yield in both rice and wheat, as well as evaluating the economic viability of these methods. The study's outcomes underscore the superiority of conventional tillage over other cultivation methods in optimizing grain yield for both rice and wheat across the studied locations. This observation implies that, during the study period, conventional tillage emerged as the most effective approach for maximizing crop production. However, the research also reveals notable trade-offs associated with adopting conservation practices. In the case of wheat, the adoption of reduced tillage, zero tillage, and natural farming resulted in decreasing grain yields by 4.6%, 10.9%, and a substantial 59.4%, respectively, when compared to conventional tillage. This highlights the delicate balance between certain conservation practices, particularly natural farming, and conventional methods in terms of wheat productivity. Similarly, for rice, the study indicates that reduced tillage, zero tillage, and natural farming led to declines in grain yield by 10.8%, 16.1%, and 34.0%, respectively, compared to conventional tillage. This variation suggests that the

impact of cultivation methods on rice productivity varies, with natural farming exhibiting a more pronounced reduction. Although not explicitly stated, the study indirectly addresses the critical issue of water use efficiency. The exploration of alternative cultivation methods, including the discussion of direct-seeded rice as a potential technology, implies a broader consideration for sustainable practices to reduce water consumption, particularly in water-intensive lowland paddy fields. These findings provide valuable insights for stakeholders interested in making informed decisions regarding sustainable agriculture practices, taking into account both productivity and water use efficiency.

Dheer pratap concluded that the study provided insights into the trade-offs between different cultivation methods in a rice-wheat cropping system, emphasizing the importance of considering both productivity and profitability when evaluating these approaches. The findings contributed valuable information for farmers, policymakers and researchers interested in sustainable and efficient agricultural practices, particularly in regions facing water scarcity challenges.

Prof. Saba Siddiqui, Head, Department of Agriculture, IIAST, Integral University, addressed the audience and urged students to actively leverage the platform as a valuable knowledge resource. The presentation segment of the program concluded with a vote of thanks delivered by Dr. Suhail Ahmad Khan. 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. The successful organization and execution of the event were attributed to the dedicated efforts of coordinators Dr. Suhail Ahmad Khan and Dr. Shipra Yadav.

Glimpses of the Journals club


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