

**Brief Report on**  
**Journal Club Presentation by**  
**Department of Agriculture,**  
**Integral Institute of Agricultural Sciences and Technology (IIAST)**  
**Integral University, Lucknow**

The Journal club session was organized on October 28, 2023, at 10:00 A.M., in the Board Room by the Department of Agriculture, Integral Institute of Agricultural Sciences and Technology. Mr. Sandeep Kumar Singh, a Ph.D. Research Scholar of the Department of Agriculture, IIAST, diligently delivered a comprehensive presentation. He presented a research paper entitled “Identification and characterization of drought-tolerant local pigmented rice from Indonesia” published in the journal “Physiol Mol Biol Plants” in May, 2022. This study places a significant emphasis on the paramount importance of oxidative defense mechanisms in the context of drought tolerance within various rice cultivars. The investigation primarily centered on understanding the drought resistance of different rice varieties, yielding crucial insights into their performance under adverse conditions. Moreover, an Indonesian variety Merah Pari Eja exhibited the highest activity of antioxidant enzymes. These enzymes are instrumental in shielding plants from the oxidative damage that drought stress can inflict. The visual indicators of drought stress, such as leaf rolling and damage, were strikingly minimal in Merah Pari Eja, reinforcing its exceptional drought resistance and overall robust health. In contrast, the white rice cultivar Putih Payo emerged as highly sensitive to drought stress. As drought conditions worsened, Putih Payo displayed a decline in the expression of genes related to drought tolerance, signifying its inability to muster the necessary defense mechanisms during drought. Mr. Sandeep summarized that this study's findings offer practical solutions for mitigating the effects of drought on Agricultural productivity. By promoting the cultivation of drought-tolerant rice varieties like Merah Pari Eja and furthering our understanding of plant responses to stress, the research contributes to more resilient, efficient, and sustainable agricultural systems.

Prof. Saba Siddiqui, the Head of the Department of Agriculture at IIAST, Integral University, took the stage and addressed the audience. She encouraged students to actively utilize the platform as a valuable resource for gaining knowledge. The presentation portion of the program

was then brought to a close with a vote of thanks delivered by Dr. Suhail Ahmad Khan. The entire program was conducted under the guidance and supervision of Prof. (Dr.) Mohd Haris Siddiqui, the Dean of the Faculty of Agricultural Science and Technology and Prof. Saba Siddiqui, the Head of the Department of Agriculture at IIAST. The event was successfully organized and led by the coordinators Dr. Suhail Ahmad Khan and Dr. Shipra Yadav.

### **Glimpse of the Journal club**



