



Brief Report of Guest Lecture on the topic - Molecular regulation of S-use efficiency and its impact on growth and yield of mustard (*Brassica juncea* L.) genotypes

Organized by Department of Agriculture, Integral Institute of Agricultural Sciences and Technology (IIAST), Integral University Lucknow

The Department of Agriculture, Integral Institute of Agricultural Science & Technology (IIAST), Integral University, Lucknow, organized a Guest Lecture on the topic "Molecular regulation of S-use efficiency and its impact on growth and yield of mustard (*Brassica juncea* L.) genotypes" on 10th October 2025 in the Seminar Hall, IIAST Building. The lecture was delivered by Prof. M.Z. Abdin, Director, Centre for Environment and Sustainable Development (CESD) & Head, Department of Biotechnology, School of Chemical and Life Sciences, Jamia Hamdard, New Delhi. Prof. Abdin is a distinguished expert in plant biotechnology and environmental sustainability who shared his extensive knowledge on sulfur use efficiency in mustard crop genotypes.

Dr. Malik Mobeen Ahmad, Associate Professor, Department of Agriculture, IIAST, Integral University, Lucknow, welcomed Prof. Abdin, who commenced the lecture by emphasizing the significance of Sulfur (S) nutrition in mustard cultivation for enhancing crop growth and yield. He explained the molecular mechanisms underlying sulfur uptake, assimilation, and regulation in mustard plants. The session elaborated on how improving S-use efficiency can positively influence mustard productivity and stress tolerance.

Prof. Abdin discussed various genotypic variations in mustard concerning S-use efficiency and their genetic regulation. He highlighted recent research findings on enhancing sulfur utilization through molecular breeding and biotechnological interventions. The lecture also covered the impact of sulfur nutrition on plant metabolism and the resultant improvement in growth, yield, and quality of mustard seeds. Prof. Abdin emphasized multidisciplinary approaches combining molecular biology, agronomy, and environmental science as key to sustainable mustard production.

The students and faculty members gained valuable insights into the role of sulfur in crop productivity and advanced strategies to improve nutrient use efficiency in agriculture. The lecture concluded with an interactive question-and-answer

session where students asked queries about molecular genetics research, practical applications in farming, and recent advancements in crop nutrition. Prof. Abdin's detailed responses enriched the learning experience and inspired students to explore research opportunities in this field.

This lecture was aligned to UN Sustainable Development Goal 2 (Zero Hunger), as it focused on enhancing nutrient use efficiency and improving crop productivity for sustainable agriculture. Around 90 students along with the faculty members attended the program. The program was conducted under the guidance of Prof. Mohd Haris Siddiqui, Dean, Faculty of Agricultural Science and Technology, and Prof. Saba Siddiqui, Head, Department of Agriculture, IIAST. The lecture was effectively coordinated and moderated by Dr. Zeeshan Ahmed Khan, Assistant Professor, IIAST. This guest lecture served as a valuable academic initiative by the Department of Agriculture, significantly contributing to the knowledge and practical understanding of students and faculty members.

Glimpse



