



Integral Institute of Agricultural Science & Technology (IIAST) Integral University, Lucknow

**Report
on
Guest Lecture on Latest Innovations in Precision Irrigation, Fertigation Systems, and
Digital Agricultural Technologies
Organized by
Department of Agriculture
September 14, 2022**

The Department of Agriculture, Integral Institute of Agricultural, Science and Technology (IIAST) has organized Guest lecture in order to share congruences with the latest trends in the field of agriculture and to create awareness amongst students, scholars, researchers and academicians about the agrarian counter-trend. On September 14th, 2022, Department of Agriculture was privileged to host Dr. L.C. Verma, Head, KVK, Sidharth Nagar, for an insightful guest lecture on the latest innovations in precision irrigation, fertigation systems, and digital agricultural technologies. Dr. Saba Siddiqui, Head, Department of Agriculture welcomed the participants and encouraged them to participate in their new program, which would provide them the chance to learn about the conventional practices and how modern approaches may bring changes.

The lecture began with an overview of the growing importance of micro irrigation systems like drip irrigation in addressing global water scarcity challenges. Dr. Verma highlighted recent advances that have enhanced the precision and efficiency of these systems, such as: Automated Precision Irrigation Using IoT: Integration of soil moisture sensors, weather data, and machine learning algorithms to automatically adjust irrigation rates based on real-time crop water needs. 3D Printing of Micro-Irrigation Components: Ability to custom manufacture emission devices and dripline laterals optimized for specific soil types and terrain using additive manufacturing. Biodegradable Dripline Materials: Development of micro-irrigation tubing from biomaterials that gradually breaks down, avoiding plastic waste accumulation.

Dr. Verma provided compelling case studies demonstrating how progressive farms have achieved over 40% increases in yields and 60% reductions in water/fertilizer usage by integrating these advanced technologies.

The lecture was extremely well-received, sparking insightful discussions around technology adoption barriers, data analytics requirements, economic viability, and the future of smart farming systems. Our students greatly appreciated Dr. Verma expertise in these rapidly evolving innovations shaping the future of agriculture.



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Dr. Saba Siddiqui, Head, Department of Agriculture, IIAST, Integral University, addressed the audience and encouraged students for utilizing the platform for gaining knowledge. She explained the importance of research discussions in such forums. The presentation was concluded with the vote of thanks by Dr. Faria Fatima. The members of the RAWE committee Dr. Malik Mobeen, Mr. Nadeem Khan, Dr. Faria Fatima Dr. Khalid Habib, Dr. Sunil Kumar, Dr. Ayush Bhushan enthusiastically organized the guest lecture under the guidance of Prof. Mohd. Haris Siddiqui, Dean, Faculty of Agricultural Science and Technology and Dr. Saba Siddiqui, Head, Department of Agriculture.

Glimpse





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Impact

- 75000
- Service Area = 30 Villages per Agripreneur
- Coverage = 5/10 Farmers per Agripreneur
- Total Number of Farmers Covered = 1.5 Crore
- Increase in Productivity = 72% Farmer
- Impact on Yield = 17.4%
- Impact on Income = 28.8%
- Employment Created = 1.9 Lakh @ 5 per Agripreneur
- AGU's Private Investment = Rs. 130 Lakh Crores @ Rs. 4 Lakh per Agripreneur

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