



Indian Institute of Technology Indore

One Day Online Workshop on AgriGenomics Data Analysis

Empowering the Next Generation of Agricultural Genomics Professionals

17 December 2025

Organized jointly by AgriHub IIT Indore, GeneSpectrum Life Sciences, Pune and Bioclues



About AgriHub

The 'AgriHub' is a transdisciplinary, multi-institutional collaborative Centre of Excellence (CoE) that brings stakeholders together to reduce the time taken to innovate, develop and deploy technologies for the benefit of breeders, researchers and farmers with an aim to provide advanced technologies such as high-performance computing and big data analytics for designing crops and implementing AI/ML platforms.

Under the scheme



इलेक्ट्रॉनिकी एवं
सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF
ELECTRONICS AND
INFORMATION TECHNOLOGY

In collaborations with



<https://agrihub.iiti.ac.in>

About Workshop

AgriGenomics is transforming the future of agriculture by enabling genomic-driven crop improvement, disease resistance, yield prediction, and microbiome optimization. This intensive 1-day online workshop provides participants with **exposure to tools, methods, databases, and real-world applications used in modern AgriGenomics data analysis**. Designed for students, researchers, bioinformaticians, plant biologists, and agricultural scientists, the workshop brings together leading researchers and industry experts to deliver insights across genomics, transcriptomics, and metagenomics in agriculture.

Learning Outcomes

- Gain foundational understanding of **agrigenomics data types** and experimental workflows across **genomics, transcriptomics, and metagenomics**.
- Conduct variant discovery and functional annotation, including **gene function prediction** for agriculturally important traits.
- Analyze **transcriptomic datasets** using differential expression pipelines to interpret biological responses.
- Apply metagenomics tools like **DADA2** and **PICRUSt2** to investigate soil and plant microbiomes and their functional roles.
- Use agrigenomics databases, **QTL/GWAS resources**, and **AI-driven cloud** platforms to explore **real-world case studies** such as disease resistance, drought tolerance, and soil health monitoring.

Session Highlights

- Introduction to AgriGenomics: Tools, Methods & Applications.
- Genomics Data Analysis in Agriculture: From Raw Reads to Biological Insights.
- Transcriptomics & Gene Expression Profiling in Crop Sciences (RNA-Seq & Beyond).
- Metagenomics for Soil & Plant Microbiome Studies.
- Demonstration of In-House Agrigenomics Platform by AgriHub IIT Indore.

Speakers

Speakers from Bioclues, GeneSpectrum Life Sciences, ICAR Insititutes, C-DAC Pune, IIT Indore and researchers & domain experts from leading universities.

Target Audience

This workshop is designed for UG/PG students, PhD scholars, faculties, researchers and industry professionals and those who are working in genomics, seed technology, AI for agriculture.

For more information and queries:

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Scan QR Code for Registration
Registration Fees: Rs. 1000 + GST 18%

Registration Deadline:
16 December, 2025 till Midnight

AgriHub Team



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Photo Gallery

