



Sustainable Natural Resource Management and Emerging Technologies for Climate-Resilient Agriculture

05-11 October, 2026



About the Training Programme

Sustainable management of soil, water, biodiversity and climatic resources is fundamental to ensuring long-term agricultural productivity, environmental sustainability and national food security. Rapid climate change, land degradation, groundwater depletion, soil fertility decline, nutrient imbalances, residue burning, biodiversity loss and increasing greenhouse gas emissions have intensified the need for innovative and science-based natural resource management strategies. This national-level virtual training programme aims to provide participants with comprehensive theoretical and practical knowledge on modern approaches to sustainable agronomy, including conservation agriculture, regenerative agriculture, precision nutrient and water management, climate-smart agriculture, integrated farming systems, digital agriculture, artificial intelligence, crop modelling, carbon farming, circular bioeconomy, and ecosystem-based resource management. The programme integrates expert lectures, real-world case studies and interactive discussions to bridge scientific advances with field-level applications.

Division of Agronomy

ICAR-Indian Agricultural Research Institute, New Delhi - 110012

Schedule of the training

Date	Key Talk / Lecture Title	Speaker / Expert
05 Oct 2026 (Mon)	Inauguration and Overview of the Training Programme	Training Coordinators
	Inaugural lecture: Sustainable Natural Resource Management for a Resilient and Food-Secure Future	Dr Ch. Srinivasa Rao , Director, ICAR-IARI, New Delhi
	Agronomic Innovations for Sustainable Natural Resources Management in a Changing climate	Dr Sanjay Singh Rathore , Head, Division of Agronomy, ICAR-IARI, New Delhi
	Climate-Smart Agronomic Practices for Sustainable Crop Production and Resource Conservation	Dr Kapila Shekhawat , Pr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
06 Oct 2026 (Tue)	Soil Health Indicators and Emerging Technologies for Sustainable Agricultural Systems	Dr Debashis Mandal , Head, Soil Science & Agril. Chem., ICAR-IARI, New Delhi
	Integrated Nutrient Stewardship for Soil Health, Nutrient Use Efficiency and Sustainable Agriculture	Dr Vishal Tyagi , Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
	Organic Amendments, Biofertilizers and Biological Inputs for Sustainable Soil Fertility	Dr Dibakar Mohanta , Pr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
07 Oct 2026 (Wed)	Efficient Water Management Strategies for Enhancing Crop Productivity and Water Use Efficiency	Dr Anchal Das , Pr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
	System agronomy through Integrated Farming System for Sustainable Soil, Water and Energy Management	Dr Rajiv K Singh , Pr. Scientist, Agronomy, ICAR-IARI, New Delhi
	Soil Microbiome, Biological Indicators and Soil Health Assessment for Sustainable Agriculture	Dr Mona Nagargade , Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
08 Oct 2026 (Thu)	Precision Agriculture and Digital Technologies for Smart Agronomic Decision-Making	Dr Pravin K Upadhyay , Sr. Scientist, Agronomy, ICAR-IARI, New Delhi
	Applications of Artificial Intelligence and Crop Simulation Models in Modern Agronomy	Dr R.S. Bana , Sr. Scientist, Agronomy, ICAR-IARI, New Delhi
	Remote Sensing, GIS and UAV Applications for Sustainable Natural Resource Management	Dr Subash N Pillai , Head, Agri-physics, ICAR-IARI, New Delhi
09 Oct 2026 (Fri)	Diversified Cropping Systems for Resource Conservation and Sustainable Agricultural Intensification	Dr Vijay Pooniya , Sr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
	Conservation Agriculture, Circular Bioeconomy and Sustainable Crop Residue Management	Dr T.K. Das , Pr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
	Weed Ecology, Herbicide Stewardship and Precision Technologies in Weed Management	Dr Rishi Raj , Sr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
10 Oct 2026 (Sat)	Experimental Design, Field Layout and Good Research Practices in Agronomic Experiments	Dr. Dinesh Kumar , Pr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
	Statistical Tools and Data Analysis Techniques for Agronomic Research	Dr M.R. Verma , Head, Design of Experiments, ICAR – IASRI, New Delhi
	Modern Research Tools, Data Analytics and Scientific Publishing in Natural Resource Management	Dr Smruti R. Padhan , Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
11 Oct 2026 (Sun)	Carbon Sequestration, Ecosystem Services and Environmental Sustainability in Agriculture	Dr Subhash Babu , Sr. Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
	Circular Agriculture, Waste Valorization and Policy Innovations for Sustainable Natural Resource Management	Dr Arjun Singh , Scientist, Div. of Agronomy, ICAR-IARI, New Delhi
	Participant Interaction, Feedback, and Valedictory Programme	Training Coordinators

Participation Details

Target Participants

- Scientists, Faculty Members, Subject Matter Specialists and Extension Professionals from ICAR Institutes, Agricultural Universities, KVKs and Government Organisations
- M.Sc. and PhD Scholars pursuing research in Agronomy, Soil Science, Environmental Science, Natural Resource Management and Allied Agricultural Sciences

MODE

Virtual (Zoom Platform)

SESSION TIMINGS

02:30 PM - 05:30 PM (IST)

REGISTRATION FEE

Rs 1500

Selection Criteria

Limited seats are available; participants will be selected on a first-come, first-served basis, with preference given to applicants from core Natural Resource Management disciplines.

Link to register: <https://forms.gle/fcSLJovSh1rwMHn49>

Bank Account Details

A/C Holder: Director, ICAR-IARI

Bank: Canara Bank

Branch: IARI, Pusa Campus, New Delhi

IFSC: CNRB0019029

A/C No.: 90293050000017

Expected Learning Outcomes

- Sustainable natural resource management
- Integrated nutrient & soil health management
- Conservation agriculture & cropping systems
- Crop simulation modelling & decision-support
- Circular bioeconomy & waste valorization
- Climate-smart, resilient agronomic practices
- Water resource management & conservation tech.
- Precision farming & digital agri. technologies
- Carbon sequestration & ecosystem management
- Experimental design & statistical analysis

TRAINING COORDINATORS

Dr Arjun Singh

Scientist, Division of
Agronomy

Dr Smruti Ranjan Padhan

Scientist, Division of
Agronomy

Dr Sanjay Singh Rathore

Head & Principal Scientist,
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