



TRAINING PROGRAMME

on

Management of Salt-Affected Areas through SLM Practices

8-12 December, 2025

at
ICAR- Central Soil Salinity Research Institute, Karnal



Patron

Dr RK Yadav, Director, ICAR-CSSRI, Karnal

Course Director

Dr. A K Rai, Head, SCM Division, ICAR-CSSRI

Dr. R. Banyal, Principal Scientist, ICAR-CSSRI

Course Coordinators

Dr Gajender Yadav, Principal Scientist, ICAR-CSSRI

Dr Rajkumar, Senior Scientist, ICAR-CSSRI

Dr. Parul Sundha, Senior Scientist, ICAR-CSSRI

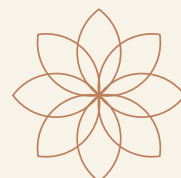
Dr. Priyanka Chandra, Senior Scientist, ICAR-CSSRI

Dr. Manish Kumar, Senior Scientist, ICAR-CSSRI

Dr. Awtar Singh, Scientist, ICAR-CSSRI

SPONSORED BY

Centre of Excellence on
Sustainable Land Management,
ICFRE, Dehradun, Uttarakhand,
India



About ICAR- Central Soil Salinity Research Institute, Karnal

The ICAR–Central Soil Salinity Research Institute (ICAR–CSSRI), Karnal, Haryana, established in 1969, has undergone significant structural and functional evolution over the years and has made noteworthy contributions to the management of salt-affected soils in India. In addition to reclaiming extensive tracts of saline and alkali soils, the Institute has developed and promoted a range of alternative and sustainable technologies for the reclamation and management of degraded lands. Institute is actively engaged in addressing salinity and sodicity stresses through the dissemination of location-specific ameliorative measures, agronomic interventions, and technical support. The institute has also developed salt-tolerant crop varieties suitable for cultivation in chemically degraded environments. With its outstanding contributions to technological knowledge generation, the Institute has evolved into an internationally recognized 'Centre of Excellence' in soil and water salinity research. Guided by its focused mandate, ICAR–CSSRI continues to promote the productive utilization of salt-affected soils and poor-quality waters through scientifically proven and sustainable land management practices, thereby contributing to climate-resilient agricultural development.

Brief About the Training Programme

Salt-affected soils (SAS) occur in more than 100 countries worldwide, covering an estimated 1,381 million hectares (10.7% of the global land area) and affecting the livelihoods of over 2.6 billion people, including nearly 74% of resource-poor farming communities. Nearly 52% of global agricultural land is impacted, resulting in an annual economic loss of approximately US\$ 6.3 billion. In India, about 6.73 million hectares are salt-affected, of which 2.95 million hectares are saline lands spread across 16 states. The annual crop production losses due to salinity and sodicity are estimated at 16.84 million tonnes, valued at around ₹ 2,300 million. Projections indicate that these affected areas may expand to 16.2 million hectares by 2050, posing a serious threat to national and global food security.

In this scenario, preventing further soil degradation and promoting the productive use of salt-affected lands are crucial for ecological sustainability and for achieving the national targets of the Sustainable Development Goals (SDGs). Smart agriculture approaches rooted in new-generation technologies, agricultural diversification, and innovative reclamation strategies offer viable pathways for enhancing sustainability, profitability, and ecological restoration of SAS. Training researchers on these emerging issues will play an important role in strengthening institutional and scientific capacities, fostering convergence across similar agro-ecological regions, and addressing the socio-economic challenges associated with land degradation.

Topics to be covered

• Assessment and Diagnosis of Salt-Affected Soils and Poor Quality Water

(Mapping, characterization, soil health assessment and development of diagnostic tools for salt-affected soils and poor-quality irrigation water)

• Reclamation and Sustainable Land Management Approaches

(Innovative, sustainable soil and water management practices, microbial interventions, and nutrient dynamics and management strategies)

• Alternate and Climate-Resilient Land Use Strategies

(Exploration and promotion of suitable alternate land use systems and climate change mitigation and adaptation approaches)

- **Understanding Multiple Stress Tolerance Mechanisms in Crops**

(Mechanisms of multiple stress tolerance in plants for improving resilience and productivity in salt-affected soils)

- **Policy interventions and Socio-economic Aspects in Managing SAS**

(Targeted beneficiary inclusion, strengthening extension services with capacity building programs, Govt. incentive schemes, financial support mechanisms, market linkages, monitoring social and economic impacts, policy feed back loop)

Eligibility

The training program is open to Group-A officers from Central Ministries and State Government Departments such as Forest, Agriculture, Horticulture, Soil Conservation, Animal Husbandry, Irrigation, and Watershed Development. It is also open to researchers, academicians, teachers, and subject matter specialists not below the rank of Assistant Professor or equivalent in Agricultural Universities/ICAR Institutes. In addition, representatives of village committees, NGOs, progressive farmers, environmental activists, and officers from banking sectors especially NABARD and other funding agencies are eligible to participate.

No. of participants: 25

Venue

ICAR-Central Soil Salinity Research Institute, Kachhwa Road, Karnal – 132 001 (Haryana)
(<https://maps.app.goo.gl/pW33hv1vBBQ9d2oCA>)

Location and Climate

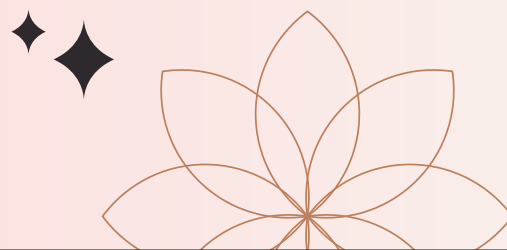
The training program will be held at ICAR-CSSRI, Karnal, Haryana, is a pre-historic epic city. It is about 132 km north of Delhi on National Highway No. 1 (Grant Trunk Road). It is well connected by road and railway. Karnal is situated at 29° 41' N latitude and 76° 59' E longitude and 252 meters above mean sea level with tropical climate. The weather at Karnal during December month is little bit cool with day temperature around (~23°C) while night around (~8-10°C).

Travel, Accommodation, and Food

Accommodation for participants will be arranged in the Institute Guest Houses on a sharing basis. Complimentary meals will be provided during the stay. Travel expenses for onward and return journeys will be reimbursed for travel undertaken by the shortest route, limited to 2nd AC train fare, subject to a maximum ceiling of ₹20,000/- (Rs. twenty thousand, only). Participants are advised to book their travel tickets (both onward and return) well in advance to avoid inconvenience.

How to Apply

The duly filled-in application, addressed to the Programme Director, may be submitted through email at trainingcssri25@gmail.com. Alternatively, the application may be sent to arvindkumarrai@gmail.com or drbanyal08@gmail.com. The last date for submission of the application is 25 November 2025. Applications must be submitted strictly in the prescribed format attached herewith. Applications in any other format shall not be accepted.





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APPLICATION FORM

Name:.....

Designation:.....

Present employer with full address:.....

Date of Birth:..... Gender:

Highest Degree:.....

Mobile No.:.....

Email ID:.....

Field of Specialization and current working area:

Address for communication:

Signature of Applicant:

Recommendation of the forwarding authority: :

Certificate

Certified that the information furnished by the applicant is found to be correct

Important Dates

Last Date for submission of Application: 25th November, 2025

Communication to Applicants: 27th November, 2025

For any details, please contact:

Dr Gajender Yadav (+919812566001) Dr Rajkumar (+919429665628)