

MANDATE

- Developing technologies for reclamation and management of salt affected soils and use of poor quality irrigation waters in different agro-ecological regions of India.
- Evaluate and recommend strategies that promote adoption of preventive/ameliorative technology.
- Coordinate/support the network of research for generating and testing location specific technologies.
- Centre for training in salinity researches in the country.

MISSION

Generating new knowledge and understanding of the processes of reclamation and developing technologies for improving and sustaining productivity of salty lands and waters.

VISION

Productive utilization of salt affected soils and poor quality water resources in varying agro-ecological situations.

SIGNIFICANT ACHIEVEMENTS

- Maps of 15 states showing salt affected soils have been prepared.
- Water quality maps of AP and TN prepared. Survey and characterization of groundwater quality for 23 districts have been completed.
- 2,00,000 ha sodic soils have been reclaimed.
- Phosphogypsum have been identified as an important alternative to mineral gypsum for reclamation of sodic soils.
- Subsurface drainage installed in 60,000 ha.
- During 2015-16, salt tolerant varieties of rice (CSR 46) and wheat (KRL-283) was recommended by Uttar Pradesh State Variety Release Committee, salt tolerant genotype of Mustard (CS1100-1-2-2-3) have been registered in NBPGR.
- In year 2014-15, 29 q breeder seed of salt tolerant rice, 60.4 q of wheat, and 5 kg of mustard varieties have been produced.
- Multi-enterprise agriculture models developed for salt affected Vertisols, Coastal saline soils, Sodic soils of IGP and reclaimed sodic soils at Karnal. Diversified agriculture system developed at Karnal has 46% lower global warming potential than sole rice-wheat system.
- Four salt tolerant bacterial isolates [Bacillus aerophilus (STB-1), Bacillus aerophilus (10STB-7B), Bacillus licheniformis (STB-80), Bacillus licheniformis (10STB3C/1)] have been identified for the higher plant growth promoting activities and deposited in ICAR-NBAIM, Mau (UP).

- The land shaping techniques standardized for coastal saline areas integrating cultivation of crop-fish, paddy-cum-fish and crop and fish separately.
- CSR-BIO (plant growth promoter and nutrient mobilizer microbial consortia) has been commercialized by ICAR. It is being produced by 5 firms in state of Uttar Pradesh, MP, Maharashtra, Tamil Nadu and Karnataka.
- The GypCal, a desktop based software application was developed on visual basic platform. This is based on soil pH (1:2), ESP and gypsum requirement (GR) determined in sodic soil samples collected from 7 districts of Indo-Gangetic plains and the relationship was developed between soil pH₂ and GR.

LOCATIONS OF REGIONAL STATIONS

- Bharuch, Gujarat
- Canning Town, West Bengal
- Lucknow, Uttar Pradesh

FIVE BEST TECHNOLOGIES/PRODUCTS

- Alkali land reclamation technology
- Subsurface Drainage technology
- Salt tolerant varieties of rice, wheat and mustard
- CSR-BIO: Bio-growth enhancer for higher productivity
- Land Shaping technology for coastal areas

NEW INITIATIVES

- Expand the potential of municipal and industrial waste in the use of reclamation of sodic soil.
- Application of nano-technology in remediation of poor quality waters, waste waters, and reclamation of saline/sodic soils.
- Multi-enterprise agriculture systems for nutritional security, quality, clean environment and energy conservation in salt affected areas.
- Exploring salt affected soils and poor quality waters for bio-energy and bio-saline agriculture in degraded ecosystems.
- Utilization of sea weeds for improving livelihood security of farmers in coastal areas.
- Ground water recharge to arrest falling water table and improving its quality through dilution.
- Breeding salt tolerant crop varieties involving biotechnological, cellular and molecular approaches.
- Impact of climate change on soil and ground water salinization.

COLLABORATIVE PARTNERS

CSSRI maintains linkages with national and international organizations like DBT, DST, HOPP, UPCAR, IRRI, ACIAR, CIMMYT etc

FLAGSHIP PROGRAMMES

- Alternatives to mineral gypsum
- Crop improvement for multiple stresses

THRUST AREAS FOR XII PLAN

- Resource inventories
- Reclamation and management of alkali soils
- Management of waterlogged saline soils
- Management of poor quality waters
- Alternate land use systems and bio-saline agriculture
- Crop improvement for abiotic stresses
- Coastal salinity management
- Management of salt affected Vertisols
- Technology transfer and impact assessment
- Human resource development

EXTERNALLY FUNDED PROJECTS /CONSULTANCY

- Foreign aided projects: 6
- Other sponsored projects–21 (DST, DBT, UPCAR, ICAR, etc)

QRT

- Period: 2006 to 2010
- Chairman: Dr. S. S. Khanna
- Next QRT due for: 2011 to 2015

STAFF STRENGTH (2015-16)

	Sanctioned	Filled	Vacant	%vacant
Scientific	81	62	19	23.46
Technical	117	91	26	22.22
Administrative	58	42	16	27.58
Supporting	95	59	36	37.89
Total	351	254	97	27.64

RAC

Period: 2015 to 2016
Chairman: Dr. B. Mishra
Next RAC due for 2016 to 2017

IMC

Period: 2015 to 2016
Chairman: Dr. D. K. Sharma
Next IMC due for: 2016 to 2017

RFD & COMPOSITE SCORE FOR 4 YEARS

Year	2011-12	2012-13	2013-14	2014-15
Score	99.5	100	90.4	96.7

STATUS OF ISO 9001

Certified with Royal Impact Certification Ltd.,
New Delhi. Certificate No.:14RQ11AW

PUBLICATIONS (2015-2016)

No. of papers in NAAS rated journals:

- (a) No. of papers in scores >8: **12**
- (b) No. of papers in scores 6-8: **23**
- (c) No. of papers in score < 6 : **43**

Total: 78

Per scientist per year papers: **1.32**

FINANCIAL OUTLAY (2014-15)

For Main Institute (Rs in lakh)

	XI Plan actual utilization	XII Plan proposed	Last year budget		
			RE	Actual Expenditure	% Utilization
Plan	1394.43	2032.75	230.00	229.93	99.97
Non-Plan	8820.86	14144.62	2431.63	2416.52	99.37
Total	10215.29	16177.37	2661.63	2646.45	99.43

For AICRP (Rs in lakh)

	XI Plan actual utilization	XII Plan proposed	Last year budget		
			RE	Actual Expenditure	% Utilization
Plan	1918.95	3675.00	469.55	469.55	100
Non-Plan	100.92	196.45	35.00	32.86	93.88
Total	2019.87	3871.45	504.55	502.41	99.57

For Institute + AICRP (Rs in lakh)

	XI Plan actual utilization	XII Plan proposed	Last year budget		
			RE	Actual Expenditure	% Utilization
Plan	3313.38	5707.75	699.55	699.48	99.99
Non-Plan	8921.78	14341.07	2466.63	2449.38	99.3
Total	12235.16	20048.82	3166.18	3148.86	99.45

RESOURCE GENERATION FOR LAST 3 YEARS (Rs. In lakhs)

	2012-13	2013-14	2014-15
	113.64	140.30	184.17

Director I/c: Dr P C Sharma

Tel : 0184-2290501

Email:director.cssri@icar.gov.in