भाकृअनुप
ICAR

ICAR-CICR at a GLANCE

ICAR-Central Institute for Cotton Research
Nagpur

ICAR-CICR
AT A GLANCE

ICAR-CENTRAL INSTITUTE FOR COTTON RESEARCH,
Panjari Farm, Wardha Road, Nagpur – 441108, Maharashtra, India

Published by
Dr. V. N. Waghmare
Director
ICAR- Central Institute for Cotton Research, Nagpur

Edited by
Dr. K. Velmourougane
Dr. V. N. Waghmare

Compiled by
Smt. Vandana Satish
Mr. Paresh Bhoyar

Citation: ICAR - CICR At a Glance – April 2026, p. 49

Dr. V.N. Waghmare
Director
ICAR-Central Institute for Cotton Research
Nagpur (Maharashtra)

Foreword

The ICAR-Central Institute for Cotton Research (ICAR-CICR) has been at the forefront of advancing cotton science and technology in India since its establishment in 1976. Over the decades, the institute has played a pivotal role in strengthening the cotton production system through cutting-edge research, technological innovations, and effective outreach, contributing significantly to the growth of the cotton sector and the livelihoods of millions of farmers.

This publication, *"ICAR-CICR at a Glance,"* provides a concise yet comprehensive overview of the institute - its genesis, organizational framework, vision, mission, and mandate. It presents the evolving cotton scenario in India, along with the emerging challenges that necessitates continuous innovation and strategic interventions.

The document highlights the institute's infrastructure and research facilities. It showcases major research achievements, ongoing and completed projects, and emerging priority areas of cotton research. The publication also reflects the institute's contributions in terms of technologies developed, patents secured, and impactful scientific publications over the past decade.

Equally significant are the institute's strong national and international collaborations, linkages with public and private sector organizations, and partnerships through various MoUs and MTAs. The role of ICAR-CICR in coordination and contribution to the ICAR-All India Coordinated Research Project (ICAR-AICRP) on Cotton, its 21 centres across 17 SAU's and extension activities through the Krishi Vigyan Kendras (KVKs), underscores its commitment to bridging the gap between laboratory innovations and field-level adoption.

Being a repository of institutional information, this document reflects the dynamic and evolving role of ICAR-CICR in addressing contemporary challenges such as climate resilience, sustainability, and resource-use efficiency. It embodies the institute's vision of leveraging science and technology to enhance productivity, profitability, and environmental stewardship in cotton cultivation.

It is a matter of immense pride for me to present this compendium that captures the essence of our institution's journey, achievements, and aspirations. This is not merely a journey of our accomplishments, but a reflection of our unwavering commitment to excellence in cotton research and service to the farming community. As we move forward, we envision ICAR-CICR as a global leader in next-generation cotton research - driving innovations that are climate-smart, farmer-centric, and globally competitive. I am confident that this publication will serve the purpose of inspiring young minds, and catalyse transformative growth in the cotton sector.

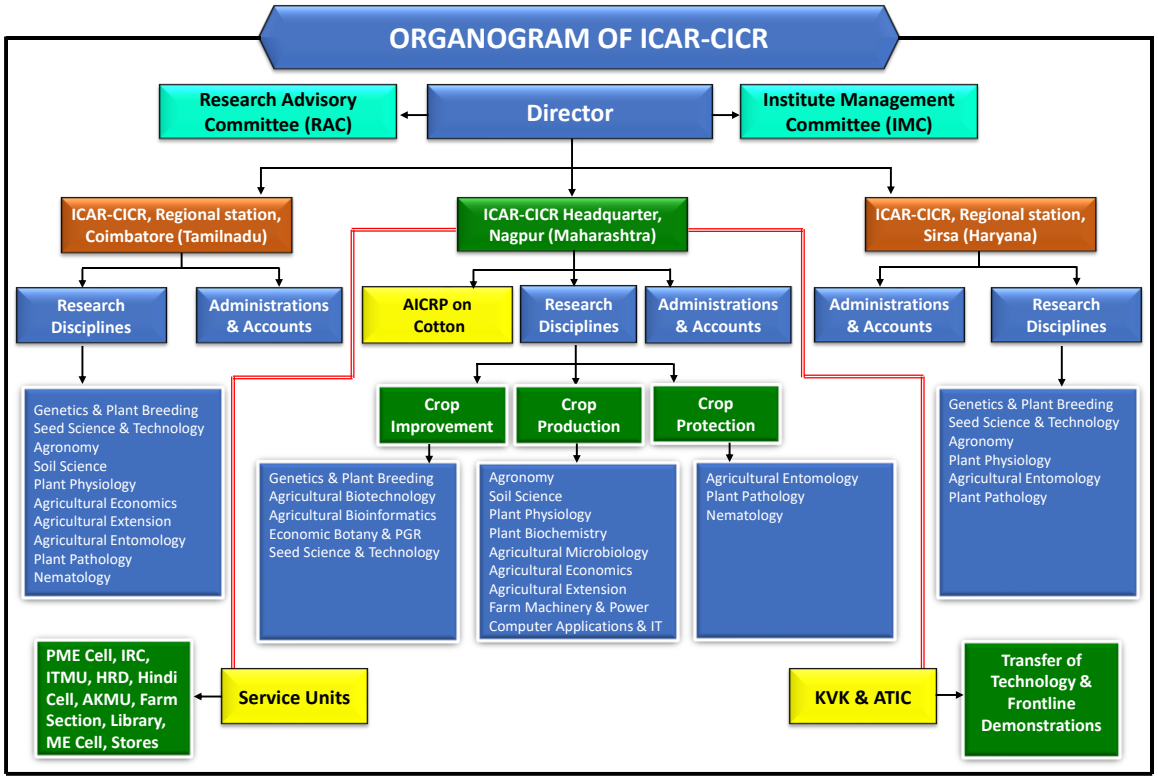
V.N. Waghmare

Table of Contents

1. Genesis of ICAR – CICR

Cotton is a major cash crop of India and contributes 60% of the fibre used in the domestic textile industry. Cotton supports the livelihood of nearly 6 million farmers and another 40-50 million people engaged in cotton processing and trade. India leads globally in cotton area with about 11-12 million hectares. India is also the second largest consumer of cotton in the world. After independence, the erstwhile Indian Central Cotton Committee, used to sponsor cotton research schemes on an adhoc basis until it was taken over by the Indian Council of Agricultural Research (ICAR) in 1966. Research efforts under All India Coordinated Cotton Improvement Project (AICCIP) now All India Coordinated Research Project (AICRP) on cotton was initiated by ICAR in the year 1967. With a view to develop a Centre of Excellence for carrying out research on fundamental problems limiting cotton production and also to provide basic support to location specific applied research work being carried out through the AICCIP system, ICAR has established the Central Institute for Cotton Research at Nagpur in April, 1976. The erstwhile Regional Station of IARI at Coimbatore (Tamil Nadu) became a part of ICAR-CICR simultaneously to cater to the needs of southern cotton zone. In the year 1985, the IARI Regional Station at Sirsa (Haryana) was also transferred to ICAR-CICR as a Regional Station for the northern irrigated cotton zone

2. Organizational setup



Staff position as on 01st Feb 2026

Cadre	Total sanctioned post	Numbers in position	Vacant	Ratio per Scientist
Director (RMP)	1	1	0	
Scientific Staff	77	57	20	
Technical Staff	72	50	22	0.88
Administrative Staff	46	28	18	0.49
Skilled Support Staff	44	30	14	0.53
Total	240	165	75	

3. Vision, mission and mandate

For expanding the research efforts in basic and strategic research on cotton, the ICAR- Central Institute for Cotton Research was established at Nagpur, in 1976. Two regional stations of IARI at Sirsa (Haryana) and Coimbatore (Tamil Nadu) were transferred to CICR to cater to the research needs of north and south India, respectively. Today ICAR-CICR with its headquarters at Nagpur and its Regional Stations at Coimbatore and Sirsa conducts basic and strategic research and also guide and coordinate the research and evaluation activities of ICAR-AICRP on Cotton.

Mission

To accelerate growth in national cotton productivity and minimizing agro-eco regional yield gaps through modern science and technologies by developing/providing technologies, products and services to different stakeholders (farmers, textile and processing industries, input agencies and other R&D organizations).

Vision

India emerging as a global leader in cotton production and export through leadership in science and technology.

Mandate

- Basic, strategic and adaptive research on production, protection, fibre quality and by-products of cotton.
- Creation of new genetic variability for location-specific adoption in cotton-based cropping systems.
- Coordination and monitoring of applied research on national and regional issues to develop improved varieties and technologies.
- Dissemination of technologies and capacity building

4. Current cotton scenario

As per the latest estimate of Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare, Government of India, cotton production in India during 2024-25 is 306.92 lakh bales from 112.3 lakh hectares with a productivity of 465 kg lint/ha. During 2024-25, the northern, central, and southern zones contributed 10.5%, 61%, and 26.5% to the cotton area, and 10.9%, 57.7%, and 29.3%, to cotton production, respectively. The area, production, and productivity of cotton in India for the last 10 years (2014-15 to 2024-25) are presented in the table below.

Trend of Cotton Area, Production, and Productivity in India (2014-2024)

Cotton growing States	2014-15			2015-16			2016-17			2017-18			2018-19		
	A	P	Y	A	P	Y	A	P	Y	A	P	Y	A	P	Y
Punjab	4.2	16	648	3.39	7.5	376	2.85	10.31	615	2.91	12.83	750	2.68	12.22	775
Haryana	6.48	23	603	6.15	9.93	274	5.7	20.41	609	6.65	16.27	416	7.08	20.13	483
Rajasthan	4.87	15.27	533	4.48	12.14	461	4.71	14.02	506	5.84	18.93	551	6.29	20.26	548
North Zone	**15.55**	**54.27**	**593**	**14.02**	**29.57**	**359**	**13.26**	**44.74**	**574**	**15.4**	**48.03**	**530**	**16.05**	**52.61**	**557**
Gujarat	27.73	105	644	27.22	94	587	23.82	85.75	612	26.24	101.87	660	26.6	62.79	401
Maharashtra	41.9	70	284	42.07	75	303	38	106.19	475	43.51	60.94	238	42.18	65.93	266
Madhya Pradesh	5.47	17.5	544	5.63	18	544	5.99	20.51	582	6.03	16.2	457	6.14	23.29	645
Central Zone	**75.1**	**192.5**	**436**	**74.92**	**187**	**424**	**67.81**	**212.45**	**533**	**75.78**	**179.01**	**402**	**74.92**	**152.01**	**345**
Telangana	17.13	38	377	17.73	36.61	351	14.09	34.44	416	18.97	51.95	466	18.39	38.47	356
Andhra Pradesh	8.21	28.41	588	6.66	18.88	482	4.72	15.64	563	6.46	20.87	549	6.2	14.91	409
Karnataka	8.75	23.11	449	6.42	20	530	5.1	10.1	337	5.47	18.44	573	7.18	14	331
Tamil Nadu	1.87	6.86	624	1.42	3.69	442	1.42	3.59	430	1.83	4.45	413	1.33	2.69	344
South Zone	**35.96**	**96.38**	456	**32.23**	**79.18**	418	**25.33**	**63.77**	428	**32.73**	**95.71**	497	**33.1**	**70.07**	360
Odisha	1.27	4	**535**	1.25	3	**408**	1.36	3.82	**478**	1.45	4.08	**478**	1.57	4.55	**493**
Others	0.31	0.9	494	0.5	1.3	442	0.5	0.99	337	0.5	1.22	415	0.5	1.18	401
Total	**128.19**	**348.05**	**462**	**122.92**	**300.05**	**415**	**108.26**	**325.77**	**512**	**125.86**	**328.05**	**443**	**126.14**	**280.42**	**378**

States	2019-20			2020-21			2021-22			2022-23			2023-24			2024-25		
	A	P	Y	A	P	Y	A	P	Y	A	P	Y	A	P	Y	A	P	Y
Punjab	2.48	12.06	827	2.52	10.23	690	2.51	6.46	437	2.49	4.44	303	2.14	6.29	500	1.6	4.06	431
Haryana	7.23	24.84	584	7.4	18.23	419	6.36	13.16	352	5.75	10.01	296	5.78	15.09	444	3.98	11.77	503
Rajasthan	7.6	27.88	624	8.07	32.07	676	7.56	24.81	558	8.15	27.74	579	10.04	26.22	444	6.27	17.86	484
North Zone	**17.31**	**64.78**	**636**	**17.99**	**60.53**	**572**	**16.43**	**44.43**	**460**	**16.39**	**42.19**	**438**	**17.96**	**47.6**	**451**	**11.85**	**33.69**	**483**
Gujarat	26.55	86.17	552	22.7	72.18	541	22.84	75.09	559	24.84	87.95	602	26.83	90.57	574	23.72	69.61	499
Maharashtra	44.91	66.39	251	45.44	101.05	378	44.1	82.49	318	41.82	83.16	338	42.34	80.45	323	39.63	92.32	396
Madhya Pradesh	6.5	16.46	430	5.88	13.38	387	5.6	14.2	431	5.95	14.33	409	6.3	18.01	486	5.37	15.35	486
Central Zone	**77.96**	**169.02**	**369**	**74.02**	**186.61**	**429**	**72.54**	**171.78**	**403**	**72.61**	**185.44**	**434**	**75.47**	**189.03**	**426**	**68.72**	**177.28**	**439**
Telangana	21.27	68.33	546	23.58	57.97	418	18.89	48.78	439	19.73	57.45	495	18.18	50.8	475	18.11	55.5	521
Andhra Pradesh	6.57	25.08	649	6.06	**16**	449	5.54	17.08	524	7.04	15.41	372	4.22	7.37	297	4.04	9.93	418
Karnataka	8.17	23.3	485	8.2	21.2	440	6.74	19.55	493	9.49	25.68	460	7.43	20.59	471	6.75	22.67	571
Tamil Nadu	1.7	4.18	418	1.12	2.43	369	1.48	3.02	347	1.73	3.19	313	1.3	2.52	330	1.03	2.1	347
South Zone	**37.71**	**120.89**	**545**	**38.96**	**97.6**	**426**	**32.65**	**88.42**	**460**	**37.99**	**101.73**	**455**	**31.13**	**81.28**	**444**	**29.93**	**90.2**	**512**
Odisha	**1.7**	5.79	579	1.71	5.51	548	1.93	6.26	551	2.16	7.05	555	2.16	7.05	555	1.47	5.17	598
Others	0.09	0.17	321	0.17	0.23	230	0.17	0.28	279	0.12	0.19	269	0.16	0.26	276	0.33	0.58	299
Total	**134.77**	**360.65**	**455**	**132.85**	**350.48**	**448**	**123.72**	**311.18**	**428**	**129.27**	**336.6**	**443**	**126.88**	**325.22**	**436**	**112.3**	**306.92**	**465**

***A**, Area ((lakh ha); **P**, Production (lakh bales), **Y**, Productivity (kg lint/ha)*

***Source:** Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi*

5. Challenges in Cotton Production in India

Bt cotton, increased area under irrigation, new selective herbicides and insecticides, mechanization and new varieties brought in major changes in cotton production in the last decade and a half. The productivity of cotton in India during the period 2002-03 to 2022-23, more precisely the Bt era increased from 302 to 439 kg lint/ha. There are more than 30 countries whose productivity has consistently been above 600 kg/ha. While the mean lint yield in India during the last five years is only 447 kg lint/ha, the cost of cultivating the crop continues to spiral upwards. The average yields even in the irrigated north zone were 547 kg/ha, much lower than the world average of 750 kg lint/ha. The rainfed cotton yields are typically less than 428 kg/ha, despite the regions being saturated by Bt hybrids. There has been a mis-match between the technological options pursued by the research and extension systems and the limitations posed by the agro-ecological conditions where cotton is grown. The following factors are responsible for hampering cotton yields in India:

1. Long duration: Long duration hybrids were chosen as the main technology for high yields. Cotton hybrids grown currently are 180-200 days of duration. Farmers in Central and South zones further extend the crop upto 210 or 240 days depending on the availability of water for irrigation. Cotton crop needs more than 70% of the total water and nitrogen requirements during the critical flowering and fruiting period. Out of the eleven cotton growing states in India, two states viz., Maharashtra and Telangana together have 5.8 million hectares of cotton almost completely under rainfed condition. Monsoon in these two states starts by mid-June and extends up to first week of September. The crop sown with the onset of monsoon does not get adequate soil moisture, during the flowering and fruiting stages and the concomitant nutrient access is also limited. This condition prevails in 60% of India's cotton area. Long duration of the flowering and boll-formation phase leads to prolonged vulnerability of the crop to insect pests and diseases, which leads to yield losses.

2. Low harvest index: Another factor responsible for low yields is the low harvest index of the long duration hybrids that were developed in India. The long duration, high vigor hybrid crop puts forth excessive vegetation and has low harvest indices of 0.2 to 0.25, compared to 0.4 to 0.45 in countries that harvest high yields. Low harvest index with excessive vegetations leads to a wastage of nutrients and water, lowering their use efficiency besides lowering yields.

3. Low ginning out-turn (GOT): Indian cotton is characterized by low ginning out turn (per cent of fiber weight in seed-cotton) of 32-34% as compared to 38-44% in many countries. Thus, the fiber yields are low. The low GOT of Indian cotton could be due to focus on more bolls per plant, which leads to a compromise of traits such as GOT and fiber strength.

4. Climate change, biotic and abiotic stresses: Lack of rainfall during crop season and unseasonal and erratic rainfall during early and maturity stages, lack of irrigation facilities even for protective irrigation during dry spell hamper cotton yields. Variation in monsoon behaviour and late sowing of cotton due to late receipt of monsoon rains, dry spells during reproductive phase cause significant yield loss in cotton. Higher incidence of biotic (bollworm complex, sucking pests, stem weevil, tea mosquito bug, boll rot, para wilt, sudden wilt, foliar and root diseases, CLCuD, TSV, resurgence of minor pests, weed infestation, resistance development, etc.) and abiotic stresses (drought, water-logging, leaf reddening, square dropping, unbalanced fertilizers use, micronutrient deficiency, low organic carbon, decline in soil health) further declined cotton productivity.

5. Other factors: Non-availability of quality seeds, spurious and low-quality seeds, increasing area under unregulated Bt events, non-availability of irrigation water during peak sowing, shallow soils, soil compaction, wider spacing, high cultivation cost, labour scarcity and increased labour wages, lack of mechanization, unstable market price, decline in profit margins and non-availability of regulated markets made cotton cultivation non-remunerative.

6. Growth, infrastructure and facilities

The Institute started functioning in 1976 in a small building provided by Dr. Punjabrao Deshmukh Krishi Vidyapeeth (Dr. PDKV) but later shifted to a rented building. The Institute was provided with two farms on lease, one by Dr. PDKV at Phutala and another by the State Department of Agriculture, Maharashtra at Panjari.

Laboratories

Nagpur: The construction of the present office building was completed in the year 1986 and all the laboratories and the administrative wings were shifted to the new premises at Panjari Farm. Over the years, good laboratories came into being in different disciplines with ample working space, sophisticated instruments, good computer facilities etc. Keeping in view the emergence of some of the frontier areas of research such as genetic engineering, biotechnology etc, the institute has constructed new laboratories to strengthen the research work. The institute has a modern glass house, three net houses, two environment-controlled green houses and a spacious bio-control and insectary building. The germplasm storage and maintenance units have state-of-art facilities. ICAR-CICR pioneered diagnostics and testing of Bt since its introduction in the country. It was later designated as the Bt referral lab for the country in 2005 and all matters related to testing of spurious Bt seeds and disputes related to its testing in court of law are referred to this laboratory.

Coimbatore: The laboratories in the initial stages were located in different buildings. After the construction of another laboratory building adjacent to the Silver Jubilee Building, most of the laboratories are presently functioning in these two buildings. Two glass houses, seed storage lab and insectary were also constructed. Open top chambers to undertake enriched CO_2 studies was constructed. A separate administrative block is being added on the ground floor of the main building.

Sirsa: The laboratories inherited from the IARI Regional Station were strengthened with the provision of some sophisticated equipment and new laboratory facilities including computer facility. Polyhouses, net-house, and walk-in growth chamber were also constructed.

Research Farm

Nagpur: In the initial stages, the Institute had two farms for field research one of 41.77 ha at Panjari and another of 20 ha. at Phutala. After shifting labs and administrative wings to its new location in 1986, the farm at Phutala was returned to Dr. PDKV. Simultaneously the Institute has acquired additional land of 134.32 ha. adjacent to Panjari Farm. Now the institute was a comprehensive research farm area of 176.08 ha. Concerted efforts were made to develop the entire farm into a good research farm in terms of creation of blocks, leveling and digging of tube-wells. Labour sheds and farm buildings were constructed. Water harvesting ponds were created to harvest and recycle rain water. Orchards of guava, ber, aonla and mango were developed.

Coimbatore: The regional station has two farms, one of 18 ha in its premises, and the other farm of 20 ha is situated near the Sugarcane Breeding Institute and is nearly 6 km away from the station. Farm office building was constructed recently to accommodate the farm equipment's and machineries. Both the farms are well equipped with infrastructure, machinery and irrigation facilities including drip irrigation system.

Sirsa: The regional station has 20 ha. of well-developed farm for research purpose with provision for irrigation using tube well and canal water. Water harvesting ponds for irrigation and recycle rain water as well as Kinnow, guava orchards were developed. Two state-of-art National Screening facilities for screening of CLCuD and root rot diseases under sick field conditions were developed and continuously being utilized for identification of resistant genotypes.

Library and documentation service

From a modest beginning in 1976, the Institute has built up good library facilities in terms of research journals, annual reviews, books, reports, reprints, proceedings etc. The library has a collection of about 5000 books, 6 e-books, and book series, 5984 periodicals, 1045 reports and bulletins. One thousand eighty reprints on cotton from the journals which are not being subscribed by the library have been collected. Library has developed and designed 'Computerized Bibliographic Data-base on Cotton'. Documentation services, such as Current Awareness Services, Retrospective Search Services, SDI service are being provided by using the data-base. A quarterly abstracting bulletin entitled **'Cotton Research Abstracts'** is being circulated to all the cotton research centres in the country. Library provides CD-ROM database search & retrieval service by using following databases. 1) CAB Abstracts, 2) CROPCD, 3) AGRICOLA, 4) AGRIS, and 5) BIOTECH ABSTRACTS.

Documentation Services

- **Gleanings in Cotton Research:** Monthly abstracting service by the title "Gleanings in Cotton Research" was started from August 2021 which reports the latest research publications on cotton globally. Various publication sources namely Google Scholar, ScienceDirect and CeRA are scanned on the internet and latest relevant articles are downloaded. This in-house service made available through e-mail to all CICR Scientists.
- **Cotton Research Abstracts:** Strengthening the library in-house database namely COTIS by scanning all new journal issues for articles on cotton and entering such articles along with abstract in this bibliographic database. In all, 64 entries were made in the reported period thereby increasing the volume of the COTIS database **to 5392 entries** exclusively on cotton. The database can be accessed through author, title, subject, year, keywords etc. Based on the above database, the library publishes a current awareness bulletin namely "COTTON RESEARCH ABSTRACTS". The bulletin is circulated within the Institute and to all AICCIP/AICRP Centres in India where it is received very well.
- **CICR in News and CICR Happenings:** This is an annual news bulletin which highlights all news items published in newspapers about CICR. News items are scanned, compiled, and presented in the form of a bulletin. Library is actively participating in the E-Journal Consortium namely JCCC@CeRA developed by ICAR through the NAIP Project. For better and effective use of this facility, the library forwards e-mails received as alerts from the Consortium groups to all the Scientists of the Institute. Dispatched 201 Annual Reports of the Institute to all other ICAR institutions, Agricultural Universities, Zonal Directorates and members of QRT/RAC. Library Server was updated to a newer version by increasing RAM and incorpoScore Linux for KOHA configuration. The library also acts as a **Repository** for scholarly papers published by the scientists of the institute. Soft copies of the research papers are stored in the library and are made available as and when required in multiple formats. The library also conducts anti-plagiarism checking for research papers published by Scientists in DrillBit anti-plagiarism software.

Year	Journals	Books	E-Books & E-Series	Hindi Books	Annual Reports & others
2014-15	26	42	-	34	105
2015-16	27	57	-	27	95
2016-17	28	199	-	46	102
2017-18	28	112	-	33	112
2018-19	14	122	-	18	125
2019-20	15	27	7	30	120
2020-21	13	10	7	7	110
2021-22	12	16	7	25	105
2022-23	11	25	7	26	110
2023-24	14	226	7	27	105
2024-25	7	109	7	19	110

ICAR-CICR Website

ICAR-CICR website (www.cicr.org.in) has been launched in the year 2000-01. Information pertaining to cotton on all aspects including transfer of technology, database, research articles, technical bulletins, and research findings are available on this site and is being periodically updated. Brief bio- data of the Scientists along with their area of specialization and contact details are also available. Recently two more sub-domains have been launched for All India Coordinated Cotton Improvement Project (www.aiccip.cicr.org.in) and Technology Mission for Cotton (www.tmc.cicr.org.in). A separate website for KVK, Nagpur was also floated (www.kvk-nagpur.org.in).

Priority setting, Monitoring and Evaluation (PME) Cell

PME Cell assists the Director in prioritizing research projects, coordinating research and technical activities besides monitoring and evaluating the progress of research. Institute publications, research project files, technical correspondence, compilation of technical and allied reports, organization of scientific meetings, workshops etc. are also been handled by the PME Cell.

ARIS/AKMU Cell

An Agricultural Research Information System (ARIS) cell was established in 1996, under which Local Area Network has been developed with a capacity for more than 70 nodes. E-mail and internet facilities have been created and a V-SAT has been installed for effective communication considering the locational disadvantages of the Institute. ARIS completed updating PERMISNET information bank and CICR Website. ARIS procured digital/videography, software, antivirus and external storage devices.

Residential Quarters

At Nagpur, twelve residential quarters have been constructed at Panjari farm to accommodate farm staff while in the city in the common ICAR residential complex along with NBSS & LUP, the Institute has 53 quarters of different categories (type I to V). Four each of type IV, III and II and 8 type I quarters are available at Sirsa.

Technology Park

At Nagpur a good Technology Park has been established depicting the technologies developed by the Institute.

Training Hostel and Training Hall

Hostel facility with 10 rooms to accommodate 20 persons is available at the Institute premises in Nagpur. A state of art training hall is also available to conduct various training programmes.

Advanced instrumentation facilities available

Gas Chromatograph Mass Spectrometer

High Performance Liquid Chromatography

Automated Autoclaves

Automated lab fermenter/bioreactor

Laminar Flow cabinets

Phase contrast/fluorescence microscope

HVI Fibre testing machine

Microwave digestion system

Lyophilizer

Walk-in growth chamber

Programable BOD incubators

Gel documentation unit

Tissue Lyser

PCR Thermocyclers

Elisa readers

Nanophotometer

Kjeldahl Nitrogen Analyzer

Deep freezers (-20°C & -80°C)

Plant canopy analyzer

SPAD meter

Rhizotron

Quantitative real time PCR

Plant growth chambers

Orbital shaking incubators

Spectrophotometers

Ultra-pure water purification system

Flame photometer

Rotary vacuum evaporator

Atomic adsorption spectrophotometer

Digital hot air ovens

7. Major research themes

ICAR-CICR conducts research under six major research themes

1. Augmenting cotton genetic resources, their utilization in pre-breeding; development of improved GM/non-GM cotton varieties/hybrids with high GOT, resistance to abiotic and biotic stresses; quality seed for sustainable cotton productivity and fibre quality.
2. Development of region-specific non-GM Extra Long Staple varieties/hybrids, naturally colour cotton for niche markets, standardization of production and protection technologies for organic cotton cultivation
3. Biotechnological solutions: Transgenics, genome editing, and marker-assisted breeding for improving economic traits, fibre quality, and biotic and abiotic stress tolerance.
4. Innovative eco-compatible integrated insect pests and diseases management strategies including use of Artificial Intelligence and Internet of Things (IoT) for sustainable cotton ecosystem
5. Development of climate-resilient cotton production technologies to enhance resource use efficiency and soil health through precision farming, conservation and regenerative agriculture, plant canopy management, innovative cotton-based cropping systems, microbiomes, and cotton waste valorization.
6. Addressing yield gaps in the cotton production system through technology interventions, dissemination, value chain and linkages establishment, and socioeconomic impact assessment

Number of projects completed (2014-25)

	Crop Improvement		Crop Production		Crop Protection		Total	
	Institute	External	Institute	External	Institute	External	Institute	External
2014-15	1	-	3	3	1	-	5	3
2015-16	1	2	4	2	-	4	5	8
2016-17	2	4	4	5	-	1	6	10
2017-18	7	2	2	-	4	1	13	3
2018-19	2	-	6	1	3	2	11	3
2019-20	1	-	8	-	6	3	15	4
2020-21	4	1	4	1	7	2	15	4
2021-22	6	-	10	-	7	-	16	8
2022-23	8	-	4	2	2	1	14	3
2023-24	13	2	4	5	1	-	18	2
2024-25	1	-	7	2	8	3	16	5

8. Significant research contributions

8.1. Crop Improvement Division

Cotton varieties released

No.	Name	Lead developer	Species	Year	Centre	Adoption
1	Suvin (CICR-B Cotton 1)	Sh. R. Krishnamurthy	*G. barbadense*	1978	CBE	SZ
2	SH 131 (CICR-H Cotton 2)	Dr. A.K. Basu	*G. hirsutum*	1978	SIR	NZ
3	LRA 5166 (CICR-H Cotton 3)	Sh. R. Krishnamurthy	*G. hirsutum*	1983	CBE	CZ & SZ
4	MCU 5 VT (CICR-H Cotton 4)	Sh. R. Krishnamurthy	*G. hirsutum*	1984	CBE	SZ
5	Supriya (CP 1998 F) (CICR-H Cotton 5)	Sh. K. Srini	*G. hirsutum*	1985	CBE	SZ
6	Savita (H 712) (CICR-HH Cotton 6)	Sh. R. Krishnamurthy	H x H	1987	CBE	CZ & SZ
7	HB 224 (CICR-HB Cotton 7)	Sh. R. Krishnamurthy	H x B	1989	CBE	SZ
8	CICR HH 1 (Kirti) (CICR-HH Cotton 8)	Dr. V.V. Singh	H X H	1992	NGP	CZ
9	Anjali (LRK 516) (CICR-HH Cotton 9)	Sh. R. Krishnamurthy	*G. hirsutum*	1992	CBE	CZ & SZ
10	Kiran (CNH 36) (CICR-HH Cotton 10)	Dr. V.V. Singh	*G. hirsutum*	1993	NGP	CZ
11	TM1312 (Surya) (CICR-HH Cotton 11)	Sh. R. Krishnamurthy	H x H	1995	CBE	SZ
12	Arogya (NISD 2) (CICR-H Cotton 12)	Sh. Kothandaraman	*G. hirsutum*	1996	NGP	CZ
13	Surabhi (VRS 7) (CICR-H Cotton 13)	Sh. K.N. Gururajan	*G. hirsutum*	1997	CBE	SZ
14	Sruthi (CICR-HB Cotton 13)	Sh. K.N. Gururajan	H x B	1997	CBE	SZ
15	Om Shankar (CSHH 29) (CICR-HH Cotton 15)	Dr. O.P. Tuteja	H x H	1997	SIR	NZ
16	Pratima (CNH 120 MB) (CICR-H Cotton 16)	Dr. V.V. Singh	*G. hirsutum*	2001	NGP	SZ
17	Sumangala (CWROK 165) (CICR-H Cotton 17)	Sh. K.N. Gururajan	*G. hirsutum*	2001	CBE	SZ
18	CICR 2 (CISAA 2) (CICR-AA Cotton 18)	Dr. R.A. Meena	a x a	2005	SIR	NZ
19	Shresth (CSHH 198) (CICR-HH Cotton 19)	Dr. O.P. Tuteja	H x H	2005	SIR	NZ
20	Hybrid kalyan (CSHH 238) (CICR-HH Cotton 20)	Dr. O.P. Tuteja	H x H	2007	SIR	NZ
21	Suraj (CCH 510-4) (CICR-H Cotton 21)	Sh. K.N. Gururajan	*G. hirsutum*	2008	CBE	SZ
22	CSHH 243 (CICR-HH Cotton 22)	Dr. O.P. Tuteja	H x H	2008	SIR	NZ
23	CICR 1 (CISA 310) (CICR-A Cotton 23)	Dr. S.K. Verma	*G. arboreum*	2010	SIR	NZ
24	CNHO 12 (Saraswati) (CICR-H Cotton 24)	Dr. S.M. Palve	*G. hirsutum*	2010	NGP	CZ
25	CICR 3 (CISA 614) (CICR-A Cotton 25)	Dr. S.K. Verma	*G. arboreum*	2010	SIR	NZ
26	CSHG 1862 (CICR-HH Cotton 26)	Dr. O.P. Tuteja	H x H	2013	SIR	NZ
27	CNA 1003 (CICR-A Cotton 27)	Dr. V.N. Waghmare	*G. arboreum*	2015	NGP	SZ
28	CCH 2623 (CICR-H Cotton 28)	Sh. K.N. Gururajan	*G. hirsutum*	2015	CBE	SZ
29	CSH 3129 (CICR-H Cotton 29)	Dr. S.L. Ahuja	*G. hirsutum*	2017	SIR	NZ
30	CSH 3075 (CICR-H Cotton 30)	Dr. S.L. Ahuja	*G. hirsutum*	2017	SIR	NZ
31	Subiksha (CCH 4474) (CICR-H Cotton 31)	Sh. K.N. Gururajan	*G. hirsutum*	2018	CBE	SZ
32	Suchitra (CCH 12-2) (CICR-H Cotton 32)	Dr. S. Manickam	*G. hirsutum*	2018	CBE	CZ
33	Sunantha (CCH 14-1) (CICR-H Cotton 33)	Dr. S. Manickam	*G. hirsutum*	2020	CBE	SZ
34	CICR CNA 1028 (CNA 1028) (CICR-A Cotton 34)	Dr. V.N. Waghmare	*G. arboreum*	2020	NGP	CZ
35	CICR CNA 1032 (CNA 1032) (CICR-A Cotton 35)	Dr. V.N. Waghmare	*G. arboreum*	2020	NGP	CZ
36	CCH-15-1 (Suraksha) (CICR-H Cotton 36)	Dr. S. Manickam	*G. hirsutum*	2021	CBE	CZ & SZ
37	CCB 51 (Sudhan) (CICR-B Cotton 37)	Dr. KPM. Dhamayanthi	*G. barbadense*	2021	CBE	SZ
38	ICAR-CICR CCB 143B (CICR-B Cotton 45)	Dr. KPM. Dhamayanthi	*G. barbadense*	2021	CBE	SZ
39	ICAR-CICR CNA 1054 (CICR-A Cotton 46)	Dr. V.N. Waghmare	*G. arboreum*	2021	NGP	CZ
40	ICAR-CICR CNH 1111 (CICR-H Cotton 47)	Dr. V.N. Waghmare	*G. hirsutum*	2021	NGP	CZ
41	ICAR-CICR CNH 1128 (CICR-H Cotton 48)	Dr. V.N. Waghmare	*G. hirsutum*	2021	NGP	SZ
42	ICAR-CICR 16301DB (Vaidehi-1) (CICR- H NC Cotton 53)	Dr. Vinita Gotmare	*Multispecies derivative*	2021	NGP	SZ
43	ICAR-CICR (Nano) CICR-H Cotton 54 (Nano)	Dr. S. Manickam	*G. hirsutum*	2022	CBE	SZ
44	ICAR-CICR CNA1031 (CICR-A Cotton 56)	Dr. V.N. Waghmare	*G. arboreum*	2022	NGP	SZ
45	ICAR-CICR CNA1091 (CICR-A Cotton 57)	Dr. V.N. Waghmare	*G. arboreum*	2022	NGP	CZ

No.	Name	Lead developer	Species	Year	Centre	Adoption
46	Shalini CNH 17395 (CICR-H NC Cotton 58)	Dr. Vinita Gotmare	*Multispecies derivative*	2022	NGP	SZ
47	ICAR-CICR CNA 17522 (CICR-A Cotton 59)	Dr. Vinita Gotmare	*Introgressed derivative*	2022	NGP	CZ
48	CCB 51-2 (CICR B Cotton 55)	Dr. KPM. Dhamayanthi	*G. barbadense*	2023	CBE	SZ
49	CNH-18529 (CICR-H NC Cotton 64)	Dr. Vinita Gotmare	*Multispecies derivative*	2024	NGP	CZ
50	CICR-A NC Cotton 67 (CNA 1092) (CICR-A Cotton 67)	Dr. V.N. Waghmare	*G. arboreum*	2024	NGP	CZ
51	Intra-*G. Arboreum* Hybrid: CICR – 4 (CISAA 19-4)	Dr. S.K. Verma	*G. arboreum*	2025	SIR	NZ

NZ, North zone; CZ, Central zone; SZ, South zone; NGP, Nagpur; CBE, Coimbatore; SIR, Sirsa.

Bt cotton varieties released

No	Name	Lead developer	Species	Year	Centre	Adoption
1.	CICR Bt 6 (RS 2013) (CICR-H Cotton 38)	Dr. O.P. Tuteja	*G. hirsutum*	2020	SIR	HR, PB
2.	ICAR-CICR GJHV 374 Bt (CICR-H Cotton 41)	Dr. Suman Bala Singh	*G. hirsutum*	2020	NGP	MH
3.	ICAR-CICR PKV 081 Bt (CICR-H Cotton 42)	Dr. Suman Bala Singh	*G. hirsutum*	2020, 2024	NGP	MH & SZ
4.	ICAR-CICR Rajat Bt (CICR-H Cotton 43)	Dr. Suman Bala Singh	*G. hirsutum*	2020	NGP	MH
5.	ICAR-CICR Suraj Bt (CICR-H Cotton 44)	Dr. Suman Bala Singh	*G. hirsutum*	2020	NGP	MH
6.	CICR 16 Bt (CICR-H Cotton 45)	Dr. Suman Bala Singh	*G. hirsutum*	2020	NGP	MH
7.	CICR 23 Bt (CICR-H Cotton 46)	Dr. Suman Bala Singh	*G. hirsutum*	2020	NGP	CZ
8.	ICAR-CICR Bt 21 (ICAR-H Bt Cotton 51)	Dr. Suman Bala Singh	*G. hirsutum*	2021	NGP	CZ
9.	ICAR-CICR Bt 25 (ICAR-H Bt Cotton 52)	Dr. Suman Bala Singh	*G. hirsutum*	2021	NGP	SZ
10.	ICAR-CICR Bt 9 (SRI 1 Bt) (CICR-H Cotton 49)	Dr. K.R. Kranthi	*G. hirsutum*	2021	NGP	CZ
11.	ICAR-CICR Bt 14 (CPT 2) (CICR-H Cotton 50)	Dr. K.R. Kranthi	*G. hirsutum*	2021	NGP	SZ
12.	Yugank Bt (Bt 183059-5) (CICR-H Bt Cotton 60)	Dr. H.B. Santosh	*G. hirsutum*	2022	NGP	CZ
13.	Tejas Bt (Bt 183059-4) (CICR-H Bt Cotton 61)	Dr. H.B. Santosh	*G. hirsutum*	2022	NGP	CZ
14.	Namami Bt (CICR 19-32 Bt) (CICR-H Bt Cotton 62)	Dr. H.B. Santosh	*G. hirsutum*	2022	NGP	CZ
15.	Samrat Bt (Bt 183059-2) (CICR-H Bt Cotton 63)	Dr. H.B. Santosh	*G. hirsutum*	2022	NGP	SZ
16.	ICAR-CICR 18 Bt (CICR-H Bt Cotton 65)	Dr. Suman Bala Singh	*G. hirsutum*	2024	NGP	CZ
17.	ICAR-CICR 20-31Bt (CICR-H Bt Cotton 66)	Dr. H.B. Santosh	*G. hirsutum*	2024	NGP	CZ

CZ: Central Zone; SZ: South Zone; MH: Maharashtra; HR: Haryana; PB: Punjab; SIR: Sirsa; NGP: Nagpur.

Registered Genetic Stocks

No.	Regd. Year	Designated Genetic Stocks	Genera & Species	National Identity	Regn. No.	Unique Traits
1	2000	CNO-131	*G. hirsutum*	IC 296770	INGR 00010	Early and synchronous maturity (130-140 days) escaping major pests, high yield (19.5 q\ha) with medium boll size and higher percentage of seed oil and index
2	2000	G-135-49	*G. arboreum race bengalense*	IC 296777	INGR 00017	Immune to grey mould (*Ramularia areola*) in different genetic backgrounds
3	2000	30805	*G. arboreum race cernuum*	IC 296778	INGR 00018	Immune to grey mould (*Ramularia areola*) in different genetic backgrounds
4	2002	LRA 5166 (GMS Line)	*G. hirsutum*	IC 296905	INGR 02012	New GMS line
5	2002	30838	*G. arboreum race cernuum*	IC 296857	INGR 02020	Immune to grey mould (*Ramularia areola*)
6	2002	CNH-123	*G. hirsutum*	IC 325211	INGR 02021	Resistant to cotton leaf curl virus (CLCV)
7	2004	CINA-316	*G. arboreum*	IC 296596	INGR 04079	High locule retention and low short fiber content
8	2005	BN-TOM-277	*G. hirsutum*	IC 471863	INGR 05019	Diverse CMS source with *Gossypium tomentosum* cytoplasm

No.	Regd. Year	Designated Genetic Stocks	Genera & Species	National Identity	Regn. No.	Unique Traits
9	2005	BN-ARB-16	*G. hirsutum*	IC 471864	INGR 05020	Diverse CMS source with *Gossypium arboreum* cytoplasm
10	2007	CSPF-1	*G. hirsutum*	IC 549909	INGR 07035	Pink flower colour mutant
11	2007	CPF-1	*G. hirsutum*	IC 549924	INGR 07036	Pink Filament mutant
13	2007	BN-OKRA	*G. hirsutum*	IC 538547	INGR 07050	Resistance to spotted, pink and Heliothis bollworms
14	2008	CIR-8	*G. hirsutum*	IC 553921	INGR 08031	CMS red plant with bicolor flower
15	2008	CIR-12	*G. hirsutum*	IC 553923	INGR 08032	CMS green plant with yellow petal and anther
16	2008	CIR-23	*G. hirsutum*	IC 553924	INGR 08033	CMS green plant with yellow petal and anther
17	2008	CIR-26	*G. hirsutum*	IC 553925	INGR 08034	CMS with good fiber properties and agronomic attributes, restores fertility *in G. harknessii* based CMS
18	2008	CIR-32	*G. hirsutum*	IC 553926	INGR 08035	CMS green plant with yellow petal and cream anther & bold seed.
19	2008	CIR-38	*G. hirsutum*	IC 553927	INGR 08036	CMS Okra type with yellow petal and anther
20	2008	CIR-47	*G. hirsutum*	IC 553928	INGR 08037	CMS green plant with yellow petal & anther with highest boll weight
21	2008	RAJ-2006	*G. hirsutum*	IC 553272	INGR 08059	Source of resistance to jassid
22	2008	CINHTi-1	*G. hirsutum*	IC 561248	INGR 08088	Trypsin inhibitor mediated tolerance to *H. armigera*
23	2008	CINHTi-2	*G. hirsutum*	IC 561249	INGR 08089	Trypsin inhibitor mediated tolerance to *H. armigera*
24	2008	ABC-5	*G. arboreum*	IC 563968	INGR 08090	Interspecific hybrid with five loculed bolls/capsules
25	2008	CATS-18	*G. arboreum*	IC 563969	INGR 08091	Thermo-sensitive genetic male sterile
26	2008	MSH-SP-91	*G. hirsutum*	IC 563997	INGR 08092	Multi-species interspecific hybrid with zero monopodia and long pedicel
27	2008	MSH-345	*G. hirsutum*	IC 563998	INGR 08093	Multi-species interspecific hybrid with cleistogamous flowers and big round bolls (5.5g)
28	2009	30814	*G. arboreum*	IC 439707	INGR 09117	Immune to grey mildew
29	2009	30826	*G. arboreum*	IC 439721	INGR 09118	Immune to grey mildew
30	2009	30856	*G. arboreum*	IC 439749	INGR 09119	Immune to grey mildew
31	2010	CISA-2 (GMS Line)	*G. arboreum*	IC 538548	INGR 10057	Spontaneous genetic male sterile mutant with yellow open flower and red petal spot and green plant body
32	2010	ABGMS (CSHN)	*G. hirsutum*	IC 584053	INGR 10058	Genetic male sterile line with curved stigma
33	2010	CINA-333	*G. arboreum*	IC 583996	INGR 10059	High seed cotton yield potential cultivar, high volume of capsule, long claw of petals
34	2010	SLL-33	*G. hirsutum race Latifolium*	IC 583997	INGR 10060	Single leaf lobe (marker trait)
35	2010	YPLL-29	*G. hirsutum race Latifolium*	IC 583998	INGR 10061	Yellow pigmented leaf lobe (marker trait)
36	2010	CSLL-59	*G. hirsutum race Latifolium*	IC 583999	INGR 10062	Cup shaped leaf lobe (marker trait)

No.	Regd. Year	Designated Genetic Stocks	Genera & Species	National Identity	Regn. No.	Unique Traits
37	2011	CNH-301	*G. hirsutum*	IC 587405	INGR 11061	Drought tolerant nature & yield stability
38	2013	VAIDEHI-95 (MSH-53)	*G. hirsutum*	IC 584260	INGR 13032	Dark brown lint colour.
39	2013	NISC-40	*G. hirsutum*	IC 584261	INGR 13033	Jassid tolerance
40	2013	NISC-43	*G. hirsutum*	IC 584262	INGR 13034	Jassid tolerance
41	2013	NISC-44	*G. hirsutum*	IC 584263	INGR 13035	Jassid tolerance
42	2014	CNA-5	*G. arboreum*	IC 597395	INGR 14005	Inter-racial pigmented arboreum
43	2014	CNH CB-211	*G. hirsutum*	IC 597397	INGR 14058	Cluster boll bearing habit, deeply palmate leaf lobe
44	2014	CNH CB-212	*G. hirsutum*	IC 597398	INGR 14059	Cluster boll bearing habit, zero monopodia and compact habit
45	2015	CNA-405	*G. arboreum*	IC 613959	INGR 15005	For narrow leaf lobed & brown lint
46	2015	CNH-1102	*G. hirsutum*	IC 611336	INGR 15015	For high ginning outturn
47	2015	CNA-1051	*G. arboreum*	IC 613964	INGR 15016	For distinct yellow top leaves
48	2015	CNA-407 (NLL-SPOTTED PETALS)	*G. arboreum*	IC 613960	INGR 15024	Narrow leaf lobed, spotted petals and brown linted.
49	2015	CNA-407 (NLL-SPOTLESS PETALS)	*G. arboreum*	IC 613961	INGR 15025	Narrow leaf lobed, spotless petals and brown linted
50	2020	CISG-20 (GMS)	*G. arboreum*	IC 628575	INGR 20076	A spontaneous mutant identified CISA 20, GMS line for hybrid development program in diploid cotton, having open red flower as marker trait.
51	2021	CNH-204710	*G. hirsutum*	IC 641997	INGR 21213	High ginning outturn percentage (43.9%)
52	2021	CCB12	*G. barbadense*	IC 641999	INGR21212	Cleistogamous flowers

Cotton germplasm resources

ICAR-CICR, Nagpur maintains one of the largest cotton gene banks in the world, a germplasm collection of 12,409 accessions of the cultivated and wild species of *Gossypium* species including perennials, landraces and inter-specific derivatives.

Species	Number of accessions
G. hirsutum	8851
G. barbadense	538
G. arboreum	2105
G. herbaceum	576
Wild Species	32
Registered Genetic Stocks	52
Perennials and land races	254
Distantly related species (*Thespesia lumpus*)	01
Total Collection	12409

Conservation of traditional landraces

Exploration and collection surveys were conducted collaborating with ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi for collection of indigenous cotton accessions. A total of 254 cotton germplasm including perennials, landraces and traditional cultivars belonging to *G. arboreum*, *G. herbaceum* and *G. barbadense* were collected from different states of India *viz.*, Assam, Arunachal Pradesh, Tripura, Manipur, Meghalaya, Mizoram and Nagaland (North Eastern Hill region), Gujarat, Maharashtra and Madhya Pradesh (Central India), Andhra Pradesh, Karnataka, Tamil Nadu and Telangana (South India). The important landraces viz., Karunganni cotton (*G. arboreum* race 'indicum'), Ponduru Cotton (*G. arboreum* race 'indicum'), Mathio (*G. arboreum* race 'indicum') and Comilla (*G. arboreum* race cernuum) were collected. All the collected germplasm are conserved in the medium term cold storage for characterization, evaluation and further utilization in the breeding programme.

List of cotton germplasm collected from exploratory surveys

Regions Explored	State	Year	No. of accessions	Species
Bhandara, Wardha, Nagpur, Washim, Parbhani	Maharashtra	2011	22	*G. arboreum*
			3	*G. barbadense*
Sehore	Madhya Pradesh	2011	8	*G. arboreum*
Theni	Tamil Nadu	2011	1	*G. arboreum*
Pondichery	Pondichery	2011	1	*G. arboreum*
Faridkot, Talwadi	Punjab	2011	1	*G. arboreum*
			1	*G. barbadense*
Kaziranga National Park	Assam	2011	1	*G. arboreum*
Jalpaiguri	West Bengal	2011	5	*G. barbadense*
East Godavari, West Godavari, Jammikunta	Andhra Pradesh	2011	20	*G. arboreum*
Srikakulam		2011	1	*G. arboreum race indicum*
West Garo Hills	Meghalaya	2011	23	*G. arboreum race* cernuum (*Comilla cotton)*
			3	*G. arboreum*
Aizawl, Mamit, Kolasib & Serchip	Mizoram	2011	16	*G. barbadense*
			13	*G. arboreum*
Vishakhapatnam, Vizianagaram, Srikakulam	Andhra Pradesh	2012	2	*G. arboreum*
			1	*G. arboreum* race *indicum*
			1	*G. barbadense*
Bhandara, Nagpur & Wardha	Maharashtra	2012	2	*G. arboreum*
			5	*G. barbadense*
Gomati, West Tripura, Kowai and Dhalai	Tripura	2012	10	*G. arboreum*
			4	*G. barbadense*
Bharuch, Bhavnagar, Rajkot, Ahmadabad, Surendranagar & Banaskantha	Gujarat	2012	7	*G. barbadense*
			4	*G. herbaceum (Wagad cotton)*
			5	*G. arboreum*
			1	*G. arboreum (Mathio cotton)*
Tuticorin	Tamil Nadu	2012	6	*G. arboreum (Karunganni cotton)*
			1	*G. arboreum*

			1	*G. herbaceum (Uppam Cotton)*
Imphal West, Senapati, Thoubal, Tamenglong, Bishnupur, Imphal East & Chandel	Manipur	2013	16	*G. barbadense*
Wardha	Maharashtra	2013	2	*G. barbadense*
Mehsana, Patan, Banaskantha & Kachchh	Gujarat	2013	5	*G. herbaceum*
			4	*G. arboreum*
			1	*G. barbadense*
Mon & Tuensang	Nagaland	2013	3	*G. barbadense*
West Garo Hills	Meghalaya	2013	1	*G. arboreum*
Barpeta	Assam	2013	3	*G. barbadense*
West Siang, East Siang, Upper Siang and Dibang Valley	Arunachal Pradesh	2014	17	*G. arboreum*
			14	*G. barbadense*
Indore and Khandwa	Madhya Pradesh	2014	1	*G. arboreum*
			2	*G. barbadense*
Wardha, Hinganghat, Chandrapur, Nandurbar and Dhule	Maharashtra	2014	1	*G. arboreum*
			8	*G. barbadense*
Raichur, Bijapur, Bagalkot, Gadag, Dharwad, Haveri, Uttarkannada, Davangere, Chitradurga, Bellary	Karnataka	2014	10	*G. arboreum*
			6	*G. barbadense*
Wardha, Bhandara, Gondia and Yavatmal	Maharashtra	2015	2	*G. arboreum*
			9	*G. barbadense*
Kanyakumari (Western Ghats)	Tamil Nadu	2015	1	*G. arboreum*
Nalgonda	Telangana	2015	2	*G. arboreum*
Karbi angling	Assam	2016	2*	*G. arboreum race cernuum*
			6	*G. barbadense*
			1	*G. hirsutum*
Phek	Nagaland	2016	3	*G. arboreum*
			5	*G. barbadense*
South 24 Paraganas and North 24 Paraganas (Sundarbans Region)	West Bengal	2016	8	*G. barbadense* var. *brasilensis*
			1	*G. barbadense*
			32	*G. hirsutum*
Nuapada	Odisha	2017	2	*G. barbadense*
			1	*G. barbadense* var. *brasilensis*
Mandya	Karnataka	2017	1	*G. barbadense*
West Garo Hills	Meghalaya	2024	2	*G. arboreum race cernuum*
			1	*G. barbadense*
Dharwad, Gadag, Koppal, Raichur and Bellary	Karnataka	2025	11	*G. arboreum*
			11	*G. herbaceum*

Breeder Seed Production

Popularization of CICR-released cotton varieties including Bt varieties, non-Bt varieties of *G. hirsutum* and *G. barbadense* and *desi* cotton varieties is undertaken through their quality seed production which is a major activity of the Institute. Quality seed includes breeder seed as well as TFL seed of varieties produced under farmer participatory mode.

Total breeder seed production (q) of CICR cotton varieties during 2015-2025

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
0.94	0.23	1.35	1.10	0.60	0.15	2.80	25.80	65.25	52.85	51.54

Variety wise (Bt, non-Bt and desi) breeder seed production (q) during 2021-22 to 2024-25

Variety	2021-22	2022-23	2023-24	2024-25
Bt variety	7.12	12.75	7.1	10.83
Non Bt Variety	14.2	42.60	31.3	28.75

8.2. Cotton Production technologies (2014-25)

No.	Technology	Category	Lead Developer	Centre
1.	High Density Planting System in cotton to enhance cotton productivity	Technology	Dr. M.V. Venugopalan	NGP
2.	Allelopathy as an alternative weed management strategy for rainfed cotton	Technology	Dr. Blaise D.	NGP
3.	Cotton-based integrated farming systems (IFS) model for rainfed dry sub-humid ecosystem	Technology	Dr. Ramkrushna GI	NGP
4.	Stale seed bed and leguminous cover crops as tools for sustainable weed management of Irrigated Cotton	Technology	Dr. P. Nalayini	CBE
5.	Polyethylene mulching – A new tool for productivity enhancement, water saving and weed control in cotton based system	Technology	Dr. P. Nalayini	CBE
6.	Herbigation in cotton for managing late emerging weeds	Technology	Dr. P. Nalayini	CBE
7.	Yield maximization in ELS cotton with Drip fertigation and Polyethylene mulching	Technology	Dr. P. Nalayini	CBE
8.	Biodegradable mulching for moisture conservation, weed control and enhanced productivity of winter irrigated cotton maize system	Technology	Dr. P. Nalayini	CBE
9.	Paper tube Nursery technique – Cotton transplanting	Technology	Dr. K. Sankaranarayanan	CBE
10.	Gap Filling Technology for Better Crop Establishment	Technology	Dr. R. Raja	CBE
11.	Defoliant formulation for mechanical picking in cotton	Technology	Dr. J.H. Meshram	NGP
12.	Nutrient Expert® for Hybrid Cotton	Technology	Dr. A. Manikandan	NGP
13.	Alternate-Row Cotton + Grain Legume Intercropping in High-Density for Rainfed Areas	Technology	Dr. A. Manikandan	NGP
14.	Biochar-Nutrient Composite for Cotton	Technology	Dr. A. Manikandan	NGP
15.	Customized fertilizer for cotton	Technology	Dr. D. Kanjana	CBE

16.	Microbially enriched cotton stalk compost as a substitution to farmyard manure in cotton production	Technology	Dr. K. Velmourougane	NGP
17.	Cyanobacterium-based bacterial and fungal biofilms as novel biostimulants for Bt-cotton	Technology	Dr. K. Velmourougane	NGP
18.	Pedogenic carbonate solubilizing bacterial formulation for alleviating soil calcareousness	Technology	Dr. K. Velmourougane	NGP
19.	Bacterial-based synthetic volatile attractant for whitefly	Pathway	Dr. K. Velmourougane	NGP
20.	Bacterial-based synthetic volatile attractant for jassid	Method	Dr. K. Velmourougane	NGP
21.	Bacterial-based synthetic volatile attractant for aphid	Technology	Dr. K. Velmourougane	NGP
22.	Bacterial-based synthetic volatile attractant for thrip	Technology	Dr. K. Velmourougane	NGP
23.	Bacterial-based synthetic volatile attractant for beneficial insects & natural enemies	Technology	Dr. K. Velmourougane	NGP
24.	Price Forecasting Models in Cotton	Technology	Dr. Isabella Agarwal	CBE
25.	Economic impact of HDPS and policy implication	Method	Dr. Jayakumaravaradan	NGP
26.	Synergistic Extension Model to bridge the yield and knowledge gaps in cotton	Model	Dr. S. Usharani	CBE
27.	Pluralistic Extension Model for Fostering the Production of ELS cotton in India	Model	Dr. S. Usharani	CBE

8.3. Cotton Protection technologies (2014-25)

No.	Technology	Category	Lead Developer	Centre
1.	AI Smart Trap for Real-time Monitoring of Pink bollworm in Cotton	Technology	Dr. K. Rameash	CBE
2.	Wireless Smart Trap for Automated Pest Monitoring in Cotton	Technology	Dr. K. Rameash	CBE
3.	CICR Cotton App	App.	Dr.VS. Nagrare	NGP
4.	CICR IRM App	App.	Dr VS. Nagrare	NGP
5.	Pink bollworm management strategy	Technology	Dr VS. Nagrare	NGP
6.	Phenology model for cotton aphid: Potential risk of establishment and survival of cotton aphid Aphis gossypii in India based on simulation of temperature-dependent phenology model	Model	Dr VS. Nagrare	NGP
7.	Package of practices for managing mealybug on cotton	Technology	Dr VS. Nagrare	NGP
8.	Degree day-based model for predicting pink bollworm phenology across geographical locations of subtropics and semi-arid tropics of India	Model	Dr. Bahasaheb B Fand	NGP

No.	Technology	Category	Lead Developer	Centre
9.	Rapid, Reliable and Robust methodology for field level yield loss assessment in cotton due to pink bollworm and boll rot	Method	Dr. Bahasaheb B Fand	NGP
10.	Innovative on-plant bioassay method for selection of superior cultivar/events against pink bollworm in cotton	Method	Dr. Rishi Kumar	SIR
11.	New Protocol for evaluation of transgenic cotton genotypes interogressed with protein against whitefly	Method	Dr. Rishi Kumar	SIR
12.	Conceptualization, In-Planta Field Evaluation, Validation and Compliance of Refugia in Bag' to maintain the susceptibility of Bt cotton against bollworm complex	Technology	Dr. Rishi Kumar	SIR
13.	Use of yellow sticky traps aligned with intercultural operations as an additional tool for monitoring and management of whitefly, *Bemisia tabaci* infesting cotton	Technology	Dr. Rishi Kumar	SIR
14.	Technology for Management of Whitefly-*Bemisia tabaci* (Gennadius) and Cotton Leaf Curl Disease (CLCuD) in North Cotton Growing Zone of India	Technology	Dr. Rishi Kumar	SIR
15.	Mealybug Management Strategies in Cotton Crop	Technology	Dr. Rishi Kumar	SIR
16.	Push-Pull strategy for management of pink bollworm in cotton	Technology	Dr. Vivek Shah	SIR
17.	Improved bioassay method for evaluation of oviposition deterrents against Old World bollworm, *Helicoverpa armigera*	Method	Dr. Rachna Pande	NGP
18.	*Metarhizium*-based oil formulation for cotton insect pest management	Product	Dr. Shivaji Thube	NGP
19.	EPN-based aqua-formulation for pink bollworm management in cotton	Product	Dr. Shivaji Thube	NGP
20.	*Metarhizium*-based capsule formulation for cotton insect pest management	Product	Dr. Shivaji Thube	NGP
21.	Rapid detection of Tobacco streak virus (TSV) in cotton (*G. hirsutum*) based on Reverse Transcription Loop Mediated Isothermal Amplification (RT-LAMP)	Method	Dr Shailesh Gawande	NGP
22.	Rapid detection of Cotton leaf curl virus infection by using Single tube Loop Mediated Isothermal Amplification technique (LAMP)	Method	Dr Shailesh Gawande	NGP
23.	Oil-based bio-insecticide formulation: CICR GreenGuard-1	Product	Dr. S.K. Sain	SIR
24.	Oil-based bio-insecticide formulation: CICR CotPest Guard-1	Product	Dr. S.K. Sain	SIR
25.	Oil-based bio-insecticide formulation: CICR CotPest Guard-2	Product	Dr. S.K. Sain	SIR
26.	*Diaporthe longicolla* (isolate CEL-48) as an endophytic, growth promoting, biocontrol agent against major diseases of cotton	Product	Dr. Neelkanth S Hiremani	NGP

No.	Technology	Category	Lead Developer	Centre
27.	Endophytic and growth promoting *Diaporthe longicolla* isolate CEL-41 as biocontrol agent against cotton diseases	Product	Dr. Neelkanth S Hiremani	NGP
28.	Antagonistic and growth promoting potential of endophytic *Diaporthe melonis* isolate CFS-5 in cotton and non-host crops	Product	Dr. Neelkanth S Hiremani	NGP
29.	Development and validation of biocontrol potential by cotton endophytic rhizobacteria against root rot disease and foliar diseases in cotton	Product	Dr. Dipak Nagrale	NGP
30.	Novel Screening Method for *Tobacco Streak Virus* (TSV)	Method	Dr. P. Valarmathi	CBE
31.	A novel Biopesticide formulation for the management of Sucking pests in Cotton	Product	Dr. J. Gulzar Banu	CBE
32.	Talc based biopesticide formulation of *Metarhizium anisopliae* for eco-friendly management of sucking pests in Cotton	Product	Dr. J. Gulzar Banu	CBE
33.	A bionematicide formulation of *Pochonia chlamydosporia* for eco-friendly management of nematodes in Cotton	Product	Dr. J. Gulzar Banu	CBE

9. ICAR certified CICR technologies

No.	Technology	ICAR ID	Lead developer	Year
1	Attractant Formulation for Whiteflies, Aphids and Thrips	ICAR-CS-CICR-Product-2025-023	Dr. K. Velmourougane	2025
2	Rapid, Reliable and Robust methodology for field level yield loss assessment in cotton due to pink bollworm and boll rot	ICAR-CS-CICR-Process-2025-022	Dr. Babasaheb B. Fand	2025
3	Antagonistic and growth promoting potential of endophytic *Diaporthe melonis* isolate CFS-5 in cotton and non-host crops	ICAR-CS-CICR-Technology-2025-043	Dr. Neelkanth S. Hiremani	2025
4	Nutrient Expert®, a decision support system for hybrid cotton	ICAR-NRM-CICR-Product-2024-221	Dr. A. Manikandan	2024
5	Novel cotton based Integrated Farming Systems (IFS) model for rainfed dry sub-humid ecosystem	ICAR-NRM-CICR Technology-2024-222	Dr. Ramkrushna G. I	2024
6	Gap-filling technology for better cotton crop establishment in inherent soil moisture	ICAR-NRM-CICR Technology-2024-223	Dr. Satish Kumar Sain	2024
7	New Protocol for evaluation of transgenic cotton genotypes interogressed with protein against whitefly, *Bemisia tabaci* (Gennadius) in cotton	ICAR-CS-CICR-Technology-2023-023	Dr Rishi Kumar	2023
8	Technology for Management of Whitefly- *Bemisia tabaci* (Gennadius) and Cotton Leaf Curl Disease (CLCuD) in North Cotton Growing Zone of India	ICAR-CS-CICR-Technology-2023-024	Dr Rishi Kumar	2023

No.	Technology	ICAR ID	Lead developer	Year
9	Oil-based entomopathogenic fungal bio-insecticide formulation (*Metarhizium anisopliae* CICR-RS- Ma-1299 @1x10^{8}cfu/ml): CICR Green Guard-1 (NAIMCC-F-04455)	ICAR-CS-CICR-Technology-2023-027	Dr. Satish Kumar Sain	2023
10	Oil-based entomopathogenic fungal bio-insecticide formulation (*Cordyceps javanica*–CICR-RSS-Cj-0102 @10^{8}cfu/ml): CICR Cotpest Guard-1 (ITCC-10499.17)	ICAR-CS-CICR-Technology-2023-026	Dr. Satish Kumar Sain	2023
11	Oil-based entomopathogenic fungal bio-insecticide formulation (*Beauveria bassiana* CICR RS-Bb-4511 @10^{8}cfu/ml): CICR Cotpest Guard-2 (NAIMCC-F-04402)	ICAR-CS-CICR-Technology-2023-025	Dr. Satish Kumar Sain	2023
12	Development and validation of a "Degree Day-based model for predicting pink bollworm phenology across geographical locations of subtropics and semi-arid tropics of India	ICAR-CS-CICR-Method-2023-021	Dr. Babasaheb B. Fand	2023
13	Innovative on-plant bioassay method for selection of superior genotype/cultivar /event against pink bollworm, *Pectinophora gossypiella* (Saunders) in cotton under protected screen house condition	ICAR-CS-CICR-Technology-2023-028	Dr. Vivek Shah	2023
14	Wireless Smart Trap for Automated Pest Monitoring in Cotton	ICAR-AE-CICR-Technology-2023-061	Dr. K. Rameash	2023
15	Development of loop mediated isothermal amplification (LAMP): A new tool for rapid diagnosis of cotton leaf curl viral disease	ICAR-CS-CICR-Method-2023-022	Dr. Shailesh Gawande	2023

10. Patents (Granted/filed) & Copyrights

No.	Patent	Grant No./Design No.	Grant Year	Type	Lead inventor
1.	Composition comprising pedogenic calcium carbonate solubilizing microorganisms and a method of preparing the same thereof	Filed (Appln No. 202621032324)	2026	Indian	Dr. K. Velmourougane
2.	A System For Attracting Pink Bollworms, Trapping And Reporting And A Method Thereof	Filed (Appln No. PCT/IB2025/059551)	2025	PCT	Dr. K. Rameash

No.	Patent	Grant No./Design No.	Grant Year	Type	Lead inventor
3.	Bacterial Based Volatiles Composition As Jassid Attractant	568707	2025	Indian	Dr. K. Velmourougane
4.	Bacterial Based Volatiles Composition As Thrip Attractant	554409	2024	Indian	Dr. K. Velmourougane
5.	Bacterial Based Volatiles Composition As Aphid Attractant	553413	2024	Indian	Dr. K. Velmourougane
6.	Bacterial Based Volatiles Composition As Beneficial Insects Attractant.	546146	2024	Indian	Dr. K. Velmourougane
7.	Bacterial Based Volatiles Composition As Whitefly Attractant	541777	2024	Indian	Dr. K. Velmourougane
8.	Drone mounted precision fertilizer applicator	427801-001, Class: 15-03	2024	Indian	Dr. Rathinavel S…. Dr. Raja. R
9.	Software program for site specific granular urea application device	SW-19517/2024			Dr. Rathinavel S…. Dr. Raja. R
10.	Bacterial Based Volatiles Composition As Whitefly Attractant	Filed (Appln No. WO2025046379A1)	2024	PCT	Dr. K. Velmourougane
11.	Bacterial Based Volatiles Composition As Jassid Attractant.	Filed (Appln No. WO2025046378A1)	2024	PCT	Dr. K. Velmourougane
12.	A System For Attracting Pink Bollworms, Trapping And Reporting And A Method Thereof	Filed (Appln No. 202421072205)	2024	Indian	Dr. K. Rameash
13.	Semi-synthetic diet for Cotton Stem weevil.	Filed (Appl No. 20242107350)	2024	Indian	Dr. K. Shankarganesh
14.	CICR Whitefly Adult Suction Trap	376517	2021	Indian	Dr. Rishi Kumar
15.	PCR detection Kit for *Xanthomonas oxonopodis* pv.	276751	2016	Indian	Dr. P.K. Chakraborty
16.	Rapid detection of Bt-Cry toxin	ZA/2004/10268 (South Africa)	2004	PCT	Dr. K.R. Kranthi
17.	Rapid detection of Bt-Cry toxin	MXPA04011769 (Mexico)	2004	PCT	Dr. K.R. Kranthi
18.	Rapid detection of Bt-Cry toxin	W003102208 (Uzbekistan)	2004	PCT	Dr. K.R. Kranthi
19.	Rapid detection of Bt-Cry toxin	CN1672049 (China)	2003	PCT	Dr. K.R. Kranthi

Copyrights/trademarks Filed

Sl. No.	Application No.	Name of Copyright	Applicant	Date of Filing/Registration**
1	6565758	ICAR-CICR Logo (Class: 41)	ICAR-CICR	08.08.2024
2	6565759	ICAR-CICR Logo (Class: 42)	ICAR-CICR	08.08.2024
3	6935484	“Krishi kirtan" (Class: 9)	Dr Babasaheb B Fand	01.04.2025
4	6935471	“C-MIMS " (Class: 41)	Dr Babasaheb B Fand	01.04.2025
5	6935472	“C-MIMS” (Class: 42)	Dr Babasaheb B Fand	01.04.2025

11. Research Publications (2014-2024)

Publications	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Research	53	30	28	46	40	40	76	64	69	62	67	575
Book chapters	-	-	-	05	-	05	12	15	06	19	26	88
Technical	-	-	-	09	05	09	04	03	-	33	18	81
Popular	-	-	-	-	-	37	30	30	25	27	27	176
Others	-	-	-	-	-	03	03	-	02	01	02	11
Total	53	30	28	60	45	94	125	112	102	142	140	931

Impact factor (NAAS Score) of Research Publications from 2014 to 2024

NAAS Score	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
<6.0	34	19	18	26	28	16	40	39	34	28	14	296
6.0 - 7.9	18	11	9	15	9	18	28	15	18	15	21	177
8.0 - 9.9	1	-	1	5	3	6	7	5	10	10	19	67
>10.0	-	-	-	-	-	-	1	5	7	9	13	35
Total	53	30	28	46	40	40	76	64	69	62	67	575

Research publications (>7 NAAS score) (2014-2025)

Abdelmoghny AM, Raghavendra KP, Sheeba Annie J et al. 2020. Morpho-physiological and molecular characterization of drought tolerance traits in *Gossypium hirsutum* genotypes under drought stress. *Physiology and Molecular Biology of Plants*, 26(12), 2339-2353. (NAAS Score:7.54)

Abhishek V. Busnoor, R. M. Wadaskar, Babasaheb B. Fand et al. 2024. Laboratory evaluation of toxicity of selected insecticides against egg and larval stages of cotton pink bollworm, *Pectinophora gossypiella* (Saunders) (Lepidoptera: Gelechiidae). *Journal of Cotton Research* 7 (1): 1-14 (NAAS Score: 8.6)

Alam, Md Shahid, Sharma, Monica, Kumar, Rakesh et al. 2023. In silico identification of potential phytochemical inhibitors targeting farnesyl diphosphate synthase of cotton bollworm (Helicoverpa armigera). *Journal of Biomolecular Structure and Dynamics* 10.1080/07391102.2022.2025904. (NAAS Score: 12.25)

Baghyalakshmi K, Priyanka AR, Sarathapriya G et al. 2024. Genetic improvement of fiber quality in tetraploid cotton: an overview of major QTLs and genes involved in and edited for the quality of cotton fibers. *Journal of Cotton Research* 7:33. (NAAS Score: 8.6)

Bhimireddy S, Rajeswari S, Premalatha N, …… Manivannan A. 2023. Combining ability and gene action studies for yield and fibre traits in *Gossypium arboreum* using Griffings numerical and Haymans graphical approach. *Journal of Cotton Research,* 6:12. https://doi.org/10.1186/s42397-023-00149-8 (NAAS Score: 9.1)

Biswas KK, Bhattacharyya UK, Palchoudhury S…. Sain SK et al. 2020. Dominance of recombinant cotton leaf curl Multan-Rajasthan virus associated with cotton leaf curl disease outbreak in northwest India. *PLoS ONE*, 15(4): e0231886. (NAAS Score:8.78)

Blaise D, Desouza ND, Singh A. 2024. Satellite based measurements of temporal and spatial variations in C fluxes of irrigated and rainfed cotton grown in India. *Remote Sensing Applications Society and Environment* 36: 101365. (NAAS Score: 9.8)

Blaise D, Keshav R. Kranthi, Chandragiri D et al. 2021. High plant density can improve the productivity of rainfed Asiatic cotton (*Gossypium arboreum* L.). *Archives of Agronomy and Soil Science*, 67:5, 607-619, (NAAS Score: 8.14)

Blaise D, Kranthi KR, Ravindran CD et al. 2020. High plant density can improve productivity of Asiatic cotton (*Gossypium arboreum* L.). *Archives of Agronomy and Soil Science*, https://doi.org/10.1080/03650340 .2020.1741553. (NAAS Score:7.68)

Blaise D, Majumdar G, Manikandan A et al. 2022. Subsoiling and crop rotation improve root growth of Bt-cotton in Vertisols. *Current Science*. 123(7), 874-880. (NAAS Score: 7.1)

Blaise D, Manikandan A, Verma P et al. 2020. Allelopathic intercrops and its mulch as an integrated weed management strategy for rainfed Bt-transgenic cotton hybrids. *Crop Protection*, 135: 105214. (NAAS Score:8.17)

Blaise D, Velmourougane K, Savitha Santosh et al. 2021. Intercrop mulch affects soil biology and microbial diversity in rainfed transgenic Bt cotton hybrids. *Science of the Total Environment*, 794 148787 https://doi.org/10.1016/j.scitotenv.2021.148787 (NAAS Score: 12.55)

Blaise D. 2021. Nitrogen loss from plants – an ignored aspect. *Current Science* 121:613-614. (NAAS Score:7.10)

Chakraborty A, Venugopalan MV, Mani JK et al. 2022. Rainfed cotton crop in central India is a strong net CO2 sink: An eddy covariance-based analysis of ecosystem fluxes. *Field Crops Research*. 286, 108595. (NAAS Score: 11.22)

Chinna Babu Naik V, Gillesugur Sham Supreeth, Gokte-Narkhedkar N et al. 2022. In vitro rearing protocol for pink bollworm, Pectinophoragossypiella (Saunders) (Gelechiidae: Lepidoptera) on semi-synthetic diet. *Animal Biology*. (72) 217–225. (NAAS Score: 7.2)

Chinna Babu Naik V, Pusadkar PP, Waghmare ST et al. 2020. Evidence for population expansion of Cotton pink bollworm *Pectinophora gossypiella* (Saunders) (Lepidoptera: Gelechiidae) in India. *Scientific reports*, 10(1):1-11. https://doi.org/10.1038/s41598-020-61389-1.

Chinna Babu Naik V, Saonerkar Tejaswini D, Chandrashekar N et al. 2022. Biochemical characterization of alkaline phosphatase in midgut of Cry2Ab dosed, pink bollworm, *Pectinophoragossypiella* (Saunders). *Journal of Environmental Biology*. 43(4) (NAAS Score: 7.5)

Chinna Babu Naik, Kumbhare S, Kranthi S et al. 2018. Field evolved resistance of pink bollworm, *Pectinophora gossypiella* (Saunders) (Lepidoptera: Gelechiidae) to transgenic Bt-cotton expressing Cry1Ac and Cry2Ab in India. *Pest Management Science*, 74(4) (NAAS Score: 9.26).

Chinna Babu Naik, Subbireddy KB, Kranthi S et al. 2021. Pink bollworm, *Pectinophoragossypiella* (Saunders) (Lepidoptera: Gelechiidae) survival on transgenic cotton in India. *Egyptian Journal of Biological Pest Control*,30 (1), 1-7. (NAAS Score: 8)

Das Joy, Kumar Rakesh, Shah Vivek et al. 2023. Simple cost-effective larval injection method for dsRNA delivery to induce RNAi response in *Helicoverpa armigera* (Hübner). *Journal of Applied Entomology* 10.1111/jen.13100. (NAAS Score: 8.2)

Das Joy, Rakesh Kumar, Sharma Ashwani Kumar. 2022. Functional characterization of chitin synthesis pathway genes, HaAGM and HaUAP, reveal their crucial roles in ecdysis and survival of *Helicoverpa armigera* (Hubner) *Pesticide Biochemistry and Physiology*. 188 https://doi.org/10.1016/j.pestbp.2022.105273. (NAAS Score: 9.96)

Das Joy, Rakesh Kumar, Vivek Shah et al. 2023. Identification and functional characterisation of N-acetylglucosamine kinase from *Helicoverpa armigera* divulge its potential role in growth and development via UDP-GlcNAc salvage pathway. *International Journal of Biological Macromolecules* 10.1016/j.ijbiomac.2023.124674. (NAAS Score: 14.2)

Dhanorkar TB, Velmourougane K, Harinkhede LR et al. 2024. Legume intercropping in cotton under high-density planting system enhances soil biological health and nutrient availability in rainfed Vertisol. *National Academy Science Letters* https://doi.org/10.1007/s40009-024-01533-x. (NAAS Score: 7.1)

El-Moghny M. Abd, Santosh H. B., Raghavendra K. P et al. 2017. Microsatellite marker based genetic diversity analysis among cotton (*Gossypium hirsutum*) accessions differing for their response to drought stress. *J. Plant Biochem. Biotechnol.* doi:10.1007/s13562-016-0395-1 (NAAS Score: 7.35).

Fand BB, Nagrare VS, Bal SK et al. 2021. Degree day-based model predicts pink bollworm phenology across geographical locations of subtropics and semi-arid tropics of India. *Scientific Reports*, 11 (1), 1-18. (NAAS Score: 10.01)

Fand BB, Nagrare VS, Deshmukh V et al. 2019. A simple and low-cost laboratory rearing technique for cotton pink bollworm, *Pectinophora gossypiella* (Suanders) (Lepidoptera: Gelechidae) using detached green bolls of cotton. *Phytoparasitica*. DOI:10.1007/s12600-019-00779-2. (NAAS Score 7.02)

Fand BB, Shah V, Nagrale DT, Mahule DJ, Gawande SP, Thube SH, Pandiyan K, Indal Ramteke, Rishi Kumar, K Rameash, T Prabhulinga, VS Nagrare, GT Behere, YG Prasad. 2025. Field estimates of current and predicted cotton yield loss due to pink bollworm and boll rot in India. Agricultural Systems, 224, 104246. https://doi.org/10.1016/j.agsy.2024.104246. (NAAS Score 12.1)

Fand, B.B., Shah, Vivek, Nagrale, D.T., Mahule D., Thube, S.H., Gawande, S.P., Nagrare, V.S., Behere, G.T., Prasad, Y.G. 2026. Dynamics of economic injury levels for cotton pink bollworm (Pectinophora gossypiella Saunders) in relation to control cost, cotton price and control efficacy. Journal of Cotton Research, https://doi.org/10.1186/s42397-026-00258-0. (NAAS Score 8.4)

Fand BB, Nagrare VS, Gawande SP et al. 2019. Widespread infestation of pink bollworm, *Pectinophora gossypiella* (Saunders)(Lepidoptera: Gelechidae) on Bt cotton in Central India: a new threat and concerns for cotton production. *Phytoparasitica*, DOI:10.1007/s12600-019-00738-x. (NAAS Score 7.02)

Gawande SP, Raghavendra KP, Monga D et al. 2019. Rapid detection of Tobacco streak virus (TSV) in cotton (*Gossypium hirsutum*) based on Reverse Transcription Loop Mediated Isothermal Amplification (RT-LAMP). *Journal of Virological Methods*. (Accepted) (NAAS Score 7.76)

Gawande SP, Raghavendra KP, Monga D et al. 2022. Development of loop mediated isothermal amplification (LAMP): A new tool for rapid diagnosis of cotton leaf curl viral disease. *Journal of Virological Methods*. 306. https://doi.org/10.1016/ j.jviromet.2022.114541. (NAAS Score: 8.01)

Gokte-Narkhedkar, Bhanare K, Nawkarkar P et al. 2019. Parasitic potential of entomopathogenic nematode *Heterorhabditis indica* against two Lepidopteran insect pests of cotton, *Helicoverpa armigera* (Hubner) and *Spodoptera litura* (Fabricious) *Phytoparasitica*, 47 (1): 31-41. (NAAS Score: 7.01)

Gotmare Vinita, C. Rodge, P. Akhare et al. 2023. Cotton Variety Vaidehi-1 (CICR- H NC Cotton 53) Naturally Colour Cotton. *Indian Journal of Genetics and Plant Breeding* Vol. 83, No. 2: 293. (NAAS Score: 7)

Gupta A, Kumar M, Zhang B,… Verma P et al, 2024. Improvement of qualitative and quantitative traits in cotton under normal and stressed environments using genomics and biotechnological tools: A review. *Plant Science*, 340, p.111937. (NAAS Score11.2)

Harry Kaur, Simranjeet Singh, Sandra Kathott Prakash…. Rakesh Kumar et al. 2024. Identification and biophysical characterization of potential phytochemical inhibitors of carboxyl/choline esterase from Helicoverpa armigera for advancing integrated pest management strategies, *Scientific Reports* 14. (NAAS Score: 10.6)

Hiremani NS, Verma P, Gawande SP et al. 2020. Antagonistic potential and phylogeny of culturable endophytic fungi isolated from desi cotton (*Gossypium arboreum* L.). *South African Journal of Botany*, https://doi.org/ 10.1016/j.sajb.2020.03.0. (NAAS Score:7.5)

Jain H, R Kaur, SK Sain et al. 2024. Development, Design, and Application of Efficient siRNAs against Cotton Leaf Curl Virus-Betasatellite Complex to Mediate Resistance against Cotton Leaf Curl Disease. *Indian Journal of Microbiology* 1-14. (NAAS Score: 9)

Jain H, Rawal E, Kumar P, SK Sain et al. 2024. In Silico Investigation of the Interactions Between Cotton Leaf Curl Multan Virus Proteins and the Transcriptional Gene Silencing Factors of Gossypium hirsutum L. *Journal of Molecular Evolution* 92(6):891-911. (NAAS Score: 9.9)

Jandrajupalli, Chinna Babu Naik, Ghodke Amol et al. 2016. Population genetic structure of cotton pink bollworm, Pectinophora gossypiella (Saunders) (Lepidoptera: Gelechiidae) using mitochondrial cytochrome oxidase I (COI) gene sequences from India: *Mitochondrial DNA Part A,* 2470-1408. (NAAS Score: 7.21).

Jayaraman S, Salikgram M, Sinha N ……Blaise D et al. 2019. Conservation agriculture effects on soil properties and crop productivity in semi-arid region of India. *Soil Research* 57:187-199. (NAAS Score 7.2)

Kaur Harry, Rode Surabhi, Lonare Sapna, Kumar Rakesh, Das Joy et al. 2024. Heterologous expression, biochemical characterization and prospects for insecticide biosensing potential of carboxylesterase Ha006a from *Helicoverpa armigera. Pesticide Biochemistry and Physiology* https://doi.org/10.1016/j.pestbp. 2024.105844. (NAAS Score: 10.7)

Kaur T, Mandhania S, Sankarnarayanan K. 2024. Differential biochemical and physiological responses to cotton leaf curl virus infection in contrasting cotton genotypes. *Acta Physiologiae Plantarum* 46(4):1-15 (NAAS score: 8.4)

Kranthi S, Ghodke AB, Raghavendra KP et al. 2016. Mitochondria CO-I based genetic diversity of the cotton leafhopper *Amrasca bigutulla bigutulla* (Ishida) populations from India. *Mitochondrial DNA*, p.No-1-56. (NAAS Score: 7.21)

Kulvir Singh, Sudhir Kumar Mishra, Manpreet Singh… Amarpreet Singh et al. 2023. Comparison of cotton (*Gossypium hirsutum*) hybrids and their non-transgenic in India. *Emirates Journal of Food and Agriculture* 35(6): 541-547. (NAAS Score: 7.03)

Kumar H, Verma P, John SA et al. 2022. Physiological, biochemical and molecular manifestations in response to seed priming with elicitors under drought in cotton. *Current Science*. 123(5), 658-666. (NAAS Score: 7.1)

Kumar M, Tomar M, Punia S…. Verma P et al. 2021. Cottonseed: A sustainable contributor to global protein requirements. *Trends in Food Science & Technology*, DOI: 10.1016/j.tifs.2021.02.058. (NAAS Score: 17.08)

Kumar Rakesh, Das Joy, Puttaswamy Raghavendra Keelara et al. 2024. Targeted genome editing for cotton improvement: prospects and challenges. *Nucleus.* https://doi.org/10.1007/s13237-024-00479-1. (NAAS Score: 7.8)

Kumar Rakesh, Das Joy, Rode Surabhi et al. 2023. Farnesol dehydrogenase from *Helicoverpa armigera* (Hübner) as a promising target for pest management: molecular docking, in vitro and insect bioassay studies using geranylgeraniol as potential inhibitor. *3Biotech* 13, 175. (NAAS Score: 8.89)

Logan-Young CJ, Yu JZ, Verma SK et al. 2015. SNP discovery in complex allotetraploid genomes (Gossypium Spp., Malvaceae) using genotyping by sequencing. *Applied Plant Science* 3:1400077. https://doi.org/10.3732/apps.1400077 (NAAS Score: 8.70)

Madhu B, Sivakumar S, Manickam S et al. 2023. Improvising cotton (*Gossypium hirsutum* L.) genotypes for compact plant architecture traits suitable for mechanical harvesting. *Indian Journal of Genetics and Plant Breeding* 83(3): 398-406. (NAAS Score: 7)

Madhu TN, Kamanur Murali Mohan, Manikyanahalli Chandrashekara Keerthi et al. 2024. Effect of temperature on the biological parameters of pink bollworm, *Pectinophora gossypiella* Saunders (Lepidoptera: Gelechiidae). *Scientific Reports* 14: 17882. (NAAS Score: 10.6)

Madhu TN, Mohan KM. 2021. Effect of host plants on the oviposition preference of pink bollworm, *Pectinophora gossypiella* (Lepidoptera: Gelechiidae). *Animal Biology*, 72 (1), 15-25. (NAAS Score: 7.2)

Madhu TN, Rishi Kumar, Chinna Babu Naik, et al. 2022. Attraction of leaf hopper, Amrasca biguttulla biguttulla, and whitefly, Bemisia tabaci, toward natural essential oils in Cotton. *Animal Biology*. doi: https://doi.org/ 10.1163/15707563-bja10095. (NAAS Score: 7.2)

Manikandan A, Blaise D, Dutta S et al. 2021. Nutrient Expert for high yield and use efficiency in rainfed Bt cotton hybrids. *Frontiers in Agronomy* 3:777300. doi:10.3389/fagro.2021.777300 (NAAS Score: 10.1)

Manikandan A, Blaise D, Nalayini P et al. 2024. Intercropping legumes with high density cotton to improve the land use efficiencies of rainfed Vertisols of India. *Agricultural Research* DOI: 10.1007/s40003-024-00833-4. (NAAS Score: 7.4)

Manikandan A, Blaise D. 2022. Customized Complex Fertilizers for Transgenic Bt-Cotton Hybrids Grown on Rainfed Vertisols. *Communications in Soil Science and Plant Analysis*. 53:20, 2789-2796 (NAAS Score: 7.33)

Manivannan A, Kanjana D, Dharajothi B et al. 2021.Evaluation of resistance in cotton genotypes against leafhoppers *Amrasca biguttula biguttula* (Ishida), (Homoptera: Cicadellidae). *International Journal of Tropical Insect Science*, 41: 2409-2420 (NAAS Score: 7.2)

Manivannan A, Thomas Cheeran Amal, Shankarganesh K et al. 2024. Comparative proteomic analysis of resistant and susceptible cotton genotypes in response to leaf hopper infestation. *Journal of Proteomics* 303, 105258, https://doi.org/10.1016/ j.jprot.2024.105258. (NAAS Score: 8.8)

Manivannan A, Waghmare VN. 2020. Assessment of genetic divergence in diploid cotton (*Gossypium arboreum* L.) germplasm using fibre quality traits. *Plant Genetic Resources- Characterization and Utilization,* 18 (5): 351-358. (NAAS Score: 7.20)

Manivannan A. 2023. Assessing genetic variation in *Gossypium barbadense* L. germplasm based on fibre characters. 2023. *Journal of Cotton Research,* 6:15. https://doi.org/10.1186/s42397-023-00153-y (NAAS Score: 9.1)

Manivannan A. 2024. Combining ability studies in *desi* cotton (*Gossypium arboreum* L.) genotypes. *Journal of Cotton Research* 7, 37. https://doi.org/10.1186/s42397-024-00200-2. (NAAS Score: 9.1)

Mawblei C, Premalatha N, Manivannan A. et al. 2024. Characterization and screening of cotton (*Gossypium hirsutum* L.) germplasm for leafhopper (*Amrasca biguttula biguttula* (Ishida)) resistance. *Journal of Cotton Research* 7, 19. https://doi.org/10.1186/s42397-024-00182-1. (NAAS Score: 9.1)

Md Shahid Alam, Sharma Monica, Rakesh Kumar et al. 2022. In silico identification of potential phytochemical inhibitors targeting farnesyl diphosphate synthase of cotton bollworm (*Helicoverpa armigera*). *Journal of Biomolecular Structure and Dynamics* https://doi.org/10.1080/07391102.2022.2025904 . (NAAS Score: 9.392)

Nagrale DT, Gawande SP, Gokte-Narkhedkar N et al. 2020. Association of phytopathogenic Pantoea dispersa inner boll rot of cotton (*Gossypium hirsutum* L.) in Maharashtra state, India. *European Journal of Plant Pathology*, 158, 251–260. (NAAS Score:7.74)

Nagrale DT, Gawande SP, Hiremani NS et al. Gokte-Narkhedkar N. 2020. Occurrence and pathogenicity of *Enterobacter* sp. causing sprout decay and seedling stunting of upland cotton (*Gossypium hirsutum* L.). *Journal of Phytopathology*, 168(7-8):391–398. (NAAS Score:7.1)

Nagrale DT, Gawande SP, Shah V et al. 2022. Biocontrol potential of volatile organic compounds (VOCs) produced by cotton endophytic rhizobacteria against Macrophomina phaseolina. *European Journal of Plant Pathology*. https://doi.org/10.1007/s10658-022-02490-1. (NAAS Score: 7.91)

Nagrare VS, Fand BB, Chinna Babu Naik V et al. 2019. Resistance development in Cotton mealybug, Phenacoccus solenopsis Tinsley (Hemiptera: Pseudococcidae) to insecticides from Organophosphate, Thiadiazines and Thiourea derivatives. *International Journal of Tropical Insect Science*. https://doi.org/10.1007/s42690-019-00068-9 (NAAS Score: 7.1)

Nagrare VS, Fand BB, Kumar Rishi et al. 2023. Pink bollworm, *Pectinophora gossypiella* (Saunders) management strategy, dissemination and impact assessment in India. *Crop Protection* 174,106424, https://doi.org/10.1016 /j.cropro.2023.106424. (NAAS Score: 8.8)

Nagrare VS, Fand BB, Naikwadi B et al. 2019. Potential risk of establishment and survival of cotton aphid *Aphis gossypii* in India based on simulation of temperature-dependent phenology model. *International Journal of Pest Management*. https://doi.org/10.1080/09670874. 2019.1649739 (NAAS Score: 7.1)

Nagrare VS, Naikwadi B, Fand B B et al. 2025. Seasonal population trend and relative occurrence of pests and their natural enemies among cotton species and cultivars in India. *Journal of Cotton Research* 8:12 https://doi.org/10.1186/s42397-025-00214-4 (NAAS Score: 9.1)

Nankade VA, Fand BB, Lavhe NV et al. 2024. A GIS-coupled thermal response model for predicting the population growth potential of the red cotton bug, *Dysdercus koenigii* (Fabricius) (Hemiptera:

Pyrrhocoridae) in India under climate change conditions. *Journal of Thermal Biology* https://doi.org/ 10.1016/j.jtherbio.2024.104010. (NAAS Score: 8.7)

Nebapure SM, Shankarganesh K, Rajna S et al. 2022, Dynamic changes in virus-induced volatiles in cotton modulate the orientation and oviposition behaviour of the whitefly *Bemisia tabaci. Front. Physiol.* 13:1017948. doi: 10.3389/fphys. 2022.101794. (NAAS Score: 89.4)

Pande R, Vivek S, Prabhulinga T et al. 2025. Evaluation of vegetable oil as oviposition deterrent for management of old-world bollworm, *Helicoverpa armigera* (Hübner) in cotton. *Journal of Plant Disease and Protection* 132:129 (NAAS Score: 8.1)

Pandirwar AP, Khadatkar A, Mehta CR… Ramkrushna, GI et al. 2022. Technological Advancement in Harvesting of Cotton Stalks to Establish. Sustainable Raw Material Supply Chain for Industrial Applications: a Review. *Bio EnergyResearch*. (NAAS Score: 8.81)

Paul D, Kumar R, Balasubhramani G et al. 2024. Quantitative Analysis on Expression of Insecticidal Crystal Proteins in Different Plant Parts of BG-II Cotton Hybrids at Various Phenological Stages. *Agricultural Research* 13:1-9, (NAAS Score: 7.4)

Paul D, Kumar R, Prasad YG. 2024. Blending procedure is crucial for BG-II cotton hybrids to adhere to the prescribed 'Refugia in Bag' standards. *Current Science* 127(1). doi:10.18520/cs/v127/i1/101-104. (NAAS Score: 7)

Peddu H, Fand BB, Sawai HR et al. 2020. Estimation and validation of developmental thresholds and thermal requirements for cotton pink bollworm *Pectinophora gossypiella*. *Crop Protection*, 127: 104984. DOI: https:// doi.org/10.1016/j.cropro. 2019. 104984. (NAAS Score:8.5)

Prabhulinga T, Kranthi S, Naik CB et al. 2024. The comparison of species diversity and abundance of insect natural enemies in the domesticated species of cotton using the yellow pan trap method. *Scientific Reports* 10.1038/s41598-023-48347-3. (NAAS Score: 10.6)

Prasad R, Blaise D. 2020. Low gossypol containing cottonseed – Not only a fibre but also a food crop. *National Academy of Science Letters* 43:599-602. (NAAS Score 7.2)

Qadir Razia, Khan Zainul A., Monga D et al. 2019. Diversity and recombination analysis of Cotton leaf curl Multan virus: a highly emerging begomovirus in northern India. *BMC Genomics*. 20:274 https://doi.org/10.1186 /s12864-019-5640-2. (NAAS Score: 9.73)

Raghavendra KP, Das J, Kumar R et al. 2021. Genome-wide identification and expression analysis of the plant specific LIM genes in Gossypium arboreum under phytohormone, salt and pathogen stress. *Scientific Reports*, 11:9177 https://doi.org/ 10.1038/s41598-021-87934-0 April 2021. (NAAS Score: 10)

Rakesh Kumar, Das Joy, Mahto Jai Krishna et al. 2022. Crystal structure and molecular characterization of NADP+-farnesol dehydrogenase from cotton bollworm, *Helicoverpa armigera. Insect Biochemistry and Molecular Biology.* 147 https://doi.org/10.1016/j.ibmb.2022.103812. (NAAS Score: 10.71)

Rao N, Gaur RK, Satnam S, … Rishi Kumar et al. 2024. Thrips composition in north Indian cotton agroecosystem: a single species or a species complex. *Phytoparasitica* https:// doi. org/ 10. 1007/ s12600- 024- 01120-2. (NAAS Score: 7.4)

Reddy DD, Blaise D, Kumrawat B et al. 2017. Evaluation of Integrated Nutrient Management Interventions for Cotton (Gossypium hirsutum) on a Vertisol in Central India. *Communications in Soil Science and Plant Analysis* 48:469-4,475. (NAAS Score: 7.30)

Rishi Kumar Monga D, Chinna Babu Naik V et al. 2020. Incipient infestations and threat of pink bollworm *Pectinophora gossypiella (Saunders)* on Bollgard-II cotton in north cotton growing zone of India. *Current Science* 118:1454-56. (NAAS Score-7.10).

Rishi Kumar, Choudhary A, Kumar S et al. 2019. Frequency of alleles conferring resistance to Bt cotton in North Zone population of the spotted bollworm, *Earias insulana* (Boisduval). *African Entomology* 27:58-65, (NAAS Score-7.20).

Rishi Kumar, Jun-CeTian, Steven E. Naranjo et al. 2014. Effects of *Bt* cotton on *Thrips tabaci* Lindeman and its predator, *Orius insidiosus* (Say). *Journal of Economic Entomol*ogy 107:927-932. (NAAS Score-8.20)

Rishi Kumar, Kranthi S, Nagrare VS et al. 2019. Insecticidal activity of botanical oils and other neem-based derivatives against whitefly, Bemisia tabaci (Gennadius) (Homoptera: Aleyrodidae) on cotton.

International Journal of Tropical Insect Science 39:203-210 (NAAS Score-7.10)

Rishi Kumar, Kranthi S, Prasad Rao GMV et al. 2020. Assessment of bollworm damage and yield loss in seed blends of Bollgard-II with corresponding Non-Bt hybrid as 'built in refuge' in cotton. *Phytoparasitica* 49:253–263. (NAAS Score-7.50)

Rishi Kumar, Sain SK, Singh S et al. 2024. Investigating the second whitefly population outbreak within a decade in the cotton growing zone of North India. *PeerJ.* DOI 10.7717/peerj.17476. (NAAS Score: 8.7)

Sain SK, Dewasi S, Singh AP. 2023. Combined application of effective Trichoderma, Pseudomonas and arbuscular mycorrhiza spp. reduced soil-borne diseases and boosted growth in cotton. *Egyptian Journal of Biological Pest Control* 33:94 https://doi.org/10.1186/s41938-023-00739-3. (NAAS Score: 8.4)

Sain SK, Gawande SP, Kumar V et al. 2024. First Report of Target Spot caused by *Corynespora cassiicola* on Cotton in Northwestern India. *Plant Disease* 108 (2): 530. (NAAS Score: 10.4)

Sain SK, Kranthi S, Kranthi KR et al. 2024. Diversity study of *Beauveria bassiana* species for finding the most virulent strain to manage *Bemisia tabaci* in cotton. *Applied Microbiology and Biotechnology* doi.org/10.1007/s00253-024-13188-1. (NAAS Score: 11)

Sain SK, Monga D, Hiremani Neelkanth S et al. 2021. Evaluation of bioefficacy potential of entomopathogenic fungi against the whitefly (*Bemisia tabaci* Genn.) on cotton polyhouse and field conditions. *Journal of Invertebrate Pathology*, 0022-2011, 183, 107618 https://doi.org/10.1016/ j.jip.2021.107618 (NAAS Score: 8.07)

Sain SK, Monga D, Kranthi S et al. 2022. Evaluation of the Bioefficacy and Insecticide Compatibility of Entomopathogens for Management of Whitefly (Hemiptera: Aleyrodidae) on Upland Cotton Under Laboratory and Polyhouse Conditions. *NeotropEntomol*. 51, 600–612 (NAAS Score: 7.43)

Sain SK, Monga D, Kumar R et al. 2019. Compatibility of entomopathogenic fungi with insecticides and their efficacy for IPM of *Bemisia tabaci* in cotton. *Journal of Pesticide Science*, 44 (2): 97-105. (NAAS Ratting 7.02)

Sain SK, Paul D, Kumar P et al. 2024. Cotton leaf curl disease (CLCuD) prediction modelling in upland cotton under different ecological conditions using machine learning tools. *Ecological Informatics* doi.org/10.1016/j.ecoinf.2024.102648. (NAAS Score: 11.1)

Salunkhe VN, Gawande SP, Gokte-Narkhedkar N et al. 2020. First report of *Colletotrichum siamense* causing leaf anthracnose on cotton in India. *Plant Disease*, 104(7): https://doi.org/10.1094/PDIS-09-19-1992-PDN. (NAAS Score:9.58)

Salunkhe VN, Gawande SP, Nagrale DT et al. 2019. First report of Corynespora leaf spot of cotton caused by *Corynespora cassiicola* in Central India. *Plant Disease*, 103(7) https://doi.org/10.1094/ PDIS-05-18-0823-PDN). (NAAS Score: 8.94)

Sampath Kumar A, Eraivan Arutkani Aiyanathan K, Nakkeeran S et al. 2023. Multifaceted Bacillus spp. for the management of cotton bacterial blight caused by *Xanthomonas citri* pv. Malvacearum. *Biological Control* 177: https://doi.org/10.1016/j.biocontrol. 2022.105111. (NAAS Score: 9.63)

Sampathkumar A, Eraivan Arutkani Aiyanathan K, Nakkeeran S et al. 2018. Documentation of virulence and races of *Xanthomonas citri pv. malvacearum* in India and its correlation with genetic diversity revealed by repetitive elements (REP, ERIC, and BOX) and ISSR markers. *3 Biotech* 8:479. https://doi.org/10.1007/s13205-018-1503-9 (NAAS rating - 7.50).

Sankaranarayanan K, Nalayini P. 2014 Performance and behaviour of Bt cotton hybrids under sub-optimal rainfall situation. *Archives of Agronomy and Soil Science*, 61(8):1179-1197 (NAAS score: 8.3)

Santhy V, Balasubramani G, Biswas A et al. 2023. Determination of minimum sample size for testing proportion of non-Bt seeds under refuge-in-bag (RIB) for Bt cotton. *Environment, Development and Sustainability* https://doi.org/10.1007/s10668-023-04188-8. (NAAS score 10.09)

Satnam S, Pandher S, Kaur R …. Rishi Kumar et al. 2023. First report of peculiar damaging behaviour of fall armyworm *Spodoptera frugiperda* (J E Smith) on the pre-blooming stage of cotton in India. *International Journal of Tropical Insect Science* 43:1831-35 (NAAS Score: 7.02)

Savitha Santosh, Velmourougane K, Verma P et al. 2024. Cotton-mycorrhizal symbiosis: a comprehensive review of benefits for sustainable agriculture. *Israel Journal of Plant Sciences* doi: 10.1163/22238980-bja10109. (NAAS Score: 7.0)

Savitha Santosh., Velmourougane K, Idapuganti RG et al. 2022. Potassium Solubilizing Potential of Native Bacterial Isolates from Cotton Rhizosphere of Rainfed Vertisols. *National Academy Science Letters*. 45: 209-212 (NAAS Score: 7.3)

Sethi K, Siwach P, Verma SK. 2015. Assessing genetic diversity among six populations of *Gossypium arboreum* L. using microsatellites markers. *Physiology and Molecular Biology of Plants*, 21 (4): 531–539. (NAAS Score 7.25)

Sethi K, Siwach P, Verma SK. 2017. Linkage disequilibrium and Association mapping of fiber quality traits in elite Asiatic Cotton (*Gossypium arboreum*) germplasm populations. *Czech Journal of Genetics and Plant Breeding* 53: DOI:10.17221/142/2016-CJGPB (NAAS Score 7.2)

Shah Vivek, Pande Rachna, Verma Pooja et al. 2022. Oviposition preference of pink bollworm, *Pectinophora gossypiella* (Saunders) on cotton. *Animal Biology*. 72(4), 353-366. (NAAS Score: 7.48)

Shah Vivek, Rachna Pande, Pooja Verma et al. 2023. Fatty acids for insect species remain constant: A case study, Pink bollworm, *Pectinophora gossypiella* (Saunders). *Animal Biology* 73(2): 141-151. (NAAS Score: 7.23)

Shah Vivek, Rachna Pande, Pooja Verma et al. 2024. Evaluation of vegetable oil as oviposition deterrents for the management of pink bollworm, *Pectinophora gossypiella* (Saunders) in cotton. *Journal of Plant Disease and Protection* 131: 403-412. (NAAS Score: 8)

Shankarganesh K., Ricupero M, Sabtharishi S. 2022. Field-evolved insecticide resistance in the cotton mealybug *Phenacoccus solenopsis* and its direct and indirect impacts on the endoparasitoid *Aenasius arizonensis*. *Scientific Reports,* 12, 16764 (2022). https://doi.org/10.1038/s41598-022-20779-3. (NAAS Score: 9.9)

Shankarganesh K, Selvi C, Karpagam C. 2020. Effects of thermal stress on the antioxidant defenses in *Paracoccus marginatus* Williams and Granara de Willink (Homoptera: Pseudococcidae) parasitised by *Acerophagus papayae* Noyes & Schauff (Encyrtidae: Hymenoptera)" *International Journal of Tropical Insect Science*, DOI No.: 10.1007/s42690-020-00222-8 (NAAS Score: 97.2)

Singh SB, Kranthi KR, Kranthi S et al. 2023. Variety ICAR-CICR Rajat Bt. *Indian Journal of Genetics and Plant Breeding* 451. (NAAS Score: 7)

Singh SB, Santhosh HB, Kranthi KR et al. 2024. Variety release Notification, ICAR, CICR 25Bt. *Indian J of Genet Plant Breeding* 84(1); 139-141. (NAAS Score: 7)

Singh V, Mandhania S, Pal A, … K Sankaranarayanan et al. 2022. Morpho-physiological and biochemical responses of cotton (*Gossypium hirsutum* L.) genotypes upon sucking insect-pest infestations. *Physiology and Molecular Biology of Plants* 28(11): 2023-2039 (NAAS score: 9.4)

Sivakumar S, Manickam S, Madhu B et al. 2024. Feasibility studies on plant architecture traits influence on seed cotton yield of *Gossypium hirsutum* zero monopodial genotypes and assessment of ecological suitability to machine harvesting, *Turkish Journal of Agriculture and Forestry* 48: 634-646. (NAAS Score: 8.9)

Thube SH, Shinde S, Shah V et al. 2023. Biocontrol potential of entomopathogenic nematode, *Heterorhabditis indica* against pink bollworm, *Pectinophora gossypiella* (Saunders) (Lepidoptera: Gelechiidae). *Journal of Cotton Research* 6, 23 https://doi.org/10.1186/s42397-023-00159-6. (NAAS Score: 8.6)

Valarmathi P, Amutha M. 2025. Field evaluation of germplasm lines of extra-long staple cotton (*Gossypium barbadense*) for tobacco streak virus resistance. Euphytica. 221: 140. https://doi.org/10.1007/s10681-025-03586-5. (NAAS Score: 7.60)

Velmourougane K, Manikandan A, Blaise D et al. 2022. Cotton stalk compost as a substitution to farmyard manure along with mineral fertilizers and microbials enhanced Bt cotton productivity and fibre quality in rainfed Vertisols. *Waste and Biomass Valorization*. 13, 2847-2860. (NAAS Score: 9.7)

Velmourougane K, Nasare SB, Verma P et al. 2025. Volatile organic compound diversity among cultivated and wild cotton species indicates plasticizer contamination of soil. *National Academy Science Letters*. https://doi.org/ 10.1007/s40009-025-01629-y (NAAS Score: 7.3).

Velmourougane K, Prasanna R, Chawla G et al. 2019. *Trichoderma-Azotobacter* biofilm inoculation improves soil nutrient availability and plant growth in wheat and cotton. *Journal of Basic Microbiology*, 59(6): 632-644. (NAAS Score: 7.76)

Velmourougane K, Prasanna R, Supriya P et al. 2019. Transcriptome profiling provides insights into regulatory factors involved in *Trichoderma viride-Azotobacter chroococcum* biofilm formation. *Microbiological Research*, 227, 126292. (NAAS score 9.70)

Velmourougane K, Prasanna R. 2017. Influence of L-amino acids on aggregation and biofilm formation in *Azotobacter chroococcum* and *Trichoderma viride*. *Journal of Applied Microbiology*, 123 (4): 977-991. (NAAS Score: 8.10).

Velmourougane K, Prasanna R. 2023. *Trichoderma–Azotobacter* Biofilm-Based Formulation Enhance Natural Plant defense Enzyme Activities in Wheat and Cotton Seedlings. *National Academy Science Letters* 47: 61-64 (NAAS score 7.3).

Velmourougane K, Radha Prasanna, Shashi Bala Singh et al. 2017. Sequence of inoculation influences the nature of extracellular polymeric substances and biofilm formation in *Azotobacter chroococcum* and *Trichoderma viride. FEMS Microbiology Ecology*, 93 (7): doi: 10.1093/femsec/fix066. (NAAS Score: 9.72).

Velmourougane K, Radha Prasanna, Surender Singh et al. 2017. Modulating rhizosphere colonisation, plant growth, soil nutrient availability and plant defense enzyme activity through *Trichoderma viride-Azotobacter chroococcum* biofilm inoculation in chickpea. *Plant and Soil*, 421: 157-174. (NAAS Score: 9.05).

Velmourougane K, Thapa S, Prasanna R. 2023. Prospecting microbial biofilms as climate smart strategies for improving plant and soil health. *Pedosphere* 33(1): 129-152. (NAAS Score: 11.51)

Velmourougane K, Venugopalan MV, Bhattacharyya T et al. 2014. Impacts of bioclimates, cropping systems, land use and management on the cultural microbial population in black soil regions of India. *Current Science*, 107 (9), 1452-1463. (NAAS Score: 7.1).

Velmourougane K, Prasanna R, Saxena AK. 2017. Agriculturally important microbial biofilms: Present status and future prospects. *Journal of Basic Microbiology*, 57(7): 548-573. (NAAS Score: 7.44).

Velmourougane K, Prasanna R, Manikandan A et al. 2025. Cyanobacterium-based bacterial and fungal biofilms as economically viable and climate smart biostimulants for Bt-cotton in rainfed Vertisol. *Journal of Applied Phycology.* https://doi.org/10.1007/s10811-025-03671-1 (NAAS score 9.0)

Verma Pooja, Blaise D, Sheeba JA et al. 2021. Allelopathic potential and allelochemicals in different intercrops for weed management in rainfed cotton. *Current Science*, 120(6), 1035. (NAAS score 7.1)

Verma Pooja, Hiremani NS, Gawande SP et al. 2022. Modulation of plant growth and antioxidative defense system through endophyte biopriming in cotton (*Gossypium* spp.) and non-host crops. *Heliyon*, 8(5) (NAAS score 10.0)

Verma Pooja, Venugopalan MV, Blaise D et al. 2020. Ethylene mediated regulation of fiber development in Asiatic cotton (*Gossypium arboreum* L.). *South African Journal of Botany*, 135:349-354 (NAAS score 7.5)

Vijay Kumar, Jagdev Singh Kular, Rishi Kumar et al 2020. "Integrated whitefly [*Bemisia tabaci* (Gennadius)] management in *Bt*-cotton in North India: an agro ecosystem-wide community-based approach. *Current Science* 119:618-624. (NAAS Score:7.10)

Waghmare RR, Velmourougane K, Blaise D et al. 2025. Wild and cultivated cotton species: comparative studies on plant biochemistry, soil biology, and soil nutrient status. *Crop & Pasture Science*. 76, CP24265. Doi: 10.1071/CP24265 (NAAS score 7.9)

Waghmare VN, Rong J, Rogers CJ et al. 2016. Comparative transmission genetics of introgressed chromatin in *Gossypium* polyploids. *American Journal of Botany*, 103: 719-730. (NAAS score 8.81)

12. Hindi publications (प्रकाशन हिन्दी)

1.	श्वेत स्वर्णिमा	वर्ष 2015	डॉ. केशव राज क्रान्ति डॉ. उल्हास नंदनकर
2	श्वेत स्वर्णिमा	वर्ष 2019-20	डॉ. विजय नामदेव वाघमारे डॉ. महेंद्र कुमार साहू
3	कपास : वैज्ञानिक/तकनीकी (हिन्दी-अंग्रेजी) शब्दकोश	वर्ष 2021	डॉ. वाय. जी. प्रसाद डॉ. महेंद्र कुमार साहू डॉ. रचना पाण्डे श्रीमती स्वाति दीक्षित
4	कपासिका (प्रवेशांक)	वर्ष 2022	डॉ. वाय. जी. प्रसाद डॉ. रचना पाण्डे डॉ. महेंद्र कुमार साहू
5	कपासिका	वर्ष 2023	डॉ. वाय. जी. प्रसाद डॉ. रचना पाण्डे डॉ. महेंद्र कुमार साहू
6	कपासिका	वर्ष 2024	डॉ. विजय नामदेव वाघमारे डॉ. रचना पाण्डे श्रीमती रामा अय्यर श्रीमती स्वाति दीक्षित
7	पर्यावरण हितैषी -प्राकृतिक रंगीन कपास	वर्ष 2017	डॉ. पुनीत मोहन डॉ. विजय नामदेव वाघमारे
8	कपास - नाशीजीव, रोग एवं सूत्रकृमी का समेकीत प्रबंधन	वर्ष 2019	डॉ. विश्लेष नगरारे डॉ. वि. चिन्नाबाबू नाईक डॉ. बाबासाहेब फंड डॉ. रचना पाण्डे डॉ. शैलेश गावंडे डॉ. दीपक नगराले डॉ. नंदिनी गोकटे-नरखेड़कर डॉ. विजय वाघमारे
9	गुलाबी सूँडी का प्रबंधन	-	वी चिन्ना बाबू नाईक डॉ. संध्या क्रांति श्री सुजीत कुंभारे डॉ. वी. एस. नगरारे डॉ. नंदिनी गोकटे नरखेडकर डॉ. विजय नामदेव वाघमारे
10	उत्तर भारत में नरमा-कपास के उत्पादन के लिए उचित प्रबंधन क्रियाएँ	वर्ष 2024	ऋषि कुमार, एस.के. सैन, अमरप्रीत सिंह, सुभाष चंद्र,देबाशीस पॉल, सतपाल सिंह, संजीव कुमार, एस.के. वर्मा एवं वाय.जी . प्रसाद।
11	साल 2025-26 के लिए उत्तर भारत में नरमा-कपास के उत्पादन के लिए उचित प्रबंधन क्रियाएँ	वर्ष 2025	ऋषि कुमार,अमरप्रीत सिंह, एस.के. सैन, सुभाष चंद्र, सतपाल सिंह, संजीव कुमार, एस.के. वर्मा एवं वाय.जी . प्रसाद।

12	कपास की फसल में रस चूसक कीटों का समन्वित कीट प्रबंधन	वर्ष 2023	ऋषि कुमार, सतपाल सिंह, एस.के. सैन, अमरप्रीत सिंह, सुभाष चंद्र, देबाशीस पॉलएवं वाय.जी . प्रसाद।
13	कपास की फसल में गुलाबी सूँडी का समन्वित प्रबंधन	वर्ष 2023	ऋषि कुमार, सतपाल सिंह, एस.के. सैन, अमरप्रीत सिंह, सुभाष चंद्र, देबाशीस पॉल एवं वाय.जी . प्रसाद।
14	कपास की कटाई के उपरांत आगामी फसल में गुलाबी सूँडी का प्रकोप कम करने के लिए क्या करें और क्या ना करें।	वर्ष 2024	ऋषि कुमार, सतपाल सिंहएवं वाय.जी . प्रसाद।
15	गुलाबी सूँडी- कीट अवस्थाएं, निगरानी व आर्थिक नुकसान स्तर तथा गुलाबी सूँडी का फसल के दौरान व गैर ऋतु में प्रबंधन	वर्ष 2024	ऋषि कुमार, सतपाल सिंह एवं वाय.जी . प्रसाद।
16	उत्तर भारत में गुलाबी सूँडी का समेकित प्रबंधन	वर्ष 2019	डॉ. विजय नामदेव वाघमारे
17			ऋषि कुमार, सतपाल सिंह, एस.के. सैन, अमरप्रीत सिंह, एवं दीपक जाखड़।
18	नरमें की फसल में ड्रिप (तुपका) सिंचाई विधि	वर्ष 2023	अमरप्रीत सिंह, ऋषि कुमार, एस.के. सैन, देबाशीस पॉल, सुभाष चंद्र, पवन सिंह कल्याणवत, संजीव कुमार, एवं वाय.जी . प्रसाद।
19	नरमें-कपास में पौषक तत्वों की कमी के लक्षण एवं उनका प्रबंधन	वर्ष 2023	अमरप्रीत सिंह, ऋषि कुमार, एस.के. सैन, देबाशीस पॉल, सुभाष चंद्र, पवन सिंह कल्याणवत, संजीव कुमार, एवं वाय.जी . प्रसाद।
20	देशी कपास में नर नपुसंकता आधारित हाईब्रीड सी.आई.सी.आर. 2 के बीज का उत्पादन	वर्ष 2023	देबाशीस पॉल, सुभाष चंद्र, अमरप्रीत सिंह, एस.के. सैन, ऋषि कुमारएवं वाय.जी . प्रसाद।
21	कपास में पौधों का शीघ्र मुरझाना या पैराविगलन के प्रमुख कारण एवं रोकथाम के लिए मार्गदर्शन	वर्ष 2023	एस.के. सैन, अमरप्रीत सिंह, ऋषि कुमार, देबाशीस पॉल, सुभाष चंद्रएवं वाय.जी . प्रसाद।
22	उत्तर भारत में नरमें कपास की बीमारियों की पहचान और उनका नियंत्रण कैसे करें	वर्ष 2023	एस.के. सैन, अमरप्रीत सिंह, ऋषि कुमार, देबाशीस पॉल, सुभाष चंद्र एवं वाय.जी . प्रसाद।
23	कपास की अधिक पैदावार के लिए पौधों की उचित संख्या कैसे बनाए रखें	वर्ष 2023	एस.के. सैन, अमरप्रीत सिंह, ऋषि कुमार, देबाशीस पॉल, सुभाष चंद्र एवं वाय.जी . प्रसाद।
24	केन्द्रीय कपास अनुसंधान संस्थान क्षेत्रीय स्टेशन सिरसा द्वारा विक्षित देशी कपास एवं अमेरिका नरम की उन्नत किस्में	वर्ष 2023	सुभाष चंद्र, देबाशीस पॉल, अमरप्रीत सिंह, एस.के. सैन, ऋषि कुमार, एवं वाय.जी . प्रसाद।

13. Awards and Recognition (2014-2025)

No.	Awardee	Award/Recognition	Awarding Institution	Year
1.	Dr. Dipak T Nagrale	Fellow of Indian Phytopathology Society	Indian Phytopathology Society	2026
2.	Dr. V. N. Waghmare	Fellow, National Academy of Biological sciences	National Academy of Biological sciences, Chennai	2025
3.	Dr. V. N. Waghmare	Cotton Scientist of the Year Award	Cotton Research and Development Association	2024
4.	Dr. Rishi Kumar	CRDA-Cotton Scientist of the Year Award -2024	Cotton Research and Development Association	2024
5.	Dr. S. Manickam	Professional Excellence Award	Cotton Research and Development Association	2024
6.	Dr. Vinita Gotmare	Professional Excellence Award	Cotton Research and Development Association	2024
7.	Dr. Rakesh Kumar	Best Cotton Thesis Award-2024	Cotton Research and Development Association	2024
8.	Dr. K. Velmourougane	Best Scientist award	ICAR-Central Institute for Cotton Research	2024
9.	Dr Rachna Pande	Agricultural Scientist Award	Dr. B. Vasantharaj David Foundation, Chennai	2024
10.	Dr. Joy Das	Young Scientist Award in Biotechnology	Agro Environmental Development Society	2024
11.	Dr. Shivaji Thube	Agricultural Scientist Award	Dr. B. Vasantharaj David Foundation, Chennai	2024
12.	Dr. J.H. Meshram & Dr. Rahul Phuke	KRITAGYA 2nd Rank in National level Hackathon 3.0 on Speed Breeding for Crop Improvement	NAHEP, ICAR, New Delhi	2023
13.	Dr. J. Gulsar Banu	Fellow, Plant Protection Association of India	Plant Protection Association	2023
14.	Dr S.K. Sain	Fellow, Plant Protection Association of India	Plant Protection Association	2023
15.	Dr S.K. Sain	Fellow of Indian Phytopathology Society	Indian Phytopathology Society	2023
16.	Dr. K. Velmourougane	Dr. M.S. Swaminathan Agri-Tech Award	Dr. Ambedkar College, Deekshabhoomi, Nagpur,	2023
17.	Dr. Shivaji Thube	The professor TN Ananthakrishnan-Kannan Nagarajan Award for Young Scientist	TN Ananthakrishnan Foundation, Chennai	2023
18.	Dr. V.N. Waghmare	Professional Excellence Award	Cotton Research and Development Association	2022
19.	Dr. D. Blaise	Fellow, Cotton Research and Development Association	Cotton Research and Development Association	2022
20.	Dr. BB Fand	NAAS Associate	National Academy of Agricultural Sciences	2022
21.	Dr. K. Velmourougane	Best Scientist award	ICAR-Central Institute for Cotton Research	2022
22.	Dr. Joy Das	Young Scientist Award	Cotton Research and Development Association	2022

No.	Awardee	Award/Recognition	Awarding Institution	Year
23.	Dr. M. Amutha	Outstanding scientist Award	Society for Biotic and Environmental Research	2022
24.	ICAR - CICR	Rajarshi Tandon Rajbhasha award	Indian Council of Agricultural Research	2021
25.	Dr. D. Blaise	The Indian Society of Agronomy Gold medal	Indian Society of Agronomy	2021
26.	Dr A. Manivannan	Agricultural Scientist Award	Dr. B. Vasantharaj David Foundation	2021
27.	Dr. S.K. Sain	Fellow, Society for Scientific Development in Agriculture and Technology	Society for Scientific Development in Agriculture and Technology, Meerut	2021
28.	Dr. M. Amutha	Agricultural Scientist Award	Dr. B. Vasantharaj David Foundation	2021
29.	Dr. D. Blaise	Fellow, National Academy of Agricultural Sciences	National Academy of Agricultural Sciences	2020
30.	Dr. A.H. Prakash	Professional Excellence Award	Cotton Research and Development Association	2020
31.	Dr. V.S. Nagrare	Scientist Award	Dr. B. Vasantharaj David Foundation, Chennai.	2020
32.	Dr. Rishi Kumar	Scientist Award	Dr. B. Vasantharaj David Foundation, Chennai.	2020
33.	Dr. Babasaheb B. Fand	Young Entomologist Award	Entomological Society of India	2020
34.	Dr. Babasaheb B Fand	Early Career Researcher Award	Royal Entomological Society of London	2020
35.	Dr. S. Usha rani	Nehru Women Excellence Award	Nehru Group of Institutions	2020
36.	Dr S.K. Sain	Outstanding Achievement Award	Society for Scientific Development in Agriculture & Technology, Meerut	2020
37.	Dr A. Manivannan	Research Excellent Award for Cotton Genetic Improvement	Society for Biotic and Environmental Research	2020
38.	Dr. A. Sampathkumar	Sree V.P. Ganesan Award for the best student in PhD (Plant Pathology)- Host pathogen interaction	Tamil Nadu Agricultural University	2020
39.	Dr. A. Sampathkumar	T.S. Natarajan Award for the best student in PhD (Plant Pathology) - Biological control study	Tamil Nadu Agricultural University	2020
40.	Dr. A. Sampathkumar	Dr. R. Samiyappan Award for the best PhD (Plant Pathology)- Molecular plant pathology	Tamil Nadu Agricultural University	2020
41.	ICAR-CICR	Rajarshi Tandon Rajbhasha award	Indian Council of Agricultural Research	2019
42.	Dr. Babasaheb B. Fand	The professor TN Ananthakrishnan Award for Young Scientist for biennium 2018-19	TN Ananthakrishnan Foundation, ChennaiS	2019
43.	Dr. Babasaheb B. Fand	Young Scientist Award	Dr. B. Vasantharaj David Foundation, Chennai.	2019

No.	Awardee	Award/Recognition	Awarding Institution	Year
44.	Dr. J. Gulsar Banu	Fellow, Society for Bio Control Advancement	Society for Bio Control Advancement	2019
45.	Dr. K. Velmourougane	Best Scientist award	ICAR-Central Institute for Cotton Research	2019
46.	Dr S.K. Sain	Young Scientist Award	Society for Scientific Development in Agriculture and Technology, Meerut	2019
47.	Dr. Rishi Kumar	USIEF Alumni Award	United States-India Educational Foundation (USIEF)	2017
48.	ICAR-CICR	Rajarshi Tandon Rajbhasha award	Indian Council of Agricultural Research	2018
49.	Dr M.V. Venugopalan	Fellow of Maharashtra Academy of Sciences	Maharashtra Academy of Sciences	2018
50.	Dr M.V. Venugopalan	Vasantrao Naik Gold Medal	Dr PDKV, and Vasantrao Naik Memorial	2018
51.	Dr. K. Rameash	Fellow, Society of Plant Protection Sciences	The Society of Plant Protection Sciences	2018
52.	Dr. M. Amutha	Fellow of the Society of Plant protection Science	The Society of Plant Protection Sciences	2018
53.	Dr. K. Shankarganesh	Fellow, Society of Plant Protection Sciences	The Society of Plant Protection Sciences	2018
54.	Dr. K. Velmourougane	IARI Gold medal for Ph.D	ICAR- Indian Agricultural Research Institute	2018
55.	ICAR-CICR	ISO 9001:2015 certificate	International Organization for Standardization	2018
56.	Dr. M. Amutha	Fellow of the Society for Biocontrol advancement	Society for Bio Control Advancement	2017
57.	Dr. P. Nalayini	ICAC Research associate	International Cotton Advisory Committee	2016
58.	Dr. P. Valarmathi	Young Scientist Award	Society for Scientific Development in Agriculture and Technology, Meerut	2016
59.	Dr A. Manivannan	The President of India Award for the best Ph.D student	Tamil Nadu Agricultural University	2015
60.	Dr A. Manivannan	Thiru D.R. Thirunavukkarasu Award for the best Ph.D student	Tamil Nadu Agricultural University	2015
61.	Dr. M.V. Venugopalan,	Fellow of Indian Society of Agronomy	The Indian Society of Agronomy, New Delhi	2014
62.	Dr. P. Valarmathi	Young Scientist Award	Indian Virological Society	2014

14. Linkages and collaborations

	Area of collaboration/linkage	Institutions/organizations
1	Cotton Genetic Resources and Improvement	• NBPGR, New Delhi, • ATGC, Hyderabad • Rasi Seeds Pvt Ltd • NRC DNA Fingerprinting, New Delhi • State Agricultural Universities (21 AICRP centres)
2	Transgenic Cotton and Biotechnology	• DBT, Govt of India • MAHYCO, Jalna • CSIR-NBRI, Lucknow • DAC, GoI • Bayer Crop Sciences • Rallis India Ltd. Bengaluru • CSIR-NBRI, Lucknow
3	Seed Production and Technology	• NSP, New Delhi • ICAR, New Delhi • PPVFRA, Govt of India • Mahabeej, Akola • Farmers and private FPO
4	Integrated Pest and Disease Management	• State Department of Agriculture, Maharashtra, Haryana, • NCIPM • State Agricultural Universities (Dr. PDKV Akola, VNMKV Parbhani, MPKV Rahuri, NAU Surat, JAU Junagarh, RAU, Sriganganagar, RVSKVV Gwalior, UAS Dharwad, UAS Raichur, PJTSAU Hyderabad, ANGRAU Guntur and PAU, Ludhiana) • CRIDA, Hyderabad • DST-SERB, Govt of India • ITC Limited, Guntur • Agrovision Foundation, Nagpur • ATGC Biotech Pvt Ltd
5	Biological Control and Protection products Evaluation	• IARI, New Delhi • DST-SEED, Govt of India • Gharda Chemicals Ltd, Thane Mumbai • CSIR-IICT, Hyderabad • CSIR-NBRI, Lucknow • ICAR- CPCRI, Kasargod, Kerala • Evonik India Pvt. Ltd., Mumbai • Hindustan Petroleum Corporation Ltd. Mumbai
6	Organic Cotton production	• Cottonguru MahaFPC Limited, Mumbai. • Welspun Foundation for Health and Knowledge (WFHK), Gujarat
7	Integrated Nutrition management and Product Evaluation	• IFFCO, Pune • WWF India • IPNI, Gurgaon, Haryana • ISRO, Hyderabad • Rasi Seeds Pvt Ltd. • Nuziveedu Seeds Ltd. • Rashtriya Chemicals & Fertilizers Ltd, Mumbai • RIVULIS Irrigation India Pvt. Ltd., Pune

	Area of collaboration/linkage	Institutions/organizations
		• SMART CHEM Technology Ltd, Pune • M/s. Isha Agro Sciences Pvt. Ltd., Pune • ICAR – CIRCOT Mumbai • M/s COROMANDEL International Ltd, Hyderabad
8	Cotton Mechanization	• CIAE, Bhopal & Precision tools, Nagpur • IIIT& M, Gwalior, Jamia Milia Islamia University, Delhi, CMERI-CoEFM, Ludhiana • CSIR-CMERI-CoEFM, Ludhiana • ICAR-CIRCOT, Mumbai
9	Fibre quality evaluation and Cotton Value Chain	• ICAR-CICRCOT, Mumbai • NASF, New Delhi • Dr. PDKV, Akola and ICAR-CIRCOT, Mumbai • Better Cotton Initiative, India and VNMKV Parbhani
10	Student Research Guidance and Human Resource Development	• Sam Higginbottom University of Agriculture, Technology and Sciences Allahabad, UP • RTMNU, Nagpur • Dr. PDKV, Akola • Chaudhary Devi Lal University, Sirsa. • Guru Jambheshwar University of Science & Technology, Hisar. • Maharashi Dayanad University, Rohtak • Chandan Mal Karnani College, Sirsa • Kurukshetra University, Haryana • Central Agricultural University Imphal • MGM, KVK Gandheli, Sambhaji Nagar • Better Cotton Initiative, New Delhi • Yuva Rural Association • NRC Orchids, Sikkim • CAU Manipur

15. MoU/MTA signed with public and private organizations (2014-2024)

No.	Area of MoU/collaboration	Public	Private
1	Multiplication and commercialization cotton varieties	7	17
2	Marketing Dipstick and ELISA Kit	-	2
3	Manufacturing yellow sticking Trap& Pheromone trap	-	1
4	Development of transgenic cotton varieties and conducting field trails	3	1
5	Demonstration of High-Density Planting System	-	4
6	Contract projects	5	17
7	Consultancy projects	5	12
8	Education/teaching	13	3

16. Extramural research projects (2014-25)

Agency	Title of project	PI/CCPI name	Duration	Project cost (Lakhs)	Status
DA & FW	Real-Time Monitoring of Cotton Pink Bollworm using AI Smart Trap in the North Zone	Dr. K. Rameash	2025-26	75.50	Ongoing
DA & FW	Pilot Project on Deployment of AI Pheromone Trap for Real-time Monitoring of Cotton Pink bollworm in Punjab	Dr. K. Rameash	2024-25	46.10	Completed
DST SERB CRG	Structure function relationship studies on farnesol dehydrogenase from *Helicoverpa armigera* (Hübner) for developing novel insect growth regulatory molecules.	Dr. Rakesh Kumar (CCPI)	2024-27	20.45	Ongoing
NRSC	Establishment of Cosmic Ray Soil Moisture Instrument for Validation of Model Computed Soil Moisture Under National Hydrology Project	Dr. A. Manikandan (Collaborative project)	2023-26	13.41	Ongoing
DST-SERB	Evaluation of chemical defoliants augmenting leaf senescence for mechanical picking in Bt Cotton.	Dr. J.H. Meshram	2022-25	49.36	Completed
RGTC	Landscape Diagnostic Survey (LDS) of cotton production practices and crop performance in Maharashtra.	YG. Prasad, Director, CICR Dr. A.R. Reddy, Dr. Ramkrushna GI	2022-24	34.8	Completed
SERB-DST	Development of sociochemical based attractants for sustainable management of cotton stem weevil *Pempherulus affinis* (Faust) Curculionidae: Coleoptera).	Dr. K. Shankarganesh	2022-25	31.53	Ongoing
DST-CRG	Thermal stress induced effect on insecticide susceptibility and fitness traits in whitefly, *Bemisia tabaci, a* serious pest of worldwide concern.	Dr. Rishi Kumar	2022-25	32.01	Ongoing
DST-SERB-CRG	Unravelling the Differential Expressed Proteins (DEP) in cotton genotypes with contrasting resistance to leafhopper and development	Dr A. Manivannan	2020-24	26.13	Completed

Agency	Title of project	PI/CCPI name	Duration	Project cost (Lakhs)	Status
	of the protein biomarkers/functional markers for leafhopper resistance				
DST-CRG	Unraveling the Differential Expressed Proteins (DEP) in cotton genotypes with contrasting resistance to leafhopper and development of the protein biomarkers/functional markers for leafhopper resistance.	Dr. A Manivannan	2021-24	26.20	Completed
Maharashtra Forest Dept	Land resource inventory of Pench National Park for ecological restoration (NBSS & LUP, Pench Tiger Reserve Project)	Dr. K. Velmourougane (CCPI)	2020-24	28.00	Completed
DST-SERB	Bioprospecting microbial volatiles for plant growth promotion and sucking pest (Whitefly and Jassids) management in Bt cotton	Dr. K. Velmourougane	2019-22	52.00	Completed
NASF	An Inclusive Agri-Business Model for Sustainable Cotton Marketing in the State of Maharashtra.	Dr. A.R.Reddy (CCPI)	2018-21	25.31	Completed
DBT	Development of consensus genetic linkage map for Gossypium spp. with SNP markers and QTL analysis for fibre traits.	Dr. V.N. Waghmare	2017-21	236.3	Completed
DST SERB	Pink bollworm, Pectinophora gossypiella (Saunders): Resistance Monitoring, Fitness Costs, Inheritance of Resistance to Cry toxins expressed in Bt cotton.	Dr. V. Chinna Babu Naik	2017-20	19.70	Completed
DST SERB	Genetic diversity in geographical Population of Pink bollworm Pectinophora gossypiella (Saunders) in India.	Dr. V. Chinna Babu Naik	2017-21	32.11	Completed
National Carbon Project, ISRO	Quantitative estimation of carbon and moisture fluxes over the cotton based agro-ecosystem: Integrating ground observations, satellite data and modelling	Director, ICAR-CICR Dr. Ramkrushna GI (Collaborative project)	2017-26	38.40	Ongoing

Agency	Title of project	PI/CCPI name	Duration	Project cost (Lakhs)	Status
ICAR Extramural	Introgression of genes for whitefly and CLCuD resistance in upland cotton (*G. hirsutum*).	Dr. V.N Waghmare	2016-19	75.0	Completed
DST-SERB	Evaluation of selectivity of insecticides against different mealy bug species and their major natural enemies associated with cotton, tomato, brinjal and papaya.	Dr. K. Shankarganesh	2015-17	24.60	Completed
DST-SEED	Exploration and development of thermal tolerant strain of biocontrol agent, Acerophagus papayae for sustainable management of papaya mealybug, Paracoccus marginatus in crops.	Dr. K. Shankarganesh	2016-19	19.70	Completed
DST-SERB	Effect of thermal stress on fitness traits of two mealybug pests, Phenacoccus solenopsis, and Paracoccus marginatus and their parasitoids Aenasius bambawalei and Acerophagus papaya.	Dr. K. Shankarganesh	2016-19	54.98	Completed
DST	Development of vision based expert system for vacuum picking of cotton.	Er. G. Majumdar	2013-17	1.70	Completed
DST	Entomopathogenic-endophytes mediated plant defense as a novel approach for the management of boll worms in cotton.	Dr. M. Amutha	2013-18	29.62	Completed
DST	Engineering root-knot nematode resistance in cotton by RNAi mediated silencing of parasitism genes of *Meloidogyne incognita.*	Dr. N. G. Narkhedkar	2013-16	35.23	Completed
DST	Design & Development of a cotton picking head.	Er. G. Majumdar	2012-17	29.89	Completed
UGC:	Association mapping of fiber traits in *Gossypium arboreum* L. accessions using SSR, ISSR and AFLP markers.	Dr. S.K. Verma	2012-16	11.91	Completed
NFBSFARA	Molecular characterization and validation of fiber strength genes with fiber specific promoter for improvement in cotton	Dr. G. Balasubramani	2012-15	100.14	Completed

Agency	Title of project	PI/CCPI name	Duration	Project cost (Lakhs)	Status
DST	Design & Development of a cotton picking head	Er.Gautam Majumdhar	2012-14	29.89	Completed
Maha. Govt.	Impact evaluation of Bt cotton in Maharashtra	Dr.Anuradha Narala	2012-14	30.00	Completed
NAIP	Georeferenced soil information system for land use planning and monitoring soil and land quality for agriculture	Dr. M.V. Venugopalan	2009-14	250.0	Completed
NAIP	Decision support system for major insect pests of rice- and cotton-based cropping systems	Dr. V. S. Nagrare	2009-14	116.27	Completed

17. Research Evaluation System

Within the framework of the Institute, various committees are functioning, sub-serving the purpose of planning and research.

Quinquennial Review Team (QRT)
The Quinquennial Review Team constituted by ICAR, comprising Eminent Scientists in various disciplines reviews the functioning and progress of research in ICAR-CICR for a specified period and provide their recommendations to the Council.

Research Advisory Committee (RAC)
The Research Advisory Committee constituted by the Council consisting of Eminent Scientists in various disciplines provides the broad guidelines in terms of thrust areas and approaches. This committee meets every year.

Institute Management Committee (IMC)
The Institute Management Committee has representatives from the State Government., SAUs, ICAR and the farming community with Director, ICAR-CICR as its Chairman. The Institute Management Committee has broad powers to oversee R&D activities of the Institute in respect of the plan proposals and periodical review of R&D activities. The management committee meets regularly to review implementation of the programmes.

Institute Research Committee (IRC)
The IRC meets at least twice a year. In the IRC meetings, the research programmes of the Institute/ Regional Stations are comprehensively reviewed and the technical programme approved for implementation. The new project proposals submitted by the Scientists are also considered critically and approved. The IRC meetings are chaired by the Director. IRC also arranges scientific talks from in house and invited experts on topics of contemporary research.

Institutional Biosafety Committee (IBSC)
The Institutional Biosafety Committee (IBSC) is a registered and accredited body constituted in accordance with the DBT "Regulations and Guidelines on Biosafety of Recombinant DNA Research and Biocontainment, 2017," under the Environment (Protection) Act, 1986. The committee ensures biosafety compliance in research involving genetically modified organisms, recombinant DNA technology, and related biological materials. The IBSC reviews project activities, monitors biosafety practices, provides guidance to researchers, and submits annual reports to DBT/RCGM. It meets at least twice a year, with the DBT nominee serving as the link between the institute and DBT for regulatory oversight.

18. Future area of research

- Germplasm augmentation, genetic base broadening, pre-breeding, heterotic pools, parental line development, and their utilization in breeding programs to break yield barriers, impart climate resilience, and stress tolerance
- Develop "Searchable database for registered cotton germplasm" for their exchange and utilization in breeding programs through collaborative research in the public-private-partnership mode
- Identification of new genes, promoters, markers, and QTLs for the development of transgenics with higher cotton productivity and tolerance to biotic and abiotic stresses using genome editing tools
- Development of region-specific climate resilient varieties/hybrids with unique traits, such as compact type, high yield, higher GOT, fibre quality, and tolerance to biotic/abiotic stresses
- Quality seed production and popularization/commercialization of ICAR-CICR bred varieties and hybrids
- Development of elite interspecific (H × B) hybrids and barbadense varieties (both BG II and non-GM) with superior yield, high strength, high GOT, and sucking pest tolerance.
- Establishing baseline sustainability indicators for yield variability in cotton-growing regions and developing an agro-ecoregion-specific package of practices to enhance soil health and cotton productivity
- Formulation and promotion of a location-specific package of practices for regenerative, conservation, and organic cotton cultivation to enhance soil health and cotton productivity for niche markets
- Standardization of a comprehensive package for high-density planting systems and closer spacing technology to break yield barriers in low-productive environments
- Development of climate smart precision crop production technologies, including sensor-based applications employing artificial intelligence (AI), machine learning, computer vision, and robotics in cotton crop production for soil, water, nutrient, and weed management to enhance climate resilience, resource use efficiency
- Strengthening and popularizing mechanization in cotton production through development and small-scale cotton harvesters, standardization of canopy management, plant growth regulators, defoliants to make cotton amenable to mechanical harvesting, ensuring low trash content and acceptable fibre quality.
- Socioeconomic impact of ICAR-CICR and AICRP technologies and reasons for technology adoption/non-adoption. Identification of key factors responsible for the decline in cotton area and total factor productivity and its redress
- Development and implementation of pluralistic extension models for cotton value chain development, validation of targeted scalable technologies through large-scale demonstrations, and dissemination in public-private-partnership (PPP) mode to bridge yield gaps
- Development of prediction/forewarning models for detecting resistance development in cotton with respect to climate change, new biotypes, and incidence of key and emerging cotton pests and diseases using big data analytics and decision support systems
- Innovative AI/IoT/PAT-based diagnostic tools and techniques for the precise detection and management of key pests, diseases, and nematodes to enhance efficiency and productivity and reduce plant protection costs
- Identification, development, commercialization, and dissemination of microbial formulations (e.g., endophytes, bioinoculants, biopesticides, bioagents, entomopathogenic nematodes, and microbial-based volatiles) for cotton production and protection
- Partnership with industries/startups/FPOs as a knowledge partner to promote sustainable cotton production in the form of collaborative and contract research, CSR funding including commercialization and up-scaling of technologies, demonstrations, and advisories to the farmers

19. All India Coordinated Research Project (AICRP) on Cotton

The All India Coordinated Cotton Improvement Project (AICCCIP) was established in 1967 with its headquarters at Coimbatore (Tamil Nadu) with adequate funding from ICAR to improve both the quality and production of cotton, considering the needs of domestic textile industry and export. The project office started functioning at the ICAR-IARI Regional Center, Coimbatore till 1976. ICAR established the Central Institute for Cotton Research (CICR) at Nagpur in the year 1976 and made this IARI Regional Center as ICAR-CICR Regional Station. AICCIP on Cotton is headed by the Project Coordinator (Cotton improvement), who gets necessary directives from the Deputy Director General (Crop Science)/Assistant Director General (Commercial Crops), ICAR, New Delhi and technical advice from the Director, ICAR-CICR, Nagpur for an effective and smooth functioning of the Project. To give new thrust and direction in terms of multi-disciplinary and multi-center approaches for improved cotton cultivars and other novel cotton production and protection technologies for ensuring sustainable cotton cultivation, the ICAR ensured the active involvement of 21 participating centers from 17 State Agricultural Universities across the cotton growing states by knitting them together under the aegis of AICCIP on Cotton (AICRP on Cotton - renamed in 2014). The ICAR-Central Institute for Cotton Research (ICAR-CICR), Nagpur (Maharashtra), and its Regional Stations at Coimbatore (Tamil Nadu) and Sirsa (Haryana) provide basic research support and participate in certain strategic research and evaluation activities of the AICRP on Cotton. The ICAR-Central Institute for Research on Cotton Technology (ICAR-CIRCOT), Mumbai and its regional centers spread across the country are closely associated with the AICRP on Cotton in assessing the fiber quality parameters of cotton and ensuring value addition to cotton. Drastic reduction in cotton area in Tamil Nadu and for convivence in monitoring of the ICAR - AICRP on Cotton has been moved to the ICAR-CICR, Nagpur from its regional station Coimbatore in 2023. ICAR – AICRP research and evaluation activities across AICRP centres in all cotton growing states and Nagpur being a central location

The major activities of various participating ICAR - AICRP centres include the development of improved cotton varieties and hybrids suitable to varied ago-climatic conditions and their multi-location testing; the development of location-specific crop production and crop protection technologies; development of modules for suitable intercropping and rotation crop for different agro-ecological zones; production of breeder seeds of promising varieties and parents of hybrids; and conducting Front Line Demonstrations on improved cotton technologies and *Kisan Melas* for effective and speedy dissemination of newer technologies to the cotton growers. In the last five decades, ICAR-AICRP on Cotton has released over >420 cotton varieties and hybrids for the different cotton growing tracts of the country, which are high yielding with biotic and abiotic stress tolerance, improved fibre qualities along with suitable low-cost production technologies, and development of economical and eco-friendly package of practices for realizing enhanced cotton productivity. In addition, research to identify the suitability of soil for cotton, optimum seed rate for different agro-ecological conditions, optimum plant geometry, diversified cropping and inter-cropping system, Integrated Nutrient Management (INM), Integrated Pest Management (IPM), Integrated Diseases Management (IDM) modules were successfully developed under the ICAR - AICRP on cotton and disseminated through demonstrations among cotton farmers.

Technologies developed and released:

	Centre name	Affiliated University	Technologies released (in numbers)				
			Varieties released	Crop Production		Crop Protection	
				Agronomy	Physiology/ Biochemistry	Entomology	Pathology
	North Zone						
1	Faridkot	PAU, Ludhiana	9	14	NA	37	1
2	Bathinda	PAU Ludhiana	8	6	-	17	2
3	Hisar		2	3	3	4	-

4	Sriganganagar	SKRAU, Bikaner	7	10	4	4	4
	Central Zone						
5	Nanded	VNMKV, Parbhani	12	12	--	1	1
6	Rahuri	MPKV, Rahuri	9	5	-	17	2
7	Akola	Dr. PDKV, Akola	6	8	-	4	-
8	Surat	NAU, Navsari	13	10	15	15	7
9	Junagarh	JAU, Junagadh	6	5	10	10	6
10	Khandwa	RVSKVV, Gwalior	4	4	Nil	3	2
11	Bhawanipatna	OUAT, Bhubaneswar	2	9	-	8	-
12	Banswara	MPUAT-Udaipur	2	4	-	8	-
	South Zone						
13	Guntur	ANGRAU	3	11	10	17	20
14	Nandyal	ANGRAU	8	3		3	
15	Dharwad	UAS, Dharwad	17	7	2	6	7
16	Raichur	UAS, Raichur	7	-	-	-	-
17	Chamrajanagar	USA, Bengaluru	-	3	-	3	-
18	Coimbatore	TNAU, Coimbatore	5	3	0	3	3
19	Srivilliputtur	TNAU	4	--	--	--	--

20. Krishi Vigyan Kendra (KVK)

ICAR has sanctioned a Krishi Vigyan Kendra (KVK) for Nagpur district in 1994 and is located at the premises of CICR, Nagpur. It is functioning under the control of Director, CICR, Nagpur. KVK, CICR, Nagpur comes under ATARI, Zone-VIII, Pune. KVK, Nagpur is a grass root level organization meant for application of technology through assessment, refinement and demonstration of proven technologies and training of same under different 'micro farming' situations in Nagpur district.

Mandates:

- Technology Assessment, Refinement and Demonstration of technology / products.
- On farm testing (OFT) to identify the location specificity of agricultural and allied technologies under various farming system.
- Front line demonstrations (FLD) to establish its production potentials on the farmer's fields.
- Training of farmers to update their knowledge & skills in modern agricultural & allied technologies.
- Training of extension personnel to orient them in the frontier areas of technology development.
- To work as resource and knowledge centre of agricultural technologies for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district.

Staff (as on 30th June, 2025)

Category	Sanctioned	Filled	Vacant
Head	01	0	1
Subject Matter Specialists	6	3	3
Technical	5	5	0
Administrative	02	0	2
Skilled Support Staff	02	1	1

Training organized (2014-24):

Clientele	Type	Scheme	No. of Trainings	No. of participants	Year
Farmers & farm women	On-campus	KVK	11	301	2015
	Off Campus	KVK	47	1341	2015
Rural youths	On-campus	KVK	10	205	2015
	Off-campus	KVK	2	41	2015
Extension functionaries	On-campus	KVK	5	166	2015
	Off-campus	KVK	5	132	2015
Sponsored Programme	On-campus	KVK	1	100	2015
Vocational training	On-campus	KVK	3	75	2015
Farmers & farm women	On-campus	KVK	36	1378	2016
	Off Campus	KVK	24	1128	2016
Rural youths	On-campus	KVK	13	500	2016
	Off-campus	KVK	18	605	2016
Extension functionaries	On-campus	KVK	7	209	2016
Sponsored Programme	On-campus	KVK	1	40	2016
Vocational training	On-campus	KVK	1	362	2016
Farmers & farm women	On-campus	KVK	33	1620	2017
	Off Campus	KVK	22	1068	2017
Rural youths	On-campus	KVK	21	823	2017
	Off-campus	KVK	10	655	2017
Extension functionaries	On-campus	KVK	16	583	2017
Sponsored Programme	On-campus	KVK	2	40	2017
Farmers & farm women	On-campus	KVK	37	1538	2018
	Off Campus	KVK	26	1113	2018
Rural youths	On-campus	KVK	15	761	2018
	Off-campus	KVK	6	273	2018
Extension functionaries	On-campus	KVK	11	349	2018
Sponsored Programme	On-campus	KVK	8	193	2018
Vocational training	On-campus	KVK	11	320	2018
Farmers & farm women	On-campus	KVK	32	1215	2020
	Off Campus	KVK	15	537	2020
Rural youths	On-campus	KVK	10	387	2020
	Off-campus	KVK	7	170	2020
Extension functionaries	On-campus	KVK	8	217	2020
	Off-campus	KVK	2	82	2020
Sponsored Programme	On-campus	KVK	5	112	2020
Vocational training	On-campus	KVK	2	68	2020
FAP under GKMS	On campus	GKMS	4	92	2020
	Off campus	GKMS	9	331	2020
Farmers & farm women	On-campus	KVK	42	1942	2021
	Off Campus	KVK	16	745	2021
Rural youths	On-campus	KVK	51	2338	2021
	Off-campus	KVK	19	880	2021
Extension functionaries	On-campus	KVK	8	276	2021
Sponsored Programme	On-campus	KVK	1	40	2021
FAP under GKMS	On campus	GKMS	2	64	2021
	Off campus	GKMS	9	274	2021
Farmers & farm women	On-campus	KVK	33	1742	2022
	Off Campus	KVK	23	894	2022

Clientele	Type	Scheme	No. of Trainings	No. of participants	Year
Rural youths	On-campus	KVK	14	889	2022
	Off-campus	KVK	6	227	2022
Extension functionaries	On-campus	KVK	8	384	2022
	Off-campus	KVK	4	194	2022
Sponsored Programme	On-campus	KVK	2	45	2022
FAP under GKMS	On campus	GKMS	3	120	2022
	Off campus	GKMS	12	385	2022
Farmers & farm women	On-campus	KVK	31	1124	2023
	Off Campus	KVK	32	1526	2023
Rural youths	On-campus	KVK	15	625	2023
	Off-campus	KVK	11	391	2023
Extension functionaries	On-campus	KVK	8	219	2023
	Off-campus	KVK	1	69	2023
Sponsored Programme	On-campus	KVK	1	26	2023
FAP under GKMS	On campus	GKMS	4	152	2023
	Off campus	GKMS	9	350	2023
Farmers & farm women	On-campus	KVK	16	566	2024
	Off Campus	KVK	32	1173	2024
Rural youths	On-campus	KVK	14	574	2024
	Off-campus	KVK	7	291	2024
Extension functionaries	On-campus	KVK	12	224	2024
	Off-campus	KVK	1	69	2024
Sponsored Programme	On-campus	KVK	14	340	2024
FAP under GKMS	On campus	GKMS	3	120	2024
	Off campus	GKMS	9	320	2024

Frontline Demonstrations, Cluster FLD on Oilseed and Pulses and On Farm Trials

Activities	Number	Area (ha)
A. Frontline Demonstrations		
Crop Production	28	145.6
Plant Protection	18	83.2
Horticulture	25	125
Veterinary	32	780
Home Science	22	396
B. Cluster FLD on Oilseed and Pulses	18	360
C. On Farm Trials		
Crop Production	20	104
Plant Protection	20	104
Horticulture	20	104
Veterinary	20	252
Home Science	17	459

21. Personnel (as on 1st March 2026)

	Name	Designation	Discipline	Place	E-Mail
1	Dr. V.N. Waghmare	Director	Genetics & Pl. Breeding	NGP	vnwaghmare13@gmail.com
2	Dr. Vinita Gotmare	Pr. Scientist	Genetics & Pl. Breeding	NGP	vinitag22@gmail.com
3	Dr. M. Saravanan	Sr. Scientist	Genetics & Pl. Breeding	NGP	msaraniari@gmail.com
4	Dr. Rahul M. Phuke	Sr. Scientist	Genetics & Pl. Breeding	NGP	rahulphuke18@gmail.com
5	Dr. Basanagouda Gonal	Scientist	Genetics & Pl. Breeding	NGP	basanagoudagonal@gmail.com
6	Dr. S. Manickam	Pr. Scientist	Genetics & Pl. Breeding	CBE	manickam.cicr@gmail.com
7	Dr. A. Manivannan	Sr. Scientist	Genetics & Pl. Breeding	CBE	manivannan461@gmail.com
8	Dr. K. Baghyalakshmi	Scientist	Genetics & Pl. Breeding	CBE	kauverik@gmail.com
9	Dr. S.K. Verma	Pr. Scientist	Genetics & Pl. Breeding	SIR	surenderkumar64@yahoo.co.in
10	Dr. Subhash Chandra	Scientist	Genetics & Pl. Breeding	SIR	chandraasubhash@gmail.com
11	Dr. J. Amudha	Pr. Scientist	Agrl. Biotechnology	NGP	jamudhacicr@gmail.com
12	Dr. Kishor U Tribhuvan	Sr. Scientist	Agrl. Biotechnology	NGP	kish.tribhuwan@gmail.com
13	Dr. Joy Das	Sr. Scientist	Agrl. Biotechnology	NGP	uasjoy@gmail.com
14	Dr. Rakesh Kumar	Sr. Scientist	Agrl. Biotechnology	NGP	rakesh.goswami12@gmail.com
15	Dr. Suhas G Karkute	Sr. Scientist	Agrl. Biotechnology	NGP	suhaskarkute@gmail.com
16	Dr. V. Santhy	Pr. Scientist	Seed Technology	NGP	santhy100@gmail.com
17	Dr. S.S. Mahajan	Pr. Scientist	Seed Technology	NGP	mahsunil@gmail.com
18	Dr. Debashis Paul	Scientist	Seed Technology	NGP	deba.13.paul@gmail.com
19	Dr. Arjun.S. Tayade	Head, CPD	Agronomy	NGP	arjuntayade3@gmail.com
20	Dr. Blaise Desouza	Pr. Scientist	Agronomy	NGP	blaise_123@rediffmail.com
21	Dr. Ramkrushna GI	Pr. Scientist	Agronomy	NGP	rgidu@yahoo.co.in
22	Dr. Mahadev Reddy K	Sr. Scientist	Agronomy	NGP	kalavamahadevreddy@gmail.com
23	Dr. P. Nalayini	Pr. Scientist	Agronomy	CBE	nalayiniganesh@gmail.com
24	Dr. K. Sankaranarayanan	Pr. Scientist	Agronomy	CBE	sankaragro@gmail.com
25	Dr. R. Raja	Pr. Scientist	Agronomy	CBE	rajatnau@gmail.com
26	Dr. Amarpreet Singh	Sr. Scientist	Agronomy	SIR	amarpreet225@gmail.com
27	Dr. A. Manikandan	Sr. Scientist	Soil Science	NGP	poonamani223@gmail.com
28	Dr. D. Kanjana	Sr. Scientist	Soil Science	CBE	kanjanacicr@gmail.com
29	Dr. Narayan Borkar	Scientist	Farm Mach. & Power	NGP	ntborkar@gmail.com
30	Dr. Jayant.H. Meshram	Pr. Scientist	Plant Physiology	NGP	j.h.meshram@gmail.com
31	Dr. AH Prakash	Head, RS	Plant Physiology	CBE	prakashcicr@gmail.com
32	Dr. J. Annie Sheeba	Sr. Scientist	Plant Physiology	CBE	anniephysiology@gmail.com
33	Dr. Pooja Verma	Sr. Scientist	Pl. Biochemistry	NGP	poojaverma1906@gmail.com
34	Dr. K. Velmourougane	Pr. Scientist	Agrl. Microbiology	NGP	velicar@gmail.com
35	Dr. G.T. Behere	Head, CPT	Agrl. Entomology	NGP	ganeshbehere@gmail.com
36	Dr. Vislesh. S. Nagrare	Pr. Scientist	Agrl. Entomology	NGP	vs.nagrare@gmail.com
37	Dr. Rachna Pande	Sr. Scientist	Agrl. Entomology	NGP	rachna.ento@gmail.com
38	Dr. Babasaheb Fand	Sr. Scientist	Agrl. Entomology	NGP	babasahebfand@gmail.com
39	Dr. Shivaji Thube	Sr. Scientist	Agrl. Entomology	NGP	shivajithube@gmail.com
40	Dr. Vivek Shah	Sr. Scientist	Agrl. Entomology	NGP	vivek4256@gmail.com
41	Dr. K. Rameash	Pr. Scientist	Agrl. Entomology	CBE	krameash@gmail.com
42	Dr. M. Amutha	Pr. Scientist	Agrl. Entomology	CBE	amuento@yahoo.co.in
43	Dr. K. Shankarganesh	Sr. Scientist	Agrl. Entomology	CBE	shankarento@gmail.com
44	Dr. Rishi Kumar	Pr. Scientist	Agrl. Entomology	SIR	rishipareek70@yahoo.co.in
45	Dr. Shailesh. Gawande	Sr. Scientist	Plant Pathology	NGP	spgawande1@gmail.com
46	Dr. Dipak.T. Nagrale	Sr. Scientist	Plant Pathology	NGP	dip29unique@gmail.com
47	Dr. Neelakanth Hiremani	Sr. Scientist	Plant Pathology	NGP	nhneelmani@gmail.com
48	Dr. A. Sampath Kumar	Sr. Scientist	Plant Pathology	CBE	sampath_a@rediffmail.com
49	Dr. P. Valarmathi	Sr. Scientist	Plant Pathology	CBE	valarpath@gmail.com
50	Dr. Satish Kumar Sain	Pr. Scientist	Plant Pathology	SIR	sain.skumar@gmail.com
51	Dr. Oinam Washington Singh	Scientist	Plant Pathology	SIR	oinamw@gmail.com
52	Dr. Priyank Mhatre	Sr. Scientist	Nematology	NGP	priyank.iari@gmail.com
53	Dr. J. Gulsar Banu	Pr. Scientist	Nematology	CBE	gulsarsci@gmail.com
54	Dr. R. JayaKumara Varadan	Scientist	Agricultural Economics	NGP	varadan.iari@gmail.com
55	Dr. Isabella Agarwal	Pr. Scientist	Agricultural Economics	CBE	is_agarwal@rediffmail.com
56	Dr. S. Usha Rani	Pr. Scientist	Agricultural Extension	CBE	ushajoshua@rediffmail.com
57	Dr. M. Sabesh	Pr. Scientist	Computer Appln in Agri.	CBE	sabesh23@gmail.com

22. Contact Details

ICAR - Central Institute for Cotton Research is located on the National Highway No.7 (Nagpur Wardha Road) about 14 km from the Nagpur Railway Station and about 5 km. from the Nagpur Airport. ICAR-CICR Regional Station, Coimbatore is located about 8 km form the Coimbatore railway station and about 20 km from the airport on the Maruthamalai Road, adjacent to Tamil Nadu Agricultural University, Coimbatore. ICAR-CICR, Regional Station, Sirsa is located 1 km from the railway station.

Centre	Contact	Office Address	Phone	Fax	E-Mail
ICAR-CICR, Nagpur www.cicr.org.in	Director	ICAR-CICR, Post Bag No.2, Shankar Nagar Post Office, Nagpur – 440010, Maharashtra	(07103) - 275536	(07103) - 275529	cicrnagpur@gmail.com
ICAR-CICR, RS, Coimbatore	Head	ICAR-CICR, Regional Station, Maruthamalai Road, Coimbatore – 641 003, Tamil Nadu	(0422) – 2431238, 2430045	(0422) - 2454021	cicrcbe@gmail.com
ICAR-CICR, RS, Sirsa	I/c Head	ICAR-CICR, Regional Station, Sirsa – 125055, Haryana	(01666) – 220428, 233832	(01666) –230271	cicrsirsa@yahoo.co.in

ICAR-CENTRAL INSTITUTE FOR COTTON RESEARCH, NAGPUR

Post Bag No.2, Shankar Nagar Post Office, Nagpur - 440010, Maharashtra, India

Tel.No.: 07103-275536/275538, Fax: 07103-275529

email: cicrnagpur@gmail.com, Website: www.cicr.org.in