



Global Excellence in Cotton Technology

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Technology

Nanofinished Antimicrobial Cotton Textile for Post-Harvest Packaging of Flowers

The institute has developed a nanofinished antimicrobial cotton textile designed for post-harvest packaging, handling, and storage of flowers. Using an in-situ process, grey cotton fabrics were impregnated with nano-silver and evaluated for physico-mechanical properties, water vapour transmission, and air resistivity. The nanofinished fabric demonstrated significant antifungal activity against major flower-infecting pathogens such as *Fusarium oxysporum*, *Colletotrichum* spp., *Chaetomium globosum*, and *Aspergillus niger*. In spore reduction tests, the nano-silver-treated fabric achieved 87% inhibition against *Fusarium oxysporum* and 98% against *Colletotrichum* spp. Field validation of this technology is currently in progress in collaboration with ICAR–Directorate of Floricultural Research, Pune.

Skill Development Program



Four-day Training program on "Basic Molecular Biology and Genome Editing Techniques" was organised at CIRCOT HQs, Mumbai from September 16-19, 2025. 11 participants attended.



Five-day training program was organised at GTC, Nagpur on "Grading, Procurement, and Processing of Cotton" for Junior Commercial Executives of the CCI in two batches,

1. September 8-12, 2025. 24 participants attended.
2. September 15-19, 2025. 29 participants attended.

Edited by: S.K. Shukla, G.T.U. Prabu, C. Sundaramoorthy, Bindu Venugopal & Anand Jadhav

MoU signed



ICAR-CIRCOT, Mumbai signed a Memorandum of Understanding (MoU) with M/s Mega Bags, Pune on 19th September 2025 for the licensing of its technology on nanosilver-finished antimicrobial cotton textiles.

Radio Talk

A radio talk in Marathi was delivered by Dr. Prashant S. Deshmukh, Principal Scientist, on the topic “Viksit Krishi Sankalp Abhiyan – Success of Kharif Crops and Preparation for Rabi Crops”. The programme was broadcast by All India Radio on September 18, 2025, during the “Mazha Aawar Mazha Shiwar” segment on the Asmita channel.

Publications

RESEARCH PAPER

- Mansuri, S. M., & Chakraborty, S. K. (2025) “Application of NIR Reflectance Spectroscopy Combined with Chemometrics for Non-destructive Detection of Aflatoxin B1 in Individual Maize Kernels”. Journal of Agricultural Engineering (India), 62(3).<https://doi.org/10.52151/jae2025623.1954> (NAAS: 5.85)
- Patil, S., Jalgaonkar, K., Bharimalla, A.K., Mahawar, M.K., Dhakane-Lad, J., & Raja, A.S.M.(2025). “PBAT-Based Nanocomposite Blown Films: A Green Alternative for Packaging of Peeled Garlic. Polymer, 337, 129025 (IF: 4.5)

PAPER PRESENTED

- Nandan Kumar, Shubham Srivastava, Chandra Shekhar Malvi, G. Krishna Prasad, presented a paper titled “Indian Origin Brown Cotton and UHMwPE Based Protective Textiles” at 38th National Convention of Textile Engineers & National Seminar on Emerging Challenges of Sustainable Technical Textiles”, organized by The Institute of Engineers (India), Ghaziabad centre on September 05-06, 2025.

BOOK CHAPTER

- G Krishna Prasad, T. Senthilkumar, GTV Prabu and L Ammayappan (2025). Review on Mechanical Processing of Wool Fiber for Development of Diversified Products. Indian Journal of Natural Fibre, Vol. 11, No.1. pp. 79-88, ISBN: 2348-7445.

HRD

- Dr. N. Vigneshwaran, Principal Scientist & Head CBPD, Shri Rajesh Kadam and Shri Mukesh Onkar attended the training programme on Measurement of Uncertainty: Chemical and Mechanical Measurements during September 15-16, 2025, at IRMRI (Indian Rubber Materials Research Institute), Thane.

- Dr. Manoj Kumar and Dr. Shekh Mukhtar Mansuri, Scientists , attended a 04-day training programme on Laboratory Quality Management System (LQMS) & Internal Audit as per IS/ISO/IEC 17025:2017,during September 09-12, 2025 at NITS, Noida.

Educational Visits

- A group of 36 students from The Pearl Academy for Fashion Business, Mumbai, visited ICAR-CIRCOT, Mumbai on September 19, 2025.
- Three students from K.K. Wagh College of Agricultural Biotechnology, Nasik visited ICAR-CIRCOT, Mumbai on September 22, 2025.
- A group of 36 students from Guru Nanak Khalsa College, Matunga Mumbai, visited ICAR-CIRCOT, Mumbai on September 22, 2025.
- A group of 48 members from Regional Agriculture Extension Management Training Institute, Nagpur ,visited the Ginning Training Centre, ICAR-CIRCOT, Nagpur, on September 17, 2025.
- A group of 50 students from the G. H. Raison College of Engineering , Nagpur , visited the Ginning Training Centre, ICAR-CIRCOT, Nagpur, on September 19, 2025.

Lecture

- A lecture on “Trading of Cotton at NCDEX for the Benefit of Farmers” was organized on September 10, 2025. The session was delivered by Sh. Ajay Sharma, Assistant Vice President, NCDEX, who highlighted the role of cotton trading at NCDEX in enhancing farmers’ income and market access.
- A brainstorming session on “Value Addition to Banana Fibre for Improving the Livelihood of Stakeholders” was organized in collaboration with the Indian Fibre Society, Mumbai, on September 29, 2025 at Burhanpur, Madhya Pradesh.
- Dr. S.K. Shukla, Director, delivered an invited lecture on the topic “Latest Technologies for Ginning of Cotton to Meet Kasturi Cotton Standards” on September 11, 2025, during the Sectoral Seminar on ‘Global Cotton, Local Strength – Positioning Maharashtra as a Leader in Cotton Innovation’. Organised by the Indo Cotton Development Association (ICDA) , at VANAMATI, Nagpur.

Stakeholders meet/ Interactions



- Dr. K. Narsaiah, ADG (PE), had an interactive meeting with the scientists of ICAR-CIRCOT on September 17, 2025.
- Dr. N. Vigneshwaran, Head (Incharge), CBPD, and Dr. A. Arputharaj attended an online meeting with M/s. Aditya Birla regarding cotton linter pulp for dissolving grade pulp applications on September 04, 2025.
- Dr. N. Vigneshwaran, Head (Incharge), CBPD, attended the online BIS Meeting TXD 35 on September 04, 2025.
- Dr. A. S. M. Raja, Head, QEID, participated in an online meeting organized by ICAR-CICR, Nagpur to discuss and fix benchmarks for various parameters under AICRP on Cotton on September 09, 2025.
- Dr. A. S. M. Raja participated in the planning meeting for the upcoming Pre-Rabi Campaign of Viksit Krishi Sankalp Abhiyan, organized by ICAR-NIASM, Baramati on September 11, 2025.
- Dr. A. S. M. Raja, Head, QEID, and Dr. C. Sundaramoorthy had an online interaction with representatives of the Better Cotton Initiative (BCI) on collaboration opportunities for capacity building in the domain of fibre quality on September 23, 2025.

Hindi Chetna Mass

ICAR-CIRCOT observed Hindi Chetna Maas from September 1–30, 2025. As part of the celebrations, Hindi Pakhwada was organized at the Headquarters, Mumbai, from September 14–30, 2025. During the fortnight, a series of competitions and activities were conducted to encourage and promote the effective use of Hindi in official work.





Hindi Saptah

The Ginning Training Centre organized Hindi Saptah from September 15 to 20, 2025. During the week-long program, a series of activities were conducted for all staff members. A workshop in Hindi (hybrid mode) titled “Karyalayeen Karyon mein Hindi ka Adhik se Adhik Prayog Kaise Kare” was organized by GTC, Nagpur on September 25, 2025. The session was conducted by Dr. Shashikant Sharma, Head, Hindi Department (Retired), Baba Nanak Sindhi Hindi College, Nagpur.



Swachh Bharat Activities at ICAR-CIRCOT

The ‘Swachhta Hi Seva Campaign 2025’ is being observed at ICAR-CIRCOT, Mumbai, from September 17, 2025 to October 2, 2025.





Swachh Bharat Activities at GTC, Nagpur





Contact us

Dr. S. K. Shukla

Director

ICAR-Central Institute for Research on Cotton Technology
Adenwala Road, Matunga, Mumbai 400019.

URL: <https://circot.icar.org.in/>

Email: director-circot@icar.org.in

Tel: 022-24146002

