



January 2024

# CENTRAL COTTON RESEARCH INSTITUTE MULTAN

Pakistan Central Cotton Committee  
Ministry of National Food Security & Research  
Government of Pakistan

Dear Stakeholders and Supporters,

We are delighted to bring you the latest updates and highlights of the Central Cotton Research Institute (CCRI) Multan during January 2024. This newsletter aims to keep you informed about our ongoing projects, research findings, and collaborative efforts in the field of cotton research and development.

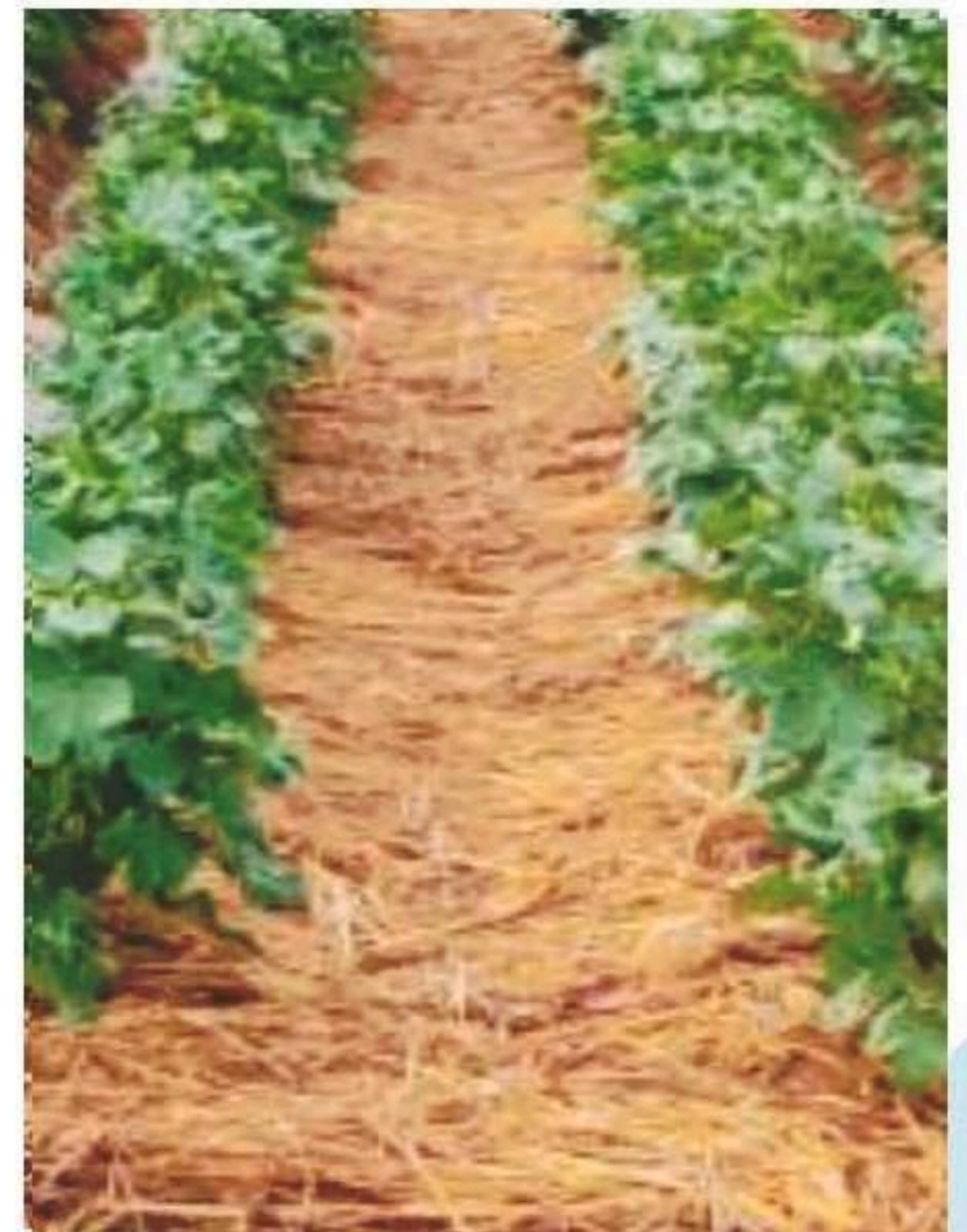
## RESEARCH AND DEVELOPMENT INITIATIVES:

**High-Yielding Varieties (HYVs):** Our team has been actively working on developing and testing high-yielding cotton varieties tailored for various agro-ecological regions. Promising results have been obtained, showing increased yield potential and resistance to prevalent diseases and pests. The Punjab Seed Council in its 57th meeting held on 12.08.2023 approved two new Bt varieties Bt.COM-775 and Bt. Cyto-511 of Central Cotton Research Institute, Multan. These cotton varieties have good fiber properties, better productivity and are highly resistant to Cotton Leaf Curl virus (CLCuV). The production potential of these varieties is more than 45mds per acre. Cotton variety Bt-Cyto-511 is a highly heat tolerant and has excellent productivity in hot weather, while Bt-CIM-775 is an outstanding variety with relatively higher tolerance against sucking insects.

Bt.CIM-775	Characteristics	Bt.Cyto-511	Characteristics
	Lint %age: 42.3 Staple Length : 28.0 Micronaire: 4.8 Strength: 28.6		Lint %age: 38.0 Staple Length : 28.0 Micronaire: 4.5 Strength: 29.95

The varieties have cleared all their regional and adaptability trials. All the varieties have good fibre quality traits with high yield potential. The approval and cultivation of these varieties will pave way for enhancing cotton productivity in the country.

**Climate-Resilient Cotton Cultivation:** In response to changing climate patterns, CCRI Multan has intensified efforts to develop cotton varieties resilience to extreme weather conditions. Our researchers are exploring innovative cultivation techniques and water management strategies to enhance the adaptability of cotton crops. The changing climatic conditions (rising temperature, rains and drought) and increase in the cost of production are greatly affecting the cotton cultivated area and its production. The cotton production and yield improvement are becoming a big challenge under the current scenario. The cost of production is continuously increasing with reduced profitability over time. The Institute has thus introduced a new eco-friendly technology called "Low Expenditure & Environment Friendly (LEEF)" for sustainable cotton production. The LEEF technology uses mulches from crop-based residues placed at the beds after thinning. The plant residues applied included straws, husks, grasses, compost, and manures. This technology maintains moderate soil temperatures, conserves





moisture, prohibits weed emergence, and improves microbial activities. Moreover, the mulches after decaying add up to the soil health in the form of organic matter and nutrients.

**Pink bollworm (PBW) Management:** A comprehensive IPM program has been implemented to address pest challenges sustainably. This includes the development of biopesticides, monitoring systems, and farmer education programs to reduce the reliance on chemical pesticides. Pink bollworm has been a serious pest management issue for the last several years. To address this issue, CCRI Multan organized the first national seminar on pink bollworm management in 2015 and the activity will continue every year until 2021. In the year 2021, an international seminar was arranged in which foreign researchers were also invited to share their findings to understand the Pink bollworm and its management more holistically. Local scientists, pesticide and seed industry personnel, cotton farmers, extension agents and policy makers participated in the seminar. The seminar earned heavy attendance and the recommendations were presented to provincial and federal governments for implementation and policy formulation. Moreover, the Institute has also fabricated Mechanical Boll Picker called “Pink bollworm Manager” for eradication of leftover bolls that host Pink bollworm larvae during winter. This machine proved to be very effective in eradicating Pink bollworm at CCRI, Multan. Consequently, the demonstrations of the PBW Manager were carried out successfully during the season. Farmers and Agriculture Extension workers participated in these demonstrations.



**Technology Transfer and Outreach:** Our extension services have been extended to remote cotton-growing areas, reaching out to the farmers with valuable information on crop management, pest & disease control, and post-harvest practices. The goal is to empower farmers with knowledge that enhances their productivity and income. CCRI Multan has conducted several training programs for local farmers to impart modern farming techniques, emphasize sustainable practices, and provide hands-on experience with new technologies. These programs have been well-received, contributing to increased awareness and adoption of improved farming methods.

Training Program for registered Cotton Farmers of WWF from Balochistan



**Collaborative Ventures:** CCRI Multan has fostered collaborations with industry partners to bridge the gap between research and practical application. These partnerships have facilitated the testing and scaling up innovative technologies and practices in real-world farming scenarios.

**MoU for Organic Cotton Promotion & Insect Pests Management with CABI:** The Institute has recently entered into agreement with CABI International for promotion of organic cotton cultivation and insect pests & disease management. The Institute will provide logistics support, research & development programs and mutual research projects.

**Technological Cooperation with CAAS:** The Institute has also engaged with Institute of Cotton Research (ICR), Chinese Academy of Agricultural Sciences (CAAS) China for cooperation in advanced seed technologies.

**Mutual Program of Variety Testing & Evolution:** M/s Jinghua Seed Industry, China for mutual collaboration in cotton research & development programs for testing & evaluation of advanced cotton strains, capacity building, varietal



development and marketing programs.

**Agreement for Training of Farmers:** Moreover, CCRI Multan also collaborated with Sangtani Women Rural Development Organization (SWRDO), Rajan Pur for training of farmers in cotton production technology during the season. **Collaboration with M/s Jaffer Agro Services:** Hafiz Muhammad Ammar, Deputy Manager Technical; Ms Zainab Khan and Ms Maria Baig, Product Manager, Marketing Department, Jaffer Agro Services (Pvt.) Ltd visited CCRI Multan. Mutual cooperation in cotton research & development including product testing & evaluation, training programs, hosting of farmers gathering and support in development initiatives discussed.

**International Collaborations:** Our institute continues to engage in collaborative research projects with international institutions to exchange knowledge, share best practices, and access cutting-edge technologies in cotton research. These collaborations strengthen our global standing in the field of cotton cultivation.

**OIC Cotton Capacity Building Program:** CCRI Multan in collaboration with SESRIC Turkey organized training course on “Productivity Enhancement of Cotton by Using Modern Agronomic Practices” under the OIC Cotton Capacity Building Program (COTTON-CAB) for the benefit of National Cotton Institutions in OIC African Member Countries from Feb 14-16, 2023. The training course was also coordinated by Islamic Development (IsDB), Food & Agriculture Organization (FAO) of the United Nations and African Association. In total, 37 participants from African countries including Nigeria, Togo, Uganda, Cote- D’Ivoire, Mozambique, Namibia, Turkey, and Azerbaijan attended the training program. There were 09 cotton experts from PCCC and 04 from MNSUAM who delivered lectures on various cotton agronomic practices. Participants appreciated the resourcefulness of experts.



**ICRA Secretariat:** CCRI Multan is housing the International Cotton Researchers Association’s Secretariat at its campus. ICRA is involved in collaboration with world cotton scientists in knowledge sharing in advanced cotton research & development and assisting the scientists in participating global cotton events. Launching of Cotton Innovation Newsletter from the platform of International Cotton Researchers Association (ICRA) Secretariat based at the Institute is a regular feature.

**World Cotton Day Celebrations:** In addition, the Institute actively remained engaged with international cotton organizations in cotton promotion and development programs throughout the year. The celebration of World Cotton Day on 7th October is a regular program held at the Institute highlighting importance of cotton crop in the economy of Pakistan.

**Upcoming Events:** Stay tuned for upcoming events, including holding of workshops, seminars, and field demonstrations, where CCRI Multan will showcase the latest advancements in cotton research and technology. The Institute has planned to organize a Refresher Course for the Field Staff of Pesticide & Seed Industry and NGOs working in Cotton Research & Development during February 2024.

We express our gratitude to our stakeholders, collaborators, and the farming community for their unwavering support. Together, we are shaping a sustainable and resilient future for cotton cultivation in the region.

For further information and inquiries, please visit our website [[www.ccri.gov.pk](http://www.ccri.gov.pk)] or contact us at [061-9201128, [ccri.multan@yahoo.com](mailto:ccri.multan@yahoo.com); [ccri.multan@gmail.com](mailto:ccri.multan@gmail.com)]. Thank you for your continued support.

Sincerely,

**Dr. Muhammad Naveed Afzal, Director, Central Cotton Research Institute Multan**