

81ST PLENARY MEETING

MUMBAI, INDIA

2-5 December 2023

Cotton Value Chain:
"Local Innovations for Global Prosperity"



MINUTES

FIRST OPEN SESSION

Technologies to Increase Productivity
SATURDAY, 2 DECEMBER, 16:00 TO 18:00

Chair: Mrs Shubha Thakur, Joint Secretary (Crops), Ministry of Agriculture & Farmers' Welfare

Co-Chair: Mr T Raj Kumar, Chairman, Standing Committee on Cotton of Confederation of Indian Textile Industry

The meeting began at 16:00.

Dr TR Sharma highlighted various challenges in cotton farming, including soil health, temperature changes, pests like pink bollworm and whiteflies, and diseases like the leaf curl virus. He also mentioned several initiatives taken by the Indian Council of Agricultural Research (ICAR) to address these challenges, such as developing new cotton varieties through breeding and gene editing, precision farming techniques like water and fertiliser management, pest monitoring tools, and the use of drones for pesticide application. Dr Sharma outlined a vision for the future, including broadening the genetic base of cotton, developing early maturing and high-yield varieties, improving fibre traits, and creating genetically modified cotton resistant to various stresses and pests. He emphasised the use of advanced technologies like sensors, drones, AI, and IoT for cotton production and crop protection.

Mr Suresh Kotak discussed cotton's historical prominence and subsequent decline as a primary fibre, emphasising the vital role of sustainability in its resurgence. He traced cotton's evolution, analysed the reasons for its decline, explored sustainable approaches using science and technology, and championed cotton's role in addressing climate issues through carbon utilisation. Mr Kotak also highlighted cotton's potential to support farmers worldwide, streamline supply chains, and promote eco-friendly practices. The presentation underscored sustainable resource management and circular practices, all aimed at shaping a transformative and resilient future for cotton.

Mr Alan McClay presented insights on sustainable cotton practices, focussing on India's role in the Better Cotton Programme. India, the world's second-largest cotton producer, has seen impressive results, including a 53% reduction in pesticide use, a 29% decrease in irrigation water usage, and a 15.6% reduction in overall farming costs. Gender diversity among field facilitators in India increased to 15.5%. Challenges remain, such as inadequate pesticide protection, climate change impacting crop reliability, and the need for greater profitability and gender equality in cotton farming. Mr McClay stressed the importance of research to understand results better and highlighted the global potential of Traceable Better Cotton. Regulatory pressures and market demands for transparency and sustainability are growing, emphasising the need for fair pricing, supply chain transparency, and value for farmers.

Dr CD Mayee's presentation focussed on enhancing cotton farmers' productivity and income in India by overcoming recent challenges through technology deployment. In India, where the majority of cotton farmers are smallholders, new extension approaches were introduced to transfer technology effectively. These approaches included high-density planting system (HDPS) and mating disruption for pink bollworm management, along with innovative communication methods like social media, websites, radio jingles, and public-private partnerships. The presentation highlighted the successful adoption of technology, resulting in improved yields and reduced pest infestations, particularly pink bollworm. The introduction of novel technologies like the nutrient Unlock Technology by CROPTec-SOLUTION also hold promise for revolutionising cotton nutrition management. Dr Mayee's talk showcased success stories of tailored technology transfer methods in smallholder farms, promoting sustainable high yields in cotton cultivation.

The session ended at 18:00.

Summary Paragraph

Cotton cultivation faces various challenges, including soil health, temperature changes, pests like pink bollworm and whiteflies, and diseases like the leaf curl virus. Potential solutions include developing new cotton varieties through breeding and gene editing, precision farming techniques like water and fertiliser management, pest monitoring tools, and the use of drones for pesticide application. Regulatory pressures and market demands for transparency and sustainability are growing, emphasising the need for fair pricing, supply chain transparency, and value for farmers. Knowledge transfer regarding high-density planting systems (HDPS) and mating disruption for pink bollworm management would help, as would with innovative communication methods like social media, websites, radio jingles, and public-private partnerships.