MINUTES

9th OPEN SESSION
Advances in textile technologies
TUESDAY, 5 DECEMBER, 11:00 to 13:00

Chair: Mr Rohit Kansal, Additional Secretary, Ministry of Textiles, Government of India
Co-chair: Mr Rakesh Mehra, Chairman, Confederation of Indian Textile Industry

The session began at 11:00.

Ms Belinda Edmonds, Managing Director, African Cotton Foundation, highlighted their vision for transforming the African cotton sector. It emphasised the foundation's commitment to supporting cotton farmers in creating a profitable, empowered, and environmentally sustainable industry. Key challenges addressed included the impact of climate change, market fluctuations, and the need for government and private sector collaboration to enhance competitiveness. The focus was on aiding small-holder farmers through innovative technologies and projects, in partnership with the private sector. The presentation also identified entrepreneurial opportunities in soil improvement, pest control, and textile waste re-use, and stressed the importance of innovation and collaboration. The need to maintain healthy soils and ecosystems for sustainable crop production was also a significant point.

Dr Marinus (René) van der Sluijs, Principal Consultant, Textile Technical Services, Australia, provided an insightful look into the complexities of yarn manufacturing, emphasising the importance of raw material quality, efficient production processes, and adaptability in the face of changing market demands and material properties. He noted that in order for cotton spinners to produce yarns that can be converted into high-end fabrics with little or no difficulty, emphasis continues to be placed on fibre quality, and the maintenance of this quality throughout the entire cotton processing pipeline. To achieve production efficiency, a spinner requires detailed knowledge of the fibre properties in order to control processing performance, operating costs, and the resultant yarn and fabric quality. Cotton is spun on multiple systems — most notably ring, followed by rotor, and to a lesser extent air-jet, with the most important physical fibre properties being fibre length and uniformity, micronaire, strength, and trash. Colour is also recognised by the cotton trade and spinning industry, with other properties such as contamination, stickiness, neps, and seed-coat fragments also considered important. He pointed out the importance of fibre properties and how in-field, harvesting, and ginning decisions can impact fibre quality

and processing performance. Mr van der Sluijs discussed the critical role of raw materials in yarn manufacturing, highlighting that fibre accounts for over 70% of manufacturing costs and its quality is essential to guarantee yarn quality. He addressed the challenges of using imported cotton and storing fibre for long periods, underscoring the importance of avoiding fibres unsuitable for the intended end-use, stating that there is no high- or low-quality cotton per se, but rather cotton that meets specific requirements in terms of price, performance characteristics, and intended use. Mr van der Sluijs emphasised the necessity of obtaining accurate and reliable information about the cotton being used and suggests considering custom ginning as a strategy.

Dr KV Srinivasan, Managing Director, Premier Mills, Tamil Nādu, focused on the dynamic interplay between technology, sustainability, and creativity, showcasing how they collectively drive innovation in textile production and manufacturing. Dr Srinivasan discussed the role of advanced manufacturing technologies in sustainable textiles, emphasising the importance of automation for increasing speed, energy efficiency, waste reduction, flexibility, and scalability. He highlighted the use of blockchain for supply chain transparency, ensuring traceability and sustainability. Collaborative efforts across industries for sustainable solutions, including partnerships and crowdsourcing, are presented as crucial for progress. Dr Srinivasan emphasised the integration of technology and creativity, mentioning innovations like molecular bio-recycling and the use of end-of-life clothes for new building materials. He concluded with a call to action for industry players, designers, and consumers to work hand-in-hand towards a sustainable future in textiles.

Dr Olivier Zieschank, Director, ITMF, Switzerland, identified key tensions within the industry, such as the trade-off between using recycled fibres and maintaining yarn quality, balancing sustainability with productivity, and the contrast between sustainable and unsustainable practices. Another significant tension lies in catering to local crop preferences while meeting the demands of global markets. Dr Zieschank highlighted the opportunities arising from these tensions. Technological advancements and niche markets are identified as potential areas for growth. Global awareness and branding, along with the integration of the supply chain, are seen as crucial for the industry's future.

Panel Discussion on ‘Prospects for Investment Destinations’:

Mr Mihir Parekh, Director of Textiles & Apparel, Commerce & Industries Department, Government of Telangana, India, focussed on the prospects of investment in Telangana and the broader Indian textile sector. He highlighted the PM Mitra Parks initiative, which aims to develop seven mega integrated textile regions across India, chosen from 77 potential locations. These parks are designed to be comprehensive hubs, encompassing the entire textile value chain and facilitating large-scale, sustainable manufacturing. Parekh stated that the vision of these mega parks is to serve not just as manufacturing centres but also as nuclei for a broader manufacturing ecosystem. This model envisions the parks producing fabric that could be utilised by surrounding apparel units, creating a synergistic effect on investment and employment opportunities.

Ms Shubhra, Member of Indian Trade Service, spoke on investment opportunities in the textile sector. She highlighted India's potential as a lucrative investment destination in the textile sector. India's textile industry, being the second-largest employer and a major producer of essential fibres like cotton and silk, is projected to expand from a $150 billion to a $350 billion turnover. The government's initiatives, such as the PM Mitra scheme for textile parks and the Production Linked Incentive scheme for the MMF sector, complement the comprehensive textile ecosystem from raw materials to finished products. These efforts, alongside a focus on innovation, R&D, and skilled manpower, make India a compelling choice for textile industry investments.

Meeting was adjourned at 13:00 hrs.

Summary Paragraph

Advances in technology are critical for the entire cotton value chain and are the key to overcoming many of cotton’s challenges. Technological innovations can: increase income for small holder farmers, who help to maintain and/or regenerate soil health for sustainable crop production; improve fibre properties by making the correct in-field, harvesting, and ginning decisions, which impact fibre quality and processing performance for spinners; and improve automation to increase speed, energy efficiency, waste reduction, flexibility, and scalability in textile manufacturing. The creation of integrated textile hubs that encompass the entire textile value chain can facilitate large-scale, sustainable textile manufacturing and benefit the broader manufacturing ecosystem.