

## CITI ACTIVITIES

# CITI ORGANIZES 2<sup>ND</sup> GLOBAL COTTON CONFERENCE IN NEW DELHI



CITI organized the 2nd Global Cotton Conference on Wednesday, November 23 in New Delhi. The theme of the Conference was “**Game-Changing Technologies & Traits for Achieving High Yields and Fine Quality of Cotton**”. This hybrid event was attended by the senior government officials and industry stakeholders and experts across the entire textile value chain. The Conference also deliberated in detail on the various crucial aspects of the cotton value chain in the technical sessions.

Ms. Roop Rashi, IA&AS, Textile Commissioner, was the Guest of Honour of the event. While delivering the Special Address she stated that today sustainability and circularity are more important than the earlier time. The textile industry needs to not only limit its impact on the environment but also cut down its cost of production as it can recycle the materials used in the value chain.



*Ms Roop Rashi, IA&AS, Textile Commissioner being felicitated at 2nd Global Cotton Conference on Wednesday, November 23, 2022 in New Delhi*



*Mr. M. Prabhakar Rao flanked by Dr. S.K. Shukla and Dr. Y.G. Prasad in the Session on Revamping of Cotton Breeding Programs for Efficient Use of Genetic Resources under Changing Climate on November 23, 2022, New Delhi*

She remarked that both the Ministry of Textiles and the Ministry of Agriculture have been able to achieve the required Synergy in their operations which is one of the major breakthroughs in their efforts toward the upliftment of cotton farmers.

She highlighted the splendid work done by CITI CDRA and was hopeful that in the near future everyone will see the efforts of the industry and the government taking shape.

Shri Suresh Kotak, Chairman, Textile Advisory Group (TAG), addressed the Conference from the perspective of cotton's present and future. He highlighted that merely productivity enhancement and quality improvement are not enough, and footprint on environment, traceability and circularity are also equally important issues for the textile industry. He also briefed about the activities of TAG, which was formed by the Government to know the perception of business and industry community.

Shri Sunil Patwari, Chairman, TEXPROCIL, Shri M. M. Prabhakar Rao, Chairman, NSL Group, Shri. Manish Daga President, All India Cotton Farmer Producers Organization and Shri Prashant Mohota Member, CITI's Standing Committee on Cotton & MD, Gimatex Limited addressed the audience with insightful presentations on the new game-changing technologies for the cotton economy.

### **Session I: Revamping of Cotton Breeding Programs for Efficient Use of Genetic Resources under Changing Climate**

Shri M Prabhakar Rao, Chairman, NSL Group chaired the Session on 'Revamping of Cotton Breeding Programs for Efficient Use of Genetic Resources under Changing Climate' which was moderated by Dr. Shivendra Bajaj, Executive Director, Federation of Seed Industry of India (FSII).

Dr. Y.G. Prasad Director ICAR-Central Institute for Cotton Research (CICR), Dr. S.K. Shukla, Director, ICAR-CIRCOT Mumbai, Dr. K. Selvaraju, Secretary General, Southern India Mills' Association, Dr. Keshav Kranthi, Chief Scientist, International Cotton Advisory Committee (ICAC), USA, Mr. Bhagirath Choudhary, Founder & Director of South Asia Biotechnology Centre attended the session as penallists.

The Session deliberated on revamping of Cotton Breeding Programs for Efficient Use of Genetic Resources under Changing Climate' and the need for India to develop brand for traceability and quality assurance as the entire world cotton is under pressure due to excessive rain, drought and abnormal temperature.

Dr. Y.G. Prasad highlighted the status of development of cotton genotypes by public and private sectors. He



narrated that public sector released 19 Bt (BGI) cultivars, and 2 Bt (BGII) by private sectors which are having hirsutum base. CICR release 16 non- Bt compact varieties which involved 5 for North Zone, 4 for Central Zone, and 7 for South Zone, which are amenable to HDPS and mechanization. He also narrated in his presentation about the development of extra-long staple cotton (ELS), and long linted arboreum (desi) cotton genotypes. Also, discussed about the development of naturally coloured cotton varieties (hirsutum and arboreum) with improved fiber properties.

He also focused on recent activities of breeding program and suggested that pre-breeding is a flagship initiative for improving genetic diversity and new traits for high yield, fiber quality, biotic and abiotic tolerance under AICRP cotton. He also highlighted that CICR is actively involved in evaluation of non-deregulated Bt events tolerance to whitefly for North Zone.

He also discussed that CICR have been released some of the hybrids amenable to high density plantation system (HDPS) and entries of the HDPS with compactness trait is under pipeline, and will be released soon for multi-location trails (MLT) to enhance the productivity which can be achieved through new technology intervention such as HDPS, which will help to improve the productivity more than 500-600 Kg lint per hectare.

He also narrated that CICR working for the development of hybrids resistance to Tobacco Streak Virus (TSV) for South Zone and Leaf Curl Virus (LCV) for North Zone, development of varieties/hybrids resistance to pink bollworm menace, stress tolerance, and for the improvement of quality parameters and yield through emerging biotechnological platforms such as Genomics Assisted Breeding (GAB) with the help of genome wide association studies and using booming technology such as CRISPR/Cas9 mediated genome editing.

Dr SK Shukla talked on the mechanization in cotton farming. He said that spindle type pickers need to develop for the harvesting of Indian cotton. He also highlighted that it is essential to develop suitable varieties/hybrids with desired traits to obtain suitable plant type for successful operation of mechanical pickers. He also narrated about the requirement for adoption of certain agronomical practices like application of growth regulators, boll openers, defoliant etc. for the precise utilization and operation of mechanical pickers. He also highlighted that trash content in mechanized picked cotton is about 15%, which should be on par footing to reduced it. He said that input cost of mechanized picking is 60% more compared to hand picking, and therefore this

technology should be open sourced, so that machines can be manufacture at a large scale and should be provided to the farmers at a reasonable subsidy.

Dr. K. Selvaraju, elaborated the cotton collaborative project activities of SIMA-CDRA and CITI-CDRA about the initiated pilot project of HDPS. He said that SIMA-CDRA maintains about 600 germplasm including extra-long staple (ELS) cotton, Bt and hybrid cotton, naturally coloured cotton and organic cotton. He narrated that SIMA-CDRA developed 14 varieties which involved medium staple length, long staple length, and extra-long staple length cotton. He also discussed in his talk about the collaborative activities of HDPS trials in Madhya Pradesh, and said that SIMA-SHAKTI, SIMA-SHIVSHAKTI, and SIMA-HYTECH cotton varieties are under HDPS trials. He highlighted that development of compact HDPS varieties/hybrids is the need of this era to foster the cotton production and productivity through new breeding platforms.

Dr. Keshav Kranthi highlighted that climate change is a real and pressing challenge for cotton farmers worldwide. He told that extreme or irregular weather environmental conditions, solar radiations, burning of fossil fuels heightens the poor cotton yield. He also marked in his talk that if temperature falls below 27°C or increase above 35°C, the cotton plant become sterile.

He suggested that genomics assisted breeding and the biotechnological intervention can develop the crops resistance to biotic stresses such as insect/pest, bacterial, fungal and viruses, and abiotic stresses such as drought, heat, salinity and frost etc. He also further discussed that Phytochrome A1 gene have been ameliorated through RNA interference (RNAi) technology to develop cotton varieties/hybrids resistance to abiotic stresses. He further concluded that genomics or biotechnology platform leads the development of climate resilient varieties/hybrids.

Dr. Bhagirath Choudhary, explained the major challenges in cotton production such as pink bollworm, leaf curl virus, tobacco streak virus, and boll rot. He elaborated matrix of technological interventions adopted by USA to eradicate the pink bollworm which involve mating disruption technology based on pheromone to disrupt mating of insects, insect resistance biotech traits, and herbicide tolerance technology, sterile insect technology and green chemistry based on IPM. He further narrated the significance of “Project Bandhan or PB Knot technology” such as 51.2% reduction in flower damage, 42% reduction in green boll damage, 49% reduction in locule damage and increase in the yield in defined clusters of Punjab, Haryana, Rajasthan, Gujarat, and Maharashtra. CITI-CDRA would like to scale up this technology PAN India.



*Session on 'Cotton – Global Raw Material Scenario' chaired by Ms. Prajakta L Verma, IAS, Joint Secretary, Ministry of Textiles on November 23, 2022, New Delhi*

## **SESSION II: Cotton – Global Raw Material Scenario**

The Session on 'Cotton – Global Raw Material Scenario' was chaired by Ms. Prajakta

L. Verma, IAS, Joint Secretary, Ministry of Textiles and moderated by Shri Unupom Kausik, Senior Vice President, Olam India. Panellists for the Session were Alexandre Schenkel, Vice President, Abrapa (Brazilian Cotton Growers Association), Dr. Terry Townsend, Global Consultant, Cotton Analytics, USA, Mr. Peush Narang, Programme Representative – India & Sri Lanka, Cotton Council International, Mr. Sushil Kumar Jhamb, Director – Raw Materials, Vardhman Textiles Ltd and Shri Sanjay Chawla, Founder & Global Convener, Fashionating World.

Ms. Prajakta L. Verma stated that India has expedited its efforts to tackle challenges of low yield, stagnated production, higher cost and unstable system of data collection on cotton. She also highlighted that joint efforts are needed to get correct data from the industry stakeholders, which is most important for strategic planning to tackle any challenge.

Mr. Unupom Kausik, moderator of the session, in his opening comments remarked that all of us are struggling with the absence of demand. This trend is being witnessed since June. He quoted figures highlighting the precipitous fall in demand. He further said that China is struggling with Xinjiang cotton obstruction as well repeated lockdowns in China has resulted in the impaired supply of raw material. Dr.

Terry Townsend also shared a presentation on the global cotton scenario and highlighted different programs related to cotton.

Dr Vinay Kotak opined that India has performed well in the last one year. Even after low consumption India has done pretty well. He comprehensively described a better situation. He highlighted that there will be a shift of demand from China to India in the near future which puts India in a very unique situation. The other panelists also discussed the issues with the global raw material scenario, especially cotton.

## **SESSION III: Traceability & Circularity**

The Session on 'Traceability & Circularity' was virtually moderated by Economist and Senior Journalist, G Chandrashekhar. Panellists for the Session were Mr. Crispin Argento, Managing Director, The Sourcing, Ms. Mridula Ramesh, Founder, Sundaram Climate Institute, Tara Luckman, Sustainability Advisor, Cotton Council International, Dr. Rossitza Krueger, Project Manager, Sustainability and Value Added in the Cotton Economy, GIZ India and Manish Gupta, Manager - Supply Chain, Better Cotton Initiative – India.

Mr. G Chandrashekhar, in his opening remarks, pointed out that consciousness about consuming green natural biodegradable and sustainable products is rising rapidly. He further remarked that although T&A Industry contributes enormously to the economy, its a fact that globally textile industry is a polluter primarily



*Ms. Mridula Ramesh, Dr. Rossitza Krueger, Manish Gupta in the Session on 'Traceability & Circularity' at 2nd Global Cotton Conference in New Delhi*

through greenhouse gases. Further, it needs to strategize to minimize pollution to help advance Sustainability.

Traceability is another aspect and primarily an efficient industry needs Traceability in the supply chain and its ability to identify disruption ensure consistent quality, recognize strategic opportunities, and respond faster to change in demand, streamline inventory. etc. He pointed out the importance of traceability in the textile industry supply chain, in the whole lifecycle of a product from raw material to the consumer to disposal and recycling to circularity. He cited examples how China and EU has already taken cognizance of the Circularity in their policy framework.

Ms Mridula Ramesh sharing her views pointed out that the problem at hand comprises 3 three things; 1) what is our goal, 2) what are the tools we are considering and 3) what are the tool kit we have to address the problem of Sustainability? She elaborated on the broader perspective of Sustainability, Traceability and Circularity. Cost is important for the implementation of Sustainability initially.

Mr. Crispin Argento highlighted about the tools adopted by Sourcery and described how Sourcery is working to address the Sustainability and Traceability issue.

Ms. Tara Luckman described the working of US Cotton Protocol for Transparency and Traceability in terms of data from the farm level. Mr. Manish Gupta highlighted efforts of the Better Cotton Initiative (BCI) in the scaling up of implementation of the issue of Traceability and Circularity. BCI is also working on developing a system in the form of a digital platform with all multi-level data models for traceability.

Ms. Krueger also shared the initiatives taken by the GIZ in mobilizing Traceability and also said that consumers are still not aware and we need to first make them aware regarding the Sustainability and Traceability issues and orient themselves for the standards and other advancements in this arena. Further, Crispin Argento highlighted the cost involved in the implementation of Traceability.

The panelists concluded by saying that India is on a developmental mode in adopting Sustainability, Traceability and Circularity in the years to come.

Mr. TVK Chaitanya Head-PMT Agri Department, Multi Commodity Exchange of India Ltd. (MCX) also delivered a presentation on “Awareness Programme on Cotton Hedging”.