## Meritorious Achievements of CSIR-CLRI 2021-22 & 2022-23

CSIR-CLRI has always been on the forefront in handholding the industry and catering to its technological requirements. It has also taken sincere efforts to integrate sustainability in its initiatives and has played a vital role in effective technology dissemination as well.

CSIR-CLRI has transferred a technology on "The process of preparation of Pseudocorium, a leather like material from agricultural wastes" to Zaibunco Industries Pvt. Ltd, Jajmau, Uttar Pradesh. The raw-material is of plant origin such as wheat straw and rice straw and this leather-like material can be used to fabricate lifestyle products matching the quality of leather.

CSIR-CLRI has developed leather gloves that could protect from extremely cold weather conditions, using commercial chemicals and indigenously secured materials, which is on par with the global benchmark with respect to functional properties and with less than one third the price of those imported gloves. This is a step towards enabling our strategic sector towards Aatma Nirbhartha. The prototype of the gloves has been sent to the Northern Command, Indian Army.

The mega project on "Indian Footwear Sizing System" was carried out under the aegis of DPIIT, Ministry of Commerce and Industry, Government of India and was implemented by CSIR-CLRI in association with Synergy Partners across the country. The main objective of the foot survey was to collect data on the anthropometric properties of the population's feet. Twenty-eight teams had fanned out to the length and breadth of India and captured our population's 'Digital Foot Images'. The country had been divided into five zones, and 1,01,880 Foot Measurements were carried out by the end of March 2022. The revised standard for Specification for Sizes and Fittings of Footwear - IS 1638:2022 would be the output of this project.

During 2022-23, CSIR-CLRI's Technology on Waterless Chrome tanning technology had been licensed to 28 tanneries at Jajmau, Kanpur through Small Tanners Association Kanpur (STAK), as part of CSIR-CLRI's Scientific Social Responsibility (SSR) towards environmental sustainability.

CSIR-CLRI has initiated an attempt to develop leather-like materials utilizing the plant wastes of agricultural industry for applications in lifestyle products. Efforts are made to develop hybrid sheet materials from various biological resources such as plants (agricultural wastes and cactus), fruits or vegetable wastes, fungi (mycelium/mushroom), bacteria and leather/textile wastes. Technology for manufacture of wheat straw-based leather-like material is recently transferred to a start-up company.

Technological Interventions of CSIR-CLRI (Click here)