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Shot in the arm for leather industry in Tamil Nadu as tannery residual salt can be processed, marketed

CSIR-CLRI CSIR-CSMCRI

27th April 2017

In a major breakthrough for the leather industry in Tamil Nadu, which contributes 40 percent of the country's \$6 billion leather exports, scientists of the Central Leather Research Institute (CLRI) and Central Salt & Marine Chemicals Research Institute (CSMCRI) in Bhavnagar in Gujarat, have discovered a novel method that converts waste residual salt into saleable raw material.

The State was staring at a major environmental hazard as nearly one lakh tonnes of residual salt produced by tanneries piled up at Common Effluent Treatment Plants.

In India, Tamil Nadu is the only State that enforced Zero Liquid Discharge (ZLD) on leather processing units in 2001. Though the measure was taken by the Tamil Nadu Pollution Control Board

(TNPCB) to prevent untreated effluents polluting the waterbodies, it has resulted in accumulation of residual salt over the years, and has become a big cause of concern.

B Chandrasekaran, Director, CLRI, told Express on the sidelines of the Commemoration Day celebrations, about 15 common effluent treatment plants that are stocking close to one lakh tonnes of salt, which is a mixture of sodium chloride and sodium sulphate. This salt is used during rawhide stage, and has no direct market. "We can neither keep the stock nor dispose it off. It is a huge burden on the industry and a storm like Vardah has drained this stock leading to environment disaster. So, we came out with a solution to separate sodium chloride and sodium sulphate using a simple technique and market them separately," he said.

Laboratory trials have proved successful, and now a pilot project is envisaged with the help of the industry represented by the All India Skin & Hide Tanners & Merchants Association (AISHTMA) for which a Memorandum of Understanding (MoU) was signed recently.

Amitsava Das, Director, CSMCRI, said that trials have given the desired purity (98.8) acceptable for the industry. The technology has proved very economical. The pilot unit is planned at salt farms in Bhavnagar, and once technology is developed into a commercial product, it will be implemented in CETPs.

Chandrasekaran said the salt can be converted into raw material and sold within a year. AISHTMA president, Rafeeq Ahmed, expressed gratitude to scientists for developing such a cost-effective technology.

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CBRI team inspects govt hospital building to study its structural safety

CSIR-CBRI

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A seven-member team from Central Building Research Institute (CBRI) from Roorkee, Uttarakhand, will decide the structural safety of General Hospital in Civil Lines.

The building was deemed unfit for repair by Public Works Department (Buildings and Road) in 2015. But the municipal corporation of Gurugram (MCG) maintained that renovations can fix the problem. Finally, CBIR was hired as an independent consultant for the purpose.

The building was constructed in 1955 and over 2,500 people visit the hospital every day. Considering the high footfall, the health department wants to add more infrastructure to the building. But existing structure is very weak.

The team will conduct inspections for four days i.e Wednesday, Thursday, Friday and Saturday. During this period, the team will identify the flaws

in the structure. On Day one, the team collected the cement and plaster samples from the ceiling of the emergency ward.

Following, their report it will be decided whether to repair the existing structure, or to construct a new building.

The CBIR team has reportedly charged a fee of Rs 30 lakhs to inspect the hospital building.

Between 2007 and 2010, the hospital building was renovated at the cost of Rs 16 crores. But the quality of the construction work was inferior. As a result, the building has been in a dilapidated condition and incidents of fire in the electrical wiring, chunks of the ceilings falling in the wards and electric current leakage through faulty wires, seepage among other issues have been reported.

Later in 2015, the chunks of ceiling at the maternity ward fell when several women and their new born were in the ward. The building was inspected by the the PWD (B&R), which had deemed it dangerous and asked it to immediately vacated. However, only the ward was vacated. Now, the normal delivery maternity ward has been shifted to the General Hospital in sector 10.

However, the corporation insisted that the old structure can still be repaired. In fact, the hospital got a certificate of National Quality Assurance Standards in 2016.

Finally, to resolve the conflict it was decided that the team will be called from CBRI to inspect and give the final verdict on the building.

"The team is inspecting and will decide that whether the hospital will be renovated, or is it to be reconstructed. Also, they will check if there is any excess land that can be used to construct more wings in the hospital," said Dr Kanta Goyal, principal medical officer.

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[TOI](#)

CFTRI launches white & brown Teff varieties to suit Indian conditions

CSIR-CFTRI

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The Central Food Technological Research Institute (CFTRI), Mysuru - the premier national food and nutrition research institute - has launched its latest superfood, Teff. It has developed an agro-technology to suit Indian conditions for both white and brown varieties of Teff grains.

Being a drought-resistant crop, Teff has great potential for the nation, yielding about 200-250kg per acre. Teff can be grown in both seasons, namely Kharif (June-July) and Rabi (October-November).

It is suitable for districts with dry zones of agriculture in Karnataka. CFTRI plans to have workshops to sensitise farmers from across the state and help develop recipes for Teff.

CFTRI also has a memorandum of understanding (MoU) with the Sri Sri Rural Development Programme to extend its efforts to farmers for superfood production and farm gate food processing.

Teff, an ancient grain going back to the civilisations of Abyssinia, is a whole-grain cereal crop and is the staple food crop of Ethiopia. It is gluten-free, has high-resistant starch and low glycemic load.

It is a good choice for those suffering with celiac disease, for better diabetes management and weight control.

Teff also has well-balanced protein with all essential amino acids, and is particularly rich in albumin proteins, which is a vegetarian equivalent of egg whites.

“The grain is rich in micronutrients, viz calcium, iron, Vitamin C and other nutrients. Teff, as an ingredient, blends well into various foods like dosas, porridges, roti and gluten-free breads,” stated the institute.

“Superfoods have advanced nutrition profiles that, upon consistent consumption, can help improve the health and wellness of our population,” said Ram Rajasekharan, director, CSIR-CFTRI.

“Superfoods have the potential of helping alleviate malnutrition and help improve the health of those suffering from lifestyle-related diseases such as diabetes and obesity,” he added.

“In the recent past, we also developed agro-technologies for to grow such superfoods as chia and quinoa in Indian conditions. Earlier the availability of superfoods was only through import, but because they were very expensive, most Indians were unable to afford them,” Rajasekharan added.

“Our efforts in developing agro-technologies for chia and quinoa have been successful in their cultivation and have increased their availability at an affordable cost in India,” he added.

“Helping both farmers to earn a better livelihood and consumers to get affordable superfoods, developed will augment the health and wellness of Indian population,” Rajasekharan added.

We intend to help change the Indian palate for a healthier India by providing agro-technologies for superfoods. In addition we also provide solutions for post-harvest management, food processing, advance nutrition and allied science”, he said.

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[Fnb News](#)