



Extracting banana fibre may become an easy affair

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The National Institute for Interdisciplinary Science and Technology (NIIST) here has developed the technology for extracting banana fibre from pseudo stems (leftover banana trunk) and empty bunches.

Banana fibre is in demand to make textiles, yarn, paper, paper cups, cordage, tea bags, handbags and footwear.

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NIIST, a constituent laboratory of the Council of Scientific and Industrial Research (CSIR), has applied for the patent of this innovation and is ready to transfer the technology to those ready to exploit it commercially, R.S. Praveen Raj, a CSIR-NIIST scientist said.

"The technology developed by CSIR-NIIST involves an anaerobic (oxygen-less) process mediated through microbial action. Banana pseudo stems and empty bunches are soaked in a tank for four to six days and the soaked liquor is circulated through an attached anaerobic reactor," Raj said.

During the process, pectin, or the intercellular cementing substance present around the fibres, is degraded. This results in the separation of fibres from their embedding.

"There is no pollution and the organic waste gets converted into biogas in the process. The process water is reused," Raj added.

Conventionally, the banana fibre is extracted through a cumbersome manual process, wherein the pseudo stem sheaths are scraped and the fibre is separated by using a metal scraper (flat and blunt blade). In this manner, just about 500 gm can be extracted.

An alternate way is to extract the fibre through a mechanical process, which yields 10 times the quantity but with heavy damage to the fibre.

"The technology developed by CSIR-NIIST has the potential to generate employment and could offer higher earnings to farmers. The stems once cut are fit to be used in a week's time for the processing, after which they become redundant," Raj said. - IANS