

## Today's Paper » NATIONAL » KERALA

Published: July 9, 2012 00:00 IST | Updated: July 9, 2012 08:19 IST

### Easy way to extract banana fibre

T. Nandakumar

*NIIST's inexpensive technology makes use of enzymes to separate fibres*



Way forward: Banana fibre extracted using the technology developed by the CSIR-NIIST

The National Institute for Inter-disciplinary Science and Technology (NIIST) here, a laboratory of the Council of Scientific and Industrial Research (CSIR), has developed a technology for extraction of banana fibre, the raw material for a range of eco-friendly products.

The indigenously developed process know-how is for 'clean extraction of banana fibre from pseudo stems (leftover banana trunk after harvest) and empty bunches.' The fibre can be used to make yarn, paper and paper cups, cordage, tea bags, handbags, and footwear.

#### Patent sought

An international patent has been sought for the process know-how, a spokesman for the CSIR-NIIST said. It has already been licensed to three parties, including one based in the Philippines. The CSIR-NIIST expects the process to become acceptable at the local level, the spokesman said.

#### The alternatives

Banana fibre is generally extracted through a cumbersome manual process. By using a metal scraper (flat and blunt blade), the pseudo stem sheaths are scraped and the fibre is separated.

An individual at work can extract just about 500 gm in this manner; the mechanical process yields 10 times the quantity but with heavy damage to the fibre.

The CSIR-NIIST technology involves an anaerobic (without oxygen) process. The fibres are separated by enzymes produced through microbial action in an anaerobic reactor.

#### Waste into biogas

The organic wastes get converted into biogas in the process. The process water is recirculated.

Under optimum conditions, separation of the fibres gets completed in a week's time, says V. Manilal of the Process Engineering and Environmental Technology division at the NIIST. The fibres are washed and dried in sunlight to bring down the moisture content considerably.

#### Brilliant white

The fibre obtained is brilliant white in colour and has little pith residues. The CSIR-NIIST claims that the process is inexpensive, pollution-free, and avoids damage to fibres.

It also has the potential to generate employment and can offer higher earnings for farmers. For details, the

CSIR-NIIST can be contacted on phone 0471-2515388.