

## CSIR centre develops new process for extracting coir fibre

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Thiruvananthapuram, May 22:

National Institute for Interdisciplinary Science and Technology (NIIST) here has developed a new bio-extraction process for producing quality coir fibre.

NIIST is a constituent laboratory of the Council for Scientific and Industrial Research (CSIR).

This relatively clean and microbiological process converts biodegradable components in the husk to soluble compounds and ultimately to biogas, a spokesman said.

The process completes in a month and yields more than 50,000 litres of biogas out of 1,000 husks.

Coir pith generated at the end of fibre extraction is free of contaminants. It can be used as a mulching agent and for soil conditioning and bio-filter applications.

The smooth surface of the fibre provides better properties in yarn making as per test data, the spokesman said.

The laboratory has tested this bioprocess up to a scale of 500 husk batch capacity at its premises and is now ready to go for field demonstration.

Collection and use of byproducts, biogas and coir pith are rendered easy in the process, the spokesman added.

This compares 'well' with the current process for extracting the fibre from fresh coconut husks after a natural decaying process called 'retting.'

The husk retting is carried out by immersing coconut husks in lakes, rivers and ponds for a period ranging from six months to one year.

Materials of the husk which bind fibres together get degraded and fibres loosened, the spokesman explained.

### **POLLUTION THREAT**

However, this leads to extensive pollution of water bodies, methane and sulphide emissions.

Conventional retting has also reportedly led to destruction of higher aquatic life including fisheries from lack of oxygen

and water pollution.

This has led to a scarcity of quality fibre for the manufacture of coir products. Fibre extraction through mechanical route is a partial solution with minimal pollution.

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