

Ropar IIT unveils technology to produce bio-fuel from farm residue

TRIBUNE NEWS SERVICE

ROPAR, MAY 2

The Indian Institute of Technology (IIT), Ropar, in association with Aston University, Birmingham, UK, unveiled a technology to produce bio-fuel and bio char using agricultural residue, especially paddy straw, here today. Explaining the benefits of the technology, Professor Robert Berry, executive dean of Aston University, said it would help in protecting environment as well as increasing monetary benefits for farmers.

"The technology is being

introduced in decentralised form for the first time in India, while it was being used in anaerobic digestion to treat sewage sludge in the UK," said Robert.

The technology has already been successfully tested on the IIT campus. Now, a unit of prototype of the project will be taken to the fields of Laadal, Khwaspura and Hussainpur villages of Ropar next month so that the farmers get a first-hand experience of it.

Informing about the technology, Berry said European Bioenergy

Research Institute of Aston University's patented technology - a Pyroformer - takes waste products and residues such as husk and straw and converts them into controlled conditions. The process generates, oils, gas and bio char.

The straw or husk of pyrolysed in the reactor at around 375 degrees Celsius. Through pyrolysis, solid residue that is called bio char, gas and a vapour product is obtained.

The vapour product is brought in contact with bio diesel or diesel in a quenching unit where bio diesel is used as a medium

to condense the vapour. The vapour after condensation becomes bio oil. It is then collected in small cans.

While bio oil and gas can be used to run pump sets or engines at farms, bio char can be used for co-combustion in thermal power plants or as fertiliser.

"While one such unit will cost nearly Rs 30 lakh, the farmers can recover the cost within five years as one quintal of straw will produce 33 per cent of each of bio oil, gas and bio char," said project in charge Sudhakar Sagi, from Aston University.