

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

UNSTARRED QUESTION NO:3698
ANSWERED ON:13.02.2014
RESEARCH BY NIIST
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the National Institute for Interdisciplinary Science and Technology (NIIST) under Council of Scientific and Industrial Research (CSIR) in Thiruvananthapuram is working on development of any rural technologies ; and

(b) if so, the details of the recently translated technologies to help the rural poor and farmers ?

Answer

MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (SHRI S. JAIPAL REDDY)

(a) Yes, Madam.

(b) CSIR-National Institute for Interdisciplinary Science & Technology (NIIST) has been providing the knowledgebase needed for the socio-economic development of rural areas. Some technologies are:

i) Clean Bioprocess for white pepper production: White pepper is the most remunerative value-added form of green and black pepper, which is an elegant culinary agent. CSIR-NIIST have invented and patented a simpler, more cost-effective and pollution-free microbial process that ensures production of superior quality white pepper within a shorter span of time than conventional routes. The knowhow has been transferred to 21 firms.

ii) Bioprocess for extraction of banana fibre: 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). CSIR-NIIST has developed a process for extracting banana fibre from pseudo stems (leftover banana trunk) and empty bunches. The process is pollution free and the organic waste gets converted into biogas. The process water is reused. The new process gives greater yield of fibre and the extracted fibres are longer and smoother. The knowhow has been transferred to 3 firms.

iii) RRLT-NC Driers: RRLT-NC driers are modern low cost, low capacity, multipurpose and improved natural convection driers. The driers can be used for the drying of different materials by farmers, cottage scale industries, traders and even in house hold sector. Depending upon the model, renewable agricultural waste materials, coal, firewood, electricity, kerosene etc. can be used as fuel for the generation of hot air needed for drying. The design, fabrication, and operation of RRLT-NC driers are simple. Maintenance of the driers is also easy. They are available in five standard models for the drying of different farm products such as coconut (copra), garcinia campogia (kodumpuly), groundnut, pappad etc. The knowhow has been transferred to one company.