

Technology details:

Name of the technology	Banana Fibre Extractor Machine
Year (s) of development	2000-05
Technology details (300-350 words)	Banana is mainly cultivated for fruits and leaves and currently, about 1,000 million tons of banana pseudo stems are dumped as waste at farm level in India. The effective utilization of pseudostems is a vital issue related to banana cultivation. Extraction of fibre and preparation of organic manure from banana pseudostems are found to be highly useful and economical to the farmers. Banana fibre is a superior quality fibre with required strength, length and color. Banana fibre is extensively used in textile industry as a natural fibre. Paper having a life span of 700 years is being prepared from banana fibre. Banana fibre is used in manufacturing of chemical-free tissue paper, currency paper, filter paper, decorative craft paper, paper bags, household articles etc., where great strength is required. Due to very low fibre productivity and involvement of drudgery in manual process, the extraction of banana fibre has not received desired attention. KVK of CTRI developed a need based user-friendly machine christened as Banana Fibre Extractor for the extraction of fibre from unutilized portions of banana such as pseudostems, peduncles and petioles on commercial basis. The machine works with the principle of beating and scraping of the fibre simultaneously. Low-Cost Portable Device, Machine works with 1h.p. single phase electric motor, Size of the machine 4"x3"x2.5" weighing about 176 kg, Output: 15 – 20 kg DF/ 8 hours, Production cost: Rs. 150 -170/kg, Product value: Rs. 200 - 250/kg, Net income: Rs. 450/day, the cost of the machine is Rs.75,000 – 1,00,000/-. The Banana fibre extractor uses the impact force with the roller drum and scrapping action with the blunt blades mounted on it to separate the fibre from banana stem sheaths. Initially, each sheath is held firmly by the operator through the guiding rods and fed inch by inch in to the roller drum. By scrapping action of the blades, the pith component of the sheath will be removed and fibre will be extracted while driving back the sheath within short time.
Pictures (High resolution)	 
Impact of the technology	Reduces the drudgery by eliminating the scraping and combing actions involved in manual process. Increase in fibre production. Four persons can extract 15-20 kg of fibre/ day as against 4 kg fibre by manual process. Thus earning net income of Rs.450/ per day per head.It is a user friendly machine and cost-effective. It requires less maintenance cost, safe and easy to operate, Gives superior quality fibre with required strength, length, softness and colour.
Publications /Commercialization	Entrepreneurship in Banana Fibre Video Compact Disc Multi colour brochures Pamphlets -3 (Telugu, English & Hindi) Articles published: 5 (ICAR News, ICAR, News Letter, SAARC News Letter, Indian Farming, Indian Journal of Horticulture) Popular articles published: 12