BANANA FIBRE AND FIBRE BASED HANDICRAFTS

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Preamble

By virtue of gigantic growth, banana plant produces large amount of biomass. More than two-thirds of the total biomass produced during banana cultivation consisted of pseudostem, leaves, mid rib, peduncle and corm. Banana pseudostem is a waste material after the harvest. In pseudostem, only 9-10 layers of sheath of the plant yield fibre. The fresh pseudostem yields about 1-1.5% of fibre. It is estimated that annually 30 million tons of biomass is produced through banana cultivation, from which there is scope to produce 1.5 million tons of banana fibre across the country as byproduct, which otherwise recycled into soil for enrichment or goes as a waste. The biomass production varies from 54.60 t/ha (Poovan, AAB) to 94.10 t/ha (Saba, ABB). Utilization of banana fibre is an underexploited area due to the lack of awareness and lack of systematic research on structural and physical properties of the fibre. As banana is cultivated round the year, supply of raw materials is ensured round the year for production of a wide array of products. From outer sheath, coarse fibre is extracted while fine fibre is extracted from inner sheath. Both the fibres are utilized for making many handicrafts.

Advantages

- Natural fibre and eco-friendly in nature.
- Raw material available cheaply.
- Choice for making diversified products.
- Wide range of applications (textile, handicraft, absorbent, automobiles, *etc*.)
- Employment generation to rural sector, particularly for SHG of women.

Banana fibre is extracted from the sheath of banana pseudostem by hand or machine. The natural fibre has multifaceted uses in preparing many value added products of handicraft items such as table-mat, bag, wall hangings and other fancy articles, ropes, craft paper, *etc*. A farmer or an entrepreneur can earn additional income up to Rs. 10,000/- from one acre of banana cultivation. The scutcher waste as byproduct can also be utilized for making vermicompost.

Keeping these points in view, an improved banana fibre extractor was designed and developed with high efficiency and quality to meet the market demand and to satisfy the customers need.

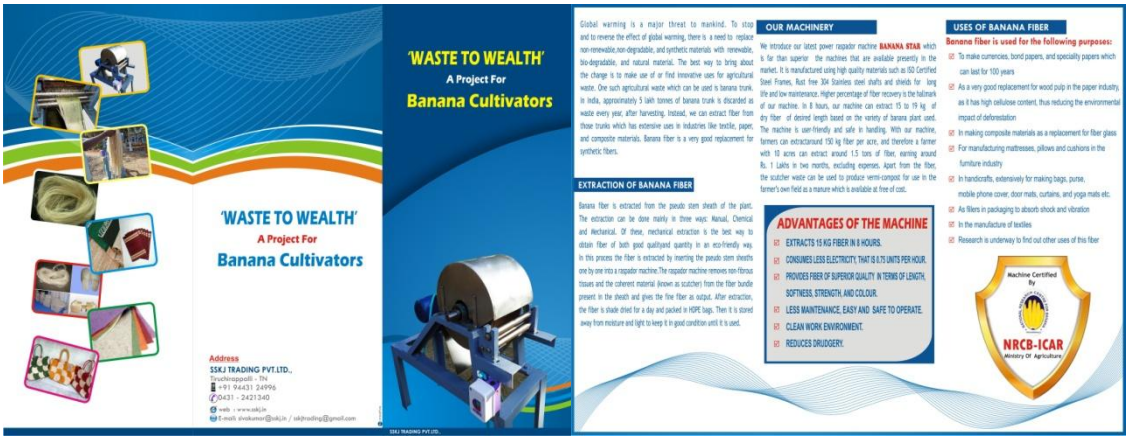
The training and transfer of technology for the product is available at ICAR – National Research Centre for Banana, Thogamalai Road, Thayanur Post, Tiruchirappalli – 620 102, Tamil Nadu. This product is highly suitable Self-help group for women (SHGs). *Khadi* Village Industrial Commission (KVIC) helps in promotion and marketing of natural fibres and its products including banana fiber and its products.

Machine extraction of fibre from banana stem

SHG women manufacturing banana fibres and handicraft items

Impact of banana fiber extraction and fibre based handicrafts

Mr. A. Sivakumar, SSKJ Trading Pvt. Ltd., Trichy, Tamil Nadu, engaged in manufacturing and marketing of banana pseudostem fibre extractor under the brand name of BANANA STAR since 2010. The machine has a stand for workers and scutcher waste collection basket, wheels for moving from one place to another. The entrepreneur developed this machine under the aegis of ICAR-National Research Centre for Banana, Tiruchirappalli under the scheme 'Waste to Wealth', a fibre extraction project for the benefit of banana farming community, self-help groups at village level and various other entrepreneurs/stakeholders involved in the banana related activities/business. The machine BANANA STAR was tested several times for its efficiency and comparative studies at ICAR – NRC Banana, Trichy and received efficiency certificate.



So far, the entrepreneur has supplied 47 machines to various Districts of Tamil Nadu, Kerala, North-eastern states and the sales turnover is Rs.33 lakhs. Importantly, the entrepreneur is facilitating buying and selling of fibre and its products of our customers as well as other customers of banana fibre. Mr. Sivakumar was recognized with 'Best Entrepreneur Award' in 2013.

Mrs. P. T. Paremalam, Erode District, Tamil Nadu is running fibre based products in the name of 'Sri Achu Fibres' for the past six years since 2011. After getting training from ICAR-NRCB, she manufactures diversified banana fibre and fibre based products, banana fibre pillows, fibre seat pads, table mats, bags, cell phone pouch, yoga mats, *etc*. Sri Achu Fibres provides employment to many women in banana fiber based handicrafts and fabric production. It also

contributes for export promotion, in addition to domestic markets. The sale of products is Rs. 20 lakhs per year with a net income of Rs. 3 lakh per year.

Recognizing her contributions to the banana fibre based products and natural fibre industry, she was awarded with 'Best Entrepreneur Award' in 2013 and 'Best Women Entrepreneur' of Tamil Nadu Award' in 2016 by ICAR - National Research Centre for Banana, Tiruchirappalli.

Mr. Sivakumar receiving 'Best Entrepreneur Award'.

Mrs. Paremalam receiving 'Best Woman Entrepreneur Award'.