






PRODUCT DEVELOPMENT AND DIVERSIFICATION

YEAR	ACTIVITIES	ACHIEVEMENTS
2012	<p>Vajra Coir Spinning Machine</p> <p>The production turn over in the case of hand spinning was less. The efforts to maximize the productivity of the yarn resulted in the introduction of automatic spinning machine units. But the idea of producing yarn by this automatic spinning machine was with the help of core threads of nylon / cotton which acts as carrier agent for the coir fibers. These fibers are entwined on to the thread and are twisted by the grip nozzle or rollers to form the single strand. Automatic spinning machine with multiple heads has increased the production of coir yarn and wages of the spinners. The core thread made out of cotton yarn creates problems for tufted mats due to difference in the colour. Synthetic yarn had also been used as core thread which is not considered as eco-friendly. In this circumstances, Central Coir Research Institute (CCRI) has designed and fabricated a new versatile multihead mechanized spinning machine without core thread for high production of different varieties of coir yarn.</p>	

YEAR	ACTIVITIES	ACHIEVEMENTS
2014	<p>Mini Tufted Machine (2014)</p> <p>Since the introduction of Coir tufting in India, a few exporters had imported PVC Tufting machinery costing about Rs.30 million per unit as investment. Handloom mats and other products went out of market with the coming of new product. This was very badly affected small entrepreneurs in the coir sector and they had to close their units for want of orders. The investment cost of standard tufting unit was very high and beyond their reach, therefore many small production units were closed and their employees were jobless. This was a serious issue in the coir market. Coir Board took the initiative and developed a Mini Tufting unit costing less and which can be used by small units with least investment i.e. less than 2 million rupees. This mini tufting machine is developed mainly for tiny units to enhance the productivity with least investment. Hence this invention will help the ordinary entrepreneurs to start mini tufting units for their profit and also give employment opportunity to the unskilled manpower. Women can operate the machine easily for more wages, and earn profit towards the income generation.</p>	

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2015	<p>Handmade Paper Unit (2015)</p> <p>Paper and the pulp paper making process, was said to be developed in China during the early 2nd century A D. Hence there is lot of wood required for making the pulp and it will affect the nature too. In coir industry, there are a lot of coir pith and coir waste fibers getting after some of the process like shearing / defibering. Research on utilization of fiber and pith from green /dry tender husk is being carried out at Central Coir research Institute under Coir Board. Laboratory scale studies could lead to pulping of fiber and pith to produce handmade paper, garden articles, egg carton, visiting cards, gift boxes etc. Paper is a thin material produced by pressing together moist fiber, typically cellulose pulp derived from wood rags or grasses and drying them in to flexible sheets. The waste paper collected by rag pickers and paper shredder etc normally come to the big plants to recycle it, the raw material for the pulp is "wood chips". R&D has proved to prepare the good quality pulp with waste paper and ligno cellulosic materials like coir / pith which is an excellent wood substitute.</p>	 

YEAR	ACTIVITIES	ACHIEVEMENTS
2016	<p>Naveena Spinning Machine (2016)</p> <p>Coir fibres have been successfully blended with other natural fibres like sisal, cotton, silk etc. However, the productivity of thinner variety yarn by ratt spinning is very low approx. 1000 metres/day. In this view to increase the production, the CCRI of Coir Board has modified the 6 head automatic spinning machine with core thread so as to produce thin variety of blended yarn by consuming only 1 HP electric motor. The productivity on this "NAVEENA" machine is approx. 18,000 meters of yarn / 8 hours. Blended yarn will be used for making different textile products in the diversified range for popularization to attract micro, small and medium entrepreneurs for making the products.</p>	
2018-2020	<p>Anugraha- Tejus Power Loom</p> <p>Coir geo textiles are ecofriendly, natural fibre based, durable and cheap when compared to other natural fibre products. Coir geotextiles have been used for soil erosion control and road construction. The demand of coir geotextiles are getting increased day by day in the International and Domestic markets. National Rural Road Development Agency, Govt. of India has approved the construction of 450 Km of rural roads in 9 states of the country using coir geo textiles. In order to meet the requirements, CCRI, Coir Board has recently developed 1 & 2 meter width power loom for weaving coir geotextiles in large quantity. The production capacity of this loom is 600-800 Sq. Meter of coir geotextiles per day i.e, 5-6 times more production than existing looms and the fabrication cost of this loom varies from Rs.5 lakh to Rs.12 lakh.</p>	