PRODUCT DEVELOPMENT AND DIVERSIFICATION

YEAR	ACTIVITIES	ACHIEVEMENTS
2004-05	The operation of wooden coir handlooms, having a weight of more than 500 kg, requires exertion of a large force and therefore can be operated only by persons having sound physique. It is because of this reason that whereas large number of women is employed in spinning industry, there are practically no women workers engaged on handlooms for the weaving of coir as it involves a lot of efforts and drudgery in its operation. Central Coir Research Institute of Coir Board has developed a metallic handloom named "ANUGRAHA" for weaving all varieties of coir geo textiles. Anugraha loom has been so designed that it can weave a coir fabric with a close weave of 6 mm to a fabric having a mesh size of 25 mm. A layman can operate and produce standard quality products without any drudgery. As there is no power required to operate this loom, it can be installed in the remote village where women can easily operate it as it has a simple pedal for treadling. The treadling and beating is very easy in Anugraha loom. The loom can be converted in to wider width or a multi shaft loom to make it more versatile to produce intricate design on coir. Coir Board has received NRDC award for this invention for the year 2006.	 

YEAR	ACTIVITIES	ACHIEVEMENTS
2006	**Anupam Handloom** Handlooms are known for weaving of coir yarn into woven products such as mats, matting and carpets. However, the known handlooms are incorporated with treadles for movement of the heddles and sley which are manually operated. The load applied to such treadles is as high as 45 kilograms. Such a load is applied manually by workers. Therefore the production of the woven products is substantially reduced into 7 to 9 mats by two workers on the traditional handloom. The Central Coir Research Institute, Coir Board has designed and fabricated a versatile pneumatic loom for weaving different kinds of mats such as rod mats, rod inlaid mats, loop mats, carnatic mats, creel mats, fibre mats, different kinds of two shaft and three shaft matting, carpets & geotextiles. Pneumatic system offers basic advantages of high efficiency coupled with fewer moving parts, compactness, forces, torques and speeds readily variable over a widely useful range, easy installation and maintenance in comparison to the manually operated traditional handloom. Tis invention provides a pneumatic handloom to produce 15 to 18 creels mats by a single worker and wherein the treadles are no longer manually operated.	 

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2008	**Mobile Fibre Extraction Machine (MFEM)** Once the traditional coir industry felt an acute crisis of fibre shortage, it had adversely affected more than six lakh workers who are engaged in spinning and weaving sectors of coir industry. The industry felt that there is an untapped stock of husks in the rural areas from where collections of husks are difficult as onsite defibering was not possible at that time. The entire endeavor by the Govt. of Kerala for collection and utilization of coconut husks and the coir industry as a whole failed to utilize the husk properly. So there was a need to develop such a mobile fibre extraction machine which could be taken to the remote villages so that vast untapped stock of husks from such areas could be tapped. In these circumstances, CCRI of Coir Board developed a Mobile Fibre Extraction Machine on the basis of the urgent demand from the coir industry that can be taken to remote areas for the extraction of husks in a simple way. This machine can be operated by 10 HP Motor/Diesel Engine whereas the existing fibre extraction units are working with 65-75 HP power for operating different fibre extraction machines. Coir Board has received NRDC award for this invention for the year 2010 and the prestigious World Intellectual Property Organization (WIPO) Gold medal has been conferred to India as the best invention of the year 2010.	 

YEAR	ACTIVITIES	ACHIEVEMENTS
2010	**Uday Wooden Handloom** There around 20,000 wooden handlooms in the coir industry. These are more than 60 years old and the weavers find it difficult to operate due to the heavy weight and force required for treadling and beating. The women workers can never work on such looms. From the beginning itself the handlooms are operated only by men. As the time being the men labors are shifted in to various other employments. To overcome the lack of men labors in the handloom, the women labors are introduced. To overcome the extra effort and to reduce the working load and also attract more women labors in to weaving sector of Coir Industry, CCRI of Coir Board introduced the pneumatic loom "Uday" by implementing the pneumatic mechanism in existing wooden handlooms. This new system is considered as most advanced weaving technology for coir industry. It brings more women workers in to weaving. Also increase productivity. Good quality is maintained by adjusting the pressure for each product according to specification. Quality will be same from person to person due to equal pressure of beating.