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Spin doctor

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Madhabanada Ray, 39

Innovation: A new tasar yarn reeling machine

Cost of production: Rs 30,000 (including the cost of the machine)

What it does: It operates through power-driven gears, replacing the pedal system and ensuring higher productivity



Ray's innovation has changed the lives of hundreds of village women machine to help rural women produce a better quality of yarn with an easier production process, translating into more money for them.

A dash of grey stubble and restless eyes speak volumes for Madhabanada Ray. With a masters in Agriculture and a PG diploma in Tea Plantation Management, Ray has always been willing to go the extra mile to gain a new skill. This perhaps explains how Madhab, as friends call him, who had never shown any inclination for design, has now created a tasar yarn reeling

The new reeling machine produces many types of yarns-both untwisted (used in wefts) and twisted that is used as warp-with a better quality to offer to the market. Not only is this machine compact and better managed, it also operates through power-driven gears, weeding out the pedal system. It can reject thicker yarns, knots and flosses that enhance the quality of yarn. "The machine is better in multiple aspects than the one provided by the Central Silk Board (CSB)," says Ray, MD, MASUTA (Mahila Sutra Tasar) Producers Company Limited that works with the yarn producers.

The user can also work on any number of spindles, stop any of the spindles without stopping the whole machine, thereby increasing the productivity of the machine. The cost at mass production scale would be less than the existing reeling machines. "Necessity is rightly called the mother of all invention," Ray says. "I was unhappy watching the rural women getting exhausted at the earlier reeling machines that operate on pedals. It was too large and too cumbersome and had quite a few limitations," he recalls.

The new solar power-operated reeling machine that he has introduced has multiple advantages in terms of having manageable weight and height with better placement position, improved safety and less power consuming motors. All this guarantees improved productivity and production flexibility.

Ray hopes that the machine will increase incomes of the users by up to 30 per cent.

Like most innovations, this one too did not come easily. Ray had to do everything—from meeting physics and mechanics professors in various cities to chatting on the Internet with students of The Netherlands' Delft University of Technology to gather technical expertise. Impressed by MASUTA's goals of economically empowering village women, some students from Delft University visited India to help in the development. "They helped us manufacture the first prototype. Then in the second prototype, we focused on reducing power requirements. In the final stage, we worked towards bettering the bobbin," he recalls.

Once the model was ready, Ray kept introducing the desired modifications in all the stages to fine-tune it further. "Finally we are ready with the final product," says Ray. He is hopeful that the enterprise will increase the users' income by 30 per cent. The earning goes into the hands of the women of the family. Ray's life changed with a deciding clarity when he joined an NGO, PRADAN (Professional Assistance from Development Action), that works with communities at the grassroots to help them overcome poverty. Ray worked as a rural development professional in 1995. "That's destiny. I wanted to make a meaningful change in the lives of the people," he reminisces.

During his posting at one of the poorest tribal villages, Ray learned how pradan assisted the Union Ministry of Rural Development and the CSB—which provided funds and technology—to create sustainable livelihood for the village poor. The medium was promoting tasar silkworm rearing and tasar yarn production. Eventually Ray's drive and commitment impressed everyone in the organisation. When PRADAN decided to constitute MASUTA Producers Company Limited to focus on collective production of tasar yarns with rural women yarn producers as owners in December 2005, Ray was the consensus pick as the managing director.

Today, MASUTA has 2,500 rural women yarn producers, an annual turnover of Rs 13 crore and is growing every year with women from disadvantaged rural families from Bihar, Jharkhand and Chhattisgarh as shareholders. Provided with productive assets for yarn-making like reeling machines, these women have gained control over their own earnings and become an economically empowered lot. Ray has played a pioneering role in making the machine a viable business model. He's reeling in the accolades now.

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