

Farmer's Invention Revolutionizes Cotton Industry in Gujarat

Mansukhbhai Patel, a farmer with a 10th-grade education, has revolutionized the cotton industry in the western Indian state of Gujarat with a cotton spinner he invented to cope with the region's unique harvesting challenges. An equally unique network set up to find and support India's grassroots inventors helped him refine his invention.

Gujarat's farmers grow a tough variety of cotton, called V-797, that does not need much water and can withstand the harsh, arid climate. But its sturdy pods must be picked off the plant and cracked manually to extract the fibers. This task, performed by women and children, often cannot be finished in time, and also keeps children out of school.

Mr. Patel, a self-taught electrician and mechanic, began work on his machine in 1991, and sold some machines to local ginners in 1993. But the machines failed when a wire mesh plate broke. Mr. Patel refunded the money and continued to work on his invention.

Then in 1995, college student Hirendra Rawal put him in touch with Anil Gupta, who teaches at the Indian Institute of Management in Ahmedabad and whose Honey Bee Network seeks out tinkerers, mechanics, and self-taught scientists in villages across India. Mr. Gupta brought a visiting professor from Bombay's Indian Institute of Technology to meet Mr. Patel. The professor said that with some alterations, the stripper would be fine. Then, Mr. Gupta brought a German exchange student to work with Mr. Patel. Their final model, built in 1999, worked perfectly.