

Indian industry looking for a few good pickers

Coconut farmers can't find enough people to scale trees, so they're looking anywhere, from robots to monkeys

By **MARK MAGNIER**
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NEYYATTINKARA, India — Retired government worker and small-time coconut farmer Prakasan Thattari is very proud of his invention: a machine with the look of a giant metallic praying mantis that clangs fearlessly up vertigo-inducing coconut trees.

It climbs well, but it has a little trouble cutting off the coconuts once up there, said Thattari, who estimates he's gone through thousands of dollars tinkering with various gizmos.

"I spent all my retirement money," he said. "The machine is close to my heart."

Here in India's southern state of Kerala, coconuts are big business: The state boasts more than 500 million coconut trees, covering 40 percent of its land. But these days coconut farmers are finding it increasingly difficult to find pickers, as younger, better-educated workers shun manual labor for more prestigious "chair" jobs.

So in 2009, the state offered a \$20,000 prize for the best robotic coconut picker, and since then the praying mantis and more than 400 of its strange cousins have sallied, crawled and grappled forth.

Unfortunately, most failed to climb, broke down or were completely impractical. Some belched diesel or were so heavy that they couldn't be moved easily over rough jungle ground.

Those that climbed weren't good at cutting the coconuts once aloft. There are now three finalists. (Sadly, Thattari's in-



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S. Sathish, among the dwindling number of human pickers in the Indian state of Kerala, says he can climb 50 coconut trees a day.

vention made it only to the top eight.)

"They all have problems," said Balsubramaniam Giriraj, one of the judges and a mechanical engineering professor at PSG College of Technology in the city of Coimbatore. "I still think you need human beings."

S. Sathish makes the job look easy: He

tucks a machete into his waistband and shimmies spiderlike up 60 feet of tree in Neyyattinkara, bringing several coconuts crashing to the jungle floor with a few deft cuts.

He's been picking part time for three years when he's not driving a truck. Climbing is tiring, he said, but once you get the hang of it, you can scamper up pretty quickly. Mornings, he explains, are best, before dust settles on the trunks, making them difficult to grip.

He says he can climb up to 50 trees per day, at 50 cents per tree.

But Sathish is among a dwindling number of pickers of the human kind, the downside of Kerala's success.

The state, with the highest literacy rate in the country, at 93 percent, does a good job educating people and raising their expectations. But it's short on industry or jobs. The result is ranks of unemployed who wouldn't think of sullying their hands, even though some coconut pickers earn more than teachers or nurses do.

"They're just plain lazy," said K.P. Peter, a small-time coconut farmer. "They get all sorts of subsidies from the government, don't show up on time, leave us stranded."

As part of their search for pickers, industry groups have looked to the likes of Thailand and Indonesia, countries that train monkeys to pluck the coconuts.

But the monkeys aren't quite working out.

"The problem is, the monkeys climb but can't tell what's ripe and just harvest everything," said Sree Kumar, a professor at the College of Agriculture in Kerala's capital, Thiruvananthapuram.

In a bid to broaden the labor pool, the Coconut Board's Friends of the Coconut Tree program is trying to recruit women — picking has traditionally been man's work — older workers and anyone else who dreams

of reaching for the fronds.

The board's six-day course trains people to use climbing devices, allowing even the most uncoordinated workers to get them selves up a trunk, provided they stifle any fear of heights, which can reach 100 feet. (We're talking a 10-story building.)

The climbing devices, in sitting and standing models, cost about \$50 and work by ratcheting the rider up the trunk with a foot-powered device. Around for at least 30 years, they were upgraded in 2010 with rust-resistant materials and a revolutionary new feature: a safety belt.

Pickers are taught to identify ripe fruit and fertilize, prune and treat disease in trees. The course also aims to address picker esteem issues.

"We offer mind management, give them a sense of dignity," said Sreekumar Poduval, an engineer with the Coconut Development Board.

India produces about 25 percent of the world's coconut meat and fiber, which is eaten or made into soap, oil, shampoo, rope and doormats. Kerala is the India's kahuna of coconuts, producing nearly half. In fact, the state's name is a Malayalam-language combination of the words for "coconut" and "land."

One other byproduct of the coconuts is toddy, a wine made from coconut sap.

The low-caste Paravan clan that has traditionally plucked coconuts has a high rate of alcohol abuse, and after festivals, many pickers are too hung over to pick. So although the robotic pickers might not be as efficient as deft humanoids, they offer one advantage.

"Traditional climbers are really skilled, climb easily and faster," said the College of Agriculture's Kumar. "But machines won't drink toddy. So they keep working."

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