

# Amid hype for superfoods, Indian tribals save nearly-extinct crops

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[Tribals in Maharashtra are cultivating indigenous varieties of grains and vegetables that are more nutritious and sustainable than hybrid ones](#) *An Indian farmer drying wet rice crop. The Times of India/Suman Reddy D* As the consumption of nutrient-rich and sustainable foods becomes all the rage, in India's western state of Maharashtra, tribal farmers have managed to conserve 722 landraces, or traditional varieties, of rice, pulses and sorghum that were on the verge of extinction.

A

landrace

is a "dynamic population of a cultivated plant that has historical origin, distinct identity and lacks formal crop improvement, as well as often being genetically diverse, locally adapted and associated with traditional farming systems". The tribal farmers have gone through extensive processes to identify and procure indigenous landraces of grains and vegetables before cultivating them widely. These food crops, experts say, are much more nutritious than hybrid ones cultivated through intensive industrial farming. Each type, such as rice or wild vegetables, have multiple varieties with different health benefits and may be considered "superfoods". They also have more resistance to poor weather conditions than hybrid crops. **Healthier food** BAIF, an NGO based in Pune, under a project called Maharashtra Gene Bank Project (MGBP), started to conserve, manage and revive indigenous seeds in 92 villages, mostly tribal, in 2005-06. They operated in five districts—Nandurbar, Palghar, Pune, Ahmednagar, and Gadchiroli. BAIF volunteers reached tribals who mostly do farming in these villages to get to know local rice, millets, sorghum, cereals, oilseeds, pulses, vegetables, and wild vegetable varieties. These landrace crops are more nutritious than ones produced through industrial farming. Sanjay Patil, who heads the project, said, "We need to understand our food plate was rich with hundreds of varieties of cereals, vegetables that were the source of all the nutrients the human body requires. Now we consume 3-4 items like one type of pulse, some oilseeds, one or two rice varieties and that is leaving us with inadequate nutrients. That is the reason why people are becoming victims of many lifestyle diseases like diabetes or obesity and so on." *Indigenous crops kept on display at tribal farmer Sunil Bhoje's crop exhibition center in Maharashtra's Palghar District.* Sunil Bhoje, a tribal farmer from Palghar district in Maharashtra, has cultivated varieties of wild vegetables on his eight acres of land. He showed some of the varieties, one of which was called 'Titu' and looked like a one-meter-long sword or cucumber, weighing more than five kilograms. Another was colored maize or black, nearly round-shaped rice. All of these were indigenous varieties that had been on the verge of extinction ten years ago. "We realized that some varieties, like red rice, are good to increase hemoglobin, a few varieties make your stomach full with little consumption, others are good for combating malnutrition and so on. We, of course with the help of our tribal leaders, have kept this record of each variety," said Patil.

An intensive process

Bhoje, a 35-year old Konkana tribal, has a three-room home cum exhibition center for crops on his farm. He said, "Till 2005-06, all villagers including me would cultivate rice varieties that were available and popular in the market. In the remaining months, they would migrate to Thane or Navi Mumbai, 100 plus kilometers away from the village, to do laboring work at construction sites. When BAIF volunteers approached us for the project to conserve indigenous seeds, I thought to give it a chance." Patil said, "Since we started from scratch, we had roamed around in local village vegetable markets to find out different looking vegetables, rices and so on. As most of these villages and tribal areas are near cities, they had switched to hybrid varieties of seeds and hence, we had to do extensive surveys of markets." Then, through vegetable vendors, BAIF fellows reached tribals who cultivated indigenous varieties of crops. They convinced tribal farmers and got the interested people onboard, including Bhoje. BAIF also conducted surveys in schools in tribal areas asking all students to get information about what their grandparents would eat, and what their parents and they eat. "Grandparents had over 100 varieties of rice, pulses, vegetables in their regular food, while parents' plates were reduced to only 30-35 varieties. Kids eat 4-5 varieties," Patil said.

Landraces of pulses and cereals on display at a crop exhibition center of the non-government organization BAIF in Maharashtra, India.

Bhoje said, "I, along with Prabhakar Gavit, a tribal youth who volunteered, literally went from house to house in nearby hamlets to know if they still grow indigenous varieties of rice and other vegetables. A few of them were still cultivating those varieties for house consumption." They bought those varieties and started to cultivate them in their farms, produced seeds and began to distribute them to nearby farmers. "The process has been slow as tribals don't get convinced fearing production will be lesser and they will not get sufficient income and so on," he added. Prabhakar said, "In the last ten years, we convinced over 300 tribal farmers from around 15-18 villages that included over 40 hamlets to switch to indigenous varieties of crops." This year they cultivated 3500 kilograms of all varieties of food crops together. It stopped raining in the flowering season when rain was required most. But still, a good amount of production was possible as most varieties do not require much water like hybrid ones. "Production would have been higher if the rain was sufficient," he said. Patil said, "One or two local tribals have become researchers, promoters, and conservers of indigenous seeds. They convince tribals to opt for indigenous varieties. They keep notes of heights, growing patterns, colors, and water requirements of each variety."

*Women tribal farmers of Maharashtra's Palghar district, who cultivate indigenous seeds, sit in a group.*

*Better than hybrid* The efforts have borne fruits as they were able to produce 6,700 kg of 722 landraces of rice, cereals, pulses, oilseeds and established 27 in-situ centers in the 92 villages involved. More than 200 community tribal leaders have reached over 5000 tribal farmers in five districts. They also make sure to pass on this knowledge to kids as they will hopefully continue the practice. Patil said, "All these varieties would have been extinct by now or in the near future as most of the tribals have turned to hybrid varieties sold in the market. Credit goes to the tribals and not to BAIF. Once we finish the project, we want tribals to continue the cultivation of indigenous seeds." Patil says he was glad that many organizations have been approaching BAIF to get indigenous seeds. Tribal farmers associated with BAIF have discovered 53 varieties of indigenous seeds, 33 are of which are kinds of rice. They have also applied for registration under Protection of Plant Varieties and Farmers Right Act, 2001. However, they are struggling to get the varieties registered, and claim that if they were from any agriculture university they would have been registered by now. First published by

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