

# Navdanya | A non-chemical green revolution

*By promoting organic farming, this organization hopes to help Indian farmers become self-sufficient*  
Rudraneil Sengupta

Thakur Das, 62, sifts through unhusked grains of basmati on the terrace of his two-storeyed house on the outskirts of Dehradun. The floor of the terrace is a carpet of gold—his rice harvest spread out to dry in the crisp September sun. Das' basmati is special. It's grown from indigenous seeds that make the Dehradun variety of basmati one of the best known in India, in soil that has no chemical fertilizers or pesticides.

Navdanya's Vidyapeeth farm used for organic farming research. Pradeep Gaur/Mint

It has not always been like this. Like most farmers in the area, Das was convinced that chemicals were needed to get a good yield. Then in 1995, Das was contacted by Navdanya, a non-governmental organization (NGO) that promotes organic farming. "They asked us about our farming practises, our yield, the rates at which we sell," says Das, "and offered us alternatives which we liked. They assured us that our old practice of using gobar khaad (a natural fertilizer made of cow dung) will work, and taught us other techniques of organic farming."

Navdanya began in 1987 when physicist-turned-environmentalist Vandana Shiva decided to promote organic farming to stave off the environmental hazards of using chemical fertilizers and pesticides, and to protect the biodiversity of indigenous seeds.

"We started making farmers aware of the benefits of organic farming much before people even knew about the concept in India," says Abhishek Jani, 32, Shiva's son, and marketing-in-charge for Fair Trade at Navdanya. "By weaning the farmers away from chemicals and store-bought seeds, our aim is to make them more economically independent." Navdanya claims this also has a profound impact on food security since organic farming practices demand inter-cropping to keep the soil fertile. "Organic farmers make sure they are not just growing rice or wheat. They are growing veggies, pulses, etc., that they will sell in their village and use themselves," says Jani. "Monoculture farmers are dependent on the market for food. People say organic produce is for the rich—that's not true. It's for the rich and for the poor farmers as well who are growing it." Monoculture farms, which grow just one type of crop, are the norm for large farms and need huge amounts of chemical inputs.

Navdanya works in 16 states with small and marginal (below 1 hectare) farmers only, who account for more than 70% of farmers in India. Vinod Bhatt, 50, additional director of Bija Vidyapeeth, an institution set up by Navdanya which runs free courses on organic practises for farmers, says there are two basic requirements for farmers to become self-sufficient—when they don't have to buy seeds, and when they have their own fertile land. "We teach farmers how to sort their best seeds and store them so they can reuse their own seeds," says Bhatt. "Traditional seeds, as opposed to hybrids or GM (genetically modified) seeds, work best because they are well adapted to the region."

Bija Vidyapeeth, in Ramgarh village on the outskirts of Dehradun, is spread over 45 acres, most of which is used to study farming practices. It also houses a massive "seed bank", which contains more than 1,300 varieties of indigenous seeds, including more than 500 varieties of rice and over 100 varieties of wheat. The seed bank is Navdanya's most crucial tool to protect India's biodiversity. In fact, setting up community seed banks across India was one of the first priorities of the organization. The seed banks also lend farmers in the area as much seed as they need for free. If the crop from these seeds is successful, the farmer is required to give 1.25 times the amount of seeds he got in the first place back to Navdanya or to other farmers in the area. Through extensive research among farmers whose crops did not fail in the event of a natural disaster, Navdanya has amassed saline-resistant, flood-resistant and drought-resistant seeds. In 1999, after a cyclone devastated Orissa, Navdanya's seed bank in the area distributed saline-resistant seeds to farmers. In 2004, after the tsunami in Tamil Nadu, the same seeds were given to farmers there. "It's in moments of crisis that people look at alternatives, and where alternatives catch on," says Jani. "Large parts of Orissa and Tamil Nadu now use our saline-resistant and flood-resistant rice varieties." Navdanya also retails organic produce that they procure from farmers under their umbrella. This direct procurement by Navdanya is seen by many farmers as the biggest benefit of joining the organization. Mukundi Lal, 72, and his 40-year-old son Anand, who run a farm in Bhorpur, near Dehradun, say it has gone a long way to alleviate their financial insecurities. "We used to take our grains to the mandi and leave it there," says Mukundi, "and we had no idea if it was going to be bought, and what price we will get for it. Now our yield is bought immediately by Navdanya for instant cash."

Anand proudly shows us their organic set-up: A vermicompost pit where his two children dip their hands to bring up fistfuls of earthworms, a gobar gas plant whose byproduct is gobar khaad, and a large room to store their best seeds for the next crop. "Look at these beautiful corn kernels," Anand says, beaming, "we know how to spot the best seeds, it's in our blood."