Agriculture goes organic

Vermicomposting takes off in Maharashtra

Vijay Khamkar, a farmer in the small village of Vadgaon, Satara district, would often watch TV shows like Amchi Maati Amchi Mansa (Our soil, our people) and wonder what he could do as a farmer to help the environment, in whatever small way. “Such shows would always stress that farmers should take up eco-friendly and organic practices but I wasn’t sure what exactly to do,” he recounts to us. But in July 2017, his wife Seema Khamkar attended an agricultural demonstration by Watershed Organisation Trust on vermicomposting and advised him to follow the same. Since then, the couple have become enthusiastic advocates of this practice.

“I have 1.5 acres of land, on which I grow wheat, jowar and various crops. To give you an idea of the impact of vermicomposting, on 0.5 acres of land I could get generally 8-9 pothis or jute bags (1 pothi=100 kg) of wheat in the rabi season. But in the rabi of 2017, I got 10 or 11 such pothis. Farmers generally get Rs. 2,500 per 100 kg, so vermicomposting has definitely given us financial benefits,” says Vijay with a smile.

What is vermicomposting?

Vermicompost (or vermi-compost) is the product of the composting process using various species of worms, usually red wigglers, white worms, and other earthworms, to create a mixture of decomposing vegetable or food waste, bedding materials, and vermicast. Vermicompost contains water-soluble nutrients and is an excellent, nutrient-rich organic fertilizer and soil conditioner. It is used in farming and small scale sustainable, organic farming (Source: Wikipedia)
vermicomposting is a process of composting organic waste using earthworms. The resultant worm castings are rich in nutrients like nitrogen, potassium, manganese and calcium, which are all beneficial for crops. Despite this, farmers in the last 15-20 years in many parts of Maharashtra (and India) had shifted away from vermicomposting to chemical fertilizers.

But the growing awareness of the need to adopt eco-friendly practices leading to a change in the mindset of farmers, especially women farmers. Prithviraj Gaikwad, Researcher in WOTR’s Agriculture team, explains why there was a focus on women farmers.

Prithviraj says “Apart from performing domestic duties, women are also responsible for agriculture activities like weeding, sowing and application of fertilizer. Using chemical based inputs to agriculture can eventually lead to hazardous residue left in agri-products later consumed by people and farm animals. We decided that if we want to popularize vermicompost as a more eco-friendly and healthier kind of fertilizer, we needed to get the support of women. Considering women tend to be home more than men, they could pay attention to the vermi beds. Women were already aware that organic agriculture is good for health, and hence enthusiastically supported us.”

What is remarkable though that WOTR held just four demonstrations of vermicompost initially in four villages in the Beed Aurangabad, Ahmednagar and Satara districts in July 2016 and August 2017 respectively. From just 10 vermi beds, there are now over 800 vermi beds. Interestingly, farmers received no financial assistance. Women’s Development and Health, explains why farmers got no financial assistance under this scheme. She says “Our experience shows us that people don’t value those assets they get for free. So when we held demos in those four villages, we made it clear that we would not give any money. Instead Rs. 600 was collected as contribution from every farmer who was interested in vermicompost, to ensure they took it seriously.”

One such beneficiary was Surekha Kadam, a farmer in the Wing village of Satara district. She works on the 5-acre farm of Ashatai Sudhir Mangre. Surekha asserts that while vermicompost has certainly reduced the expenses, we should be realistic and not expect any miraculous change in output. “I use the vermi wash ( liquid by product of vermicomposting ) to spray on the mirchi and bhindi crops. In the past I would buy pesticides for the same, which would cost me around Rs. 1,500
This was totally saved. If I talk about the disadvantages of vermicompost, one minus point is that it takes longer to harvest the crop,” says Surekha talking about the financial incentive to carry out vermicomposting.

Another point highlighted by farmers practicing vermicomposting is related to the quality of the produce. “For example, onions grown on vermicompost take up to six months to harvest whereas with chemical fertilizers it can be done in five months. But the plus side is, in my experience, onions or other crops grown through vermicompost last for a longer time,” says Surekha’s husband, Khandu Kadam.

However, some farmers like Madhukar Barad from Yesgaon village of Aurangabad district have gone beyond using vermicompost as fertilizer and are selling vermi wash and worms commercially. Madhukar, who has four acres of land says “I sell earthworms at the rate of Rs. 150 per kg and I could sell 75 kg of worms last year. Vermicompost has thus made me an entrepreneur as well.”

In conclusion, vermicompost has several advantages in terms of soil health, lower costs and eco friendliness. But for it to be more popular, farmers, more needs to be done. “Both the government and NGOs have tried to promote vermicompost. But the efforts have not paid off in many cases as farmers had no guidance on basic aspects like not using waste water in the vermi beds, controlling white grubs in vermi beds with biopesticides and covering the beds in times of rain. Second, we need to make long term investments, like cement vermi beds, and not just use the cheap plastic ones often promoted in agricultural schemes. If these are done, vermicomposting may gain even further in popularity,” signs off Seema Khamkar. ( with inputs from Preetilata Gaikwad )