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Waste to Lucrative Business of Nutrition: Through Vermicomposting and Dairy

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Farmer's details

Name: Barender Singh
Age: 42
Village: Dhola Majra
Enterprise: Animal Feed, Vermicomposting, Dairy, Earthworm Sales.

Introduction

This distinct farmer from Dhola majra has proved himself to be a successful agripreneur. He has significantly reduced the usage of chemical fertilizers unlike other farmers by integrating vermicomposting for satisfying the nutritional demand of land. Moreover, he has generated a substantial profit through practicing dairy farming.

Start of his Career

Since the age of 17 he was heavily involved in farming with his father. After completing his matriculation, he had all the time in the world for farming, his landholdings stand at 10 acres along with 5 more acres on lease. Initially, he only grew grains like every other farmer. Barender Singh always sought out ways to improve the production from his enterprises. At that time, he only grew Wheat, Rice and Barseem. He noticed the heavy input of chemicals that went into his field, to maintain production and even that was not guaranteed for better yield.

The eureka moment

S. Barender Singh started participating in Kisan mela, which gave him the idea of integrating vermicomposting and reusing animal waste in his existing farming system. Further, S. Barender expanded number of his milch animals and by incorporating their waste into his vermicomposting unit. He set up his composting unit after completing his training at KVK, Rupnagar, and set his first Vermicompost unit, that provided him 1.5-ton production of vermicompost. The earthworms, left as residue after one cycle of composting was sold by him to other farmers who were looking forward to establishing their own setup.

In the beginning, he started his dairy enterprise (fig 1) with only six cows. Through his hard work, dedication, and proper management, he gradually expanded his dairy unit and increased the number of cattle to a total of seventeen cows. The milk produced from the dairy is regularly sold to Verka at a rate of ₹45 per litre, which provides him daily stable income. To reduce production cost and ensure good animal health, he grew green fodder crop to the cattle. This integration of dairy feed farming with crop production helps him maintaining a sustainable farming system while improving the productivity of his livestock and overall farm income.

Figure 1 Dairy farming

Barender Singh has also adopted vermicomposting as an important component of his integrated farming system. He prepares vermicompost using cattle dung and other farm residues from his dairy and crop fields. The vermicompost produced (fig 2) is applied to his own fields, which improves soil fertility and significantly reduces the dependence on chemical fertilizers. To maintain efficient compost production, he carefully rears and manages earthworms that help in the decomposition of organic waste. He also sells these earthworms to other farmers who wish to establish their own vermicomposting units, providing him with an additional source of income. The surplus vermicompost produced on his farm is sold to nearby farmers at a minimal charge so that more farmers can adopt organic farming practices. In addition, he regularly conducted soil testing of his fields and applied integrated dose of fertilizers and vermicompost according to the nutrient deficiencies identified in the soil. He also uses soil amendments such as gypsum whenever required to improve soil pH.

Earlier, he used to cultivate the traditional rice–wheat cropping system like most farmers in the region. However, with time and experience he adopted improved crop varieties to enhance productivity. At present, he grows the rice variety PR-126 and wheat varieties (fig 3) DBW-187 and DBW-371 on his farm. He also prepares his own rice nursery, which helps him maintaining better crop management and reduce input costs. To address the problem of crop residue, he does not burn paddy straw; instead, he sells the waste to a company, which helps in reducing environmental pollution and prevents stubble burning. Along with field crops, he also grows a variety of vegetables for household consumption. These vegetables are cultivated organically using only vermicompost produced on his farm, without the use of chemical fertilizers, ensuring healthy and safe food for his family.

Fig 2: Vermicompost apply

Fig 3: Wheat crop