

Organic Agriculture: Conventional farming vs organic farming

Nikumani Chaudhary

Assam Agricultural University, Assam, Dist - Jorhat

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Introduction:

*“An organic farm, properly speaking, is not one that uses certain methods
Or substances and avoid others; it is a farm whose structure is formed
In imitation of the structure of a natural system that has the integrity,
The independence and the benign dependence of an organism.”*

- Wendell Berry, The Gift of Good Land

Organic farming is the process of growing crops or livestock without any use of inorganic substances, viz, inorganic fertilizers, pesticides, herbicides, growth hormones, or genetically modified organisms (GMOs). As the principle “**feed the soil, not the plant**” states, organic farming completely emphasizes on food security and soil health. To say further, organic farming can be regarded as a holistic approach that has been created to optimize the productivity and health of diverse communities in the ecosystem, including human, plant, and soil fauna.

In India, the organic certification mark is termed as ‘**India Organic,**’ and certification is carried out by **APEDA**. This mark ensures that the product meets all the national organic standards set by the Government of India under the **National Program for organic production**. Also, the **FSSAI (Food Safety and Standards Authority of India)**, in 2017, has introduced a new logo, named ‘**Jaivik Bharat**’ to help consumers identify authentic organic food.

Differences between conventional farming and organic farming:

The most significant difference between conventional and organic farming is that conventional farming relies on chemical products to fight weeds or pests, whereas organic

farming permits no chemical intervention. Organic farming simply utilizes farming techniques like crop rotation, mulching, composting, green manuring, etc to grow chemical free foods.

In conventional agriculture, with the use of chemical fertilizers, the productivity fastens at a quick pace and lesser amount of time. And that is why exactly farmers find it tempting to use them. But the toxic elements used in the manufacturing of fertilizers and pesticides ultimately accumulate in the fruit itself and may lead to severe ailments to the consumer. Moreover, these chemicals are also a big no-no to the environment as they create a residual effect on soil and air.

On the other hand, organic farming takes some time to boost the productivity. But it is a perfect alternative to the conventional agriculture since organic farming practices don't cause any issue of pollution or don't compromise human health. As health is the only wealth, a human being possesses, not to look after it may cost him so much. Organic farming has little emissions of carbon and helps to restore the natural soil properties. The application of compost or vermin-compost to the soil even helps to improve the soil characteristics such as organic matter concentration, buffering capacity, cation exchange capacity of soil, etc. The technique of crop rotation not only maintains the soil fertility but also reduces the incidence of pests and diseases by breaking the disease cycle.

When it comes to the expenses of growing food organically, it costs somewhat more than conventional farming. But over the years, the costs of both the farming activities become equal since the price of organic foods in market is higher. During the initial two or three years, organic farmers may not be able to generate a huge amount of revenue, but after the transition period, organic farming becomes more profitable than conventional farming. One study has shown that organic farming is almost three times more remunerative than conventional one.

The cost of cultivation of foods in organic manner is more since it involves more labour costs than a conventional farm. However, the purchasing cost of fertilizers, pesticides, GMOs are not there in organic cultivation; therefore, the cost of cultivation of both the farming activities almost lie at the same level. Organic farming can be performed with all the farm available materials, and no products go to wastage.

Organic foods are more expensive because their demand is higher than supply. Besides, the price of organic products do not only include the production cost, but also account for some other factors like food security, environmental security, etc. Post-harvest handling of small quantities of organic foods results in higher prices because of the mandatory segregation of organic and conventional produces for processing and transportation. Marketing and supply chain for organic products is relatively inefficient, and that is why costs are higher.

In a study regarding the resilience of organic crops, it was found that organic corn yielded 31 percent higher than conventional yields in the seasons of drought. When this yield was compared to the genetically modified 'drought tolerant' varieties, organic varieties completely out yielded them.

Organic farming is more efficient than conventional farming in terms of energy also. Organic systems use 45 percent less energy overall than conventional systems, whereas, in conventional farming, the nitrogen fertilizer only accounts for 41 percent of energy costs.

The Oxford meta-analysis of 71 studies revealed that organic farming requires 84 percent more land than conventional farming for an equivalent amount of harvest, mainly due to lack of nutrients but sometimes due to weeds, diseases, or pests.

Conservation of natural resources and biodiversity is a core principle of organic cultivation. The organic farmers even utilize natural methods to increase the population of beneficial insects and trap the harmful one.

While modern techniques have revolutionized the agricultural sector, it is also replacing human resources with machines and chemicals and ultimately creating problem of unemployment. In a country like India, everybody is aware up to which extent unemployment is pronounced. Therefore, organic farming is the most suitable way to erase these kind of issues and sustain the natural ecosystem.

Conclusion:

The concept of organic farming is still new, and a majority of farmers are still unfamiliar with this, although it had originated early in the 20th century. The markets for

organic products are strongest in North America and Europe. In India, organic products have still not captured the market graph, though the country has domination in agriculture.

To popularize and encourage farmers towards organic cultivation, the Government needs to put more efforts by creating campaigns and awareness programs. Besides, the agricultural extension officers should also take active participation in promoting organic farming to every nook and corner of the country. As rightly said by **Masanobu Fukuoka, the ultimate goal of farming should not only be the growing of crops, but the cultivation and perfection of human beings and nature.**

