

## Sustainable Agriculture through Organic Farming

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### SUMMARY

Organic farming is one of the most eminent modes of sustainable agricultural production. The permaculture has been implemented by comparing organic farming with worms with that of conventional farming. Organic farming is a type of agriculture in which cultivation of agricultural land is done without using chemical fertilizers or chemical pesticides and chemical growth regulators. Organic farming is a very traditional concept to Indian farming and it maintained agricultural sustainability. Organic farming is a system of farming that aims at maintenance the soil structure, its good health, cultivation of land and growing crops. This done to maintain a pollution-free environment and in an ecological way.

### INTRODUCTION

Organic farming is defined as “a production system that sustains the health of soils, ecosystems and people”. Organic farming is the exercise by using sustainable methods to cultivate crops rather than use of chemical methods that harm to the natural eco system. To increase the crop yield and improve soil fertility the various methods to be followed in organic farming and sustainable agriculture such as, Vermiculture, organic mulching, Crop rotation. In vermiculture, the population of earthworms are increased in the soil by providing them suitable environment thereby increasing the soil fertility and crop yield. Organic mulching is yet another practice that involves the use of different mulches of organic in nature to cover the soil surface which help to moisture retention and prevention of growth of weeds. Crop rotation practice involves the cultivation of different kinds of crops such as legumes in one season and cereals in next season for atmospheric nitrogen fixation in the soil. Organic farming is a production system that sustains the health of soils, ecosystems and people. It depends on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic farming includes tradition, innovation and science to benefit the shared environment and promoting pale dealings and a good quality of life for all involved (Ganeshan *et al.* 2013). The main focus in organic farming is of the soil health. The soil health and its texture or structure is maintained as it is believed to the most important medium. Thus, organic farming is a system of farming that aims at maintenance the soil structure, its good health, cultivation of land and growing crops. This done to maintain a pollution-free environment and in an ecological way. In sustainable agriculture, use principles of preservation ecology. Unlike organic farming, sustainable agriculture focused on the ability of providing food material for long-term. As such, in addition artificial fertilizers and pesticides, it also does not allow to the use of agricultural machines running on non-renewable resources. It focused on verdict the most energy-efficient and cost-effective method for utilising agricultural machines and non-renewable natural resources (Dubey, 2013). Organic farming is a type of agriculture in which cultivation of agricultural land is done without using chemical fertilizers or chemical pesticides and chemical growth regulators. The use of agricultural implements which running on bio-fuels is allowed. The aim of organic farming include the maintenance of soil fertility, efficient use of water, increasing soil fertility and improving livestock welfare as well as ecological aspects indirectly related to farming such as reduction of energy use and avoidance of pollution (Trewavas 2001). Sustainable Agriculture is more a beliefs or means of life. Sustainable agriculture is able to feed the peoples without disturbing the ecological balance or environment. It is a way of producing food by ecologically and morally liable approach and it results in higher returns over time, with less need for high-priced and environmentally harmful inputs such as chemical fertilizers, pesticides and weedicides. Therefore, Organic farming is a very traditional concept to Indian farming and it maintained agricultural sustainability. The benefit cost ratio in sustainable agriculture is significantly higher in sustainable agriculture methods as the capital required is minimal (only cost of seeds) whereas prevalent farming practices involve the costs of fertilizers and pesticides as well thereby reducing the profit to capital ratio. Another disadvantage of present type farming is too much use of chemicals to the human system which had severe physiological and psychological impacts on human health. Therefore, the importance of sustainable agriculture practice is require for the day.

### Sustainable Agriculture through Organic Farming

The sustainable agriculture incorporates three main targets such as environmental healthiness, economic prosperity, and socio-economic equity. The protection of natural resources is vital for agricultural sector which determine the long-term sustainability. The high use on inorganic / chemical fertilizers and pesticides, harm to the environment and food chain. The high use of chemicals in agriculture has severe effects on the environment. An organic agricultural practice offers healthy food while establishing an ecological balance to prevent soil fertility or pest troubles. In order to improve all environmental and social nuisance arising from inorganic farming, the application and awareness of organic farming is very important. The hazardous environmental effects, inorganic fertilizers and pesticides based farming system creating so many economic problems against the farmers. The unsustainable farming methods create harmful effect on farmer's health and long term income of farmers. The increase in use of chemical pesticides directly increase in cost of cultivation. The high use of chemical fertilisers lower down and decrease the soil fertility which causes unending decline in agricultural produce. Agriculture can be sustainable only if it has a long-term economic viability. Organic farming provides long term economic sustainability than inorganic farming (Asokan 2018).

**Challenges:** In developing countries, the production of organic products are high but they faced by a many constraints viz., lack of technical knowledge about organic farming applications or production methods and lack of marketing knowledge like which products to be produce and where to sell. Furthermore, food manufacturers, retail organizations and consumers also look for assurance of Organic products. Organic products are costly. Organically produced foods should adhere to strict regulations like certification and intensive management. Organic farming is still faced with the problem of high man power or labours require during farm operations. In-addition, organic farming is still fraught by lack of clearness, Consumers were not always sure about what was really covered by organic farming (Das, 2007).

**Solutions:** In organic farming requires both technical and institutional support to the farmer to developing farming system. Systematic training of organic farming with a strong network across regions is the need of the hour. Low cost and hassle-free certification need to be put in place. Even group certification can be encouraged through cooperatives and self-help groups. The Indian Council of Agricultural Research (ICAR) and the National Project on Organic Farming (NPOF) play active role in promoting organic farming for agricultural development.

### CONCLUSION

In India, the practice of organic farming is more native and farmers are more aware of about the organic farming is a practice that can sustain Indian agriculture. Due to low input cost, high output gain, zero chemical addition and low energy intensity it is consider as advantageous farming system. This farming systems makes the practices to be innovative as it improves the crop yield. Organic farming is mode of production which is possibly to produce non-polluting and creates healthy and tasty products. The high prices of organic farming products compared to conventional farming products is the major obstacle.

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