

Organic Farming: A Holistic Approach to Agriculture

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Abstract: Organic farming is a growing movement with increasing demand for organic products. Organic farming in India is still in its early stages but it has the potential to grow. India has the highest number of organic products in the world. Sikkim became the world's first 100% organic state in 2016. According to FiBL survey 2021 India holds a unique position among 187 countries practicing organic agriculture. Fruits and vegetables (mango, banana, ginger) Grains (wheat, rice, pulses) Spices (turmeric, cardamom) Organic cotton are the major organic products in India. Organic farming offers a sustainable solution to environmental degradation and climate change. The present study reviews the advantages of organic farming. However, challenges persist including limited availability of organic produce and high certification costs.

Key Words: Ecology, Food Security, Health, Organic Farming.

INTRODUCTION

Organic farming has a long and varied history with roots stretching back to ancient civilizations. Throughout history various cultures have practiced the evolution of organic farming in India. For example, ancient civilizations such as the Greeks, Romans and Chinese used natural methods to grow crops including composting and crop rotation. Organic farming is practiced in 187 countries. India ranks first in number of organic farmers. The organic produce market is now the fastest growing market all over the world including India. Organic farming is a method of agriculture that avoids chemicals like fertilizers, pesticides and genetically modified organisms (GMOs) Instead, it relies on natural inputs such as compost, green manure and biological pest control to grow crops. The use of synthetic fertilizers and pesticides began to gain popularity in the mid-19th century. The modern organic farming movement began in the early 20th century Today, organic farming is a growing movement with increasing demand for organic products around the world.

METHODS OF ORGANIC FARMING

- 1 Crop Rotation: Crop rotation is the practice of planting different crops in a specific sequence on the same piece of land over a period of time. Crop rotation helps to balance the use of soil nutrients and maintains soil fertility structure and biodiversity.
- 2 Organic Mulching: Organic mulching involves applying a layer of organic material to the surface of the soil around plants This layer can be made up of various materials such as straw, wood chips or leaves to retain moisture and suppress weeds.
- 3 Vermicomposting: It is a natural process and a sustainable way to recycle organic waste whereby earthworms convert waste material with rigid structures into compost. The compost produced in this green process is traditionally and popularly used as a natural fertilizer for enhancing plant growth.
- 4 Polyculture: It is a method of agriculture that involves growing more than one crop species together in the same place at the same time. Polyculture is considered a more sustainable and environmentally friendly method of agriculture.
- 5 Biofertilizers: They are made up of living things such as bacteria, blue –green algae and mycorrhizal fungi. Biofertilizers promote growth of plants by increasing the availability of essential nutrients.
- 6 Green Manures: Green manures are crops that are grown specifically to be plowed into the soil. They are not harvested for food but are instead used to enrich the soil with organic matter and nutrients. They are normally incorporated back into the soil either directly or after removal and composting.
- 7 Composting: It is a nature's way of recycling. Creating nutrient –rich compost from organic materials like food waste, manure and leaves.
- 8 Biological pest control: A method in which living organisms are used to control pests without or with limited use of chemicals.

Table No 1: The Top 10 Countries with the largest areas of organic agricultural land 2022

Sl No	Country	Land in Million Hectares
1	Australia	53.02
2	India	4.73
3	Argentina	4.06
4	China	2.90
5	France	2.88
6	Uruguay	2.74
7	Spain	2.68
8	Italy	2.35
9	USA	2.06
10	Germany	1.86

Source: FiBL Survey 2024

LITERATURE REVIEW

S. K. Yadav (2013) In the study mentioned that organic farming can provide quality food without adversely affecting the soil's health and the environment. There is a need to identify suitable crops/products on regional basis for organic production that has international market demands.

Rajesh Kumar et al. (2022) the study observed the benefits and challenges of organic farming in India. Organic farming contributes to improve the livelihoods of small holders and generates higher incomes and involves less risk.

Roshan Raj Bhujel, Harisha G. Joshi (2023) The study found that organic agriculture has the potential to improve food security in India and highlighted the importance of long-term evaluations of the viability and scalability of organic farming as a solution to food security in India.

Suryatapa Das (2020) Pointed out that Organic farming yields more nutritious food which is healthier and safe. Organic food ensures food safety from farm to plate. The organic farming process is ecofriendly and keeps soil healthy and promotes the health of consumers. Organic farming promotes the health of consumers of a nation, the ecological health of a nation and the economic growth of a nation by income generation holistically.

OBJECTIVES

1 To know the concept and principles of organic farming

2 To understand the organic farming practices

3 To study the advantages and disadvantages of organic farming

METHODOLOGY

The present study is based on secondary sources, information is collected through research articles, journals, government reports, various websites, newspapers.

PRINCIPLES OF ORGANIC FARMING

The International Federation of Organic Agriculture Movements (IFOAM) identified four principles of organic farming such as health, ecology, fairness and care. All organic production methods around the world are based on these principles. These principles provide a vision for agriculture that inspires environmentally friendly cultivation and production.

Principle of Health: This principle of health is the foundation of organic farming. The health of soil, plants, animals, human and planet is interdependent. Healthy soil produces healthy crops, which in turn support the health of animals and people. The health of one component of the eco system is interconnected with the health of all other components.

Principle of Ecology: Organic farming should work with and sustain living ecological systems. This includes protecting the environment and nature. It emphasizes the use of natural and locally available materials to control pests, diseases and weeds.

Principle of Fairness: Organic farming should be fair to all involved, from producers to consumers. Organic farming should be equitable and just. It should ensure that natural and environmental resources are managed justly and sustainably.

Principle of Care: This principle of organic farming states that Precaution and responsibility are the key concerns to protect the health and wellbeing of current and future generations and the environment.

ADVANTAGES OF ORGANIC FARMING

Organic farming is an agricultural practice that avoids the use of synthetic fertilizers, pesticides, genetically modified organisms and other artificial chemicals. It relies on natural methods to control pests, diseases and weeds and to improve soil fertility.

- 1 Organic farming reduces the risk of water and soil contamination
- 2 Organic farming methods can reduce the risks associated with chemical residues
- 3 Organic farming creates more jobs in rural areas.
- 4 Organic products have higher nutritional value
- 5 Organic products have superior quality and taste
- 6 Organic farms provide fresh seasonal products
- 7 Organic farming helps to maintain long term soil fertility

DISADVANTAGES OF ORGANIC FARMING

1. Organic farming can be more expensive
2. Organic produce can be limited in availability.
3. Organic produce may have a shorter life
4. Organic certification is expensive and time consuming.
5. Organic farming often results in lower crop yield
6. It requires specialized knowledge and expertise
7. It requires more land to produce
8. It requires more water for crop rotation and irrigation
9. Organic farming requires more manual labor and increasing labor costs
10. It can be more challenging in terms of pest and disease management

CONCLUSION

India ranks among the top organic producers globally. There is a growing demand for organic products in India and globally. Organic farming creates new market opportunities for farmers and boosting the economy. India faces numerous environmental challenges, including soil degradation, water pollution and loss of biodiversity. Organic farming is a holistic approach towards sustainable agriculture in India. It promotes soil fertility, maintains ecological balance. By promoting organic farming, India can ensure food security, improve public health and protect the environment. Hence organic farming practices need to be encouraged in India

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