

ORGANIC FARMING: AIMS AND COMPONENTS

The Scientific Agriculture (August 2022)
Volume 01, Issue 02, Page No. 17-21



Organic Farming: Aims and Components

Dilip choudhary¹, Lilaram Chandravanshi², Rajendra Choudhary³, Radhakishan Choudhary⁴

^{1,2} Department Of Agronomy, Naini Agriculture Institute, SHUATS, Prayagraj

³Department Of Agronomy, college of agriculture, Naik Marathwada Krishi Vidyapeeth, Prabhani India

Email: dilipbkn1997@gmail.com

ORGANIC FARMING:

USDA defined organic farming as a production system, which avoids or largely excludes the use of synthetic inorganic fertilizers, pesticides, growth regulators and live stock feed additives. Organic farming system largely depends on green manures, animal manures, crop rotation, crop residues, mineral bearing rocks, off- farm organic wastes, mechanical cultivation and aspects of biological pest control to maintain soil productivity, to supply plant nutrients to control insects, pathogens and weeds.

FAO/WHO defined organics farming, organic agriculture is production management system, which promotes and enhances agroecosystem health, including biodiversity, biological cycles and soil biological activity. It emphasises the use of management practices in preference to the use of off- farm inputs, taking into account that regional conditions require locally adopted system. This is accomplished by using, where possible,

agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system.

Organic agriculture is a production system that sustains the health of soil, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic farming also known as Eco- farming, Permaculture and Nature farming *etc.*

Aims of Organic Farming:

Organic agriculture is a holistic way of farming and besides production of goods of high quality; it primarily aims at conservation of the natural resources (soil, water, climate, biodiversity and non- renewable energy) for sustainable productivity in agriculture.

1. To work, as much as possible, with in a closed system and draw upon local resources,

2. Organic farming protects the long-term fertility of soils by maintaining organic matter levels, fostering soil biological activity, giving due importance to the basic principles of crop rotation and intercropping.
3. Reduce soil erosion. important role in protection against soil erosion is legumes mulching, intercropping and agro- forestry.
4. In organic farming, the supply of the nutrients is more balanced, which helps to keep plants healthy and soil biological activity is enhanced.
5. Organic farming improves nutrient mobilization from organic matter and native soil reserves and minimizes the losses of nutrients.
6. To avoid pollination problems due to agro-chemicals use
7. To minimise the use of fossil energy in agriculture.
8. To minimizing cost of cultivation
9. To obtained healthy food
10. To augmentation of profits
11. Improving soil health
12. Improve chemical and physical conditions of soil
13. **Water-** retention capacity of soil is increased owing to their higher level of organic matter content and permanent soil cover.

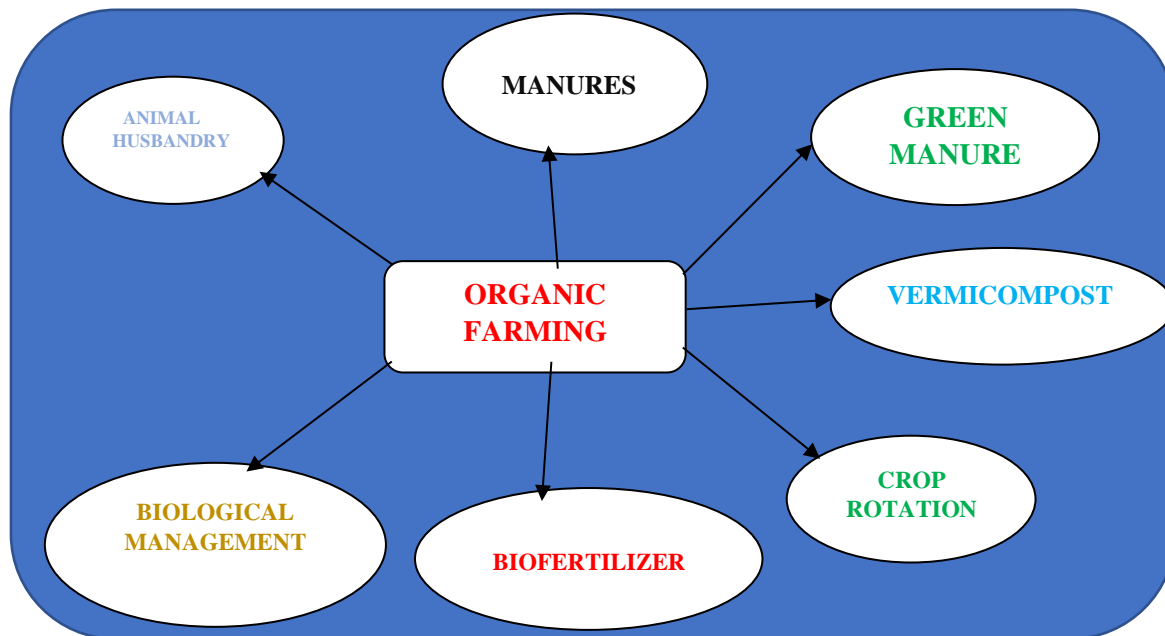


Fig. 1 Components of Organic Farming

Components of Organic Farming:

1. Organic manures
2. Biological pest management
- 6.
3. Non-chemical weed control
4. Agronomical practices
5. Alley cropping

PRINCIPLE OF ORGANIC FARMING: Principal of Health:
Organic farming should be sustained

and enhance the health of soil, animal, plant human being and environment of the earth. The role of Organic farming whether in framing, processing, consumption and distribution. It increases the health of ecosystem and organisms present in soil to human beings. Organic farming produce high quality, nutritious food that contributes to preventive health care. In Organic farming avoid the use of fertilizers, insecticides, herbicides etc. In organic farming only used animal manure, compost, vermicompost, green manure and NSKE etc. Healthy soil produces healthy crop it is healthy for animal and human.

- 1. Principal of Ecology:** it is based on living ecological system and cycle. This principle depends on ecological system. It is based on ecological processes and recycle and efficient management of materials and energy in order to maintain and improve environmental quality and conserve resources. Reuse and recycle of resources reduce input cost.
- 2. Principal of Fairness:** Organic agriculture should build on relationship that ensure fairness with regard to the common environment and life opportunities. It is characterized by equity, justice and steward ships of the shared world. In this principal emphasizes that involved in Organic agriculture should be conducted people
- 3. Principal of Care:** Organic agriculture should be managed natural resources, protect health and wellbeing of present and future generation and the environment. Organic agriculture reduces significant risks by adopting appropriate technologies and rejecting unpredictable ones, such as genetic engineering. Fairness is characterized by equity, respect, justice and stewardship of the world. Natural and environmental resources that are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations.

Advantages of organic farming

- 1) It helps to maintain environment health by reducing the level of pollution.

- 2) It reduces human and animal health hazards by reducing the level of residues in the product.
- 3) It helps in keeping agricultural production at a sustainable level.
- 4) It reduces the cost of agricultural production and also improves the soil health.
- 5) It ensures optimum utilization of natural resources for short-term benefit and helps in conserving them for future generation.
- 6) It not only saves energy for both animal and machine, but also reduces risk of crop failure.
- 7) It improves the soil physical properties such as granulation, good tilth, good aeration, easy root penetration and improves water-holding capacity and reduces erosion.
- 8) It improves the soil's chemical properties such as supply and retention of soil nutrients, reduces nutrient loss into water bodies and environment and promotes favourable chemical reactions.

Disadvantages of Organic Farming:

1. **Lower productivity:** An organic farm cannot produce as much yield as a conventional or industrialized farm. This is debatable as the productivity and soil quality of an

industrialized farm decreases rapidly over the years.

2. **Lack of technical knowledge to farmers:** Most of the farmers in our country are less educated, so that the farmers lack the technical knowledge to make and use compost manure. Most of the farmers dig a pit and fill it with garbage. And during the rainy season, this pit gets filled with water so that the waste does not decompose easily and cannot be composted well.
3. **Lack of organic matter:** The biggest obstacle in adopting organic farming in our country is the lack of organic matter. This is how it is destroyed.
4. **Higher cost:** Adopting organic farming in the beginning leads to higher cost of cultivation. And the price of agricultural product is not available in that ratio, due to which farmers run away from adopting organic farming.
5. **Time-consuming:** Significant amounts of time and energy are required to execute the detailed methods and techniques that are required for a farm to be called an organic farm. Failure to comply with any of these requirements could result in loss of certification, which the farmer will not be able to regain in up to three years. And it can be more time-consuming. Organic farming increases soil

fertility by way of compost, and organic fertilizers and mulch. Organic fertilizers tend to be slow-release. As with control by botanicals, horticultural oils, and insecticidal soaps, organic fertilizers may need several applications before the desired results are brought about.

- 6. More labour intensive:** It can be more labour - intensive. For organic farming considers biological, cultural and mechanical responses to production challenges. It focuses on plant and soil health through proper aeration, drainage, fertility, structure and watering. So there's more above and below ground grunt work involved.
- 7.** Organic farming methods aren't as established and widespread - yet - as conventional production. So organic control by botanicals such as pyrethrin can be more expensive than conventional controls by the longer established, more available, and wider ranging artificial, commercial, synthetic chemical pesticides.

Limitations and implications of Organic farming:

There are a few limitations with organic farming such as

- 1.** Organic manure is not abundantly available and on plant nutrient basis it may be more expensive than chemical

fertilizers if organic inputs are purchased.

- 2.** Production in organic farming declines especially during first few years, so the farmer should be given premium prices for organic produce.
- 3.** The guidelines for organic production processing, transportation and certification etc are beyond the understanding of ordinary Indian farmer.
- 4.** Marketing of organic produce is also not properly streamlined. There are a number of farms in India which have either never been chemically managed / cultivated or have converted back to organic farming because of farmers' beliefs or purely for reason of economics. These thousands of farmers cultivating million acres of land are not classified as organic though they are. Their produce either sells in the open market along with conventionally grown produce at the same price or sells purely on goodwill and trust as organic through select outlets and regular specialized markets. These farmers may never opt for certification because of the costs involved as well as the extensive documentation that is required by certifiers.