

Role of Organic Farming in Agriculture

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ABSTRACT

Organic farming is a method of production of crops as well as the livestock which excludes the use of pesticides, chemical fertilizers and genetically modified organisms, antibiotics and other growth hormones. The principle or foremost aim of organic production to develop the enterprises which are sustainable and eco-friendly. The basic need of organic farming is to conserve the environment from the harmful chemicals and to preserve the soil health. Organic farming helps in promoting the use of crop rotation, integrated pest and disease management and other soil conservation techniques.

INTRODUCTION

Organic farming is a system of crop production that involves the use of organic fertilizers such as green manure, compost manure and excludes the utilization of synthetic compounds namely, pesticides, chemical fertilizers, growth regulators and other food additives of livestock. It can preserve the soil health and help in sustaining the ecosystems as well as people by integrating the tradition, innovation and science because it combines the crop management with animal husbandry in the agro-ecosystems and is socially acceptable and ecologically sustainable. As a whole, this system reducing the use of various external inputs as well as knowledge, and aiming to optimize the crop

productivity in spite of its maximization by renewal and strengthening of ecological processes and functions of farm ecosystems (Shukla et al., 2011). Organic farming is also called ecological farming and the biological farming.

Objectives of organic farming:

- 1) To maintain the soil health.
- 2) To Maintain the ecological balance.
- 3) Avoidance of Ground water and air pollution
- 4) Maintenance of soil as well as crop productivity.

1. To prevent the degradation and to reestablish the natural balance.
2. Minimization of utilization of fossil energy
3. To avoid the pollution problems happened due to use of agrochemicals.
4. To focus on local resources and work in a closed system

Need of Organic farming:

- 1) Use of chemical fertilizers excessively brings the reduction in soil fertility and also leads to pollution problems like soil, water and air pollution. So organic farming successively prevents these problems.
- 2) For promoting the sustainable development.
- 3) For the conservation of eco-system.

Types of Organic farming

There are two types of organic farming

- 1) Integrated organic farming
- 2) Pure organic farming

Integrated organic farming: It involves the integration of nutrients and pest management to fulfil the ecological requirements and demands.

Pure organic farming: Here all the fertilizers and the pesticides are obtained from the natural sources including bone meal or blood meal. It simply avoids all the unnatural chemicals.

Components of Organic farming:

1) **Crops and soil:** By the use of organic farming system, the use of crop rotations as well as manures for maintenance of soil fertility encouraged. Apart from this, by intercropping with legume and green manuring, there would be reduction of the weeds and also reduction in leaching of nutrients and soil erosion.

2) **Organic manures:** Organic material like FYM, green manures, biogas slurry, compost, crop residues, straw and cover crops are good alternatives for inorganic fertilizers. Also, fish manure, sea weeds, basic slag as well as rock phosphate also proved to be better alternatives. These organic material helps in ameliorating the physiochemical properties of the soil. It will lead to reduce the soil erosion. By improving the soil fertility, crop rotation and green manuring are the best method.

3) **Non-chemical weed control:** Due to environmental pollution, herbicides use is prohibited and for controlling of weeds through organic agriculture done by practices like crop rotations, manure management, green manuring and tillage. Also, the mechanical as well as the thermal methods used for same purpose.

4) **Biological pest management:** Botanical pesticides obtained from neem and parasitoids such as *Bacillus thuringiensis*, *Trichoderma*, and Nuclear Polyhedrosis Virus (NPV) are used for controlling of pests.

Benefits of organic farming

1. It helps in the prevention of environment degradation due to avoidance of use of harmful chemical sprays and dusts.
2. Organic products are healthier and nutritional.
3. Organic fertilizer is good to use because organic matter restores the soil pH because by using the chemical fertilizers, the soil becomes acidic so help in the restoring the soil pH.
4. Organic farming leads to decrement in pollution.
5. Organic farming produces more employment to people because it is labor intensive and decrease the economic crisis.

6. Due to use of organic manure, the optimal condition in soil to produce high yield and good quality is increased.
7. Organic farming as a whole is a good source of providing the better and balanced environment and better products

Limitations of Organic Farming:

1. The conventional farming products are much cheaper than the organic products.
2. Organic farming reduces the production volumes
3. Organic farming needs the pest and weed control frequently while chemical application is easy and one time only.
4. Time consumption and farming labor is more because it includes the manual as well as the mechanical work, crop observations and uncompromised adherence with standards.

5. As organic products lack the preservatives so leads to shortening of shelf life.
6. Organic inputs are required in large quantity.
7. There is not much scientific research on organic farming.
8. There is less efforts of Government to propagate this type of farming.
9. It is difficult to get the organic fertilizers.
10. There is presence of unorganized market for the organically grown produce.
11. There is less preference to consume organic products.

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