

## Organic Farming: Goals, Principles and Components

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### Introduction:-

In today's time where people are falling to chronic disease easily, who would like to risk their own life with the harmful pesticides and fertilizers? But there is a way to rescue ourselves from these life threatening chemicals, **Organic Farming**. **Organic farming** in India is not new but it is being practiced from thousands years ago. It is a method of farming system which primarily focuses at cultivating the land and raising crops in such a sustainable way, where the fertilizers, pesticides etc. are obtained from plant residues and animal products for increased sustainable production in an eco-friendly pollution free environment.

### What is Organic Farming?

“Organic farming is a system of farming or Agriculture which avoids the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives and the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off farm organic waste and biological system of nutrient mobilization and plant protection.”

“Organic Farming is the method of crop and livestock production which involves not to using synthetic pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones” (USDA).

### Goals of Organic farming

- To improve drawbacks of Green Revolution.
- To improve rapidly degrading soil fertility in a sustainable way.
- To reduce cost of cultivation.
- To reduce environment pollution.
- To solve health problems due to using intensively chemicals in crop production.
- Reducing high energy use and emissions of green house gases.
- To control pest and diseases without harming the environment.
- Effective use of resources which farmers have already.

### **Principles of Organic Farming**

- (1). **Principles of health:-** It is one of the basic principles of organic farming. Organic Farming contributes to the well being of soil, plants, animal, human and the Earth.
- (2). **The principle of ecological balance:-** Components of Organic Farming work on suitable use of natural resources in a sustainable manner. Moreover the method of farming must fit the ecological balance and cycles.
- (3). **Principle of fairness:-** Organic farming and its products provides a healthy, good quality of life and helps in reducing soil infertility. Nowadays, organic farming has become centre of attraction due to agro-tourism & eco-tourism.
- (4). **Principle of care:-** As we know that we are guest on the Mother Earth, so we have to maintain it now and handover it to our next generations. We should practice organic agriculture in a careful and responsible way to help the present and future generations and the environment.

### **Components of Organic Farming**

- (1). **Crop Rotation:-** It is the method of growing several types of crops in the same area, according to different season in a sequential way. Here land is fixed but crop is rotated year after year according to their demand of nutrients and water. It helps to check the erosion, improves soil fertility and stabilizes income.
- (2). **Green Manuring:-** Green Manuring is a process cultivating the plants and crops and which are uprooted and ploughed into soil to make them decomposed and act as organic matter and make source of nutrients for the soil to increase its quality. **e.g.** *Crotolaria juncea*, cowpea and other leguminous crops.
- (3). **Composting:-** Compost is highly rich in nutrients and works as organic material. It is commonly used for manuring in crops. It can be made by decomposing farm waste, vegetables waste, food waste and crop residues onto a certain temperature and humidity for a certain period under controlled conditions.
- (4). **Mulching:-** It is a process of covering the soil by any type of crop residues or plant material. It checks evaporation from soil surface, provides more favourable conditions for the best growth of the plant and after decomposition works as organic matter in soil.
- (5). **Bio-fertilizers:-** There are some living micro-organisms, which provide nutrients to plants when applied to the seeds, plant surface or soil. They colonize on the plants parts, roots

and promotes plant growth by increasing the supply or availability of primary nutrients to the plants. e.g. Azolla, Blue Green algae etc.

(6). **Biological Pest control**:- It is a method in which micro-organisms are used to control diseases without use of chemical. Some beneficial insect are useful to control harmful insect by parasitizing on various stages of harmful insects or feeds direct to the insects.

(7). **Weed Management**:- Weed is the unwanted, unsown and undesirable plant that grows on field and competes with crops for space, nutrients, water and sunlight. Organic farming focuses on reducing the population of weeds by living organisms but not to using chemical herbicides for preventing and not removing them completely.

(8). **Vermicompost**:- Vermicompost is the product of composting processes using various species of earthworms especially red earthworms, to create mixture of decomposed vegetation or food wastes. Earthworms are called “Farmer’s Friend”. Earthworms help to improve soil conditions by maintaining soil texture and structure with good aeration.

(9). **Soil Management**:- Soil is the soul of organic farming. It is well known fact that after taking one crop, the soil of farm loses most of its nutrients and its fertility becomes down. So, it is necessary for management of soil by manuring or other practices after harvesting of crops.

(10). **Livestock production**:- Organic farming proposed to keep domestic animals use to increase the sustainability of the farm. Livestock plays a vital role in organic farming. The products of the animals like dung (act as Organic material and having much nutrients), urine (rich source of nitrogen) are useful for making compost manure.

#### **Advantages of Organic Farming**

- Organic farming helps to prevent environmental degradation and can be used to regenerate degraded areas.
- Organic manure produces an ideal condition in the soil for high yields and good quality of crops.
- They reduce the expenses of inputs.
- They improve the soil chemical properties such as supply and retention of soil nutrients.
- Organically grown plants are more resistant to disease and insect.
- Creates job opportunities for the people involved in organic farming.

- It leads to reduction in farm waste and they recycled and used in another forms.

### **Disadvantages of Organic Farming**

- It requires more workers for managing the Organic Farming, so it becomes more costly and laborious.
- It requires expertise knowledge of making and using effectively organic manures and other practices.
- More time requires for obtain results of Organic Farming.
- Due to low yields, organic farming can't produce enough food for the world's population needs to survive.

### **Status of organic farming in India**

India holds a unique position among 172 countries who practicing organic agriculture. India produced around 1.35 MT (2015-16) of certified organic products which includes all varieties of food products. The production sector is not limited to the edible sector but also produces organic cotton fiber, functional food products etc. In the year 2015, India ranked first in the terms of the number of organic producers among over 170 countries and 9<sup>th</sup> in the terms of area under organic agriculture. In 2015, India ranked 11<sup>th</sup> in terms of export of organic product. India is the home of 30% of total organic producers in the world but accounts for just 2.59% (1.5 Mha) of the total organic cultivation.

### **Sikkim: World's First Organic State**

Sikkim presented a model in front of the world by becoming the first ever organic state in the world. India's "100% Organic State" Sikkim has won the "Oscar for Best Policies" conferred by the Food and Agriculture Organization (FAO) for the world's best policies promoting agro-ecological and sustainable food systems. Sikkim won the Future Policy Award 2018, beating the 51 nominated policies from 25 countries. Sikkim became the first state in India officially announce to adoption of organic farming in the year 2003 to ensure long term sustainability of soil fertility, protection of environment and ecology, healthy living and decreasing the risk of health ailments. In 2003 Sikkim stopped imports of chemicals fertilizers in the state and since then the cultivable land there is practically organic and farmers of sikkim are traditional users of organic manure.

**Conclusion:-**



There are some limitations like availability of practical guidelines, communication gap with small and marginal farmers and lack of comprehensive approach for integration of technological know-how, better marketing options etc. which led to lesser farmer's participation in large scale demonstration. Organic Farming may have a bright future in India in Post Covid-19 era because Organic Farming is the only way to healthy crop production in a sustainable way. Organic farming should be encouraged to reduce the harmful impacts of chemical fertilizers, pesticides on human and livestock and to keep our soil healthy.

