



Organic Farming

Dr. Sandeep Kumar Dr. Abhinav Kumar and Dr. R.P. Singh

Department of Horticulture, Faculty of Agriculture Sciences,
Bhagwant University, Ajmer, Rajasthan, India

Email: sandeepgpb@gmail.com

Introduction

Organic farming is a technique, which includes crop and livestock production in natural ways without use of pesticides, fertilizers growth regulator antibiotics and other synthetically produced compounds. Organic farming is simply based on natural products. The principal goal of organic production is to develop enterprises that are sustainable and harmonious with the environment which maintain soil fertility and ecological balance so that minimizing pollution and wastage. Organic farming is based on environment friendly and ecologically balanced principles such as crop rotation, cover crops, green manure, animal manures, legumes; organic waste, biological pest control, mineral and rock additives. Integrated pest and weed management, and soil conservation systems are valuable methods on an organic farm. Prohibition of genetic engineering, animal cloning, synthetic pesticides, synthetic fertilizers, sewage sludge, synthetic drugs, synthetic food

processing aids and ingredients comes under organic standards.

Introduction of Organic farming

As per the definition of the United States Department of Agriculture (USDA) study team on organic farming “organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc.,) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection”. FAO suggested that “Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs”. Organic farming is an attractive alternative for both

farmers and policymakers (Cacek *et al.*, 2009).

Need of Organic Farming

With the increase in population our compulsion would be not only to balance out agricultural production but to build it further in sustainable manner. The researchers have understood that the 'Green Revolution' with high input use has reached a level and is presently sustained with lessening return of falling profits. In addition, the excess utilization of fertilizers and artificial growth regulators has prompted an issue called 'pollution' hence; a natural balance needs to be maintained at all cost for existence of life and property. The undeniable choice for that would be more significant in the present period, when these agrochemicals which are produced from fossil fuel and are not renewable and are reducing in accessibility. It may also cost heavily on our foreign trade in future.

- Run off nitrate compounds during rains contaminates water resources.
- Loss of soil richness due to excessive utilization of chemical fertilizers and absence of crop rotation.
- Deep ploughing and heavy rains leads to the soil erosion.
- More requirement of fuel for cultivation.
- For controlling pest and weeds, use of toxic bio-cide sprays.

- Cruelty to animals in their housing, feeding, breeding and slaughtering.
- Mono culture farming leads to the reduction in biodiversity.
- Destruction of the native species of animals and plants due to the introduction of exotic species and hybrids.

Principles of Organic Farming

Principle of Health

Organic farming must ensure the well-being and health of mankind, plants, animals, soil and ultimately overall the earth. It is the sustenance of mental, physical, ecological and social wellbeing. For instance, it provides pollution and chemical free, nutritious food items for humans.

Principle of Fairness

Fairness is clear in keeping up equity and justice of the mutual planet both among humans and other living beings. Organic farming provides good quality of life and helps in diminishing poverty. Natural resources must be reasonably utilized and safeguarded for future generations.

Principle of Ecological Balance

Organic farming must be displayed on living ecological framework. Organic farming techniques must fit the ecological balances and cycles in nature.

Principle of Care

Organic farming should be practiced in a careful and responsible

manner to profit the present as well as future generations and also increase the health of environment.

Benefits of Organic Farming

1. Organic foods help us stay healthy. In organic farming there is no use of chemicals which deteriorates human health and environment. Organic farming improves the health of people, soil and ecosystem.
2. In organic food there is a more nutritive value. Nutritional value of a food item is determined by its mineral and vitamin content. Organic farming not only produces fine and healthy food products but also improves the fertility and quality of soil (Isaacs 2012). Organic farming enhances the nutrients of the soil which is passed on to the plants and animals. Organic agriculture reduces the use of non-renewable energy sources by using organic fertilizers and reducing the consumption of agrochemicals.
3. Organic farming enhances the crop diversity. It helps in multiple cropping practices which enhance the biodiversity, productivity, resilience and contributes to a healthy farming system.
4. Organic farming technique utilizes the natural environment to increase the productivity of farming. It uses natural, biological methods to develop soil richness like microbial action boosting plant nutrition.

5. Organic farming does not utilize artificial fertilizers. Organic farming is favoured as it fights pests and weeds in a non-poisonous way, includes less input costs for preservation the ecological balance while promoting biological diversity and protection of the environment. Organic Farming also controls other organisms with
6. Organic farming does not make utilization of toxic compounds, pesticides and weedicides. Organic farming use different methods such as green manure and composting which replaces nutrients taken from the soil from the previous crops, organic farming depends upon natural breakdown of organic matter and hence allows the production of nutrients in the soil. It increases the soil fertility and feeds nutrients to the soil to feed the plant. Organic farming is one of the most effective method for soil health management.
7. Pesticides and other synthetic chemicals polluted the groundwater but use of organic fertilizer helps to prevents water pollution.
8. By utilizing organic farming ecological services such as soil forming and conditioning, waste recycling, nutrient cycling, stabilization of soil, carbon sequestration, predation, pollination and habitats are improved.
9. It ensures optimum utilization of natural resources for short-term advantages and aids in securing them for future generation