

Popular article

## ORGANIC FARMING IN HORTICULTURE

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### Introduction

India is an agro based country. It ranks 2nd in agricultural products manufacturing in the world. So, organic farming plays an important role in agro field. Organic farming system in India is not new and is being followed from ancient time. India has many natural resources of various organic compounds and so it is an excellent opportunity to produce sufficient quantity of organic foods to meet the global demand. There is a bright future for organic farming to export its quality product. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (Bio fertilizers) to release nutrients to crops for increased sustainable production in an eco- friendly pollution free environment.

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 horticulture is the science and art of growing fruits, vegetables, flowers, or ornamental plants by following the essential principles of organic agriculture in soil building and conservation, pest management, and heirloom variety preservation. The Latin words *hortus* (**garden**) and *cultura* (**culture**) together form *horticulture*, classically defined as the culture or growing of garden plants. *Horticulture* is also sometimes defined simply as "agriculture minus the plough." Instead of the plough, horticulture makes use of human labour and gardener's hand tools, although small machine tools like rotary tillers are common now.

Organic farming provides a real opportunity for horticultural crop production, expand the food market worldwide (organically produced food has great demand in foreign countries; there is major deficiency of home produced organic fruit and vegetable in certain countries like Island), has lower cost of production and provide good price premium which may cover reductions in yield during early phase of organic farming system. It increases the opportunity of

direct sale of produce e.g. Farmers Markets, Farm Shops etc. (People are now keen interested to purchase organically grown food plant products even at higher price.).

### **Present status of organic farming in India**

India is bestowed with lot of potential to produce all varieties of organic products due to its various agro climatic regions. In several parts of the country, the inherited tradition of organic farming is an added advantage. This holds promise for the organic producers to tap the market which is growing steadily in the domestic and export market. As per the available statistics, India's rank in terms of World's Organic Agricultural land was 9th and in terms of total number of producers was 1st as per 2018 data (Source: FIBL & IFOAM Year Book, 2018).

The Government of India has implemented the National Programme for Organic Production (NPOP). The national programme involves the accreditation programme for Certification Bodies, standards for organic production, promotion of organic farming etc. The NPOP standards for production and accreditation system have been recognized by European Commission and Switzerland for unprocessed plant products as equivalent to their country standards. Similarly, USDA has recognized NPOP conformity assessment procedures of accreditation as equivalent to that of US. With these recognitions, Indian organic products duly certified by the accredited certification bodies of India are accepted by the importing countries.

### **Area**

As on 31st March 2018, total area under organic certification process (registered under National Programme for Organic Production) is 3.56 million Hectare (2017-18). This includes 1.78 million ha (50%) cultivable area and another 1.78 million Hectare (50%) for wild harvest collection. Among all the states, Madhya Pradesh has covered largest area under organic certification followed by Rajasthan, Maharashtra and Uttar Pradesh. During 2016, Sikkim has achieved a remarkable distinction of converting its entire cultivable land (more than 76000 ha) under organic certification.

### **Production**

India produced around 1.70 million MT (2017-18) of certified organic products which includes all varieties of food products namely Oil Seeds, Sugar cane, Cereals & Millets, Cotton, Pulses, Medicinal Plants, Tea, Fruits, Spices, Dry Fruits, Vegetables, Coffee etc. The production is not limited to the edible sector but also produces organic cotton fibre, functional food products etc. Among different states Madhya Pradesh is the largest producer followed by Maharashtra, Karnataka, Uttar Pradesh and Rajasthan. In terms of commodities Oil seeds are the single largest category followed by Sugar crops, Cereals and Millets, Fiber crops, Pulses, Medicinal, Herbal and Aromatic plants and Spices and Condiments.

### **Exports**

The total volume of export during 2017-18 was 4.58 lakh MT. The organic food export realization was around INR 3453.48 crore (515.44 million USD). Organic products are exported to USA, European Union, Canada, Switzerland, Australia, Israel, South Korea, Vietnam, New Zealand, Japan etc. In terms of export value realization Oilseeds (47.6%) lead among the products followed by Cereals and millets (10.4%), Plantation crop products such as Tea and Coffee (8.96%), Dry fruits (8.88%), Spices and condiments (7.76%) and others.



Organic vegetables fetch a premium price of 10%- 50% over conventional products. Market of organic products is growing at faster rate (20%) as compared to conventional ones (5%). This growth rate is highest in Japan, USA, Australia and EU. Export preference of organic vegetables offers a great scope to a country like India, which has inculcated the skill of growing organically since time immemorial.

### Approaches for organic farming

1. Nature farming; 'do nothing' approach
2. Ecological agriculture; tools used are biofertilizers , botanical pesticides, bio-control agents, stress resistant varieties, vermi-compost etc.
3. Rishi krishi;
  - Angara - bhoomi sanskar, to make soil fertile.
  - Amrit pani - for seed treatment.
  - Aancha gavya - for vegetative and reproductive growth.
  - Biodynamic farming; for micronutrient supply.



### Advantages of Organic Farming

- ❖ Organic manure produces optimal condition in the soil for high yield and good quality of crops.
- ❖ Supply the entire nutrient required by the plants.
- ❖ Improved the plant growth and physiological activities of the plant.
- ❖ Improve the physical properties of the soil.
- ❖ Reduce the need for purchased inputs.

- ❖ Organically grown crops are beloved to provide healthier and nutritionally superior food for man and animals.
- ❖ Organically grown crops are resistant to insect pest and diseases.

### Limitations of organic farming

- ❖ Low amount of plant nutrients
- ❖ Time consuming
- ❖ Low yield of crop
- ❖ Requires Skill
- ❖ High C:N ratio of different organic residue

### Conclusion

Organic farming is done to release nutrients to the crops for increased sustainable production in an eco-friendly and [pollution](#)-free [environment](#). It aims to produce crop with a high nutritional value. Organic farming promotes agro-ecosystem health, soil biodiversity and provides opportunity for export of horticultural crops. People are becoming health conscious and ready to purchase organically grown food and plant products even at higher price.

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