

Organic Farming in India: A Vision Towards Sustainable Development

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Abstract: *Organic farming is defined as cultivation without application of chemical fertilizers and synthetic pesticides. The popularity of organically grown food is increasing day by day because of their nutritional and health benefits. Organic farming also protects environment and also has greater socio – economic impact on a nation. India has potentiality for the growth in organic agriculture. Now India has achieved a rapid growth in organic agriculture and now becomes one of the largest organic producers in the world. Therefore, organic farming has a great impact on the health of a nation like India by ensuring sustainable development.*

Key Words: Organic farming, Agriculture, Food security, Cultivation, Agricultural Development, Economic Development.

Introduction

In the modern age, the increasing population in every sphere is a critical challenge in the sustainable development of our environment. The agricultural system is also affected by pollution. Modern farming technique disturb the soil fertility. Organic farming is environment friendly technique. Organic farming as a cultivation process is gaining increasing popularity (Dangour, 2010). Organically grown foods have become one of the best choices for both consumers and farmers. Organically grown foods are part of green lifestyle. Organic farming is very important in ensuring food security. Organic farming can be defined as an agricultural process that uses biological fertilisers and pest control acquired from animal or plant waste. Organic farming was actually initiated as an answer to the environmental sufferings caused by the use of chemical pesticides and synthetic fertilisers. In other words, organic farming is a new system of farming or agriculture that repairs, maintains, and improves the ecological balance.

The term ‘organic’ was first coined by Northbourne, in 1940, in his book entitled ‘Look to the Land’. Northbourne stated that ‘the farm itself should have biological

completeness; it must be a living entity; it must be a unit which has within itself a balanced organic life' (Nourthbourne, 2003). Northbourne also defined organic farming as 'an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity'. According to Winter and Davis (2006), 'it is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony'.

Organic product is not grown with synthetic pesticides, antibiotics, growth hormones, application of genetic modification techniques (such as genetically modified crops), sewage sludge, or chemical fertilizers. Conventional farming is the cultivation process where synthetic pesticide and chemical fertilizers are applied to gain higher crop yield and profit. In conventional farming, synthetic pesticides and chemicals are able to eliminate insects, weeds, and pests and growth factors such as synthetic hormones and fertilizers increase growth rate. (Worthington, 2001).

Importance of Organic Farming

Organic farming and food processing practices are wide-ranging and necessitate the development of socially, ecologically, and economically sustainable food production system. The International Federation of Organic Agriculture Movements (IFOAM) has suggested the basic four principles of organic farming, i.e., the principle of health, ecology, fairness, and care. The main principles and practices of organic food production are to inspire and enhance biological cycles in the farming system, keep and enhance deep-rooted soil fertility, reduce all types of pollution, evade the application of pesticides and synthetic fertilizers, conserve genetic diversity in food, consider the vast socio-ecological impact of food production, and produce high-quality food in sufficient quantity (IFOAM, 1998).

Principles of Organic Farming

Principles of Care: Organic farming should be managed that in precautionary and with responsible manner.

Principle of Fairness: Organic farming should be built on relationships that ensure ecological and social justice

Principle of ecology: Organic farming should be based on living systems and cycles.

Principle of Health: Organic farming should sustain and enhance the health of soil and plant.

Benefits of Organic Farming

- Organic farming is beneficial to soil by organic matter build-up.
- Small efficiency and crop yield carry the risk of soil deprivation in organic farming.
- Nutritional benefits and health safety.
- Organic farming has a protective role in environmental conservation.
- Organic cultivation requires a higher level of labour, hence produces more income-generating jobs per farm
- Biofertilizers and pesticides can be produced locally, so yearly inputs invested by the farmers are also low.

Types of Organic Farming

Organic farming is divided into two types, namely:

- Integrated organic farming: Integrated organic farming includes the integration of pest management and nutrients management to achieve ecological requirements and demands.
- Pure organic farming: Pure organic farming means avoiding all unnatural chemicals. In this process of farming, all the fertilisers and pesticides are obtained from natural sources such as bone meal or blood meal.

Organic Farming and Sustainable Development

The concept of sustainable development integrates three main goals—environmental health, economic profitability, and social and economic equity. The concept of sustainability rests on the principle that we must meet the needs of the present without compromising the ability of future generations to meet their own needs. Organic agriculture is an efficient and promising agricultural approach for environmental sustainability as it provides yield stability, improves soil health. Organic farming is a farming technique that sustains, enhances and maintains the quality of the ecosystem. Organic farming is an agricultural system that is fully consistent with sustainable development approach.

The very basic approach to organic farming for the sustainable environment includes the following (Yadav, 2017):

1. Improvement and maintenance of the natural landscape and agro-ecosystem.
2. Avoidance of overexploitation and pollution of natural resources.
3. Minimization of the consumption of non-renewable energy resources.
4. Exploitation synergies that exist in a natural ecosystem.
5. Maintenance and improve soil health by stimulating activity or soil organic manures and avoid harming them with pesticides.
6. Optimum economic returns, with a safe, secure, and healthy working environment.
7. Acknowledgement of the virtues of indigenous know-how and traditional farming system.

Long-term economic viability can only be possible by organic farming and because of its premium price in the market, organic farming is more profitable. The increase in the cost of production by the use of pesticides and fertilizers in conventional farming and its negative impact on farmer's health affect economic balance in a community and benefits only go to the manufacturer of these pesticides. Continuous degradation of soil fertility by chemical fertilizers leads to production loss and hence increases the cost of production which makes the farming economically unsustainable. Implementation of a strategy encompassing food security, generation of rural employment, poverty alleviation, conservation of the natural resource, adoption of an export-oriented production system, sound infrastructure, active participation of government, and private-public sector will be helpful to make revamp economic sustainability in agriculture.

Future Prospects of Organic Farming in India

The following points highlighted the relevance of organic farming:

- High nutritional value.
- Maximum profit.
- Employment opportunity.

India is an agriculture-based country with 67% of its population and 55% of manpower depending on farming and related activities. Agriculture fulfils the basic needs of India's fastest-growing population accounted for 30% of total income. Organic farming has been found to be an indigenous practice of India that practised in countless rural and farming communities over the millennium. The arrival of modern techniques and increased burden of population led to a propensity towards conventional farming that involves the use of synthetic fertilizer, chemical pesticides, application of genetic modification techniques, etc.

Even in developing countries like India, the demand for organically grown produce is more as people are more aware now about the safety and quality of food, and the organic process has a massive influence on soil health, which devoid of chemical pesticides. Organic cultivation has an immense prospect of income generation too (Bhardwaj and Dhiman, 2019). The soil in India is bestowed with various types of naturally available organic nutrient resources that aid in organic farming (Adolph and Butterworth, 2002; Reddy, 2010; Deshmukh and Babar, 2015).

India is a country with a concrete traditional farming system, ingenious farmers, extensive drylands, and nominal use of chemical fertilizers and pesticides. Moreover, adequate rainfall in north-east hilly regions of the country where few negligible chemicals are employed for a long period of time, come to fruition as naturally organic lands. Organic agriculture promotes the health of consumers of a nation, the ecological health of a nation, and the economic growth of a nation by income generation holistically. India, at present, is the world's largest organic producers (Willer and Lernoud, 2019) and with this vision, we can conclude that encouraging organic farming in India can build a nutritionally, ecologically, and economically healthy nation in near future.

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