

## Organic Farming: Past, Present and Future

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In the last few decades, organic farming has been increasingly popular as both farmers and customers look for environmentally friendly and sustainable farming methods. The success and uptake of organic farming practices are greatly influenced by education. Organic farming is a societal need; it is not only from the consumer's perspective but also from a farmer point of view. For the transformation of rural agriculture into a well sustainable agriculture, organic farming might become a panacea which can build a plinth for sustainable agriculture and reimburse conversion cost and maintain the sustainability of soil (Yadava, 2019).

Agriculture has brought a plethora of benefits, and its significance should not be overlooked. It has basic, economical, and developmental benefits. It enriches every country in the world in some form while functioning a critical role in both developed and developing countries when it comes to the way of life (Christiaensen et al., 2011; Dubey et al., 2022).

### Organic Farming

The term "organic farming" was coined by Lord Northbound in 1940. The beginnings of the organic movement can be traced back to the beginning of the 1800s. In 1840 Justus Von Liebig developed a theory of mineral plant nutrition. Liebig believed that manure could be directly substituted by certain mineral salts. Organic farming provides solutions for most problems faced by contemporary issues in agriculture and food production. The principles of health, ecology, fairness and care are the roots from which organic agriculture grows and develops. Organic products are richer in nutrients and largely free of pesticide residues and additives (Hammed et al., 2019).

### Need of organic farming

Food quality and safety are two vital factors that have attained constant attention in common people. Growing environmental awareness and several food hazards have substantially decreased the consumer's trust towards food quality in the last decades. Intensive conventional farming can add contamination to the food chain. For these reasons, consumers are quested for safer and better foods that

are produced through more ecologically and authentically by local systems. Organically grown food and food products are believed to meet these demands (Rembialkowska, 2007).

Organic farming gives importance to environmental protection and helps to sustain ecological issues such as soil conservation. Farmers who undertake organic farming practice crop rotation to enrich the soil with natural mineral resources. Organic farmers have to follow the norms set by the local organic farming associations and they are not allowed to cultivate genetically modified (GM) crops (Alistair 2007; Haslberger 2010).

Organic cultivation yields more nutritious and protected food. The reputation of organic foodstuff is increasing considered as user seeks the organic foods that are considered to be improved and safer. Thus, organic food possibly ensures food safety from farm to protect. The organic agriculture development is more eco-friendly than conservative farming. Organic farming keeps soil healthy and maintains environment, openness thereby, promoting the health of consumers. Moreover, the organic produce market is now the fastest growing market all over the world as well as India (Suryatapa Das et al., 2020).

### Growth and Development of Organic Farming Education

Organic agriculture began to gain popularity in the middle of the 20th century, mostly as a reaction against chemical-intensive farming practices. Organic agricultural techniques were being taught in seminars and workshops by organizations and institutions as educational initiatives started to take shape. Educating farmers and the public about best practices and other related topics was made easier with the help of advocacy groups and associations dedicated to organic farming.

Organic farming is a holistic production/management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasizes, the use of management practices in preference to the use of off and on farm inputs, taking into account that regional conditions

require locally adapted systems. This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system (FAO, 1999).

The government has historically approved and generally supported organic farming practices reducing the use of pesticides and increasing the use of bio-composts (produced from sick plants and agricultural waste) in place of synthetic manures (such those used in natural farming). Thus, many producers have changed their ways and switched to environmentally and socially conscious organic constructions despite the steady income that comes with conservative agriculture. The availability of relevant handbooks, bulletins, and research study data that accurately illustrate the characteristics and advantages of organic farming as well as the anticipated growth of the market for their products is undoubtedly crucial for the continued expansion of this industry.

**The significant prerequisites for this may be summed up as follows:**

- The appropriate soil and climate conditions.
- Adequate financial assistance and political will for organic agriculture to succeed.
- The necessary expertise.
- The availability of the applicable laws (regulatory system) for organic farming.
- Handle organic product management and certification.
- Conditions for enhancing both the domestic and international market.
- A solid reputation as a conventional agricultural product exporter.
- Professional learning, which provides farmers implementing this kind of agricultural system with management training.
- Adding more information to the inadequate educational prospectus, with an emphasis on organic farming and production.
- The corporate ability to meet the demand for organic products.
- The accessibility of approved seeds and additional plant material suitable for low-input and organic farming.

#### **Current Landscape of Organic Farming Education**

Today, organic farming education is well-established in many parts of the world. Numerous universities and agricultural colleges offer degree

programs specifically tailored to organic agriculture. These programs cover a range of topics, including organic crop production, soil health, pest management, certification standards, and marketing strategies for organic products. Additionally, non-profit organizations and government agencies provide workshops and training programs to support farmers interested in transitioning to organic practices.

Organic foods have become one of the rapidly growing food markets with revenue increasing by nearly 20% each year since 1990 (Winter and Davis, 2006). In 2020, regarding organic agriculture, India ranked eighth in the world, whereas, concerning the number of producers, India ranked first (Willer, 2022).

The Government of India has implemented a number of programs and schemes for boosting organic farming in the country. Among these the most important include

1. The Paramparagat Krishi Vikas Yojana
2. Organic Value Chain Development in North Eastern Region Scheme,
3. Rashtriya Krishi Vikas Yojana,
4. The mission for Integrated Development of Horticulture
  - a. National Horticulture Mission,
  - b. Horticulture Mission for North East and Himalayan states,
  - c. National Bamboo Mission,
  - d. National Horticulture Board,
  - e. Coconut Development Board,
  - f. Central Institute for Horticulture, Nagaland),
5. National Programme for Organic Production,
6. National Project on Organic Farming, and
7. National Mission for Sustainable Agriculture (Yadav, M., 2017).

In the union budget 2020–21, Rs 687.5 crore has been allocated for the organic and natural farming sector which was Rs 461.36 crore in the previous year (Kumar 2020).

**The Future of Organic Farming Education:** There is a drastic need for changes in the food-producing system. It is observed that widespread uptake of sustainable practices in agriculture and food supply chains are essential to meet current and future threats to food security and environmental resilience.

Looking ahead, organic farming education is poised for further expansion and innovation. Advances in technology, such as precision agriculture and digital farming tools, can enhance the efficiency

and productivity of organic farms. Integrating agroecological principles into educational curricula can promote holistic approaches to farming that prioritize biodiversity and ecosystem health. Moreover, partnerships between academia, industry, and government can facilitate knowledge transfer and skill development in organic farming. Numerous inventions in organic farming, such as 3D printing, incorporating mycorrhizal fungi and nano bio-stimulants and agroecological practices, pose viable opportunities for a better organic farming system in future (Pavani et al. 2022).

### Conclusion

In conclusion, organic farming education has evolved significantly over the years, from its early roots in traditional farming practices to its current status as a formalized field of study. The future of organic farming education holds promise, with opportunities to address challenges through research, innovation, and inclusive educational strategies. By investing in organic farming education, we can empower farmers to adopt sustainable practices that benefit both people and the planet.

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