



Organic farming

A Vision of a Healthy Nation

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Abstract

The safety and quality of food are two major topics that are gaining attention among consumers as a whole. The increased awareness of environmental conservation as well as the health risks connected with agrochemicals, as well as customers' choice for safe and hazard-free food, are the key drivers driving the world's interest in alternative types of agriculture.

Conventionally farmed foods have significant negative health impacts due to increased pesticide residue, more nitrate, heavy metals, hormones, and antibiotics as well as genetically engineered creatures. Organic food production is described as farming that does not use chemical fertilisers, synthetic pesticides, genetically modified organisms, growth hormones, or

antibiotics. Organically cultivated foods are becoming increasingly popular because of their nutritional and health advantages. Organic farming is also environmentally friendly and has a larger socioeconomic influence on a country. Given the potential

environmental advantages of organic cultivation and its compatibility with integrated agricultural methods to rural development, organic agriculture may be viewed as a development tool for developing nations such as India.

Introduction

Northbourne was first coined a term 'organic' in his book 'Look to the land' in 1940s. Howard, who worked as an agricultural researcher in India, was inspired by the traditional and sustainable farming practises he saw there and campaigned for their adoption in the West. Such practises were further promoted by other supporters, such as J.I. Rodale and his son Robert, who produced Organic Gardening and Farming magazine and a variety of organic farming publications in the 1940s and 1950s.

“Organic farming is a farming system that avoids the use of synthetic substances such as pesticides, synthetic medications or fertilizers, and genetically modified organisms.” To produce chemical-free products, farmers use natural methods such as manure, crop rotation, intercropping, biological pest management, and so on. Various organisations are still working to enhance organic farming today. Because it combines crop management and animal husbandry in agro-ecosystems that are socially acceptable and environmentally

sustainable, it can sustain the health of soils, ecosystems, and people by integrating tradition, innovation, and science. As a result, this method minimises the need of external inputs and expertise and seeks towards crop yield optimisation rather than maximisation through the renewal and strengthening of biological processes and the operations of farm ecosystems. Organic farming practises are internationally regulated and legally enforced by transnational organisations (such as the European Union) and many nations, largely based on the criteria set by the International Federation of Organic Agriculture Movements (IFOAM), 1972, a international umbrella organisation for organic farming organisations. Local biodiversity and environmental protection can benefit from organic farming. However, due to the organic farming produces lower yields than intensive farming, more agricultural land is required throughout in the world, requiring natural and forest land to be transformed into cultivable land.

Principles of Organic farming

The International Federation of Organic Agriculture Movements (IFOAM) has proposed the four essential principles of organic farming including health, ecology, fairness, and care. The basic principles and practises of organic food production are to inspire and improve biological processes in the farming system, and to safeguard and improve biodiversity, deep-rooted soil

fertility, avoidance of every kind of pollutants, insecticides and synthetic fertilizers, and genetic conservation, consider the tremendous socio-ecological impact of dietary diversification, production, and produce adequate quantities of high-quality food.

Principle of health: Organic agriculture's role particularly in farming, processing,

allocation, or consumption is to maintain and boost the health of ecosystems and species ranging from the smallest soil organisms to humans. Organic agriculture in specifically aims to create high-quality, healthy food that contributes to better health and well-being. In the context of this it should avoid the use of potentially harmful fertilizers, pesticides, animal medications, and food additives.

Principle of ecology: The premise establishes organic farming as a part of live ecological systems. It indicates that production will be based on environmentally friendly procedures and recycling. Organic agricultural, pastoral, and wild harvesting systems must be in harmony with nature's cycles and ecological balances. These cycles are ubiquitous, but their execution varies by location. Organic management must take into account the regional environment, ecology, culture, and scale. In order to sustain and enhance environmental quality and save resources, inputs should be reduced through reuse, recycling, and efficient material and energy management.

Principle of fairness: This idea emphasises the importance of conducting human

Benefits of Organic farming

Nutritional benefits: Organic plants have much higher levels of magnesium, iron, and phosphorus. They also have greater calcium, sodium, and potassium as significant elements, as well as manganese, iodine, chromium, and trace amounts of molybdenum, selenium, boron, copper, vanadium, and zinc elements. Organic products have higher levels of dry matter, minerals, and antioxidants such polyphenols and salicylic acid. Organic foods (94%-100%) are free of pesticides. Pesticide residues are lower in

connections in organic agriculture in a way that assures justice at all levels and to all stakeholders - farmers, employees, processors, distributors, traders, and consumers. Organic farming should improve the quality of life for everyone involved while also contributing to food sovereignty and poverty reduction. Its goal is to create an adequate supply of high-quality food and other items. Fairness implies open and balanced production, distribution, and trading processes that account for genuine social and ecological expenses.

Principle of care: Organic farming is a live, dynamic system that adapts to both inside and outside demands and situations. Organic farming professionals can improve efficiency and output, but this should not come at the expense of health and well-being. As a result, new technology must be evaluated, and established processes must be examined. Given our limited understanding of ecosystems and farming, take care is advised. According to this philosophy, the primary concerns in organic agricultural management, development, and technology choices are prudence and accountability.

conventionally cultivated foods. Phytochemicals are abundant in fruits and vegetables. Polyphenols, resveratrol, pro-vitamin C, and carotenoids are secondary metabolites found in plants.

Environmental impact: The environmental impact of organic and conventional farming has been thoroughly researched. Organic farming is seen to be less detrimental to the environment because it does not allow for the use of synthetic fertilisers, pesticides, the most of which are potentially detrimental to water, soil, as

well as local terrestrial and aquatic animals. Organic farming increases soil physico-biological qualities by increasing organic matter, biomass, enzyme levels, and stability of the soil increased water percolation, capacity, less water, and wind erosion when compared to typical farming soil.

Socioeconomic impact: Organic products typically cost 10%-40% more than conventionally grown crops, and the price is determined by a wide range of factors in

Drawbacks of Organic farming

- Organic food is produced in lower quantities, making marketing and distribution inefficient.
- Farmers require additional labour, which raises production expenses.
- Organic food is greater in price because farmers obtain less from their land than conventional farmers.
- Organic farmers should be well-versed in localised soil systems, meteorology,

Policies and schemes for Organic farming

National Project on Organic farming :

The National Project on Organic Farming (NPOF) is a central sector initiative that was initially established in 2004, during the tenth five-year plan, by incorporating the National Project on Development. The initiative aims to improve organic production units, biopesticides, and biofertilizers, lowering reliance on chemical fertilisers. The programme also offers certification programmes and promotes organic farming.

Paramparagat Krishi Vikas Yojana

(PKVY) : In 2015-16, the Government of India has promoted organic farming in the

Future Prospects of Organic Farming in India

Even in developing nations like India, the need for organically grown product is increasing as people become more

the inputs as well as the results of arms. Factors that raise the cost of organic products on the input side include the high expense of acquiring organic certification, as well as the manpower costs in the field, not enough of organic subsidies in India in contrast to chemical inputs. Organic farming is currently a developing economic sector as a result of the profits generated by produce that is organic, resulting in an increasing farmer preference for organic agriculture.

ecology, and other elements that impact crop growth. Without the necessary information, an individual organic farmer will be incapable to protect his crop during vital stages of the farming process.

- The crops are readily afflicted, which might cause production to decrease.

country through a specialised scheme known as the Paramparagat Krishi Vikas Yojana (PKVY). The system emphasises complete support for organic farmers, from production through certification and commercialization. These activities include post-harvest management support such as processing, packing, and marketing to boost organic farmers. Farmers receive Rs 50,000 per hectare for three years under PKVY, of which Rs 31,000 (62%) is paid directly through DBT for inputs (bio fertilisers, bio-pesticides, organic manure, compost, vermicompost, botanical extracts, and so on).

conscious of the health and nutritional value of food, and the organic process has a significant impact on soil health because it

is free of chemical pesticides. India is an agriculture-based country, with farming and allied sectors employing 67% of the population and 55% of the labour force. Agriculture provides for the basic requirements of India's fastest-growing population, accounting for 30% of total GDP. Organic farming has been discovered to be an indigenous Indian discipline that

Conclusion

Organic farming produces more healthy and safe food. Organic food is becoming increasingly popular as consumers seek out organic foods that are regarded to be healthier and safer. As a result, organic food may ensure the security of food from farm to plate. Organic farming is more environmentally friendly than conventional farming. Organic farming benefits

has been conducted in many rural and farming communities for millennia. The introduction of modern innovations and the rising population burden resulted in a preference for conventional farming, which entails the use of synthetic fertiliser, chemical pesticides, genetic modification techniques, and so on.

consumer health by sustaining soil health and ecological cleanliness. Furthermore, the organic produce market is now the world's fastest expanding market, including India. Organic agriculture enhances a nation's consumer health, ecological health, and economic growth by generating money in a holistic manner.