

Organic Farming in India and Current Status and challenges of Organic Farming

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ABSTRACT

Though the organic movement was initiated over a decade ago it has failed to gain the expected momentum due to several ambiguities. Organic farming is mostly envisaged as the stoppage of synthetic inputs and their replacement by organic alternatives i.e. use of organic manures and natural methods of plant protection instead of using synthetic fertilizers/pesticides. Organic agriculture relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. The major objectivity of organic farming resides on development of a self-sustainable farming system in harmony with nature which delivers ecologically and economically sustainable pure food with enrichment of surrounding biodiversity and its entire components. India holds a unique position among 172 countries practicing organic agriculture: it has 6, 50,000 organic producers, 699 processors, 669 exporters and 7,20,000 hectares under cultivation. India is poised for faster growth with the growing domestic market. Success of organic movement in India depends upon the growth of its own domestic markets. With the sizable acreage under naturally organic/default organic cultivation, India has tremendous potential to grow crops organically and emerge as a major supplier of organic products in the world's organic market.

Keywords: Organic Agriculture, Production, Status and challenges

Introduction

• Defination of Organic Farming

Organic farming is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, genetically modified organisms and livestock food additives. To the maximum extent possible organic farming system rely upon crop rotations, use of crop residues, animal manures, legumes, green manures, off farm organic wastes, biofertilizers, mechanical cultivation, mineral bearing rocks and aspects of biological control to maintain soil productivity and tilth to supply plant nutrients and to control insect, weeds and other pests.

❖ Principle of Organic farming by IFOAM,

• Principle of Health

Organic agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.

• Principle of Ecology

Organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.

• Principle of Fairness

Organic agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities.

• Principle of Care

Organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

❖ Advantages of organic farming

- It helps to maintain environment health by reducing the level of pollution.
- It reduces human and animal health hazards by reducing the level of residues in the product.
- It helps in keeping agricultural production at a sustainable level.
- It reduces the cost of agricultural production and also improves the soil health.
- It ensures optimum utilization of natural resources for short-term benefit and helps in conserving them for future generation.
- It not only saves energy for both animal and machine, but also reduces risk of crop failure.
- It improves the soil physical properties such as granulation, good tilth, good aeration, easy root penetration and improves water-holding capacity and reduces erosion.
- It improves the soil's chemical properties such as supply and retention of soil nutrients, reduces nutrient loss into water bodies and environment and promotes favourable chemical reactions.

❖ Status of Organic Farming in India

Organic food and farming have continued to grow across the world. Since 1985, the total area of farmland under organic production has been increased steadily over the last three decades (Willer and Lernoud, 2020). In 2019, there was a total of 72.3 million hectares of organically managed land, including in conversion areas, recorded globally. Australia has the largest organic lands with an area of 35.7 million hectares followed by Argentina (3.7 million hectares). The regions with the largest organic agricultural land areas are Oceania (35.9 million hectares, which is half of the world's organic agricultural land) and Europe (16.5 million hectares). Latin America has 8.3 million hectares followed by Asia (5.9 million hectares); North America (3.6 million hectares) and Africa (2 million hectares) (**Figure 1**). India occupies the fifth position with a total organic agriculture area of 2.3 million hectares (**Figure 2**); in terms of the number of organic producers, India stands first with a total of 1,366,226 (**Figure 3**).

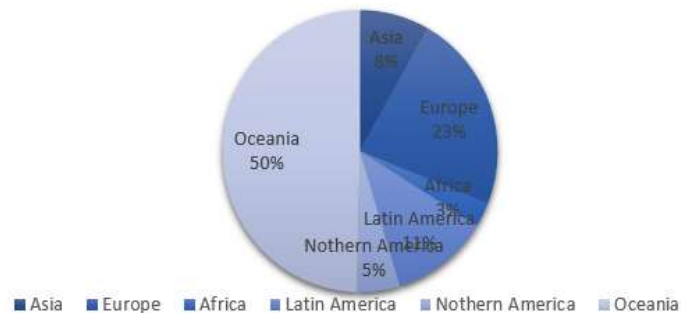


Fig.1 Distribution of organic arable cropland by region (Source: FiBL & IFOAM, 2021)

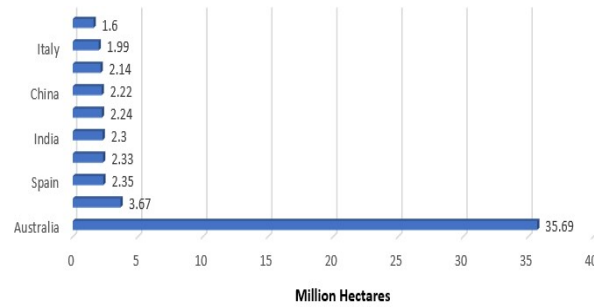


Fig.2.Ten Countries with largest areas of organic agricultural land (Source: FiBL & IFOAM, 2021)

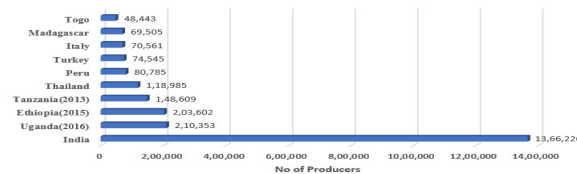


Fig.3. The ten countries with the most organic producers (Source: FiBL & IFOAM, 2021)

The national-level organic farming movement is promoted by National Programme for Organic Production (NPOP), which started in 2001 under the Agricultural and Processed Food Products Export Development Authority (APEDA) of the Ministry of Commerce and Industry, Government of India. It was promoted at the government level mainly with an export-centric approach, backed by a third-party certification system (Amit Khurana and Vineet Kumar, 2020). The first organic farming policy of the Government of India was framed in the year 2005. Later during 2014–15, the National Mission for Sustainable Agriculture by the Ministry of Agriculture and Farmers' Welfare (MoAFW) is launched to promote organic farming. Because of these institutions, policy and various schemes, organic farming is spreading fast too many agro-ecological zones of India, most notably to rain-fed areas, hills and arid zones (Vaidya S, et al., 2007). As of March 2020, 2.3 million hectare was covered under organic farming in India. Out of this, around 70 percent of the land is under NPOP. The organic share of total agricultural land is 1.3 percent (FiBL & IFOAM, 2021). Compared with 2018, the growth of organic agricultural land in India is 18.6 percent. Due to the efforts from government and other organization, organic farming is spreading fast too many agro-ecological zones of India, most notably to rain-fed areas, hills and arid zones (Vaidya S, et. al, 2007). 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 (Union Budget 2020-21, GOI). This amount is distributed among NPOF (12.5 crores), Organic Value Chain Development for North East

Region (175 crores) and the Paramparagat Krishi Vikas Yojana (500crores). Among all the states, Madhya Pradesh has covered the largest area under organic certification followed by Rajasthan, Maharashtra, Gujarat, Karnataka, Odisha, Sikkim and Uttar Pradesh. India produced around 2.75 million MT (2019-20) of certified organic products which include all varieties of food products namely oil seeds, sugar cane, cereals and millets, cotton, pulses, aromatic and medicinal plants, tea, coffee, fruits, spices, dry fruits, vegetables, and processed foods. The organic food export realization was around Rs 4686 crore Organic products are exported to USA, European Union, Canada, Switzerland, Australia, Japan, Israel, UAE, New Zealand, and Vietnam (APEDA).

❖ **Reasons To Go For Organic Farming**

- **It boosts the nutritional quality of food**

Organic crops are grown in biologically healthy and safe active soils. Crops on organic farms take a longer time to grow and tend to yield less per acre than crops on industrial agriculture. Also, plants nourished by soil on organic farms produce crops that are most likely to consist of more important minerals, antioxidants, and vitamins.

- **Organic food gives the best results for health issues**

There are so many problems everyone is facing in the conventional food system like learning disabilities, water pollution, birth defects, farm animals suffering and so much more. The certified organic label stands in giving what people need in today's generation that includes nutritious food, good water quality, products grown naturally without using toxins, etc.

- **Decreases the intake of antibiotics and unnecessary hormones**

Most of the conventional farmers use a lot of mixture of growth hormones, supplements, drugs, and toxic substances so that their animals grow products faster, bigger and produce more milk compare to their natural products and give more per day than these products consumed by us leads to heavy intake of antibiotics. By growing products organically will help reduce the intake of all these. The National Organic Program rule prohibits virtually synthetic animal drug use therefore in the end healthy animals produce healthy milk, meat, dairy products, eggs, etc.

- **Maintenance for healthy soil**

Having healthy soil is the main thing for all successful organic farms. After all the comparison done by so many studies over the past years, it is concluded that the soil quality of conventional farms is affecting the soil health versus the organic farms that practice organic management which includes enhancing the soil quality, crop rotation, restore organic components, and nitrogen to help fight global warming.

- **Create a healthy environment in the workplace and neighbouring areas**

Farming is the second most hazardous occupation in the list of mining. Until and unless good care is practiced, caustic fertilizers, toxic pesticides, and so many other chemicals pose a risk to a lot of people living or working near the farms. By going organic, the use of high-risk chemical products by the farmers is very less so the workers and rural Neighbours have nothing to worry about their health.

❖ **Scope of Organic Farming**

- The scope of organic farming is increasing at a great speed in India. This is mostly due to new experiments and researches done in the agricultural field. New techniques which are invented are fully in support of the health of the soil.
- By these new measures of production, there is so much reduction in toxic substances increasing the quality of the product. Also, with the increasing diseases caused by the artificial production of crops more and more people are shifting to organic farming methods in today's scenario.
- People's health is another very important factor to shift to organic farming. The high scope of organic farming is also been seen because a lot of people are reshaping their health in their lifestyle.
- So, there is a huge possibility for the farmers to get a great response for organic products from the consumers and their opportunities also increase. In addition, the maintenance costs are extremely less in organic farming as this method does not include the use of artificial substances in farming.

❖ **Opportunities In Organic Farming**

- In organic farming, there are a lot of categories. One can choose any of them and then specialize in that particular category. By this, one will be clear about what they have to focus on and can also achieve success in the market.
- One can go for the production of vegetables and fruits which sums up to 75% of the market in organic farming. But if you are financially stable then this field is a great option as this category can have a loss at times because the products are perishable.
- The production of organic medicines is another good option for generating more income. Medicines are also a huge demand when it is being produced organically. So many people in the medical field prescribe organic medicines to patients to recover at a great speed.
- Organic farming is a very new concept for a lot of people but has a huge scope of success and this can be used smartly to gain profits. From a business point of view, the supply is less and the demand for the products is comparatively more. Therefore, prices for organic products are more than normal but even after that people are buying as if it is beneficial.

❖ **Future of Organic Farming**

- Organic farming in India will prosper and will include feeding 1.5 billion people by 2030. The growth rate in organic farming increases 25-30 % every year. By 2020 India will reach 1.35 billion in organic farming. Organic farming is 35% more profitable than conventional farming.
- Organic farming methods use good quality soil and air and also helps in biodiversity so more farmers are shifting to organic farming. A large number of investors are looking up to having a business in organic farming as there

are many people out there going vegan, organic as consuming conventional and toxic crops are giving major health issues.

- There is a very effective and successful future of organic farming in the coming years as organic crops are more healthy and naturally grown as compared to conventional crops. There are large scopes of organic farming as it is cheap and does not include the use of toxic substances, drugs, etc.

❖ **Need for Organic Farming**

Sustainability has become a buzzword in every sector globally, with organic farming being a proponent of agriculture. Organic lifestyle is gradually becoming the core concern in the 21st century. Organic farming aims to impact human health and the planet positively. Elayaraja [2] highlight that adopting organic farming is crucial to avoiding chemical-based pesticides and fertilizers. The process emphasizes natural methods to get rid of weeds and pests. At the same time, chemicals could leave residues in foods and products that could have delirious implications for our health and the planet. Also, as Kumari [4] argues, adopting organic farming is suitable for protecting the environment. The bigger global issue of climate change depicts the harm looming on our environment, calling for interventions to ensure nature stays rich and clean, such as organic farming in the agricultural sector. In that light, ecological production practice significantly sustains the proliferation of biodiversity as opposed to conventional production processes. Besides, Karunakaran [5,4] emphasizes that organic farming could enrich the nutritional content of foods and food products instead of conventional farming. A recent study found that organic ingredients contain significantly higher levels of antioxidants and other essential compounds that benefit consumers, such as anti-inflammatory impacts [6]. Moreover, organic farming contributes to the empowerment of local producers and protect their environment from toxic chemical [7]. Demand for organic foods means farmers producing foods organically get to supply and benefit from the market. In that light, procuring organic food products assures that the overall production could not harm the local communities and their surroundings. Nonetheless, organic farming could be suitable for avoiding genetically modified organisms (GMO) products [4,6]. Organic farming uses organic practices rather than GMOs, eliminating the likelihood of contracting health and ecological consequences associated with GMOs. Therefore, organic farming has more to offer to people and the planet. Thus, it should be widely adopted to boost sustainable existence.

❖ **Limitations and Suggestions**

While the studies reviewed provide valuable insights into the potential of organic farming in India, there are some limitations to be considered. Firstly, most of the studies were conducted in a specific region of India, which may limit the generalizability of the findings to other regions of the country. Additionally, most of the studies only examined the short-term effects of organic farming on food security and related aspects, so more research is needed to fully understand the long-term effects of organic farming. Moving forward, future research should focus on conducting more comparative studies between organic and conventional farming methods in India and examining the specific challenges and opportunities faced by organic agriculture in different regions and climates of India. This will help to understand better the potential benefits and drawbacks of switching to organic farming in India, as well as the economic and social aspects that affect the acceptance and effectiveness of such techniques.

In terms of policy and practical implications, boosting government support for organic agriculture and expanding access to markets for organic farmers in India could significantly influence the growth of India's organic agricultural industry. Further research is needed to evaluate the long-term effects of organic farming on food security, crop yields, and the economy in India. To support organic farming in India, government policies and programs should be developed to provide funding for research and development, infrastructure, and market access. Developing a robust supply chain and infrastructure for organic farming in India is crucial to support farmers and make their products more accessible to consumers. Collaboration between farmers, researchers, and policymakers is necessary to promote the adoption of organic farming practices and ensure its success in India.