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Organic Farming In India And Its Benefits

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Abstract

Organic farming ensures that nature stays in original form. Organic farm have animal, bird and insect activity. Many researches show that there are more wildlife animal and plants near organic fields compared to conventional farming. This is because there are no pesticides and fertilizer is used. We should focus on nutritional security not of food security. Organically grown foods contain antioxidants, micronutrients and no harmful chemicals, pesticides and fertilizers. Organically grown foods contain better taste and more nutrition.

Key Words- Organic Farming, Conventional Farming, Environment.

Introduction-

According to FiBL survey 2021 India holds a unique position among 187 countries practicing organic agriculture. India is home to 30% of total organic producers in the world having 2.30 million ha. Total organic cultivation area, 27, 59,660 total farmers (11, 60,650 PGS and 15, 99,010 India Organic), 1703 total processors and 745 traders. A major relative increase of organic agricultural land was noted in recent past throughout the country.

Organic agriculture is practiced in 187 countries, and 72.3 million hectares of agricultural land were managed organically by at least 3.1 million farmers. With the most organic agricultural land in Australia (35.69 m hectares) followed by Argentina (3.63 m hectares) and the Spain (2.35 m hectares). There has been an increase in organic agricultural land in all regions. The global sales of organic food and drink reached more than 106 billion euros in 2019. According to the latest FiBL survey on organic agriculture worldwide, organic farmland increased by 1.1 million hectares, and organic retail sales continued to grow. Apart from land dedicated to organic agriculture, there are further areas of organic land dedicated to organic activities. The largest part of these is wild collection areas and areas for livestock and beekeeping. Further non-agricultural areas include aquaculture, forest and grazing areas. These are totaled 35 million hectares. And all the organic areas together summed up to 107.4 million hectares (Organic World 2021).

In 2019, 3.1 million organic producers were reported. India continues to be the country with the highest number of producers (13,66,000), followed by Uganda (2,10,000), and Ethiopia (2,04,000). Most small-scale producers are certified in groups based on an internal control system. (FiBL Survey 2021) Present Scenario of Organic Farming in India.

Organic farming is in a nascent stage in India. About 2.30 million hectares of farmland was under organic cultivation as of March 2019. This is two per cent of the 140.1 million ha net sown area in the country. A few states have taken the lead in improving organic farming coverage, as a major part of this area is concentrated only in a handful of states. Madhya Pradesh tops the list with 0.76 million ha of area under organic cultivation — that is over 27 per cent of India's total organic cultivation area.

The top three states — Madhya Pradesh, Rajasthan and Maharashtra — account for about half the area under organic cultivation. The top 10 states account for about 80 per cent of the total area under organic cultivation. Need for Organic Farming in India The Green Revolution in the year 1960 changed the whole scenario in the field of agriculture where the farmers were introduced to high yielding seeds and fertilizers to maintain food security. Increasing productivity ensured profit but ultimately the land was turning barren due to the excessive usage of fertilizers making the soil infertile and pesticides turning the product dangerous to consume.

There are reasons for the need of the Organic Farming in India -

- The organic food industry is rising and is growing very fast ensuring high profitability.
- Food security needs to be addressed with the growing population and decreasing supply of resources which is why there is a need to increase the production but in a feasible and sustainable manner.

Maintaining a clean and green environment is equally important, thus environmental sustainability needs to be maintained which can be achieved through organic farming. There needs to be an improvement in the health as the consumption can lead to many diseases such as cancer, infertility which happens when the toxic residue remains in the body, thus the safety of humans and animals are of utmost priority. The strike of balance between the environment and the livelihood becomes immensely important due to the risks caused by conventional agriculture practices.¹

Organic products are grown under a system of agriculture without the use of chemical fertilizers and pesticides with an environmentally and socially responsible approach. This is a method of farming that works at grass root level preserving the reproductive and regenerative capacity of the soil, good plant nutrition, and sound soil management, produces nutritious food rich in vitality which has resistance to diseases. India is bestowed with lot of potential to produce all varieties of organic products due to its various agro climatic conditions. 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 sector.²

The APEDA, Ministry of Commerce & Industries, Government of India is implementing the National Programme for Organic Production (NPOP). The programme involves the accreditation of Certification Bodies, standards for organic production, promotion of organic farming and marketing 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. With these recognitions, Indian organic products duly certified by the accredited certification bodies of India are accepted by the importing countries. APEDA is also in the process of negotiation with Australia, South Korea, Taiwan, Canada, Japan etc.

AREA

As on 31st March 2024 total area under organic certification process (registered under National Programme for Organic Production) is **7.3 mha** (2023-24). This includes **44,75,836.91 ha** cultivable area and another 28,50,156.48 ha for wild harvest collection.

Among all the states, Madhya Pradesh has covered largest area under organic certification followed by, Maharashtra, Rajasthan, Gujarat, Odisha, Sikkim, Uttar Pradesh, Uttarakhand, Kerala, Karnataka and Andhra Pradesh.

PRODUCTION

India produced around **3.6 Million MT** (2023-24) of certified organic products which includes all varieties of food products namely Oil Seeds, fibre, Sugar cane, Cereals & Millets, Cotton, Pulses, Aromatic & Medicinal Plants, Tea, Coffee, Fruits, Spices, Dry Fruits, Vegetables, Processed foods etc. The production is not limited to the edible sector but also produces organic cotton fiber, functional food products etc.

Among different states Maharashtra is the largest producer followed by Madhya Pradesh, Rajasthan, Karnataka, and Gujarat. In terms of commodities, Fiber crops are the single largest category followed by Oil Seeds, Sugar crops, Cereals and Millets, Medicinal/ Herbal and Aromatic plants, Spices & Condiments, Fresh Fruit Vegetable, Pulses, Tea & Coffee.

EXPORTS

The total volume of export during 2023-24 was 2,61,029 MT. The organic food export realization was around INR 4007.91 Crore (494.80 million USD). Organic products are exported to USA, European Union, Canada, Great Britain, Sri Lanka, Switzerland, Vietnam, Australia, Thailand, New Zealand, Japan, Korea Republic etc.³

Organic Farming: Concept

Organic farming can be defined as an agricultural process that uses biological fertilizers 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 fertilizers. In other words, organic farming is a new system of farming or agriculture that repairs, maintains, and improves the ecological balance.

Advantages of Organic Farming

Economical: In organic farming, no expensive fertilizers, pesticides, or HYV seeds are required for the plantation of crops. Therefore, there is no extra expense.

Good return on Investment: With the usage of cheaper and local inputs, a farmer can make a good return on investment.

High demand: There is a huge demand for organic products in India and across the globe, which generates more income through export.

Nutritional: As compared to chemical and fertilizer- utilized products, organic products are more nutritional, tasty, and good for health.

Environment-friendly: The farming of organic products is free of chemicals and fertilizers, so it does not harm the environment.

Disadvantages of Organic Farming

Incompetent: The major issue of organic farming is the lack of inadequate infrastructure and marketing of the product.

Less production: The products obtained through organic farming are less in the initial years as compared to that in chemical products. So, farmers find it difficult to accommodate large-scale production.

Shorter shelf life: Organic products have more flaws and a shorter shelf life than that of chemical products.

Limited production: Off-season crops are limited and have fewer options in organic farming.

Types of Organic Farming

Organic farming is divided into two types, namely:

1. Integrated organic farming
2. Pure organic farming

Pure organic farming means avoiding all unnatural chemicals. In this process of farming, all the fertilizers and pesticides are obtained from natural sources such as bone meal or blood meal.

Integrated organic farming includes the integration of pest management and nutrients management to achieve ecological requirements and demands.

Need of organic farming

- Excessive use of chemical fertilizers reduces the fertility of soil.
- Excessive use of chemicals has led to soil, water, and air pollution.
- To conserve ecosystem.
- To promote sustainable development.
- Inexpensive farming.
- Increased demand of organic products due to safety of food.

Relevance of organic farming in India

- High nutritional value.
- Maximum profit.
- Employment opportunity.⁴

India, a major contributor to global food production, traditionally employed farming methods like crop rotation, compost, manures and poly culture. In the past, farmers used traditional methods, but now they often use modern ways with chemicals to get more crops.

However, these chemical methods can harm the environment and the food we eat. That's why in India, there's been a change towards organic agriculture in recent years. The organic farming method is a better way to use natural resources and techniques to keep the soil healthy and help the environment and farmers at the same time.

The basic idea of organic agriculture is not just about growing crops; it's about keeping everything in nature healthy—like the soil, the plants, and all the living things around.

The main goal of organic grown farming is to grow food that's good for you without using harmful stuff. To do this, farmers use different farming practices, like special ways of planting and taking care of the soil. This approach emphasizes sustainable practices, including livestock integration; weed management, chemical-free cultivation, and vermi -culture.

By forsaking synthetic fertilizers and pesticides, farmers aim to cultivate crops that are not only healthy for consumers but also eco-friendly.

Organic farming in India signifies a shift from traditional agricultural farming practices by avoiding the use of chemical pesticides and synthetic fertilizers.

Instead, it relies on natural pest control methods derived from organic sources such as manure, plant residues, and animal waste. This transition towards organic agriculture is a response to the environmental repercussions associated with the widespread use of chemical inputs.

It represents a modern organic agriculture system designed not only to rectify the ecological imbalances caused by conventional farming but also to maintain and enhance the overall health of the ecosystem. The organic method of farming process is considered to be a little more difficult than conventional farming.

An integral part of methods for organic farming method involves the use of organic inputs like green manures and cow dung. Green manures and cultivated cover crops play a crucial role in improving soil fertility, while cow dung serves as a valuable organic agriculture, contributing to soil enrichment and fostering a sustainable approach to crop cultivation.

In essence, organic farming in India embodies a harmonious and environmentally conscious approach to agriculture, promoting the well-being of both the land and its inhabitants.

Organic farming method is not merely a cultivation method; it's a holistic approach that places a premium on sustainability, environmental health, and the overall well-being of our ecosystems.

At its core, the objectives of organic farming are geared towards cultivating crops in a manner that eschews synthetic inputs in favour of nature-friendly alternatives.

Organic agriculture examples include crop rotation, where different crops are planted sequentially to enhance soil fertility, and the use of natural pest control methods, such as introducing beneficial insects, to avoid synthetic pesticides.

Practices of organic farming play a vital role towards a sustainable future. Let's look into the key organic agriculture methods that guide organic farming practices, shaping a pathway towards a more harmonious coexistence with the environment.

Elimination of Synthetic Inputs:

Organic farming practices aim to exclude the use of synthetic pesticides and chemical fertilizers, relying instead on natural alternatives for pest control and soil fertility.

Promotion of Natural Pest Control:

The main focus of organic agriculture is that instead of relying on chemical pesticides, organic farming employs methods like companion planting and biological pest control to manage pests and diseases in an eco-friendly manner.

Enhancement of Soil Health:

The objective of organic agriculture is to improve soil fertility and structure through the use of organic inputs such as compost, green manures, and animal manure, fostering long-term productivity.

Sustainable Agriculture Practices:

The main organic farming process includes avoiding synthetic inputs and emphasizing organic alternatives; organic agriculture contributes to sustainable agricultural practices that are environmentally friendly.

Biodiversity Promotion:

Organic farming encourages the cultivation of diverse crops and discourages monoculture, fostering biodiversity to maintain natural balance and reduce the risk of pests and diseases.

Eco-Friendly Crop Rotation:

Organic farmers employ crop rotation strategies in organic agriculture to maintain soil health, prevent nutrient depletion, and reduce the risk of pests and diseases associated with continuous monoculture. This is one of the most important process of organic farming.

Respect for Ecological Balance:

The most important objective of organic agriculture is to create a harmonious balance between agriculture and nature, prioritizing practices that support the health of the entire ecosystem.

TYPES OF ORGANIC FARMING

Within the realm of organic agriculture practices, two distinct approaches have emerged: pure organic farming and integrated organic farming. Each method carries its set of advantages and drawbacks, allowing farmers to tailor their practices based on preferences and ecological considerations.

Pure Organic Farming:

One of the types of organic agriculture is pure organic farming, true to its name, relies solely on natural methods for cultivation. This approach staunchly avoids the use of inorganic chemicals that may pose harm to the soil, crops, and ultimately, those who consume the produce.

In this method, farmers exclusively utilize organic fertilizers and bio-pesticides derived from natural sources. Examples include bone meal, blood meal, and other organic matter.

By excluding synthetic inputs, pure organic farming techniques emphasize a more traditional and naturalistic approach to agriculture.

Integrated Organic Farming:

On the other hand, integrated organic farming takes a comprehensive approach by merging pest management and nutrient management strategies.

The goal of integrated organic grown farming methods is to meet ecological requirements while simultaneously addressing economic demands. These green farming practices recognize the interconnectedness of various farming aspects, integrating them into a cohesive system.

Farmers practicing integrated organic farming carefully balance the use of organic fertilizers and bio-pesticides with other ecological practices to create a harmonious and sustainable farming ecosystem.

ORGANIC FARMING METHODS AND PRACTICES IN INDIA

The methodology of organic farming is like going back to nature's way of growing food. Instead of using chemicals, it uses natural methods to keep the soil and plants healthy.

Farmers use organic agriculture methods to enrich the soil with nutrient-rich compost. Let's take a look at the methods for organic agriculture farming and practices in India.

Crop Rotation:

In India, farmers practice crop rotation in organic farming by planting different crops in the same field at different times. This helps maintain soil fertility, reduces the risk of pests and diseases, and ensures sustainable agriculture.

Green Manures:

The second most organic method of farming includes green manures. Farmers use green manures, which are special crops planted to add nutrients to the soil. These crops improve soil fertility naturally, providing essential elements for the healthy growth of subsequent crops.

Compost:

The third organic method of farming includes composting is a common practice where farmers mix kitchen scraps, plant leftovers, and other organic matter to create natural fertilizer. This homemade compost enriches the soil, promoting robust and nutrient-rich plant growth.

Pest Management:

In organic farming, pest management involves using beneficial insects or natural methods to control harmful pests. This eliminates the need for chemical pesticides, promoting a healthier environment.

Weed Management:

Weed management is one of the crucial techniques of organic farming for maintaining a healthy crop. Farmers in India adopt practices to keep unwanted plants in check, ensuring that crops receive sufficient nutrients and water without competition. Weed management is one of the important organic method of farming.

Soil Management:

Indian farmers focus on soil management to nurture the ground where crops grow. By adopting organic farming methods, they ensure the soil remains fertile, contributing to sustainable and fruitful harvests.

Crop Diversity:

A contemporary agricultural approach known as 'Polyculture' has gained popularity recently. This polyculture method involves cultivating a diverse range of crops concurrently, addressing the growing global demand for food items.

In India, organic farmers emphasize crop diversity by growing various types of crops together. This is one of the best polyculture techniques of organic farming, which not only supports a balanced ecosystem but also reduces the vulnerability of crops to specific pests and diseases.

Vermiculture:

Vermiculture is an important part of the organic method of farming involves using worms to create natural fertilizer. In India, farmers utilize worms to break down organic matter, producing nutrient-rich soil that enhances the overall health of the crops.

CONCLUSION:

Organic farming in India represents a holistic and sustainable approach that resonates with today's growing environmental awareness. With green farming practices and organic agriculture techniques deeply rooted in tradition and a fusion of modern agricultural science, Indian farmers nurture the land through methods like zero-budget natural farming, organic manure, and bio fertilizers. This organic agriculture approach prioritizes environmental benefits, health, and local economic support, making it a promising choice.

However, challenges such as limited awareness and bureaucratic certification processes must be overcome. Successful organic farming in India demands patience, ecological knowledge, and a commitment to safer food production and environmental preservation.

By embracing flexibility and sharing knowledge, Indian farmers can ensure a thriving future for organic agriculture, fostering a healthier environment and more prosperous communities.⁵

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