

UNVEILING THE GOVERNMENT'S INITIATIVES TO PROMOTE ORGANIC FARMING

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Organic farming is an eco-conscious and sustainable agricultural method that uses natural substances to nourish and protect crops, avoiding artificial chemicals and biotechnological interventions. It is an antidote to the environmental harm inflicted by traditional agricultural practices to mend and boost the ecological equilibrium. According to the Food and Agriculture Organization (FAO), it is a practice that fosters the nourishment of ecosystems, focusing on indigenous and organic techniques rather than synthetic ones. In India, the government has launched several schemes to encourage this eco-friendly method, acknowledging its role in enhancing diversity in species, soil health, and the overall vitality of agricultural ecosystems. Organic farming represents a forward-thinking, holistic approach to agriculture. Recognising its significance, the Indian government has launched several initiatives, like The National Programme for Organic Production (NPOP), Paramparagat Krishi Vikas Yojana, Rashtriya Krishi Vikas Yojana, etc., to encourage organic farming practices. Here, we will discuss such initiatives taken by the government to sensitise the concept and the practice of organic farming among the farmers of India.

Introduction

Organic farming, also known as organic agriculture, biological farming or ecological farming, is a method of agriculture that relies on bio-fertilizers and pest management derived from plant or animal waste. It excludes irradiation, sewage sludge, synthetic chemical substances like pesticides, fertilisers, biotechnological intervention, i.e., genetically modified organisms, etc.¹ It has emerged as a solution to the environmental harm caused by chemical pesticides and artificial fertilisers. It represents a modern approach to farming that aims to restore, sustain, and enhance ecological stability. The Food and Agriculture Organization (FAO), a specialised agency under the umbrella of the United Nations working across the globe to defeat hunger, defines organic farming as “Organic agriculture is a holistic production management

system which promotes and enhances agroecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasises the use of management practices in preference to the use of off-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”². In organic farming, crops are cultivated using agricultural methods that restrict chemical fertilisers and pesticides and rely only on sustainable and eco-friendly approaches. Like FAO, The National Organic Standards Board of the United States Department of Agriculture (USDA) defines organic farming as “an ecological production management system that promotes and enhances biodiversity, biological cycles, and soil biological activity. It is based on the minimal use of off-farm inputs and management practices that restore and enhance ecological harmony”³. This farming technique maintains soil fertility, ensuring proper plant nutrition and effective soil management. As a result, it

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Fig. 1: Organic Farming in India: a bird's-eye view.

yields nutritious food that is healthy in all aspects. Keeping in mind its importance, the government of India has come up with various initiatives to promote organic farming and to strengthen to meet the objectives of Sustainable Development Goals (SDGs). The principles of organic farming are in tight conformity with the goals of SDG 2 (i.e., zero hunger), working to reduce hunger, promote nutritional health, and sustainable global food network. Organic agricultural methods offer a viable route to achieve these targets⁴. Following illustration (Figure 1) describes several initiatives taken up by the government to promote organic farming in a nutshell.

What is Organic Farming?

Organic farming focuses on producing healthy food, soils, plants, and environments, alongside ensuring crop productivity. Farmers practicing organic methods utilize natural fertilizers and implement cover cropping and crop rotation techniques to enhance soil quality and increase organic matter. By boosting organic matter in the soil, they improve its capacity to retain water, thus mitigating the effects of drought and flooding. This also aids in carbon and nutrient storage, supporting the growth of robust crops more resistant to pests and diseases. Organic farming prohibits using genetically modified (GM) seeds, synthetic pesticides, and fertilizers. Critical features of organic agriculture include creating and implementing an organic method that outlines the practices for growing crops and raising livestock, maintaining thorough recordkeeping that traces products from the farm to the market (for sale), and establishing buffer zones to protect against accidental contamination from synthetic chemicals used on nearby farms^{5,6}. Organic farming emerged as a response to the adverse impacts of modern industrial agriculture in the 20th century. The reliance on

agrochemicals has led to environmental contamination, reduced soil fertility, diminished plant health and immunity, loss of biodiversity, and poorer food quality, all of which have detrimental effects on human health. Additionally, the development of organic farming was driven by concerns over intensive animal farming, which involved animal cruelty, excessive use of medications, poor-quality feed, and deteriorating animal

health and lifespan. The broader consequences of industrial agriculture have included rural depopulation. Organic farming methods, initially developed by farmers and later validated by scientific research, offer an alternative to conventional practices. Today, organic farming is regulated by laws and certifications, and it receives financial support through rural development initiatives focused on environmental and food quality. The land area is dedicated to organic farming, and the market for organic products is continually expanding⁷.

Promoters of Organic Farming in India

The Government of India actively advocates the research, implementation, propagation and conservation of organic farming by setting up institutions and universities. Besides government initiatives, some NGOs and civil society organisations are working in the same line to promote organic farming.

The National Centre for Organic Farming (NCOF) is a nodal agency that comes under the INM (Integrated Nutrient Management) Division, Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Government of India, is working under the Soil Health Management component of the National Mission on Sustainable Agriculture (NMSA) that promotes organic farming in India. It was established with its five regional centres in 2004 to execute the National Project on Organic Farming (NPOF). In March 2022, the NCOF was renamed by the government as the National Centre for Organic and Natural Farming (NCONF), Ghaziabad. It has regional centres in five zones spread across the country for Organic and Natural Farming. The north zonal office is located in Ghaziabad, the South zonal office is in Bengaluru, the East zonal office is in Bhubaneswar, the West-Central zonal office is in Nagpur, and the North-East zonal office is

situated in Imphal⁸. The Agricultural and Processed Food Products Export Development Authority (APEDA), an apex organisation under the Ministry of Commerce and Industries, Govt. of India, is authorised with the responsibility for the promotion and development of the export of agricultural products from India and also the implementing agency for the National Programme for Organic Production (NPOP). The initiative includes accreditation of certification bodies, setting the benchmarks for organic production, and promoting organic agriculture and its marketing. The production norms and certification system of NPOP for raw plant stuff are at par with the European Commission and Switzerland standards, and this enables Indian organic goods with proper certification to be recognised by the importing nations. Additionally, APEDA is actively discussing with countries such as Australia, Japan, Taiwan, South Korea, and Canada to gain similar recognition. APEDA serves as the administrative body for the National Accreditation Board (NAB), which administers the accreditation process for Certification Bodies under the National Programme for Organic Production (NPOP). For any organic exports to be certified, they must be produced, processed, and packaged following the guidelines specified in the NPOP guidelines⁹⁻¹⁰.

The Organic Farming Association of India (OFAI) was founded in 2002 by the seniormost members of India's organic farming sector, aiming to promote and popularise organic agriculture, influence government bodies to focus more on sustainable farming practices, and help farmers transitioning from conventional farming practices to organic methods. The primary motto of OFAI is to advance eco-friendly and scientifically sound agricultural techniques that are financially sustainable, energy-efficient, and environmentally conscious while empowering rural communities by leveraging local knowledge and practices and empowering farmers to protect their rights and the organic integrity of their farms. OFAI actively markets organic products and their derivatives to boost farmers across various Indian states, promoting a collaborative venture between consumers and producers at the state level. OFAI is today's sole national, membership-based body that advocates for organic farmers, organic farming promoters, and eco-friendly shops. The organisation mandates that its president be an organic farmer and promotes gender balance in all its endeavours. Moreover, it campaigns against introducing genetically modified organisms and seeds in India's agricultural domain¹¹.

Following is the list of various Government Institutions, Research Institutes and Universities, NGOs

and Civil society organisations that are actively engaged in the propagation and promotion of organic farming-

Government Institutions	National Centre of Organic Farming Regional Centre of Organic Farming Systems
Research Institutes Universities	Centre for Indian Knowledge Systems (CIKS) ICAR- Indian Institute of Farming Systems Research ICAR-Indian Agricultural Research Institute IIAASD: International Institute of Advanced Agriculture Skill Development National Organic Farming Research and Institute, Sikkim All India Network Programme on Organic Farming (AI-NPOF) is jointly conducted by ICAR New Delhi and the Indian Institute for Farming Systems Research (IIFSR). Bidhan Chandra Krishi Viswavidyalaya (BCKV) Various Agricultural Universities in states (Both Govt. and Private)
NGOs and Civil Society Organisations	The Organic Farming Association of India (OFAI) Sanjeevani Organic Farmer Producer Association of India (OPPAI) Deccan Development Society- Krishi Vigyan Kendra (DDS KVK), Telangana Kheti Virasat Mission, Punjab Centre for Sustainable Agriculture Alliance for Sustainable and Holistic Agriculture (ASHA)- Kisan Swaraj network All India Organic Farmers Society (AIOFS) Worldwide Opportunities on Organic Farms India (WOOOF INDIA) International Competence Centre for Organic Agriculture (ICCOA) Dilasa Organisation AVISHKAR (Karnataka state) Bharatiya Jana Seva Mission

Organic Farming: Global Vs National Scenario

According to the available data, globally, organic farming is carried out across 188 nations, with over 96

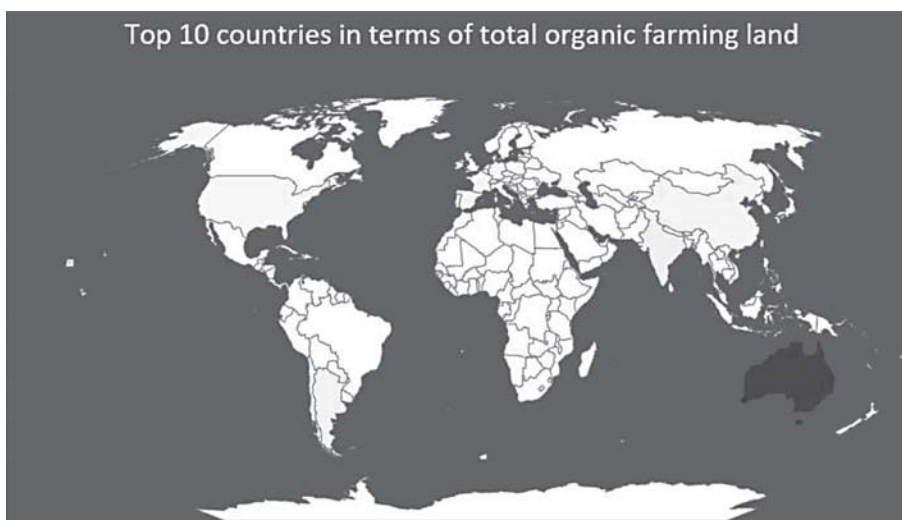


Fig. 2: List of top ten (10) countries in total organic farming land. The ten (10) countries shown in the diagram are Argentina, Australia, China, France, Germany, India, Italy, Spain, Uruguay, USA (arranged in alphabetical order).

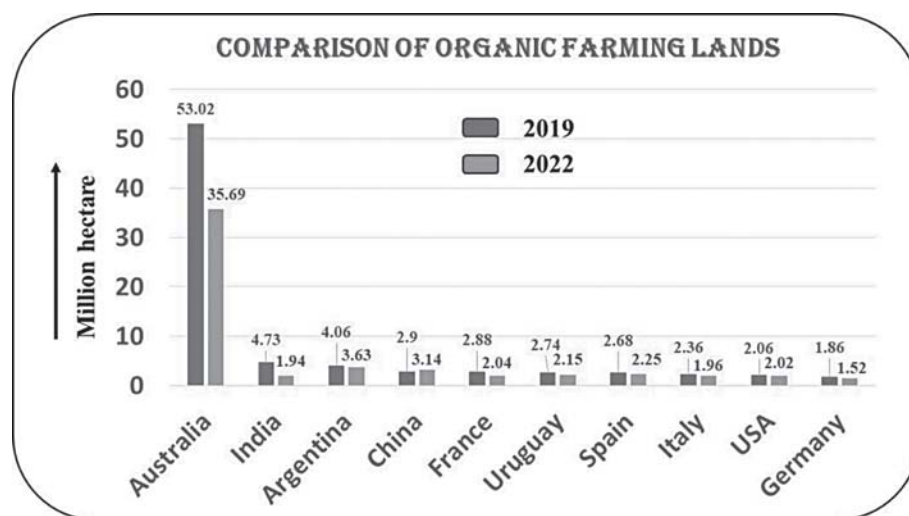


Fig. 3: Comparison of organic farming land in the top 10 countries in 2019 and 2022

million hectares of organic agricultural land cultivated by approximately 4.5 million farmers. This data indicates an increase of about 50 million hectares of organic farmland within a decade. In 2022, worldwide, the total budget of the organic foodstuffs and drinks market was worth 135 billion euros¹². Regarding organic farming land, Australia holds the first position globally with 53.02 m ha, followed by India (4.73 m ha) and Argentina (4.06 m ha). In Figure 2 and Figure 3, the top 10 countries, along with their comparative land area in 2019 and 2022, are shown. In 2022, the share of the world's agricultural land for organic farming was 2%. Liechtenstein leads the world of organic agriculture, with over 43% of its agricultural land dedicated to organic practices, followed by Austria (27.5%) and Estonia (23.4%). The United States of America holds the

top spot for the organic food market. Organic agriculture can meet sustainable farming goals, and the trend of growing organic sectors is expected to rise persistently¹³.

Figure 3 shows that in 2019, India was in the ninth (9th) position with 1.94 m ha organic land, whereas within three odd years, India advanced to the second (2nd) position with 4.73 m ha land in 2022. The credit goes to the government for its policies and untiring efforts to alleviate the organic farming practices and other public and private stakeholders working in line with the government to achieve the same goal¹⁴.

The area of land used for organic farming in India has seen a significant increase, growing more than double from 11.83 lakh hectares in 2014 to 29.17 lakh hectares in 2020, showcasing the positive impact of government initiatives¹⁵. These efforts have fostered the creation of organic brands unique to each state and boosted the internal market and export of organic goods, particularly from the North-Eastern Region (NER). Inspired by these successful endeavours, the

Government of India has set an ambitious goal in the vision document to expand organic farming by 20 lakh hectares by the end of 2024. To achieve this, strategies such as awareness campaigns, improved post-harvest infrastructure, better marketing facilities, and higher prices for organic products are expected to encourage more farmers to adopt organic farming practices, thus expanding the culture of organic farming nationwide. According to the 2020 statistics from the Research Institute of Organic Agriculture FiBL and the International Federation of Organic Agriculture Movements (IFOAM), India ranks 9th globally in certified organic farmland, with 1.94 million hectares recorded for 2018-19¹⁶⁻¹⁷. Table 1 shows India's position in the context of other nations like China, Brazil,

and the USA concerning organic cultivation are shown below-

Table 1: Comparison of India’s organic certification land w.r.t USA, China and Brazil

Countries	Rank	The area under organic certification (in million hectares)
India	9 th	1.94
China	3 rd	3.14
USA	7 th	2.02
Brazil	12 th	1.18

India’s diverse agro-climatic zones offer the perfect environment to cultivate a wide range of organic products. India has a longstanding heritage of organic agriculture, which provides a unique edge that supports farmers in capitalising on the consistently expanding domestic and global market. As of 2021, India leads globally in the number of organic producers¹⁸.

The latest data showed that the total land area undergoing organic certification (enrolled in the National Programme for Organic Production, NPOP) reached 10.17 m ha for the fiscal year 2022-23, out of which 5.39 m ha area is farmable land and 4.78 m ha area is for wild harvest collection. India’s certified organic production in the same period was approximately 2.9 million metric tons. This extensive range encompasses a variety of food items, including Oil Seeds, Fibre, Sugarcane, Cereals, Millets, Cotton, and Pulses, as well as Medicinal Plants, Tea, Coffee, Fruits, Spices, Nuts, Vegetables, and Processed Food Products. Besides food products, the production extends to organic cotton fibre and functional food items. At the national level, Madhya Pradesh (MP) is the top organic producer among Indian states, followed by Maharashtra, Rajasthan, Karnataka, and Odisha. In terms of production volumes of organic goods, fibre crops top the list, followed by Oil Seeds, Sugarcane, Cereals, millet,

Medicinal plants, Spices, Fresh Fruits, Vegetables, Pulses, Tea, and Coffee¹⁹.

Organic agriculture is widespread in India, with Sikkim achieving the milestone of becoming an entirely organic state in 2016. Madhya Pradesh, Rajasthan, and Maharashtra are the leading states in this sector, comprising nearly half of India’s organic cultivation area. However, a report from the Centre of Science and Environment points out that organic farming still represents a minor segment in most states. Specifically, Madhya Pradesh, Rajasthan, and Maharashtra have 4.9%, 2.0%, and 1.6% of their total cultivated land under organic farming. In contrast, states like Meghalaya, Mizoram, Uttarakhand, Goa, and Sikkim have over 10% of their agricultural land dedicated to organic practices 20 (Figure 4).

During fiscal 2022-23, India exported 3.12 lakh metric tons of organic products. The revenue earned from these exports was approximately ₹ 5,525.18 crore. The exported countries include the European Union (EU), the USA, Canada, England, Switzerland, Australia, Japan, Turkey, Ecuador, South Korea, and Vietnam²¹.

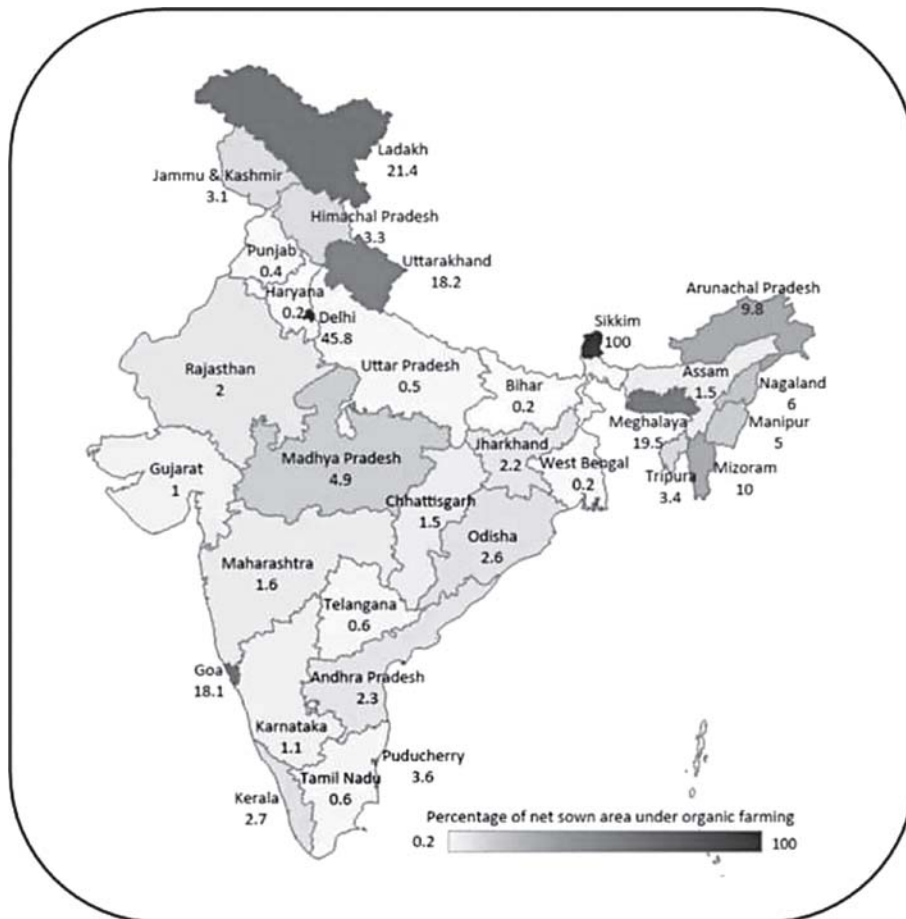


Fig. 4: State-wise area coverage of organic farming w.r.t net sown area Source: Lok Sabha 2019; Ministry of Agriculture & Farmers Welfare 2019

Various Government Initiatives

Organic farming enhances environmental health and provides consumers with healthier and nutritious foods. It represents a move towards a more sustainable and robust agricultural system. The government of India has come up with various initiatives to prioritise and promote organic agriculture. The following are the critical objectives of organic farming schemes in India:

- **Reducing Dependence on Chemical Fertilisers:** The main goal is to minimise chemical fertilisers and pesticides by enhancing the availability and quality of bio-fertilisers, biopesticides, and composts.
- **Conversion of Organic By-product:** A significant aim is to transform organic waste into valuable plant nutrients, promoting sustainable agriculture.
- **Pollution Prevention:** Organic farming practices are targeted at reducing pollution, soil erosion, and degradation, with the proper management of organic waste vital to this effort.
- **Eco-friendly agricultural practices:** The focus is on encouraging farming methods that are sustainable, profitable, and dignified, prioritising natural inputs to maintain longterm soil health and ecological balance.

Following is the list of various important schemes related to organic farming initiated/implemented by the government from time to time-

Paramparagat Krishi Vikas Yojana (PKVY)

The Paramparagat Krishi Vikas Yojana (PKVY) was launched in 2015 and is a key part of the Soil Health Management (SHM) within the National Mission on Sustainable Agriculture (NMSA). The program aims to foster organic farming practices that lead to healthier soil. The initiative endorses the Participatory Guarantee System (PGS) for India, a community-based organic certification system that relies on collective responsibility and active participation from producers and consumers. It is a centrally sponsored scheme with the financial contribution split between the central and state governments at 60:40. For the North Eastern and Himalayan regions, the ratio is 90:10. At the same time, UTs receive total funding from the central government. The purpose of PKVY is to cultivate crops without using chemicals and pesticides through sustainable and cost-effective methods²².

The National Programme for Organic Production (NPOP)

The National Programme for Organic Production (NPOP), launched by the Ministry of Commerce and Industry, Govt. of India in 2001, has several key purposes, i.e., establishing a system to evaluate organic agriculture and product certification programs based on government-approved criteria, acknowledging the certification programs from organisations seeking accreditation, providing certification of organic products that meet established standards, supports the import certification of organic products based on bilateral agreements or the importing country's requirements and encourages the propagation of organic farming and processing within India. So, it is designed as a nodal agency to streamline the certification process for organic products and help to develop India's organic sector²³.

Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)

Mission Organic Value Chain Development for North East Region (MOVCD-NER), a submission under the National Mission for Sustainable Agriculture (NMSA), under the Ministry of Agriculture and Farmers Welfare in 2015-16 for executing in the North Eastern states of the country states (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura). It is a Central Sector Scheme that aims to develop a certified organic production system connecting farmers directly with buyers. This approach supports the entire organic production process, encompassing everything from the supply of inputs and seeds to the certification process. It also includes establishing infrastructure for gathering, consolidating, processing, and marketing and efforts to create and promote brands²⁴.

Capital Investment Subsidy Scheme (CISS)

Launched in 2004-05, the Capital Investment Subsidy Scheme (CISS) for commercial production units for organic and biological inputs is being implemented by the Department of Agriculture, Cooperation and Farmers' Welfare (DAC&FW) under the Ministry of Agriculture & Farmers' Welfare, Govt. of India, through the National Centre of Organic Farming (NCOF) in collaboration with National Bank for Agriculture and Rural Development (NABARD) and National Cooperative Development Corporation (NCDC). The initiative is designed to advance organic farming in India by using organic inputs like bio-fertilizers, bio-pesticides, and compost from fruit and vegetable waste, aiming to enhance the profitability of

organic agriculture. It seeks to boost agricultural productivity in an eco-friendly manner, ensuring soil health and environmental protection. The strategy includes reducing dependency on chemical fertilisers and pesticides by making organic alternatives more available and of superior quality. It also focuses on converting organic waste into valuable plant nutrients, preventing pollution, and mitigating environmental degradation through effective waste management. In addition to this, the plan involves setting up production units for bio-fertilizers and bio-pesticides and facilities for composting fruit and vegetable waste²⁵.

National Mission on Oilseeds and Oil Palm (NMO-OP)

Launched in 2014-15 by the Govt. of India, the National Mission on Oilseeds and Oil Palm (NMO-OP), the organic farming policy aims to promote the production of edible oils and increase oil palm plantations. From 2018-19 onwards, the NMO-OP was merged with the National Food Security Mission (NFSM) as NFSM-OS&OP. In 2021, the government launched the National Mission for Edible Oils and Oil Palm (NMEO-OP). The new centrally sponsored scheme NMEO-OP will subsume the NFSM-OS&OP, and the mission is committed to accelerating oil palm cultivation and Crude Palm Oil production to 11.20 lakh tonnes by 2025-26 and to 28 lakh tonnes by 2029-30²⁶.

National Food Security Mission (NFSM)

The National Food Security Mission (NFSM), initiated in 2007, is a Centrally Sponsored Scheme that was launched based on the suggestions of the agriculture sub-committee of the National Development Council (NDC) to enhance agricultural services, technology dissemination, and decentralised planning. It has successfully increased food grain production by 20 million MT during the eleventh plan period, focusing on rice, wheat, and pulses. The twelfth five-year plan extended the target to 25 million MT, including coarse cereals and commercial crops. It aims to sustainably increase targeted crop production through area expansion and productivity enhancement, improve soil fertility and productivity at the farm level, and increase farmers' net income²⁷.

Recent Budget Initiatives (2023-24)

In her budget speech, honourable Finance Minister Ms Nirmala Sitaraman outlined several initiatives to enhance organic farming in India. According to the

Economic Survey 2022-23, India has about 4.43 million organic farmers. These include the goal to transition 10 million farmers to natural farming within three (03) years, despite the current challenges and limited funding compared to conventional agriculture. About 5.91 million hectares of agricultural land in the country are under organic farming, which is around 4 % of the net sown area, according to the Economic Survey 2022-23. The budget proposes the creation of 10,000 Bhartiya Prakritik Kheti Bio-Input Resource Centres to support a shift to micro-fertiliser and pesticide production. This move is crucial, as farmers often struggle with access to quality organic inputs and fair market prices. The PM-PRANAAM (PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth) scheme seeks to lower the use of chemical fertiliser by offering incentives to states through subsidies, which can be used to promote alternative fertilisers. Additionally, the GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan) scheme plans to establish 500 'waste to wealth' plants, including biogas and community-based facilities, with a budget of Rs 10,000 crore to encourage the use of organic fertilisers. Efforts to position India as a leader in 'Shree Anna' or millets are underway, with the Indian Institute of Millet Research, Hyderabad, set to become a Centre of Excellence. The Agriculture Accelerator Fund aims to introduce modern technologies to enhance agricultural practices, specifically to support sustainable, chemical-free farming. The budget also addresses the cooperative sector, focusing on computerising Primary Agricultural Credit Societies and developing a national cooperative database. The Atmanirbhar Horticulture Clean Plant Program and a new sub-scheme under PM Matsya Sampada Yojana have also been announced, and significant investments are planned. While these announcements are promising, the actual impact will depend on the allocation of sufficient funds and the effective implementation of these programs. Farmers need robust support and fair prices for their cultivated products for a successful transition from conventional to organic farming²⁸⁻²⁹.

Future Prospects

In 2023, because of governmental efforts, India's export of organic goods exceeded the USD 1.51 billion mark compared to USD 1 billion in 2021 and USD 0.815 billion in 2020 (Figure 5).

The United States of America (USA) was the primary recipient, accounting for 54% of the total exports, out of which the share of organic processed foods was



Fig. 5: Comparison of India's export of organic goods over the years

predominant. European Union and Canada are in the second and third positions, respectively. Despite this growth, there remains considerable potential for expansion, given that the worldwide market size exceeds USD 231 billion in 2023 and is expected to grow to USD 546.97 billion by 2032. According to recent research by the US Department of Agriculture, by the end of 2026, India's market for organic products, including food and beverages, health and wellness, beauty and personal care, and textiles, is expected to reach USD 10.1 billion. This suggests that India's organic food industry presents a substantial potential that needs to be streamlined to get the maximum output in terms of revenue and, in turn, that will propagate the craving for organic agriculture among the farmers and the culture of organic farming in our country²⁹⁻³¹.

Conclusion

The organic farming sector has witnessed a significant metamorphosis in the last few years due to government initiatives promoting sustainable agricultural practices. Various research institutes are being set up to implement this eco-friendly agrarian procedure. Besides this, different NGOs and civil society organisations are working together to uplift this sustainable practice. Schemes like Paramparagat Krishi Vikas Yojana (PKVY), the National Programme for Organic Production (NPOP), Mission Organic Value Chain Development for North Eastern Region (MOVCD-NER), PM Programme for Restoration, Awareness Generation, Nourishment, and Amelioration of Mother Earth (PM-PRANAM) etc. launched by the government provides necessary support to the farmers through financial aid and certification assistance. These cumulative endeavours have significantly enhanced India's organic sector, making India an essential contributor to the global scenario. With the government's constant

initiative, aid and backing, the future of organic farming in India is full of opportunities, with expectations of growth and innovations ahead. It will not be an exaggeration to say that if these kinds of continued assistance are received, India will become a supergiant in organic farming in the coming years. □

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