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ORGANIC FARMING IN INDIA: PROGRESS, CHALLENGES, AND ROLE OF THE PUBLIC POLICY

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ABSTRACT

Organic farming in India has gained increasing attention due to rising concerns over health, environmental sustainability, and the negative impacts of chemical-based agriculture. The research aims to track the growth of organic farming over the years in different parts of India and the constraints farmers face in adopting organic farming despite the state's promotional relief. The study is based on secondary data collected through various journals, official sites, and government annual reports. Supported by government schemes like PKVY and NPOP, it offers benefits such as improved soil health, lower input costs, premium market prices, and employment opportunities. The area covered by organic certification is growing gradually in spite of obstacles like limited awareness, marketing problems, and certification fees. Leading this expansion are states like Madhya Pradesh and Maharashtra, which show a slow transition to sustainable agricultural methods.

Keywords: Organic farming, Sustainable Agriculture, Government schemes, Area Under Organic Agriculture

1. INTRODUCTION

The three primary pillars of any nation's economy are capital formation, consumption, and production. Production is the most important since it serves as the basis for the other two. Agriculture is essential to production because it supplies raw materials for commercial and industrial operations and ensures food security. As a result, agriculture has become an integral part of human existence, and any modifications to agricultural methods immediately affect both the environment and people (Singh, 2020).

For a significant portion of the population in India, agriculture is their primary source of income. According to the Economic Survey 2022–2023, over 46% of India's workforce is employed in agriculture, accounting for over 18.3% of the country's Gross Value Added (GVA). It remains the single largest source of employment, notwithstanding a decrease in relative employment compared to previous decades. Furthermore, agriculture is rightfully regarded as the foundation of the Indian economy, with almost 65% of the country's people residing in rural areas and relying heavily on it for their livelihood (Chandrashekar, 2010; Ministry of Agriculture & Farmers Welfare, 2023).

The idea of sustainable agriculture is becoming more and more popular as a means of guaranteeing both long-term agricultural output and environmental balance. The ethical management of natural resources to satisfy human demands without endangering the ecological integrity of future generations is known as sustainable agriculture (Narayan, 2005). However, especially during the Green Revolution, Indian agriculture quickly deviated from sustainability in an effort to increase output. Long-term soil degradation, excessive chemical use, and environmental discomfort were the outcomes of this.

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2. ORGANIC FARMING

The word 'organic' comes from the Greek word organikos, which means organ or body. According to Chandrashekar (2010), organic farming is a comprehensive production method that improves ecological balance, soil health, and biodiversity. It involves agricultural practices that avoid the use of chemicals such as fertilisers, insecticides, and herbicides. It promotes crop rotation, compost, green manure, and biological pest management to maintain balance with the environment. One promising way to counteract the negative impacts of traditional chemical farming is through organic farming. Global interest in organic methods has increased due to growing worries about food safety, environmental contamination, and long-term soil fertility (Ramesh et al., 2005). Due to increased health consciousness following the COVID-19 pandemic, there has been an extreme demand for safe, chemical-free food.

The United States Department of Agriculture (USDA) defines organic farming as "a system which is managed by the Organic Foods Production Act and regulations to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity." It is not merely product-oriented but process-oriented; every stage, from production to marketing, must conform to organic standards and undergo certification by authorized agencies.

According to the FiBL & IFOAM 2024 survey, the global organic market exceeded €135 billion in 2022, showing consistent growth. India has emerged as the fourth-largest country in terms of the number of organic producers, with over 4.43 million certified farmers, according to APEDA (2024). This indicates increasing awareness and acceptance of organic practices in the country.

Organic to Chemical and Back to Traditional

Organic farming methods have long been a significant part of Indian agriculture. Texts such as the Rigveda mention the use of crop rotation, neem extracts, natural manure, and animal dung by Indian farmers thousands of years ago. After independence, this situation was different. Due to severe food shortages in the 1950s and 1960s, India implemented the Green Revolution strategy. To increase the production of food grains, especially in Punjab, Haryana, and western Uttar Pradesh, chemical fertilizers, high-yielding varieties (HYVs), and pesticides were introduced.

Despite transforming India from a food-deficient to a food-surplus country, the Green Revolution had adverse effects. Overuse of chemicals caused the health of the soil to deteriorate, water tables to drop, pests to become resistant and need even more toxic pesticides, and food quality to decline. Rising input costs (fertilizers, pesticides, seeds) caused farmers to become more and more enmeshed in debt cycles, which in turn caused distress and, in many cases, suicide. Organic farming has gained attention again as a result of these developments.

3. ORGANIC FARMING'S EXPANSION IN INDIA

The 1980s saw the start of India's modern organic movement, with significant turning points such as the Wardha conference in 1984 and the founding of groups like ARISE in 1995. India ranks ninth in the world for the area under organic agriculture, with over 2.9 million hectares currently certified organic (APEDA, 2024). Madhya Pradesh, Rajasthan, and Maharashtra have the most certified land. However, Sikkim is the only state in the world to be entirely organic, having grown 75,000 hectares of organic land in 2016.

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The organic farming movement was further supported by the Government of India's Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) and Paramparagat Krishi Vikas Yojana (PKVY). These programs support community-based organic clusters and provide farmers with financial and technical support. Furthermore, the Jaivik Bharat logo and website are expanding market access for certified organic products and boosting consumer trust.

India's organic industry is expected to grow quickly despite still making up a small percentage of the country's overall agricultural output. The USA, EU, and Canada were India's top export destinations for organic products in 2022–2023, with exports totaling over 5,000crores, according to APEDA (2024).

In India, organic farming is growing in popularity as a substitute that supports human health, economic sustainability, and environmental preservation by fusing traditional knowledge with contemporary certification and policy support.

4. REVIEW OF LITERATURE

Ramesh et al. (2005) reviewed national and international literature on productivity, nutrient sufficiency, and economic feasibility of organic farming. It found lower yields in organic systems but better environmental and health outcomes. Organic farming was economically viable due to lower costs and premium prices, although nutrient requirements could not be fully met organically.

Chandrashekar (2010) analyzed India's organic farming evolution, benefits, and export trends. Using a historical review, it found that while India shifted to chemical farming due to food scarcity, organic methods now offer safer alternatives with export potential. Low labor costs and high product prices increase profitability for Indian farmers despite certain limitations.

Meena (2010) assessed the socio-economic traits of organic farmers in Sri Ganganagar, Rajasthan, using primary data from 50 respondents. Findings showed middle-aged farmers held positive attitudes, and although yields were lower, net returns were higher. Constraints included expensive certification, poor marketing, and low initial yield, discouraging small farmers from adoption.

Pandey and Singh (2012) analyzed organic farming's role in smallholder sustainability. It was found that organic farming improves soil fertility and employment but suffers from poor input availability and marketing. Concludes that institutional efforts are necessary to overcome constraints and make organic farming more viable for small Indian farmers.

Sihi et al. (2012) examined organic and conventional rice farming in Kaithal, Haryana. Data from 14 fields showed organic farms had slightly lower yields but higher profits due to premium pricing and reduced costs. Organic rice had better amylose content, supporting the claim of improved quality and long-term farmer benefit.

Azam and Banumathi (2015) analyzed demographic factors affecting organic farming adoption in Nalanda, Bihar, using data from 160 farmers. Results showed that education positively influenced adoption, while marital status and joint families showed negative links. Age had a positive association. The study recommended increased awareness and government support for crop disease training.

Hans and Rao (2018) compared state-level and worldwide trends in organic farming in Kerala. It was discovered that Kerala, motivated by sustainable objectives, leads India in organic practices. However, advancement is hampered by low productivity and ignorance. In

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order to increase acceptance and improve India's organic commerce, the report suggests providing institutional and technical support.

Das et al. (2020) assessed organic farming's effects on health, sustainability, and employment. Organic produce enhances consumer health and environmental quality while creating more rural employment. Given India's needs, the study urged the promotion of organic farming for long-term ecological and economic sustainability.

Jaacks et al. (2022) evaluated training's impact on pesticide use. Despite policy support from surveying 894 farmers and 38 pesticide sellers in Andhra Pradesh, many APCNF farmers still used pesticides, and no decline in sales was noted. Concludes that training alone is insufficient—stricter regulations and incentives are required to reduce chemical use.

Thakur et al. (2022) explored the socio-economic challenges of smallholder farmers in India. It was discovered that while organic farming raises living standards, it also faces resource limitations, gender inequity, and land instability. suggests improving market access, training, and regulatory changes to promote equitable agricultural growth and sustainability.

Choudhary (2023) analyzed the productivity, profitability, and health effects of organic versus inorganic farming across four districts. Organic farming had lower yields but higher profits, better soil health, and fewer health risks. Constraints included poor training and marketing. The study recommended integrated organic systems and enhanced extension services.

Gamage et al. (2023) reviewed global literature on organic farming's environmental impact and challenges. It was underlined that while organic practices lower chemical use and increase biodiversity, they are expensive and have insect problems. Vermicomposting, digital tools, and biofertilizers are examples of innovations that have been proposed to increase sustainability and production while maintaining food security.

5. OBJECTIVES OF THE STUDY

The present paper aims to achieve the following objectives:

1. To study the concept and importance of organic farming.
2. To examine government initiatives for the promotion of organic farming in India.
3. To analyse the extent and growth of area under organic agriculture in India.
4. To highlight the major challenges faced by organic farmers in the country.

6. RESEARCH METHODOLOGY

The data used in the study came from a secondary source. Data by district was gathered from APEDA between 2020–2021 and 2024–2025. The following formula was used to calculate the Compound Annual Growth Rate (CAGR):

r = (An/A0) 1/n -1

Where,

An Amount/Value at the end of 'n' years.

A0= Amount/Value in the base year.

r = Rate of growth.

n Period in years.

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7. NEED FOR ORGANIC FARMING

The dynamics of agricultural output have changed significantly over the past few decades. In the past, natural factors like soil fertility, seasonal cycles, and climatic conditions were the key determinants of crop choice; today, market demand is the main driver. More and more farmers are growing crops in response to consumer preferences and market incentives rather than following conventional ecological rhythms. Alongside this shift, consumer attitudes have changed, moving away from focusing on quantity and appearance and toward a greater awareness of ecological sustainability, food safety, and nutrition.

With several advantages beyond the farm to the environment and customers, organic farming has become a viable substitute for conventional agriculture. Although organic farming is underutilised in India due to a lack of market infrastructure and poor awareness, more and more farmers, particularly small and marginal farmers, are beginning to recognise its potential. The following subsections illustrate some of the many benefits of organic farming:

7.1. Premium Pricing and Consumer Health

One of the most notable economic advantages of organic farming is the potential to earn a premium price for produce. On average, organic food commands 20–30% higher market prices than conventionally grown produce due to consumer perception of its health and safety benefits (Willer & Trávníček, 2024). Studies in developed and developing nations have shown that organic produce contains lower pesticide residues, heavy metals, and higher levels of beneficial antioxidants and micronutrients (Średnicka-Tober et al., 2016). A comparative analysis conducted in the United States found that organic produce had nearly 100% more beneficial elements like polyphenols and vitamins and 20% fewer harmful residues, affirming consumer belief in its superior nutritional profile (Barański et al., 2014).

7.2. Low Capital Investment and Reduced Debt Dependency

Organic farming is primarily based on indigenous knowledge systems and locally available resources, such as farmyard manure, green manures, crop leftovers, and compost. As a result, it minimizes the need for costly synthetic fertilizers and pesticides, cutting input prices. This considerably reduces the financial strain on farmers, particularly smallholders, and helps them avoid becoming trapped in a debt cycle, which is frequent under the high-cost conventional farming paradigm. According to research conducted by the Indian Council of Agricultural Research (ICAR, 2023), organic farms have 20-40% cheaper input costs than chemical-intensive farms.

7.3. Soil Health and Environmental Regeneration

As seen by declining organic matter, reduced microbial activity, and nutritional imbalances, chemical-intensive agriculture has caused the health of the soil to gradually deteriorate. However, by employing techniques like crop rotation, intercropping, mulching, and the use of biofertilizers and vermicompost, organic farming promotes soil regeneration. Long-term trials undertaken by FiBL-IFOAM (2024) reveal that organically managed soils have improved structure, water retention, and microbial biodiversity. These approaches also aid with carbon sequestration, promoting climate resilience and lowering greenhouse gas emissions (IFOAM Organics International, 2023).

7.4. Employment Generation and Rural Livelihoods

Due to its relatively high labour requirements, organic farming provides rural employment prospects, particularly in nations like India where there is a glut of underemployed agricultural labourers. Organic farming prioritises diversified crops, manual weeding, and

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post-harvest handling, which generates ongoing and varied employment in contrast to monoculture-based chemical farming. According to a report by the Research Institute of Organic Agriculture (FiBL, 2024), organic farms employ 15–30% more labor per hectare than conventional ones. This labor demand can be effectively harnessed to tackle rural unemployment and enhance women's participation in agriculture.

7.5.Enhanced Productivity Over Time

While initial yields in organic farming may be lower than those in chemical farming, long-term studies indicate that soil fertility improves dramatically over time, eventually leading to equivalent or better yields, notably for pulses, vegetables, and fruits.

According to a meta-analysis by Reganold and Wachter (2016), organic farms outperform conventional farms during stress conditions such as drought due to better soil structure and moisture retention.

7.6.Boost to Eco-Tourism and Sustainable Branding

In addition to preserving ecological balance, organic farming may increase ecotourism, especially in regions with a strong agricultural and cultural heritage. Organic farms have been successfully incorporated into tourism circuits in nations like Thailand and Italy, giving tourists the opportunity to learn about sustainable agricultural methods. In India, states such as Sikkim and Kerala are experimenting with similar models in which organic villages are marketed as eco-friendly attractions, allowing farmers to diversify their income.

7.7.Preservation of Biodiversity and Ecosystem Services

Organic farms promote better biodiversity at all levels, including microbiological, floral, faunal, and genetic. No synthetic pesticides and herbicides protect pollinators, earthworms, beneficial insects, and native plant species. According to an FAO (2023) report, organic farming is critical for preserving ecosystem services such as natural pest control, pollination, and nutrient cycling.

7.8.Side effects of chemical farming

I**. Soil Degradation:** Continuous and long-term use of chemical fertilizers has adversely affected soil health. It not only depletes essential nutrients but also damages the natural structure of the soil. Over time, this reduces soil fertility and disrupts microbial activity, making the land less productive with each passing season.

II. **Decline in Crop Yield:** Although chemical inputs may initially enhance production, their excessive and repetitive use has led to diminishing returns in many areas. The over-dependence on synthetic fertilizers often causes nutrient imbalance in the soil, resulting in a gradual decline in crop productivity over the years.

III. Contamination of Groundwater: When fertilizers and pesticides are used beyond the required levels, they seep into the ground and contaminate underground water resources. In many rural parts of India where people rely on wells and hand pumps for drinking water, the presence of harmful substances like nitrates poses serious health threats.

IV. Health Risks to Farmers and Consumers: The exposure to chemical pesticides during spraying or through food consumption has serious health consequences. Farmers working in the fields without adequate safety gear often suffer from respiratory issues, skin problems, hormonal disruptions, and even cancer in extreme cases. Consumers are also at risk due to pesticide residues in food items.

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V. Pollution of Water Bodies: Excessive chemical use in farming leads to runoff during irrigation and rainfall. These chemicals reach nearby ponds, lakes, and rivers, polluting the water and harming aquatic life. In many places, such pollution leads to algal bloom, which disrupts oxygen levels and kills fish and other water organisms.

VI. Reduction in Biodiversity: Pesticides not only target pests but also harm beneficial insects like honeybees, earthworms, and birds that help in pollination and pest control. This leads to an ecological imbalance and weakens the natural resilience of farming systems, ultimately affecting overall farm biodiversity.

VII. Financial Pressure on Farmers: Chemical-based farming demands frequent and expensive inputs such as fertilizers, pesticides, and hybrid seeds. For small and marginal farmers, these recurring costs become a heavy burden. Many farmers fall into debt, and in unfortunate cases, this has been linked to rising incidents of farmer distress and suicides.

VIII. Pest Resistance and Escalating Input Use: With time, pests develop resistance to commonly used chemicals, making them ineffective. As a result, farmers are forced to use higher doses or shift to more toxic and costly alternatives. This not only increases their input cost but also worsens environmental pollution.

Table 1: State-wise Area under Organic Certification (NPOP) and Compound Annual Growth Rate (CAGR), 2020–21 to 2024–25

(Figures in hectares)

S.NO	State Name	2020-21	2021-22	2022-23	2023-24	2024-25	CAGR
1	Madhya Pradesh	540993.98	618080.48	686208.31	612816.04	670425.55	5.509006
2	Maharashtra	219659.41	224787.36	258638.55	267229.29	526628.63	24.43389
3	Gujarat	72318.02	81,700.72	84,404.36	92,333.51	192940.85	27.80399
4	Rajasthan	177599.56	204871.08	216440.36	215299.44	303761.56	14.35963
5	Odisha	78148.00	72,757.78	77,950.82	77,696.34	93,537.36	4.596418
6	Karnataka	61115.97	58,613.37	44,342.45	30,612.23	32,236.69	-14.7785
7	Uttarakhand	31556.80	31,739.17	32,634.01	51,628.19	56,009.91	15.42317
8	Sikkim	74647.31	75,168.33	75,453.18	75,472.85	75,451.57	0.268272
9	Uttar Pradesh	53194.79	53,700.93	52422.44	52,888.78	51,045.63	-1.02572
10	Jharkhand	0.00	10.40	1,499.76	3,523.82	3,688.26	679.3013
11	Tamil Nadu	14086.32	18,806.88	18,652.5	18,099.17	18,266.32	6.712029
12	Andhra Pradesh	22343.07	26,759.21	26,949.05	25,876.73	29,057.81	6.789858
13	Kerala	25656.60	28,743.47	32,602.71	36,208.78	35,952.26	8.800721
14	Telangana	4723.74	5,295.57	7,288.85	5,399.72	24,391.98	50.74408

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15	Bihar	4.90	24.19	17,594.82	19,086.93	18,737.05	686.3688
16	Jammu & Kashmir	19028.70	18,441.82	25,093.94	24,963.10	24,364.68	6.37459
17	Meghalaya	34816.30	24,160.70	21,652.71	20,111.78	20,100.10	-12.8326
18	Mizoram	40.45	2,846.89	4,796.84	3,230.30	4,000.00	215.3446
19	Chhattisgarh	14744.46	13,722.28	13,258.18	11,289.44	6,303.64	-19.1387
20	Assam	6719.27	10,312.87	15,593.93	15,433.92	11,023.57	13.17488
21	Manipur	4419.25	4,928.25	7,682	7,172.00	8,122.50	16.43547
22	Nagaland	7384.96	7,140.56	7,550.61	3,340.15	3,524.85	-16.8814
23	Goa	9243.79	10,669.75	11,203.22	11,180.12	10,906.30	4.221385
24	Arunachal Pradesh	265.37	3,840.16	3,109	5,841.22	4,357.05	101.296
25	Tripura	203.56	2,343.69	2,490.13	5,884.31	9,411.68	160.7616
26	Himachal Pradesh	9108.87	8,552.73	8,507.25	8,181.83	7,525.24	-4.66246
27	Punjab	879.87	780.41	890.12	1,009.40	3,659.80	42.81036
28	West Bengal	5462.79	5,893.62	7,479.66	7,011.49	6,820.45	5.705998
29	Haryana	3345.85	2,872.74	2,265.54	2,260.07	2,044.92	-11.5816
30	Pondicherry	2.84	2.84	21.17	21.17	18.33	59.38999
31	New Delhi	0.72	0.72	0.72	5.17	9.60	91.08856
Total		14,91,716	16,17,569	17,64,677	17,11,107	22,54,324	10.87472

Source: Information provided by the certification bodies accredited under NPOP on Tracenet

The data presents a clear upward trend in the area under organic certification across India from 2020–21 to 2024–25. The total certified area grew from approximately 14.92 lakh hectares in 2020–21 to over 22.54 lakh hectares in 2024–25, indicating a steady rise in the adoption of organic farming practices. Madhya Pradesh consistently maintained its leadership, with the area increasing from 5.4 lakh hectares to 6.7 lakh hectares. At the same time, Maharashtra more than doubled its certified area in the final year, reaching over 5.26 lakh hectares. Rajasthan followed a stable upward path, rising from 1.77 lakh hectares in 2020–21 to over 3 lakh hectares by 2024–25. Among smaller but progressive states, Uttarakhand and Kerala showed consistent growth, while Sikkim sustained its fully organic status with over 75,000 hectares throughout the Period. Northeastern states such as Tripura and Manipur recorded notable increases, indicating successful regional implementation.

On the other hand, agriculturally significant states like Punjab and Haryana continued to reflect relatively low adoption, although Punjab showed a considerable jump in 2024–25 with more than 3,600 hectares certified. Meanwhile, Chhattisgarh and Karnataka saw a decline in certified areas, suggesting continuity or policy implementation challenges. The highest CAGR was recorded in Jharkhand, whereas the lowest was found in Karnataka, where the area under organic farming has declined over the years. The trend highlights a growing national shift toward organic agriculture, albeit with regional disparities and uneven growth patterns.

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Table 2: State-wise Agricultural Land and Area under Organic Certification (NPOP) in India (2021–22)

(Figures in 000 hectares)

STATES/UTs	Total Agricultural Land	Share of Agri. Land in All India (%)	Area under Organic Certification	Share in Total Organic Area (%)	Organic Area as % of Total Agri. Land
ANDHRA PRADESH	8987	5.00	26.75	1.65	0.297
ARUNACHAL PRADESH	431	0.24	3.84	0.24	0.890
ASSAM	3321	1.84	10.31	0.64	0.310
BIHAR	6542	3.63	0.024	0.002	0.001
CHHATTISGARH	5552	3.08	13.72	0.85	0.247
GOA	141	0.08	10.67	0.66	7.567
GUJARAT	12428	6.9	81.7	5.05	0.657
HARYANA	3847	2.14	2.87	0.18	0.075
HIMACHAL PRADESH	831	0.46	8.55	0.53	1.029
JAMMU & KASHMIR	1075	0.6	18.44	1.14	1.715
JHARKHAND	4324	2.4	0.01	0.0007	0.0002
KARNATAKA	12836	7.13	58.61	3.62	0.457
KERALA	2223	1.23	28.74	1.78	1.293
MADHYA PRADESH	17432	9.68	618.08	38.21	3.546
MAHARASHTRA	20466	11.37	224.79	13.9	1.098
MANIPUR	399	0.22	4.93	0.31	1.235
MEGHALAYA	1015	0.56	24.16	1.49	2.380
MIZORAM	367	0.20	2.85	0.18	0.777
NAGALAND	672	0.37	7.14	0.44	1.062
DELHI	53	0.03	.0007	0	0.001
ODISHA	6782	3.77	72.76	4.5	1.073
Pondicherry	28	0.02	.003	0.0002	0.011
PUNJAB	4225	2.35	.78	0.048	0.018
RAJASTHAN	25463	14.14	204.87	12.67	0.804
SIKKIM	97	0.05	75.17	4.65	77.495
TAMIL NADU	8105	4.5	18.81	1.16	0.232
TELANGANA	6715	3.73	5.3	0.33	0.079
TRIPURA	270	0.15	2.34	0.144	0.867
UTTAR PRADESH	18264	10.15	53.7	3.32	0.294
UTTARAKHAND	1541	0.86	31.74	1.96	2.059
WEST BENGAL	5595	3.12	5.9	0.36	0.105
All India	180027	100	1617.56	100	0.898

Source: Ministry of Agriculture and Farmers Welfare

The table compares the agricultural land and area under organic farming in central Indian states and union territories. Organic cultivation accounts for only around 0.898% of India's 180 million hectares of agricultural land. Madhya Pradesh has the most significant contribution, accounting for 38.21% of India's total organic area, including 3.55% of its agricultural land under organic techniques. Maharashtra, Gujarat, and Rajasthan contribute considerably in area, albeit their organic percentage of total agricultural land is less than

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1.1%. On the other hand, Sikkim stands out, with organic farming covering 77.5% of its agricultural acreage, indicating its complete organic status.

States like Kerala, Uttarakhand, Meghalaya, and Jammu & Kashmir show higher organic coverage relative to their agricultural land, indicating strong regional initiatives. However, large agricultural states such as Uttar Pradesh, Punjab, Bihar, and Haryana have very low organic adoption in absolute and relative terms. This illustrates how chemical-based agriculture continues to rule these areas. The data indicates the need for focused policy assistance, knowledge, and input accessibility in underperforming states, highlighting regional disparities and unrealised potential for organic farming in India.

8. GOVERNMENT INITIATIVES FOR ORGANIC FARMING

1. **Paramparagat Krishi Vikas Yojana (PKVY):** Launched in 2015 as part of the National Mission on Sustainable Agriculture, PKVY promotes organic farming through a cluster-based approach. It emphasizes low-cost organic inputs, certification under PGS-India, and commercialization. The Centre and States share financial support. The scheme encourages residue-free food production and aims to increase profitability for small and marginal farmers while promoting soil health and natural resource use.
2. **Rashtriya Krishi Vikas Yojana (RKVY-RAFTAAR):** Introduced in 2007–08 and revamped in 2017, RKVY aims to support holistic agricultural development through state-led planning. It covers crop development, mechanization, marketing, and organic farming. States enjoy the flexibility to design localized solutions. Key goals include creating pre- and post-harvest infrastructure, promoting agri-entrepreneurship, skill development, and risk mitigation via integrated farming and value-added approaches.
3. **Mission for Integrated Development of Horticulture (MIDH):** MIDH is a centrally sponsored scheme promoting the comprehensive development of the horticulture sector. It supports fruits, vegetables, spices, flowers, and other crops. The mission focuses on aggregating farmers into FPOs, adopting region-specific technologies, and skill-building for rural youth. It seeks to enhance nutrition, income, and post-harvest employment opportunities, including cold chain development.
4. **National Programme for Organic Production (NPOP):** Launched in 2001 by the Ministry of Commerce and Industry, NPOP provides a regulatory framework for organic certification and licensing of certifying agencies. It aligns with international standards to ensure market access and consumer trust. The program promotes sustainable agriculture and enhances the socio-economic status of farmers by improving the credibility and quality of certified organic produce.
5. **National Mission for Sustainable Agriculture (NMSA):** NMSA is part of the National Action Plan on Climate Change and aims to enhance productivity in rainfed areas. It focuses on integrated farming, water-use efficiency, soil health, and resource conservation. It supports organic farming and related interventions through PDMC, SHM, and PKVY programs. It promotes location-specific practices, diversified livelihoods, and climate-resilient agriculture.
6. **Mission Organic Value Chain Development for North Eastern Region (MOVCD-NER):** MOVCD-NER is a Central Sector Scheme targeting organic farming in eight northeastern states. It focuses on building crop-specific organic clusters and complete value chains, including certification, input support, processing, branding, and market linkage. The scheme connects farmers with organic businesses and helps develop

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domestic and export-ready organic markets through FPOs and long-term trading arrangements.

9. CONSTRAINTS OF ORGANIC FARMING

1. Lack of Awareness and Training: A major obstacle in the adoption of organic farming is the inadequate awareness among farmers. Many cultivators, especially in rural areas, are not fully familiar with the concept, methods, or benefits of organic farming. Due to limited training opportunities, they often hesitate to shift from conventional practices.
2. Limited Availability of Organic Inputs: Essential organic inputs such as bio-fertilizers, farmyard compost, and botanical pesticides like neem-based formulations are not easily available in many villages or remote regions. As a result, farmers either continue using chemical inputs or are forced to travel long distances, adding to their costs and inconvenience.
3. High Cost and Complex Process of Certification: Obtaining organic certification is both time-consuming and costly. It involves fulfilling strict guidelines, maintaining records, facing regular inspections, and paying annual renewal charges. For small and marginal farmers, these requirements are difficult to manage, making certification a major constraint.
4. Low Yield During Transition Period: During the initial years of shifting from conventional to organic farming, soil takes time to regain its natural fertility. This often leads to a temporary fall in crop yield. For farmers who depend on their seasonal harvest for livelihood, this reduction in income becomes a serious concern and discourages adoption.
5. Lack of Market Infrastructure and Price Instability: Organized markets for organic produce are limited, and many farmers end up selling their products through local traders or intermediaries without receiving a fair price. The absence of direct marketing channels and proper price realization discourages farmers from continuing organic practices.
6. Storage and Transport Issues: Organic crops are sensitive and need proper storage and careful handling. However, many regions lack adequate post-harvest facilities like cold storage units or hygienic warehouses. The unavailability of efficient transport systems further increases the risk of spoilage and post-harvest losses.
7. Higher Labour Requirements: Organic farming involves more manual tasks such as composting, mulching, and manual weeding. This makes the process labour-intensive. In areas facing labour shortages or high wage costs, it becomes difficult for farmers to sustain operations profitably.
8. Weak Institutional and Government Support: Although several government schemes exist for promoting organic farming, their reach is limited. Many farmers are unaware of such programs or face difficulties in accessing them due to bureaucratic hurdles. Support in terms of extension services, financial aid, and training is still lacking at the ground level.
9. Limited Consumer Awareness and Demand: Even though health consciousness is increasing, a large section of consumers still lacks complete awareness about the nutritional and environmental benefits of organic produce. This limits the market

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demand and prevents farmers from receiving consistent returns, making organic farming financially unviable in many areas.

10.CONCLUSION

The present study aimed to analyse the growth of organic farming in India, the role of government initiatives, and the practical difficulties faced by farmers. While the area under organic certification is gradually expanding—led by states such as Madhya Pradesh, Maharashtra, and Rajasthan—the national share still remains low compared to the total cultivated land. This reflects a growing interest but also highlights the gap in adoption at a broader level. Government schemes like PKVY, NPOP, and MOVCD-NER have certainly played a significant role in creating awareness and offering financial and infrastructural support. However, the actual ground-level implementation is uneven, with several states still lagging behind in both certified area and farmer participation.

Issues such as lack of awareness and training, poor input availability, high certification costs, market linkage problems, post-harvest constraints, and limited consumer demand are the major challenges for organic farmers in India, which need to be addressed through proper coordination of government departments, farmer unions, consumers, and the public at large. Organic farming is not just an agricultural method—it is a pathway to sustainable rural livelihoods, ecological restoration, and safer food systems. With focused efforts and inclusive support, organic farming in India can move from a niche practice to a mainstream agricultural model. To conclude, the organic farmer remains central to achieving sustainable agriculture and long-term development goals.

REFERENCES

1. APEDA. (2024). State-wise cultivated area under organic certification (NPOP): 2021–2025. Agricultural and Processed Food Products Export Development Authority. https://npop.apeda.gov.in
2. Azam, M., & Banumathi, K. (2015). Demographic characteristics and their influence on organic farming adoption: Evidence from Nalanda district, Bihar. International Journal of Applied Research, 1(9), 684–687.
3. Barański, M., Srednicka-Tober, D., Volakakis, N., Seal, C., Sanderson, R., Stewart, G. B., ... & Leifert, C. (2014). Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: A systematic literature review and meta-analyses. British Journal of Nutrition, 112(5), 794–811.
4. Chandrashekar, H. M. (2010). Changing scenario of organic farming in India: An overview. International NGO Journal, 5(1), 34–39.
5. Choudhary, M. (2023). Comparative analysis of organic and inorganic farming in semi-arid eastern plains of Rajasthan. Indian Journal of Agricultural Economics, 78(1), 112–123.
6. Das, S., Ali, A., & Jena, S. (2020). Organic farming in India: Benefits, constraints, and potential. Journal of Pharmacognosy and Phytochemistry, 9(3), 1599–1603.
7. Economic Survey of India. (2023). Chapter 7: Agriculture and Food Management. Ministry of Finance, Government of India. https://www.indiabudget.gov.in/economicsurvey
8. FiBL. (2024). Research Institute of Organic Agriculture Statistics – Organic Farming in India. https://www.fibl.org

ISSN No: 2349-2015
Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

9. Gamage, D. P., Wickramasinghe, U., & Perera, K. (2023). Organic farming and sustainability: Challenges and innovations. Journal of Cleaner Production, 408, 137158. https://doi.org/10.1016/j.jclepro.2023.137158
10. Hans, H. C., & Rao, G. S. (2018). Organic farming: An Indian perspective with special reference to Kerala. International Journal of Agricultural Science and Research, 8(1), 19–28.
11. IFOAM Organics International. (2023). Organic agriculture and climate change. https://www.ifoam.bio
12. Indian Council of Agricultural Research (ICAR). (2023). Organic farming practices and their economic impact on Indian farmers. Indian Council of Agricultural Research.
13. Jaacks, L. M., Ghosh, S., Roy, A., Ramdas, S., & Smith, J. P. (2022). Evaluating government-led training and pesticide use under natural farming in Andhra Pradesh, India. Environmental Research Letters, 17(3), 034017. https://doi.org/10.1088/1748-9326/ac55a6
14. Meena, R. K. (2010). A study on socio-economic features of organic farming in Sri Ganganagar district of Rajasthan. Journal of Agricultural Economics and Development, 2(2), 027–033.
15. Ministry of Agriculture & Farmers Welfare. (2023–2024). Land Use Statistics-at-a-glance & Government Schemes Database. Government of India. https://agricoop.gov.in
16. Narayan, R. (2005). Sustainable agriculture: The Indian context. Journal of Rural Development, 24(2), 151–164. (Inferred)
17. Pandey, R., & Singh, R. (2012). Opportunities and constraints in organic farming: An Indian perspective. Journal of Environmental Research and Development, 6(4), 864–869.
18. Ramesh, P., Singh, M., & Rao, A. S. (2005). Organic farming: Its relevance to the Indian context. Current Science, 88(4), 561–568.
19. Reganold, J. P., & Wachter, J. M. (2016). Organic agriculture in the twenty-first century. Nature Plants, 2(2), 15221. https://doi.org/10.1038/nplants.2015.221
20. Sihi, D., Hooda, I. S., Singh, S., & Verma, K. S. (2012). Organic and conventional rice productivity and quality under Kaithal district conditions. Oryza, 49(3), 239–243.
21. Średnicka-Tober, D., Barański, M., Seal, C., Sanderson, R., Benbrook, C., Steinshamn, H., ... & Leifert, C. (2016). Composition differences between organic and conventional meat: A systematic literature review and meta-analysis. British Journal of Nutrition, 115(6), 994–1011.
22. Thakur, M., Bansal, S., & Pal, S. (2022). Understanding barriers and opportunities for smallholder farmers in India: A socio-economic analysis. Sustainability, 14(6), 3451. https://doi.org/10.3390/su14063451
23. Willer, H., & Trávníček, J. (Eds.). (2024). The world of organic agriculture: Statistics and emerging trends 2024. FiBL & IFOAM – Organics International.