



Plant Archives

Journal homepage: <http://www.plantarchives.org>

DOI Url : <https://doi.org/10.51470/PLANTARCHIVES.2024.v24.no.1.188>

ORGANIC FARMING IN INDIA: CHALLENGES AND POLICY SUPPORT

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(Date of Receiving-23-01-2024; Date of Acceptance-31-03-2024)

ABSTRACT

Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones. The area under organic farming at world level was 29211.2 thousand hectares in 2005 and reached to 72213.3 thousand hectares in 2019. While, its area is increasing fast in Oceania region (49.69% of world area) and Europe (21.87% of world area). In India, the area under organic farming was 2299.2 thousand hectares (1.3% of total agricultural land) in 2019. The CAGR for area under organic farming is 9.77% at world level and India level is found as 26.14% from 2014 - 2019. In India, 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. The top three states - Madhya Pradesh, Rajasthan and Maharashtra - account for about half the area under organic cultivation. There are many challenges, that are faced by organic farming. A cooperative model may be very helpful to overcome the challenges faced by individual farmers in organic farming. In India, government has also made number initiatives to give a boost to organic farming to harness its potential.

Key words : Organic farming, India, Challenge, Policy Support.

Introduction

Organic agriculture, a dynamic and continuously developing farming system based on the science of agro-ecology, is a forerunner of truly sustainable agriculture and offers practical solutions to address major global challenges faced by rich and poor nations both (Yussefi and Willer, 2003). Organic agriculture and equally sustainable systems produce healthy, nutritious food and other natural products for a growing population. They enable farmers to earn a fair living, regenerate and enhance soil fertility and biodiversity, safeguard and replenish scarce water resources, mitigate climate change and help people, who have been negatively impacted on to adapt to it and become more resilient (Singh *et al.*, 2006). By training farmers in low cost agro-ecological farming methods, building on local management skills and resources, we can enable farmers to grow healthy and

nutritious food and combat hunger and reduce poverty in their communities (Sarker and Itohara, 2008).

Material and Methods

In this, a descriptive analysis done based on secondary data collected through various sources. Charts and comparative tabulations are used for easier and simpler understanding and presentation of data. The information about organic agricultural products and their farming practices in India and globally is collected from the published sources. The core sources are FAO stat, FiBL & IFOAM survey reports, APEDA reports etc. The data for status and growth were collected from Reports of Food and Agriculture organization, analysis is based on secondary data and efforts for promotion of organic farming was based on reports/bulletins etc. The different regions of the world as Africa, Americas (South and North America), Asia, Europe and Oceania (include Australia

etc.) and India. The data were collected for period 2004 to 2019 and analysis and inferences were made.

Results and Discussion

Area under organic crops : The area under organic farming is continuously increasing in all regions of the world. From the available data in Table 1, it is clear that area under organic farming at world level was 29211.2 thousand hectares in 2005 and reached to 72213.3 thousand hectares in 2019. In the same period, the area

total agriculture area is presented in Table 2. It shows that at world level, the area under organic farming was 0.5 percent of total agriculture area in 2004 and it increased to 1.5 in 2019. The share of organic farming area to the total agricultural area is highest in Oceania region followed by Europe.

It is found that for India, the area under organic farming was 0.1 percent of total agriculture area in 2005 and it increased to 1.3 in 2019. This is clear that area

Table 1 : Area (thousand hectares) and CAGR (percent) under organic farming under different regions of world and India.

Regions	2004	2005	2010	2014	2015	2016	2017	2018	2019	CAGR from 2014 to 2019
World	21 891.7	29 211.2	35 803.8	45307.1	50967.7	57714.1	69540.8	71116.6	72213.3	9.77%
Africa	624.2	952.9	1 023.6	1263.1	1682.5	1800.6	2031.7	2006.8	2018.5	9.83%
Americas	3 214.4	7 090.4	10 178.5	9897.9	9765	10292.1	11242.5	11545.1	12056.9	4.03%
Asia	211.8	2 837.1	3271.4	4412.7	4483.4	5426.2	6665.4	6980.7	6462.9	7.93%
Europe	5 764.2	6 567.8	9545.1	11208	12198.3	12884.1	13785.4	14654.5	15793.9	7.10%
Oceania	12077	11763	11785.2	18525.4	22838.5	27311.2	35815.7	35929.5	35881.2	14.14%
India		185.9	780	720	1180	1490	1780	1938.2	2299.2	26.14%

Source: FAO. 2021. World Food and Agriculture - Statistical Yearbook 2021. Rome and FiBL survey 2021.

Table 2: Share of area under organic agriculture in total agricultural area (percent).

Regions	2004	2005	2010	2014	2015	2016	2017	2018	2019
World	0.5	0.6	0.7	1	1.1	1.2	1.5	1.5	1.5
Africa	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Americas	0.3	0.6	0.9	0.9	0.9	0.9	1	1	1.1
Asia	0	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4
Europe	1.2	1.4	2	2.4	2.6	2.8	3	3.2	3.4
Oceania	3	2.8	3	4.8	6.3	7.7	9.3	9.7	9.6
India		0.1	0.4	0.4	0.7	0.8	1	1.1	1.3

Source: FAO. 2021. World Food and Agriculture - Statistical Yearbook 2021. Rome and FiBL survey 2021

(thousand hectares) is increased to 2018.5 for Africa, 12056.9 for Americas, 6462.9 for Asia, 15793.9 for Europe, 35881.2 for Oceania (Table 1).

In India, the area for organic farming is reached from 185.9 thousand hectares to 2299.2 thousand hectares. About the distribution of agricultural land area under organic crops is not uniform in the world. It is 49.69% for Oceania, 21.87% for Europe, 16.70% for Americas, 8.95% for Asia and last 2.80% for Africa for total area under organic in world in 2019. Compound annual growth rate in area under organic farming is calculated from 2014-2019. The CAGR for area under organic farming is 9.77% at world level. It is highest for Oceania region (14.14%), followed by Africa (9.83%), Asia (7.93%) then for Europe (7.10%) for period 2014 to 2019. The CAGR for India is very high that is 26.14% in the given period. The share of area under organic farming as percent of

under organic farming is increased absolutely and in percentage term to total agricultural area.

Lead countries in the world in organic farming

: The highest area under organic farming in the world is shown in Table 3. It shows that highest area in world in organic farming is in Australia, followed by Argentina, Spain, USA, India, France, China, Uruguay, Italy and Canada. India is at fifth position in terms of area in the world for organic farming.

Area under organic farming in states of India :

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 percent of the total area

Table 3 : Lead 10 nations in the world for area under organic farming in 2019.

Countries	Area under organic farming in thousand ha. in 2019
Australia	35 687.8
Argentina	3 631.0
Spain	2 354.9
United States of America	2 326.6
India	2 299.2
France	2 241.0
China	2 225.5
Uruguay	2 143.6
Italy	1 993.0
Canada	1 321.1

Source: FAO. 2021. World Food and Agriculture - Statistical Yearbook 2021. Rome and FiBL survey 2021.

under organic cultivation. Sikkim is the only Indian state to have become fully organic so far. A majority of the states have only a small part of their net sown area under organic farming. Even the top three states that account for the largest area under organic cultivation - Madhya Pradesh, Rajasthan and Maharashtra - have only around 4.9, 2.0 and 1.6 percent of their net sown area under organic farming, respectively (Table 4). Few states such as Meghalaya, Mizoram, Uttarakhand, Goa and Sikkim have 10 or more of their net sown area under organic cultivation. Almost all other states have less than 10% area of net sown area under organic cultivation.

Challenges for organic farming in India : While organic farming has many environmental and health benefits, it also faces challenges such as lower yields compared to conventional farming, higher labor costs, and the complexity of managing pests and diseases without synthetic chemicals. Critics also point to the higher prices of organic products and question whether organic farming can sufficiently feed the growing global population. The important challenges for organic farming in India as given below.

- Shortage of Awareness about benefits
- Lack of awareness about organic cultivation practices
- Challenges for sale of organic produce: Inability to obtain a premium price for the produce, at least during the nascent stages, leads to a setback.
- Lack of cost effective and easily available organic manures and other inputs.
- Among these challenges, lack of training, lack of capital and lack of organic inputs are important

(Sarker, 2007).

Despite these challenges, the demand for organic products continues to grow as consumers become more concerned about health, environmental sustainability, and animal welfare. Organic farming remains a vital part of the solution to these global concerns, offering a more sustainable and ethical alternative to conventional agricultural practices.

Policy support for spread of organic farming in India : Low organic farming coverage prevails in several states, despite at least 20 of them having a policy or a scheme with regard to organic farming. States like Sikkim, Andhra Pradesh, Himachal Pradesh, Kerala, Uttarakhand, Mizoram, Nagaland and Arunachal Pradesh have expressed their desire to become fully organic or natural-farming states. To promote the organic farming in India, Government has taken number of Initiatives to Promote Organic Farming and important among them are given below.

- **Mission Organic Value Chain Development for North East Region (MOVCD) :** This scheme was launched by the Ministry of Agriculture and Farmers Welfare in 2015 for implementation of organic value chain in North Eastern States as Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. It aims to develop certified organic production in a value chain mode to link growers with consumers and to support the development of the entire value chain.
- **Paramparagat Krishi Vikas Yojana (PKVY) :** Paramparagat Krishi Vikas Yojana, launched in 2015 and is an elaborated component of Soil Health Management of major project National Mission of Sustainable Agriculture. In this scheme, Organic farming is promoted through adoption of organic villages by cluster approach and Participatory Guarantee System certification.
- **Food Safety and Standards Authority of India (FSSAI) :** It is for regulating organic food in the domestic market and imports. Thus, it assists in promotion of organic products.
- **Participatory Guarantee System :** PGS is a process of certifying organic products, that ensures that production is done as per standards. PGS Green is given to chemical free produce under transition to 'organic' which takes 3 years. It is mainly for domestic purpose.
- **National Program for Organic Production (NPOP) :** It grants organic farming certification

Table 4 : States/UTs with highest absolute area and highest percent area under organic farming in India in 2019.

State with higher area under organic farming of net sown area of that state/UTs			States/UTs with highest percentage of area under organic farming of total net sown area in 2019		
States/UTs	Ranking of Organic area in thousand ha	Organic area in percent	States/UTs	Organic area in thousand ha	Ranking of Organic area in percent for state/UTs
Madhya Pradesh	756	4.9	Sikkim	155	100
Rajasthan	350	2	Andaman and Nicobar	9	60
Maharashtra	284	1.6	Dadar and Nagar Haveli	10	53
Sikkim	155	100	Delhi	10	45.5
Andhra Pradesh	144	2.3	Daman and Diu	1	32
Uttarakhand	128	18.2	Meghalaya	56	19.5
Odisha	118	2.6	Uttarakhand	128	18.2
Karnataka	111	1.1	Goa	23	18.1
Gujrat	103	1	Mizoram	14	10
Uttar Pradesh	79	0.5	Arunachal Pradesh	22	9.8
Chhattisgarh	71	1.5	Puducherry	1	8
Meghalaya	56	19.5	Nagaland	23	6
Kerala	54	2.7	Manipur	19	5
Assam	43	1.5	Madhya Pradesh	756	4.9
Jharkhand	31	2.2	Jammu and Kashmir	26	3.4
Tamil Nadu	30	0.6	Tripura	9	3.4
Telangana	28	0.6	Himachal Pradesh	18	3.3
Jammu and Kashmir	26	3.4	Kerala	54	2.7
Goa	23	18.1	Odisha	118	2.6
Nagaland	23	6	Andhra Pradesh	144	2.3
Arunachal Pradesh	22	9.8	Jharkhand	31	2.2
Manipur	19	5	Rajasthan	350	2
Himachal Pradesh	18	3.3	Maharashtra	284	1.6
Punjab	17	0.4	Chhattisgarh	71	1.5
Mizoram	14	10	Assam	43	1.5
Bihar	12	0.2	Karnataka	111	1.1
Delhi	10	45.5	Gujrat	103	1
Dadar and Nagar Haveli	10	53	Tamil Nadu	30	0.6
Andaman and Nicobar	9	60	Telangana	28	0.6
West Bengal	9	0.2	Uttar Pradesh	79	0.5
Tripura	9	3.4	Punjab	17	0.4

Table 4 continued...

Table 4 continued...

Haryana	7	0.2	Bihar	12	0.2
Lakshadweep	3		West Bengal	9	0.2
Chandigarh	3		Haryana	7	0.2
Daman and Diu	1	32	Lakshadweep	3	
Puducherry	1	8	Chandigarh	3	
Total (India)	2777		Total (India)	2777	

(Source: Ministry of Agriculture and Farmers welfare, GoI), Khurana, A. and Kumar V. Down to Earth. Sept 2020.

through a process of third party certification for export purposes.

- **Soil Health Card Scheme** : Soil Health Card Scheme has led to a decline of 8-10% in the use of chemical fertilizers and also raised productivity by 5-6%.
- **Agri-export Policy 2018** : Focus on clusters and Marketing and promotion of “Produce of India” have positively impacted the organic farming in India
- **One District - One Product** : The programme aims to encourage more visibility and sale of indigenous and specialized products/crafts of Uttar Pradesh, generating employment at the district level. The presence of aggregators is imperative to bring about economies of scale for the small and marginal farmers.
- **PM Formalization of Micro Food Processing Enterprises (PM FME)** : The Ministry of Food Processing Industries (MoFPI) launched the PM FME scheme as a part of ‘Atmanirbhar Bharat Abhiyan’. It aims to bring in new technology, apart from affordable credit to help small entrepreneurs penetrate new markets.
- **Zero Budget Natural Farming** : Zero budget natural farming is a method of chemical-free agriculture drawing from traditional Indian practices. Other than this, there are regular capacity building programme from ICAR, State Agriculture Universities, Krishi Vigyan Kendras and Agriculture departments for trainers, farmers and other stakeholders.

Summary and Conclusion

It is seen that organic farming is growing both at internationally and at national level (Heena *et al.*, 2021). However, there are many challenges. The efforts are made world over to address these challenges. A cooperative like model can be very helpful to overcome the challenge for individual farmers in achieving this. This

will enable this sector to meet the necessary requirements of producing and marketing organic foods, both the domestic and export markets; and can secure an extra premium for the poor farmers of nation (Sarker and Itohara, 2008). Government of India has initiated number of policy measures for promotion of organic farming and promote and harness the potential of organic farming. Hence with greater awareness and capacity building of the producers in compliance with international standards, Indian organic farmers will soon be reinforcing their rightful place in global agri trade.

References

- Heena, Malik D.P. and Tanwar N. (2021). Growth in Area Coverage and Production under Organic Farming in India. *Economic Affairs*, **66(05)**, 611-617.
- Khurana, A. and Kumar V. (2020). On a tardy trail: State of organic farming in India. Down to Earth. Sept 2020.
- Sarker, M.A. and Itohara Y. (2008). Organic farming and poverty elimination: a suggested model for Bangladesh. *J. Org. Syst.*, **3(1)**, 68-79.
- Sarker, M.A. (2007). Practice of organic farming technologies by the Bangladeshi farmers: Evidence from farm operations in Tangail district. An unpublished *Masters Thesis*, submitted to the Department of Bio-resources science, the Graduate School of Agriculture, Yamaguchi University, Japan in July, 2007.
- Singh, J., Singh G.P. and Rajkishor (2006). Present status and Economics of organic farming in the district of Udham Singh Nagar in Uttaranchal. *Agric. Eco. Res. Rev.*, **19**, 135-144.
- Statistical year Book (2021). FAO.
- The Agricultural & Processed Food Products Export Development Authority (APEDA) reports 2021-22.
- Willer, H., Trávníček J., Meier C. and Schlatter B. (2021). The world of organic agriculture statistics and emerging trends 2021. *FIBL & IFOAM–Organics International*.
- Yussefi, M. and Willer H. (2003). *The World of Organic Agriculture Statistics of 2003 and Future Prospects*. Available at: www.ifoam.org accessed on April 10, 2003.