Production and Export of Organic Products: Opportunities and Challenges

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Abstract: *Organic farming is one of the most important and celebrated systems of agriculture from the point of view of agricultural sustainability. It combines modern scientific techniques of cultivation with tradition to benefit the environment and ecosystem in general and promote a good quality of life for all in particular. It has a concealed production and trade opportunities for both developing and developed countries. The production and market for organic products have been growing continuously for the past two decades. Organic products are often traded with a price premium in domestic as well as international markets. However, the production and marketing possibilities are underutilized all over the world, especially in developing countries. The organic farming movement in India is showing modest growth both in terms of production and marketing. There exists an unexplored market potential for organic products both domestically and internationally.*

Key Words: *Organic Farming, Export, Opportunities, Challenges.*

1. Introduction

Indian agriculture system essentially flourished on the so-called 'organic farming' since time immemorial. The entire industry of agriculture was practiced using organic techniques where almost all of the inputs were obtained from plant and animal products. However, the ever-increasing population along with several natural calamities led to severe food scarcity in the country, especially after independence. India is compelled to import huge amounts of food grains from the rest of the world especially from the USA to feed the people. To address this critical issue, and to ensure food security, the Government of India introduced the New Agriculture Strategy, later termed as Green Revolution during the 1960s. The new agriculture

strategy was fully based on a high yielding variety of seeds, chemical fertilizers and pesticides and so on; as a result of the adaptation of the new system, productivity increased manifold times. But the negative externality associated with this system of farming like degradation of soil, health and environmental issues necessitated to devise an alternative technique of farming. Organic Farming is suggested as an alternative to conventional farming since its principles and philosophy are entirely different and since it has an edge over conventional farming on various grounds. The very definition of organic farming is therefore nature-centric and human-centric.

1.1. Objectives: "Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on the ecological process, biodiversity and cycles adapted to local conditions rather than the use of inputs with adverse effects. Organic farming combines tradition, innovation and science to benefit the shared environment and promote fair relationship and a good quality of life for all involved" (IFOAM, 2020). Organic Farming is therefore based on some internationally accepted principles: principle of health, principle of ecology, principle of fairness and principles of care (IFOAM). In this context, this paper attempts to examine (i) the present status of organic farming, (ii) its opportunities and prospects in both production and export, and (iii) challenges faced by the stakeholders of organic farming in India.

1.2. Review of Literature: Amit Khurana and Vineet Kumar (2020) analyzed the state of organic and natural farming, its challenges and possibilities. Karunakaran N and Babu. C (2019) examined the organic farming practices in Kerala and its current status and future prospects. Karunakaran N and Sadiq MS (2019) studied the socio-economic aspect of organic farming practices for improving farmer's income in some locations of Kerala. Karunakaran N and Silna Thomas (2017) also studied the marketing of organic commodities. Ummyiah, H. M (2017) and Willer, et. al. (2020) evaluated the export of organic products.

2. Materials and Methods

A systematic search was conducted to understand and analyze the present status of organic farming, its opportunities and prospects in both production and export, and also challenges faced by them in India. Many important reports and articles were used for reference.

Table 1: Organic Agriculture, Key Indicators and Top Countries

Indicator	World	Top Countries
Countries with organic activities	2019:187 Countries	
Organic Agricultural land	2019:72.3 million hectares (1999: 11 million hectares)	Australia (35.7 million hectares) Argentina (3.7 million hectares) Spain (2.4 million hectares)
Organic share of total agricultural land	2019: 1.5 %	Liechtenstein (41.0 %) Austria (26.1 %) Sao Tome and Principe (24.9 %)
Wild collection and further non-agricultural areas	2019: 35.1 million hectares (1999: 4.1 million hectares)	Finland (4.6 million hectares) Zambia (3.2 million hectares) Namibia (2.6 million hectares)
Producers	2019: 3.1 million producers (1999: 200'000 producers)	India (1'366'226) Uganda (210'353) Ethiopia (203'602)
Organic market	2019: 106.4 billion euros (2000: 15.1 billion euros)	US (44.7 billion euros) Germany (12.0 billion euros) France (11.3 billion euros)
Per capita consumption	2019: 14.0 euros	Denmark (344 euros) Switzerland (338 euros) Luxembourg (265 euros)
Number of countries with organic regulations	2019: 108 countries	
Number of affiliates of IFOAM – Organics International	2020: 719 affiliates	Germany: 79 affiliates India: 52 affiliates USA: 48 affiliates Italy: 46 affiliates

Source: Annual Report (IFOAM-2020)

3. Results, Analysis and Discussion

3.1. Global Status of Organic Agriculture: Organic food and farming have continued to grow across the world. Since 1985, the total area of farmland under organic production has been increased steadily over the last three decades (Willer and Lernoud, 2020). In 2019, there was a total of 72.3 million hectares of organically managed land, including in conversion areas, recorded globally. Australia has the largest organic lands with an area of 35.7 million hectares followed by Argentina (3.7 million hectares). The regions with the largest organic agricultural land areas are Oceania (35.9 million hectares, which is half of the world's organic agricultural land) and Europe (16.5 million hectares). Latin America has 8.3 million hectares followed

by Asia (5.9 million hectares); North America (3.6 million hectares) and Africa (2 million hectares) (table 1).

3.2. Global Market for Organic Products: Organic food was first introduced on a large scale in the early 1990s; it took over 18 years for global organic product sales to reach 50 billion US dollars. Ten years later (2018), it crossed the 100 billion US dollar mark. International sales of organic food and drinks reached 112 billion US dollars in 2019, with expansion of 55 percent since 2013. North America and Europe generate most sales (90 percent).

3.3. Present Status of Organic Agriculture in India: In March 2021 total area under Organic Certification Process (registered under National Programme for Organic Production) is 5782276.07 hectare; including 4100980.46 hectare cultivable area and 1681295.61 hectare for wild harvest collection. Among the states, Madhya Pradesh has covered largest area under organic certification followed by Rajasthan, Maharashtra, Chhattisgarh, Uttar Pradesh and Himachal Pradesh. India occupies fifth position with a total organic agriculture area of 2.3 million hectares. In terms of the number of organic producers, the country stands first with a total of 1366226 followed by Uganda (210353), and Ethiopia (203602) (table 2).

Table 2: Organic Farming in India

Total Area covered under organic Farming (2020)	2.3 million hectare
The organic share of total agricultural land	1.3 Percent
Total number of organic Producers (2020)	13,66266
Production of organic certified products (2019-20)	2.75 MT
Export earnings from organic products (2020-21)	7078 Crore
Major export destinations	USA, European Union, Canada, Switzerland, Australia, Japan, Israel, UAE, New Zealand, and Vietnam
Major States under organic farming (Coverage of certified organic land area)	Madhya Pradesh, Rajasthan, Maharashtra, Gujarat, Karnataka, Odisha, Sikkim and Uttar Pradesh.
Major products under organic farming	Oil seeds, sugar cane, cereals and millets, cotton, pulses, aromatic and medicinal plants, tea, coffee, fruits, spices, dry fruits, vegetables, and processed foods.

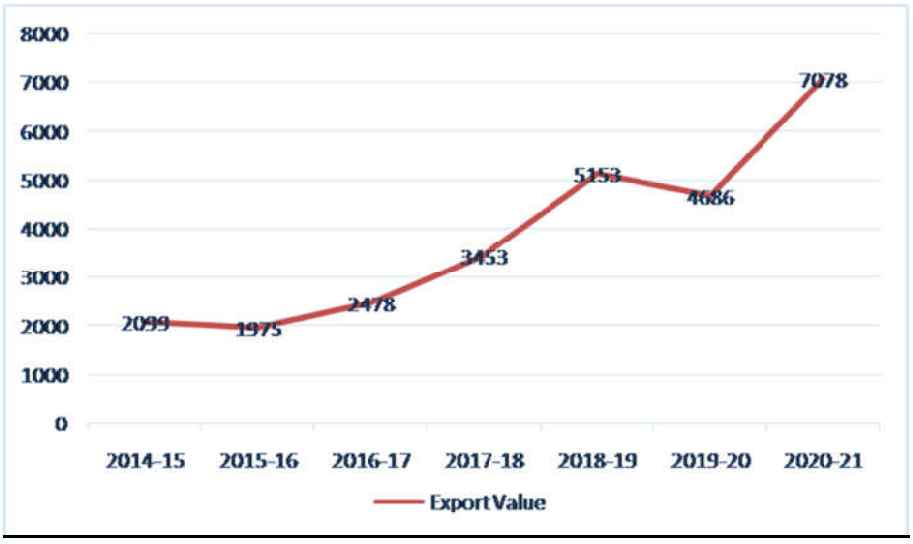
3.4. Domestic Market for Organic Products: In the last few years, contribution to the growth in the Indian organic foods landscape has included various national level schemes to encourage organic farming, initiating new exports from the remote North East region, and improved market linkages of producer clusters with agribusiness, phytochemical, organized retail and e-commerce firms. Table 3 presents the domestic consumption of major two category of organic products in India during the last five years.

Table 3: Organic Products Consumption in India (USD million)

Category	2015	2016	2017	2018	2019	2020*
Health and welness products	10678	12279	14200	15526	16848	18158
Organic packaged food and beverages	38.6	46.3	54.6	61.6	69.0	77.0

*Estimates for 2020; Source: Global Organic Trade

Figure 1: Export of Organic Agricultural Products in the Last Seven Years



Source: *APEDA*

3.5. Trend, Composition and Direction of Organic Products Export: Export of organic products is continuously increasing both in terms of quantity and value. During the year 2014-15, India could export 285663 MT organic products worth of Rs 2099 crores. The country's exports of organic food products rose by 51 percent year-on-year in 2020-21 (figure 1). The total volume of export during 2020-21 was 888179.68 MT. The organic food export realization was around Rs 7078.49 crores. During the last seven years, the export earnings has increased more than 3 times (table 4).

Table 4: Export Data of Organic Agricultural Products (2014-15 to 2020-21)

Year	Quantity of Export (MT)	Export Value In crores	Export Value in Million USD
2014-15	285663	2099	327
2015-16	263687	1975	298
2016-17	309767	2478	370
2017-18	458339	3453	515
2018-19	614087	5153	757
2019-20	638,998	4686	989
2020-21	888,179	7078	1040

Source: APEDA

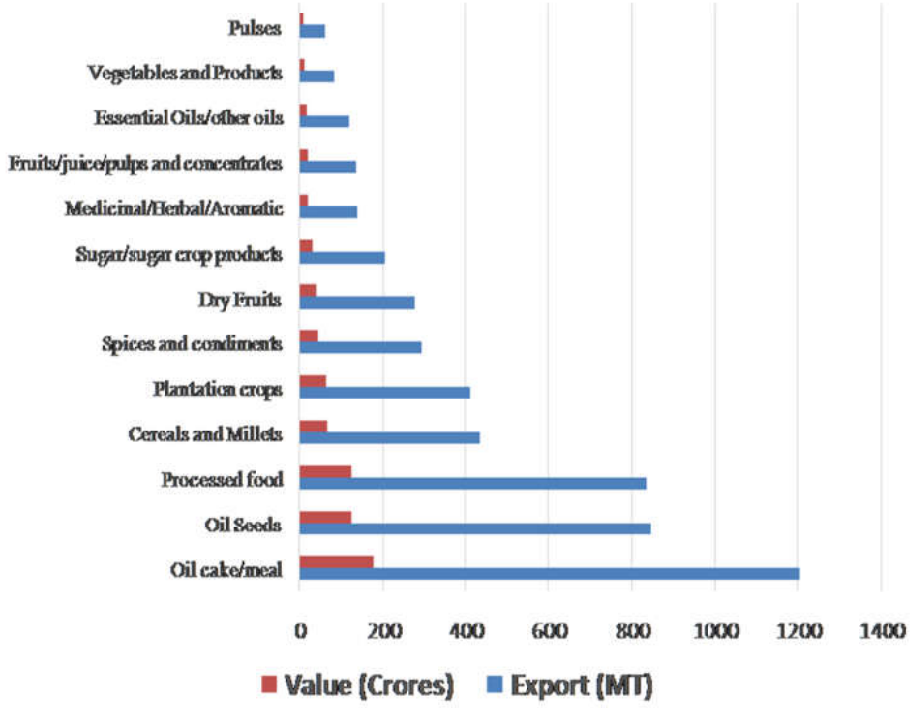
During 2018-19, India exported producing 614087 MT of certified organic products which include oilcake/meal, oilseeds, processed food, cereals and millets, sugar cane, pulses, fruits, spices, vegetables, dry fruits, tea, and coffee. Moreover, India produced organic cotton fiber (figure 2). In terms of export value realization Processed Foods including soya meal (39 percent) lead among the products followed by Oilseeds (16 percent), Cereals and millets (8 percent), Plantation crop products such as Tea and Coffee (8 percent), Spices and condiments (5.6 percent), Medicinal plants (5 percent), Dry fruits (3 percent), and Sugar (3 percent) (table 5).

Table 5: Category Wise Export of Organic Products in 2018-19

Sl. No	Category	Item/ Commodity (MT)	Qty Exported (MT)	Value of exports INR crores	Percent in Quantity Terms
1	Oil cake/meal	273786	1203	177	23
2	Oil Seeds	170745	845	124	16
3	Processed food	2430	835	123	16
4	Cereals and Millets	67847	432	64	8
5	Plantation crops	8969	409	60	8
6	Spices and condiments	6784	294	43	6
7	Dry Fruits	3805	275	40	5
8	Sugar/sugar crop products	41126	203	30	4
9	Medicinal/Herbal/Aromatic	2759	138	20	3
10	Fruits/juice/pulps and concentrates	12196	133	20	3
11	Essential Oils/other oils	5619	116	17	3
12	Vegetables and Products	2251	82	12	2
13	Pulses	5158	59	9	2
14	Flowers	551	37	5	1
15	Fodder crops	1570	9	1	0
16	Tuber crops	205	4	1	0
17	Seeds	24	2	0	0
18	Ornamental Plants/products	7	1	0	0
19	Others	8255	76	11	1
	Total	**614087**	**5153**	**757**	**100**

Source: APEDA

Figure 2: Commodity Wise Export Major Organic Products 2018-19



Source: *APEDA*

India's organic products have been exported to 58 countries including USA, European Union, Canada, Switzerland, Korea Republic, Israel, Vietnam, and Australia. USA, EU and Canada are the most important destination of organic products export. Country wise export of organic products (top 15 countries) during 2018-19 is presented in table 6.

Table 6: Country Wise Export of Organic Products (Top 15 Countries) during 2018-19

Sl. No	Country Name	Exported Qty (MT)	Total Value in INR (In Crores)	Total Value (USD)	Total Value (Million USD)
1	USA	334113	2922	429705431	430
2	European Union	155255	1517	223117746	223
3	Canada	101934	467	68602269	69
4	Switzerland	6199	67	9888236	10
5	Australia	2131	51	7468131	7
6	Japan	751	16	2397739	2
7	New Zealand	1978	14	2125926	2
8	Israel	3070	13	1865451	2
9	Vietnam	3186	11	1679401	2
10	Lebanon	681	11	1633756	2
11	UAE	492	11	1551083	2
12	Korean Republic	1110	11	1546113	2
13	China	685	7	997397	1
14	Sri Lanka	225	5	731531	1
15	Turkey	355	4	625094	1

Source: The Agricultural and Processed Food Products Export Development Authority (*APEDA*)

3.6. Opportunities and Challenges: India has one of the highest arable land areas in the world. The net sown area is 140.1 million hectares. Agriculture, along with its allied sectors such as livestock, forestry and fisheries, is still the largest source of livelihood. Food security depends upon personal relationships of integrity and trust among farmers, farm workers, suppliers, consumers and others up and down the agricultural supply chain and integrity and trust have been fundamental to organic agriculture's success (Ummyiah, H. M., 2017). The important opportunities of organic agriculture include:

- Bestowed with a growing middle class with higher disposable incomes, rapid urbanization, elevated concerns for the safety and quality of food, preference for embracing wholesome or naturalistic lifestyles are all factors leading to the ever-increasing domestic demand for organic products especially the food consumption.
- India's organic food sector is expected to grow at a compound annual growth rate (CAGR) of 10 percent in the MY 2016-2021 period from US $386.32 million in 2015 and reach US $10.75 billion mark by 2025 (USDA, 2020).
- The area under rainfed agriculture is accountable for almost 40 percent of the food production in India. The rainfed area is using comparatively fewer chemical fertilizers and pesticides and can be easily converted to the system of organic farming. Moreover, the tribal, Northeast and hilly regions of India where traditional farming on eco-friendly lines is more or less practiced could also be considered for organic farming system.
- Total Area covered under organic Farming (2020) is 2.3 million hectares which accounts only 1.3 percent of total agricultural land. Production of organic certified products (2019-20) is 2.75 MT and the export earnings from organic products (2020-21) is 7078 crores. Even though the share of organic farming in terms of arable land, number of farmers, and the export contribution is relatively less, a significant increasing trend in all these vital variables is visible during the last 2 decades.
- Due to the presence of various agro-climatic conditions along with rich and varied inherited tradition of organic/natural farming, India has lot of potential to produce all varieties of organic products at lower costs.The organic farmers of India can there by successfully tap the ever increasing domestic as well as international market for their products.

The important challenges faced by organic agriculture include:

- Poor infrastructural facilities and lack of proper supply chains networks.
- Lack of awareness among farmers about (i) the process of organic farming certification, (ii) the existing opportunities both in domestic and international markets, and (iii) the government initiatives and financial assistance with respect to the production and export of organic products.

- Consistent maintenance of quality and professionalism is inevitable for the success of organic farming which is also a big obstacle in front of Indian farmers.
- Lack of awareness along with non-availability of quality inputs are another challenge for those who are willing to adapt organic farming system.

4. Suggestions

- Necessary steps may be taken for increasing awareness among exporters about the financial assistance being provided by APEDA for creating capital assets and other necessary infrastructure.
- To meet and explore the increased export demand especially for processed food
- In order to increase export competitiveness of organic products, special incentives to the organic exporters may be provided and the existing Merchandise Exports from India Scheme (MEIS) may be modified accordingly.
- The number of certification agencies in India is too inadequate compared with the volume of production and export of organic products. To be a successful player in the global market and ensure international standard and quality, number of certification bodies should be increased.
- Around 85 percent of Indian farmers are holding a farm area of less than 2 hectares. They find difficulty in accessing available marketing channels. To address this issue organic cluster farming system should be encouraged.
- The present-day third-party certification process is highly complex and expensive in nature. The entire process of certification should be simplified and the expenses related with it should be reasonable.
- Since organic farming practices are demanding specific skills and expertise, proper capacity building and training programmes should be implemented.
- Necessary infrastructural facilities should be created especially with respect to the storage and export of products

5. Conclusion

Agriculture and allied sectors provide employment to 54.6 percent of the total workforce in India. About 70 percent of rural households still depend primarily on agriculture for their livelihood. In this context, any positive change in the agriculture sector will certainly improve the livelihood of masses of families. Organic farming provides enough opportunities for the farmers in this respect. With proper coordination, planning and implementation of the programmes and projects both at the central and state level, aimed at the promotion of organic farming and by providing farm-level support, the production and marketing of organic products can be increased. This will ensure higher income and more prosperous living for the farmers on the one hand and sustainability of the agriculture system to a larger extent.

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