

Organic Farming in India: Status, Constraints and Challenges

¹SRUTHY K. S., ²VIBINI K.R.

^{1,2}Research Scholar, Research and PG Department of Economics, P. M. Govt. College, Potta-680722, Thrissur, Kerala, India

Abstract: Organic farming in India is attaining popularity day by day. India is endowed with various types of naturally available organic form of nutrients in different parts of the country and it will help for organic cultivation of crops substantially. The rising population of India has started creating demographic pressure on agriculture sector to maintain food security. For producing better crop yield, chemical fertilizers and pesticides were used and this creates more health hazards. To generate good health and environment, a need arise a shift to organic agriculture. India is home to 30 per cent of the total organic producers in the world, but accounts for just 2.59 per cent (1.5 million hectares) of the total organic cultivation area of 57.8 million hectares (World of Organic Agriculture Report, 2018). Organic farming is beneficial for natural resources and the environment. The study mainly focused on the Present status of the organic farming in India and given the main challenges and constraints of organic farming.

Keywords: Organic farming, Food security, Green revolution and Agriculture.

1. INTRODUCTION

Ever increasing population has necessary to increase the agricultural production and stabilize it in a viable and feasible manner. Organic agriculture is an effective strategy to promote sustainable agriculture in India and it can be contribute to a broader development of agricultural productivity, food security, generation of rural employment and poverty reduction while promoting the conservation of the natural resource base. In philosophical terms "organic farming means farming in spirits of organic relationship". In this system everything is connected with everything else. Organic agriculture has demonstrated its ability not only to produce safer commodities for consumers but also to produce bio-diversity at all levels. Organic Farming generally implies to modes of agricultural production which avoids the use of synthetic fertilizers, pesticides and herbicides and it helps in the improvement of crop quality and reduces environmental pollution.

Brief History of Organic Farming:

The beginnings of the organic movement can be traced back to the beginning of the 1800s. The term "organic farming" was coined by Lord Northbourne in his book "Look to the Land" in 1940. From his conception of "the farm as organism," he described a holistic, ecologically balanced approach to farming. The principal methods of organic farming include crop rotation, green manures and compost, biological pest control, and mechanical cultivation. Since the 1970s, when it became apparent that intensive farming was leading to soil degradation and water pollution, consumers and governments have become increasingly interested in organic farming. Organic farming has been practiced in India for thousands of years. In traditional India, the entire industry of agriculture was practiced using organic techniques, where the fertilizers and pesticides were obtained from plant and animal products. The Green Revolution (under the leadership of M. S. Swami Nathan) became the government's most important program in the 1960s. Several hectares of land were brought under cultivation. Hybrid seeds were introduced. Natural and organic Fertilizers were replaced by chemical fertilizers and locally made pesticides were replaced by chemical pesticides. In 1990s, India had surplus food grains and once again became and exporter of food grains. The extensive dependence on chemical farming has shown its many defects. The land is losing its fertility and is demanding larger quantities of fertilizers to be used. Pests are becoming immune requiring the farmers to use stronger and pesticides. Both consumer and farmers are now gradually shifting back to organic farming in India because of organic farming is healthier.

2. REVIEW OF LITERATURE

Sharma and Saghvi (2017) examined the organic agriculture in India and the constraints faced by farmers in practicing organic agriculture in India and found that high input cost, lack of inadequate infrastructure, shortage of manure, lack of awareness among consumers, farmers and policy makers are the main constraints in organic agriculture and the authors suggests that government should provide subsidies and facility to avail easy credit with low interest rate to the farmers and also organize workshops, seminars and conferences regarding organic farming.

Prakash (2003) analyzed the unsuitability of the cost and return accounting methods adopted to find out the economies of the organic farming. An economic evaluation of the bad effects of in organic agriculture and their internalization through environmental taxes is proposed for a market based approach to promote organic farming in India.

Rajib Roychowdhary et.al (2013) indicated that India produces large variety of food crops like cereals, pulses and oilseeds. For the increased productivity and more use of chemical fertilizers will cause health factor at bay. So, a good method of farming is urgent need which satisfies the needs of increased food production. In India, agriculture is highly influenced by the vagaries of various biotic and a biotic factors and organic farming is provide economic security to the mediocre farmers as well. They explained the Indian government provides many policies to encourage organic farming for marketing of organic food products and increased the demand of these type of organic food in domestic as well as international market. They conclude that perceptions of organic farming are quite divergent and organic farming is labour intensive.

Rahudkar and Phate (1992) found out that the experiences of organic farming in Maharashtra. They explained that after using vermi-compost, soil fertility is increased, irrigation decreased by 45 per cent and sugarcane quality improve. So, the individual farmers growing sugarcane and grapes. They pointed that net profits from both sugarcane and grape crops are high in organic farmer.

Balasubramanian (1994) explained that the agricultural practices followed in organic farming are governed by the principles of ecology. It is not an alternative system of farming but part of the philosophy of life to know the true spirit and form of nature. Biologically active soil is the foundation of organic farming. Healthy plants grown in healthy soil are naturally more resistant to pests and diseases.

Objectives:

1. To find out the Status of organic farming in India.
2. To examine the major constraints and challenges of organic farming in India.

3. METHODOLOGY

The study is based on secondary data. It was collected from Research Institute of Organic Agriculture (FiBL), Agricultural and processed food products export development authority (APEDA), National Centre for organic agriculture annual report of various years, National Programme for Organic Production (NPOP) various reports, Department of Agriculture, Govt. of India, Annual Report 2016-17. The tabulated data was analyzed with the help of Percentages and Simple Annual growth rate.

Status of Organic Farming in India:

India is endowed with various types of naturally available organic form of nutrients in different parts of the country and it will help for organic cultivation of crops substantially. India's rank in terms of World's Organic Agricultural land was 9th and in terms of total number of producers was in first position (FIBL & IFOAM Year Book 2018). India's total area under organic certification is 3.56 million hectare in 2017-18 and this includes 1.78 million ha (50%) cultivable area and another 1.78 million Hectare (50%) for wild harvest collection. During 2016, Sikkim has achieved a remarkable distinction of converting its entire cultivable land (more than 76000 ha) under organic certification (National Programme for Organic Production, NPOP).

Only 30% of India's total cultivable area is covered with fertilizers where irrigation facilities are available and in the remaining 70% of arable land, which is mainly rain-fed, negligible amount of fertilizers is being used. The northeastern region of India provides consider-able opportunity for organic farming due to least utilization of chemical inputs. It is estimated that 18 million hectare of such land is available in the NE, which can be exploited for organic production

(Ramesh et al. 2005). The national program for organic production (NPOP) was implemented by agricultural and processed food products export development authority (APEDA) in 2001. Organic food market in India is highly unorganized and fragmented, which offers immense growth opportunities for domestic as well as international players.

As per the latest available cross-country statistics, in the year 2015, India ranked first in terms of the number of organic producers among over 170 countries and ninth in terms of the area under organic agriculture. India has potential for export of organic products and was ranked 11th in organic product exports in 2015. India has tremendous potential, largely untapped; for a major breakthrough in organic agriculture. India's organic area in 2005 was 0.186 million hectares and wild collection area was 2.386 million hectares that has increased to 0.51 million hectares and 5.18 million hectares respectively in 2013. Total area of both organic & wild collection in India has increased from 2.57 million hectares in 2005 to 5.69 million hectares in 2013 [NPOFA, Report, 2012-13].

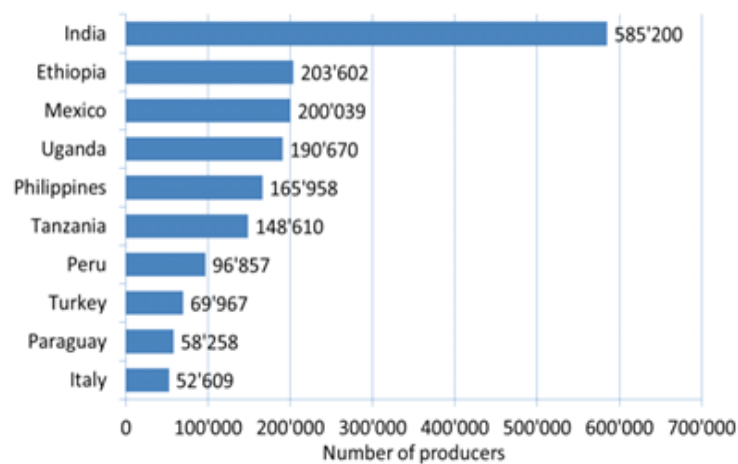


Fig 1: The Ten Countries with the largest numbers of organic producers 2015

Source: FiBL Survey 2017

Figure 1 clearly specified that India ranked 1st position in the largest number of organic producers. Ethiopia and Mexico are the second and third position. There are 43.1 million hectares of land devoted to organic agriculture across the world. America ranked 1st position in the largest market of organic food products (FiBL Report ,2016). This can be clearly depicted below:

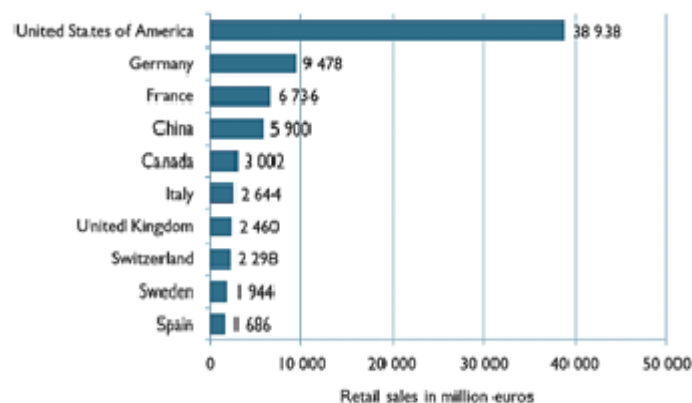


Fig 2: The Ten Countries with the largest markets for organic food 2016

Source: FiBL, AMI Survey 2018

India has brought out so many changes in the organic farming field. Germany and France are two countries that leading to the second and third position of organic food market in 2016. Here, clearly given below the development of organic farming in India:

Table I: Development of Organic Farming in India (2002-2007/08)

Year	Land Area (in hectares)	Growth rate	No. of Organic Producers	Growth rate
2002-03	37050	-	39814	-
2003-04	73500	98.38	44265	11.18
2004-05	114037	55.15	45814	3.49
2005-06	185937	63.05	49637	8.34
2006-07	432259	132.47	146327	194.79
2007-08	1030311	138.35	198634	35.75

Source: SOEL, FIBL (2002-04) and APEDA(2004-05,2007-08)

Table I indicates that increasing trend in case of organic farming land area. At the same time number of organic producers shows a fluctuating trend. During the year 2006-07 shows highest growth rate and after that it shows a drastic decline.

Table II: Export of Organic Products from India: (Export volume in metric tons Export value in Rs. Crores)

Year	Export volume	Growth Rate	Export value	Growth rate
2007-08	37533	371.94	498	-61.14
2008-09	44476	18.50	537	7.83
2009-10	58408	31.32	526	-2.05
2010-11	69837	19.57	699	32.89
2011-12	147800	111.64	1866.33	167.00
2012-13	165262.06	11.81	2106.81	12.89
2013-14	194088	17.44	2563.08	21.66

Source: National centre for organic agriculture annual report 2002-03 TO 2012-13

Table II reveals that an export of organic products from India in 2002-03 was 416 that went up to 194088 MT in 2013-14. Similarly the export value of organic products was Rs.619.6 Crores in 2002-03 which has increased to Rs. 2566 Crores in 2013-14.

Table III: Major State Players (2016-17)

Rank	State	Cultivated Area lakh ha	Production in lakh MT*
1	Madhya Pradesh	7.84	3.91
2	Maharashtra	2.80	2.55
3	Rajasthan	2.29	0.64
4	Odisha	0.98	0.30
5	Karnataka	0.90	1.64
6	Sikkim	0.76	0.20
7	Uttar Pradesh	0.96	0.88
8	Gujarat	0.76	0.41
9	Uttarakhand	0.53	0.28
10	Kerala	0.26	0.10

Source: Annual Report 2016-17, Department of Agriculture, Govt. of India.

Every state from India promote more organic agricultural activities, it creates more production and healthy food. Among all the states in India, Madhya Pradesh has covered largest area under organic certification followed by Maharashtra, Rajasthan, and Uttar Pradesh. As per Agricultural and Processed Food Products Export Development Authority (APEDA), the total organic produce stood at 11.801 lakh tonnes in 2016-17.

4. MAJOR CONSTRAINTS AND CHALLENGES OF ORGANIC FARMING IN INDIA

Lack of awareness and understanding:

There is a lack of awareness and understanding among policy makers, agriculturists, producers and consumers on the concept, principles and practices of organic farming. Many of them have only vague ideas about organic farming and its advantages as against the conventional farming methods. Unless such a clear and unambiguous direction is available in terms of both financial and technical supports, from the Centre to the Panchayat levels, mere regulation making will amount to nothing.

Inadequacy of farm labour:

Organic farming is labour intensive by adopting organic principles and practices undoubtedly requires additional labour inputs, especially in managing soil fertility and pests than conventional farming, though scarcity of farm labour is an important issue.

Risk of Yield Loss:

When a farmer converts his/her land from conventional chemical-based farming to organic farming; there is a risk of loss in yield due to the withdrawal of chemical inputs and high-yielding varieties of seeds. In the case of organic, the cost of laboratory testing and third-party certification is high. Organic farmers cannot find consumers who are willing to pay premium price. They are forced to sell as chemical using farmers. So there is no incentive to go for organic farming.

Lack of policy:

The biggest challenge faced by organic farmers is the lack of an organic policy for the domestic market. In the absence of regulation on labeling standard for organic production, it is not possible to distinguish an organic product from a conventional product. This has led to fraud practices and genuine players are not getting the premium, which the consumers of organic products are willing to pay.

Shortage of quality organic inputs:

There is a serious shortage of good quality organic inputs, which increases the risk to loss the yield. The available organic fertilizers are much below the required quantity, and there are a number of spurious players in the market too. Similarly, there is a shortage of good quality organic seeds. There is a lack of marketing and distribution network for them because the retailers are not interested to deal in these products, as the demand is low. Higher margins of profit for chemical fertilizers and pesticides for retailing, heavy advertisement campaigns by the manufacturers and dealers are other major problems affecting the markets for organic inputs in India (Manisha Gaur, 2016). However, there is need for a policy on input standardization, crop-specific and region-specific research and development on organic inputs.

Industrial scale farming is difficult:

Many organic crops are grown in mono-cultures, like conventional crops, but use organically registered pesticides and fertilizers. It is common for organic growers to spray pesticides even more frequently than their conventional counterparts to keep up with insect and disease pressure. Organic methods are much more effective on a small scale than on the industrial level.

Organic certification:

Many small farmers don't justify the expense for organic certification. Some use methods that are very well suited for their production and environment, but still don't qualify for the organic label. Access to certification, cost involved therein and a time lag of three years (conversion stage) often constrain farmers especially small land holders in India from adopting organic farming (Jitendra Pandey and Ashima Singh, 2012).

Underdeveloped Supply chain:

The supply chain is underdeveloped and small, farmers located in hilly regions and tribal belts find it extremely difficult to access the market. There is a shortage of warehouses and refrigerated vehicles, which leads to spoilage of products. Organic products have to be stored separately from conventional products to avoid cross-contamination and the existing supply chain does not often provide that facility. The government supports organic product marketing through fairs and exhibitions but it does not give farmers a steady market. Direct linkages to processors and retailers will help farmers to get a better price, but farmers lack the right linkages and hence have to depend on middlemen.

Mainstream consumers Quality standards:

Organic growers have higher rates of unmarketable blemished product because the consumers already have a mind set to buy good-looking vegetables and fruits based on their colour, shape, size, etc. Although nutrition and flavor quality might be excellent, consumers not ready to buy organic products that will reduce the farmer's sales revenue.

5. CONCLUSION

The increasing awareness about the safety and quality of foods, long term sustainability of the present farming system persuades sustainable agriculture practices. The organic farming has emerged as an alternative system of farming which not only address the quality and sustainability concerns, but also ensure profitable livelihood option for rural community in India. As an initial step to promote Sustainable Farming, the Governmental inventiveness to assist the unorganized frames through various means are essential to overcome the present problems faced by Organic farmers and enable them to achieve social and economic development thorough successful sustainable agricultural practices. The Government should provide subsidies to the farmers and provide facilities to avail easy credit with low interest rate, higher prices should be determined by the government for organic produce than the conventional produce, the government should also want to organize workshops, seminars and conferences by the subject experts for farmers.

REFERENCES

- [1] Prakash, T. N., "A Theoretical Framework To Promote Organic Produce Marketing in India", Indian Journal of Agriculture Marketing, Conference Number Special pp. 1-16, 2003.
- [2] Rahudkar, W.B. and Phate, "Organic Farming: Experiences of Farmers in Maharashtra", Proceedings of National Seminar on Natural Farming, Rajasthan College of Agriculture, Udaipur, 1992.
- [3] Balasubramanian A., (1994), "National Training on Organic Farming prospect and problems in Organic Farming-an overview", seminar proceedings of Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India.
- [4] Rajib Roychowdhary et.al., "Organic Farming For Crop Improvement And Sustainable Agriculture In The Era Of Climate Change" OnLine Journal of Biological Sciences 13 (2): 55-70, 2013.
- [5] Nayana Sharma and Dr. Ritu Singhvi "Organic Agriculture in India: A Summary", International Journal of Agriculture Innovations and Research Volume 5, Issue 6, 2017.
- [6] Annual Report of Department of Agriculture, Government of India 2016-17.
- [7] Agricultural and Processed Food Products Export Development Authority (APEDA), various reports.
- [8] FIBL & I FOAM Year Book 2018.
- [9] United States Department of Agriculture, Retrived on 2016 April 28.
- [10] Gaur Manisha, "Organic farming in India:Status,Issues and Prospects", SOPAAN-II,Vol.1,Issue 1, Jan-June 2016.
- [11] P. Ramesh, Mohan Singh and A. Subba Rao (2005) "Organic Farming: Its Relevance to the Indian Context" Current Science, Vol. 88, NO. 4, 25 February 2005.
- [12] <http://www.yourarticlelibrary.com/essay/major-problems-and-constraints-for-organic-farming-in-india/25013> accessed on 28/12/2018.
- [13] Jitendra Pandey and Ashima Singh, "Opportunities And Constraints In Organic Farming: An Indian Perspective", Journal of Scientific Research, Vol. 56, 47-72, 2012.