
QUALITY ORIENTED AGRICULTURE THROUGH ORGANIC FARMING IN INDIA**SWETAL RANA, RAHUL PIPPAL, PAYAL RANA**

Abstract: This paper focuses on the present status and prospects 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 total area under organic certification is 4.72 million hectare in 2013-14 and its global rank is 10th. The CGR of cultivation of organic area of India is 11.52% of which wild collection is 12.57% and remaining area is 7.45% during 2005-2013. The coefficient of variation is approx 0.5% during same period. Compound growth rate of export quantity of organic products of India is 51.50% and export value is 11.75% during 2002-03 to 2013-14. Among all the states in India, Uttar Pradesh has highest area under organic farming followed by Himachal Pradesh, Madhya Pradesh and Maharashtra in 2011-12. The prices of organic products are higher than the non-organic products in domestic markets. India exports around 135 organic products of which the share of oil crops in total organic export quantity was (26.74%) followed by cotton (24.48%) basmati rice (11.81%) in 2013-14. India is exporting organic products to all the continents of the world of which the largest share goes to EU (44.12%), followed by USA (19.2%). An attempt is made to analyze the importance of organic farming, principle of organic farming, Marketing and export of organically produced products in India.

Keywords: Exports, Marketing, Organic Farming, Production.

I. Introduction: Indian economy is one of the fastest growing economies among the developing countries in the world. Agriculture is the major source of livelihoods, particularly in the rural areas, where 55% of people have been living. Agriculture still contributes significantly to export earnings and is an important source of raw materials as well as demand for many industries. The agriculture sector in India has made enormous stride in the past 50 years. The Green Revolution has been the cornerstone of India's agricultural achievement, transforming country from the stage of food deficiency to self-sufficiency by use of high yielding varieties and higher level of inputs of fertilizers and pesticides. During the post Green Revolution period, the production of food grains has increased four-folds, from 50.82 million tons in 1950-51 to 265.57 million tons on 2013-14. But indiscriminate and excessive use of chemicals during this period has put forth a question mark on sustainability of agriculture in the long run calling attention for sustainable agricultural production. To fulfill & address social, ecological and economical issues together organic farming plays a vital role.

Organic agriculture in India has its roots in traditional agricultural practices that evolved in countless villages and farming communities over the millennium. Organic agricultural is a holistic production and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted system. 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 national program for organic production (NPOP) was implemented by agricultural and processed food products export development authority (APEDA) in 2001. The standards made by NPOP have been developed under guidelines of international organic production standards such as CODEX and International Federation of Organic Agricultural Movements (IFOAM). The NPOP standards for production and accreditation system have been recognized by European commission and Switzerland as equivalent to their country standards. Similarly, USDA has recognized NPOP conformity assessment procedures of accreditation equivalent to that of US. With these recognizes, Indian organic products duly certified by the accredited certification bodies of Indian are accepted by the importing countries. Europe and North America are the major global markets for organic food products. The demand for organic food products is growing in these regions due to high purchasing power and huge presence of health conscious consumers. The organic food consumption in India is very low as compared to western markets. Organic food market in India is highly unorganized and fragmented, which offers immense growth opportunities for domestic as well as international players. India mainly exports organic processed food products, organic rice, beverages and other cereals and millets to US, Canada, Europe, and South East Asian countries. India is 10th leading country in the world in terms of organic certification. There are 6.5 lakh producers and 362 exporters who are associated with organic production and exports in India.

The organizational structures supporting smallholder organic agriculture in India fall into four forms: (1) farmers organized by a company, (2) farmers operating under NGO initiatives, (3) farmers organized or facilitated by government, and (4) farmers forming their own organizations (cooperatives, associations, self-help groups, etc). However, in many instances, these basic organizational forms coexist with one another, giving rise to more complex structures.

Organic Farming Way of Sustainability: Organic farming was practiced in India since thousands of years. The great Indian civilization thrived on organic farming and was one of the most prosperous countries in the world. In traditional India, the entire agriculture was practiced using organic techniques, where the fertilizers, pesticides, etc., were obtained from plant and animal products. Organic agriculture in India was initiated in 1900 by Albert Howard, a British agronomist in North India. The traditional farming system was characterized mainly by small and marginal farmers producing food and basic animal products for their families and local village communities. After this qualification was drastically changed during the green revolution period but organic farming is seen today as the best option to attain sustainability in the crop production. Therefore organic farming appears to be one of the options for sustainability.

Principles of Organic Farming: Organic agriculture is a unique production management system which largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, food additives etc.) & to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection. However, organic is not only about replacing inputs, which is the starting point of the process rather it is based on the four principles of organic farming as advocated by International Federation of Agriculture Movement (IFOAM).

1. It should be based on living ecological system and cycles, work with them, emulate them and help sustain them.
2. It should build on relationships that ensure fairness with regard to the common environment and life opportunities.
3. It should be managed in a precautionary and responsible manner to protect the health and well being of current and future generations and environment.
4. Organic agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.

Growth of Organic Area in India: 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. The compound growth rate of India's organic area and wild collection area was 7.45% and 12.87 % respectively during 2005 to 2013. The compound growth rate of India's total organic area including wild collection was 11.52% and coefficient of variation was 0.53% during the same period. It is clear that the growth rate of wild collection area has increased more than the actual organic area in India.

State wise area production and productivity of organic products and its ranking in India in 2011-12. Uttar Pradesh has highest certified area under organic cultivation i.e. 2.59 million hectares followed by Himachal Pradesh 0.93 million hectares, Madhya Pradesh 0.43 million hectares and Maharashtra 0.25 million hectares in 2011-12. In terms of organic production, Orissa rank first 29016450 MT, followed by Maharashtra 211740.8MT, Rajasthan (7.6%) and Rajasthan 138635.8 MT. However in terms of yield Orissa rank first followed by Meghalaya Maharashtra etc. Among all the states, Orissa has highest production and yield of organic crops followed by Maharashtra in India during 2011-12. The certified organic product includes all varieties of food products namely Sugarcane, Cotton, Oil Seeds, Basmati rice, Pulses, Spices, Tea, Fruits, Dry fruits, Vegetables, Coffee and their value added products. The production is not limited to the edible sector but also produces organic cotton fiber, functional food products etc. Among all the states, Madhya Pradesh has covered largest area under organic certification followed by Himachal Pradesh and Rajasthan respectively.

Importance of Organic Agriculture in India: Organic farming is gaining gradual momentum across the world. Growing awareness of health and environmental issues in agriculture has demanded production of organic food which is emerging as an attractive source of rural income generation. Organic agriculture has made a credible performance during the past ten years. Both, the 11th plan document on organic sector and the report of the National Commission on farmers have recommended it as a tool for second green revolution in the country in particular for agro-eco zones comprising rain fed areas, hilly areas and areas experiencing ecological backlash of green revolution. Organic agriculture can become low cost, sustainable option of farming in the country, particularly by the small farmers in rain fed areas and helps to improve their food and income security. It helps to produce and supply adequate safe

and nutritious food to the producers and consumers of the nation. Environmental benefits, health aspects and farmers empowerment are other important factors influencing farmers to shift to organic agriculture. Some of the important benefits of organic farming are Organic fertilizers are completely safe and does not produces harmful chemical compounds.

Domestic Market: Basically organic farming in India is export intensive hence very less products are circulated in the domestic market. The conventional products are available relatively at a cheaper rate than the organic products so domestic market becomes unstable. Indian consumers are divided into three major classes depending upon their interest in the organic product 1st upper class consumer 2nd upper- middle class and 3rd lower -middle class. In urban centers, diverse range of consumers is now showing more interest in reconnecting with the sources of their food. This phenomenon finds its expression in the increasing popularity of farmers markets and organic bazaars, community- supported agriculture schemes, consumer cooperatives and terrace gardening groups etc.

Organic Food Export from India: The increasing demand for organic produce has created new export opportunities and many developing countries have started to tap lucrative export markets for organic

produce. Indian organic farming industry is almost entirely export oriented, running as contract farming under financial agreement with contracting firms. Moreover majority of farmers in India are opting this practice motivated by attractive markets and price margins (Sharma, 2001). The increasing demand for organic food products in the developed countries and the extensive support by the Indian government coupled with its focus on agri-exports are the drivers for the Indian organic food industry. Organic food exports from India are increasing with more farmers shifting to organic farming. With the domestic consumption being low, the prime market for Indian organic food industry lies in the US and Europe. India has now become a leading supplier of organic herbs, organic spices, organic basmati rice, etc. Table- 1 reveals that an export of organic products from India in 2002-03 was 4161MT 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. The compound growth rate of India's organic products volume and value of export was 51% and 11% respectively during 2002-03 to 2013-14. India exported 135 products last year (2013-14) with the total volume of 194088 MT including 16322 MT organic textiles.

Table: 1 Export of Organic Products from India:
(Export volume in metric tons Export value in Rs. Crores)

Year	Export volume	Percent Change	Export value	Percent Change
2002-03	4161	.....	619.6	.....
2003-04	6288	51.12	726.6	17.25
2004-05	8344	32.70	953.3	31.22
2005-06	7953	-4.69	1281.6	34.44
2006-07	NA	.....	NA	.....
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
CGR	51.50	.....	11.75	.....
CV	0.85	.....	.66	.....

Source : *Lok Sabha Unstarred Question No. 5368, dated on 06.09.2011 & Lok Sabha Unstarred Question No. 6140, dated on 14.05.2012.** National centre for organic agriculture annual report 2002-03-2012-13

Table 2: Continent- wise Export of Organic Product during the period 2010-2011:
(Export volume in metric tons Export value in Rs. Lakh)

Continent	Export volume	Percent Change	Export value	Percent Change
Africa	184.64	0.26	86.85	0.12
Asia	8867.16	12.70	10766.33	15.41
Australia	910.06	1.30	827.44	1.18

Canada	15060.84	21.57	10023.13	14.35
EU	30814.03	44.12	36452.21	52.18
New Zealand	608.55	0.87	192.91	0.28
USA	13391.58	19.18	11512.44	16.48
Total	69836.86	100.00	69861.31	100.00

Source: Lok Sabha Unstarred question No.5368 Dated on 08.09.2011; www.indiastat.com

Table-2 indicates the continent wise export of organic products from India. The proportion of export of organic product in terms of volume to European Union (44.12%) was highest followed by Canada (21.57%), USA (19.18) & Asian country (12.70). Moreover in terms of value of export European Union (52.18%) rank was first followed by Asia (15.41%), USA (16.48%) during the same period.

Table- 3 reveals the country wise export of organic products from India in 2013-14. The share of export of organic products in terms of volume to USA (42.16%) was highest followed by European Union (32.3%), Canada (21.68%). The share of import of organic products by these three nations was around 96%. The total volume of export of organic products from India was 177765.26 metric tons and export value was Rs. 1328.6 crores during the period of 2013-14.

Table: 3 Selected Country wise Export of Organic Food Products from India in 2013-14:
Export volume in metric tons Export value (Rs. in crore)

S.No	Country name	Export volume	Percent change	Export value	Percent Change	FOB (Rs/MT)
1	Australia	749.95	0.42	14.58	1.10	0.02
2	Canada	38545.57	21.68	182.41	13.73	0.00
3	China	76.35	0.04	1.57	0.12	0.02
4	European Union	56946.72	32.03	553.85	41.69	0.01
5	Iran	38	0.02	1.21	0.09	0.03
6	Israel	312.93	0.18	3.72	0.28	0.01
7	Japan	309.07	0.17	16.12	1.21	0.05
8	Korea Republic	143.48	0.08	2.33	0.18	0.02
9	Malaysia	43.44	0.02	0.91	0.07	0.02
10	New Zealand	599.79	0.34	4.23	0.32	0.01
11	Philippines	110.11	0.06	1.88	0.14	0.02
12	Singapore	73.02	0.04	0.97	0.07	0.01
13	Sri Lanka	78.51	0.04	2.45	0.18	0.03
14	Switzerland	4306.56	2.45	33.89	2.55	0.01
15	USA	74942.72	42.16	498.83	37.55	0.01
16	Others	489.04	0.28	9.65	0.73	0.02
17	Total	177765.26	100.00	1328.6	100.00	0.01

Source: Lok Sabha Unstarred Question No 2393 Dated on 25/07/2014.; www.indiastat.com

Table- 4 shows the top ten countries share of organic food market in 2013. The share of organic food was

highest in USA (36.9%), followed by Germany (11.76%), France (6.65%), and china (3.69%) during 2013. Moreover India's contribution was 0.2% in total global sales of organic food in 2013.

Table: 4 Leading Countries Share of Organic Food Market in 2013:

S.No	Country name	Export volume	Percent change
1	United states of America	24347	36.95
2	Germany	7750	11.76
3	France	4380	6.65
4	China	2430	3.69
5	Canada	2375	3.60
6	United kingdom	2065	3.13
7	Italy	2020	3.07

8	Switzerland	1668	2.53
9	Austria (2011)	1065	1.62
10	Sweden	1018	1.54
11	India	130	0.20
12	Total	65897.84	100.00

Constraints of Organic Farming: The most important constraint felt in the progress of organic farming is the inability of the government policy making level to take a firm decision to promote organic agriculture. It is quite natural that a change in the system of agriculture in a country of more than a billion people should be a well thought out process, which requires utmost care and caution. Farmers' apprehension lies in non-availability of sufficient amount of organic supplements, bio-fertilizers and local market for organic produce. Additionally, lack of access to guidelines, lack of market information and vocational training, risk of low yield, certification and input cost coupled with capital-driven regulation by contracting firms strongly discourage small farm holders who constitute over 80% of farming community in India.

IV. Conclusion & Policy Recommendations: Agriculture is the base of economic policies and is the ultimate driver of national economic growth and poverty alleviation in many developing countries including India. It has vast opportunity for rural employment and livelihood security. Organic agriculture is gaining momentum as an alternative method to the modern system. Many countries have been able to convert significant per cent of their cultivated areas into organic farming. Indian

agriculture evolved principally as an ecologically sustainable approach using natural inputs for enhancing crop yield. The demand for organic products is growing fast in countries like USA & Germany. It was clear that area, production and yield of organic produce in India is very low and it varies very widely among different states in India. India has the potential to become a major organic producing country given the international demand for our farm products, different agro-climatic regions for the cultivation of a number of crops, the size of the domestic market and above all the long tradition of environment friendly farming and living. However, at the same time increasing health consciousness and increasing disposable income among Indians is ceaselessly increasing the demand for organic food. Therefore strong national organic policy is main need of the current position which will give an important place to organic farming addressing the current issues and obstacles. Government needs to do a meticulous and in-depth evaluation of the general picture of the organic sector policies, programme and plans to understand how they affect the current organic sector. An action plan for the organic sector should be developed based on the analysis of the state of the sector, participatory consultations, a need evaluation and proper sequencing of the actions.

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