



# Recent Trends in Organic Farming in India: A Study

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**Abstract:** Organic farming system in India is not new and is being followed from ancient time. Organic farming is defined as cultivation without the application of chemical fertilizers and synthetic pesticides or genetically modified organisms, growth hormones, and antibiotics. Agricultural development policy for developing countries needs to focus on increasing the productivity of the land under cultivation, with lower costs, higher efficiency of products with little or no damage to both humans and the environment. The scientists have realized that the 'Green Revolution' with high input use has reached a plateau and is now sustained with diminishing return of falling dividends. Thus, a natural balance needs to be maintained at all cost for existence of life and property. Organic farming promotes food security, especially for the small farmers operating in traditional or low-input systems through improvements in yields and incomes, enhancement of food availability through diversification and mixed farming as well as lower chances of crop failure in case of extreme climate events. Revival of traditional varieties and reintroduction of traditional foods into diets of farming communities through organic agriculture also promotes food cultures. In this paper an attempt is made to examine the trends and area and production of organic farming in India.

**Keywords:** Organic, Farming, Area, Production, Health, Ecology

## Introduction

Organic farming system in India is not new and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (bio-fertilizers) to release nutrients to crops for increased sustainable production in an eco-friendly pollution free environment.

Organic farming systems have attracted increasing attention over the last one decade because they are perceived to offer some solutions to the problems currently besetting the agricultural sector. Organic farming has the potential to provide benefits in terms of environmental protection, conservation of non-renewable resources and improved food quality (Charyulu et. all, 2017).

The Government of India has implemented a number of programs and schemes for boosting organic farming in the country. Among these the most important include (1) The Paramparagat Krishi Vikas Yojana, (2) Organic Value Chain Development in North Eastern Region Scheme, (3) Rashtriya Krishi Vikas Yojana, (4) The mission for Integrated Development of Horticulture (a. National Horticulture Mission, b. Horticulture Mission for North East and Himalayan states, c. National Bamboo Mission, d. National Horticulture Board, e. Coconut Development Board, d. Central Institute for Horticulture, Nagaland), (5) National Programme for Organic Production, (6) National Project on Organic Farming, and (7) National Mission for Sustainable Agriculture (Yadav, M., 2017).

## Concept of Organic Farming

As per the definition of the United States Department of Agriculture (USDA) study team on organic farming “organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc.) and 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 (OFPA, 2010).

“Organic agriculture is a holistic production management system which promotes 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 systems. This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed of using synthetic materials, to fulfil any specific function within the system (FAO/WHO Codex Alimentarius Commission, 1999).

Organic farming has a long way of life and a tradition in our Indian farming system over centuries, it's not a new concept. Organic farming has its own system in controlling pest and diseases in raising the crop and livestock, by avoiding the use of different synthetic chemicals or gene manipulation. There are different types of organic farming are followed in a diverse climate of the country, like forest produce by default fall under this category. Organic farming among all different kind of farming system is gaining more attention

due to the positive effect on the ecosystem. Also, organic farming is labour intensive, this increases rural employment and long-term improvement in the quality of the resources.

### **Need of organic farming**

Food quality and safety are two vital factors that have attained constant attention in common people. Growing environmental awareness and several food hazards (e.g. dioxins, bovine spongiform encephalopathy, and bacterial contamination) have substantially decreased the consumer's trust towards food quality in the last decades. Intensive conventional farming can add contamination to the food chain. For these reasons, consumers are requested for safer and better foods that are produced through more ecologically and authentically by local systems. Organically grown food and food products are believed to meet these demands (Rembalkowska, 2007).

With the increase in population our compulsion would be not only to stabilize agricultural production but to increase it further in sustainable manner. The scientists have realized that the 'Green Revolution' with high input use has reached a plateau and is now sustained with diminishing return of falling dividends. Thus, a natural balance needs to be maintained at all cost for existence of life and property. The obvious choice for that would be more relevant in the present era, when these agrochemicals which are produced from fossil fuel and are not renewable and are diminishing in availability. It may also cost heavily on our foreign exchange in future.

### **Principles of organic farming**

The four principles of organic farming are as follows:

1. **Principle of health:** Health is the wholeness and integrity of living systems i.e. maintenance of physical, mental, social and ecological well-being. Organic Farming should sustain and improve the quality of the health of soils, plants, animals and humans. This principle points out that, healthy soil produces healthy crops that nurture the health of animals and people. In particular, organic farming is required to produce high quality, nutritious food that enhances health and well-being. To achieve this, organic farming should avoid the use of fertilizers, pesticides, animal drugs and food additives that may have adverse health effects.
2. **Principle of ecology:** Organic farming should be based on the ecological system and cycles, working with them in a sustained manner, i.e. organic farming should root up with ecological systems within a specific production environment. For example, crops with living soil; animals in its farm ecosystem; fish and marine organisms with the aquatic environment, etc. Organic farming has to attain ecological balance through a well-designed farming system, by the establishment of habitats and maintenance of genetic and agricultural diversity. Those who produce, process, trade, or consume organic products should protect and benefit the environment including landscapes, climate, habitats, biodiversity, air and water.

3. **Principle of fairness:** Fairness is nothing but equity, respect, justice and supervising of the common world, both among people and their relationship with other living beings. Similarly, organic farming should ensure fairness with the environment, life and all level of practices. It should also contribute food sovereignty, reduce poverty and also reduce social cost.

4. **Principle of care:** Organic farming should be done in a responsible manner and with precautionary care to protect the health and well-being of present, future generation and the environment. Organic farming should be able to prevent significant risks by adopting appropriate technologies and rejecting unpredictable ones, such as genetic engineering. Decisions taken should reflect the values and needs of all who might be affected, through transparent and participatory processes.

### Review of Literature

Nadia El-Hage Scialabba and Maria Müller-Lindenlauf in their article discussed the mitigation and adaptation potential of organic agricultural systems along three main features: farming system design, cropland management and grassland and livestock management. The authors opine that in developing countries, organic agricultural systems achieve equal or even higher yields, as compared to the current conventional practices, which translate into a potentially important option for food security and sustainable livelihoods for the rural poor in times of climate change. Certified organic products cater for higher income options for farmers and, therefore, can serve as promoters for climate-friendly farming practices worldwide.

Jayasree Das and Deepro Bhattacharyya (2018) in their study explored the challenges faced by organic farming in Sikkim and to cite causes and remedies of such challenges. The author concludes that organic farming is the only viable alternative that has presented itself. In this context, the story of Sikkim takes the spotlight since it has shown the courage to be the only state in the country to produce crops in a completely organic manner.

Smita Bhutani, Simrit Kahlon and Monika (2018) in their study made an attempt to examine organic farming as an alternative agricultural system in the country. The cause of organic farming has been taken by a number of NGOs in different states and many state governments have drafted policies for promoting it. The bane of the system is low productivity, which fails to cater to the rising needs of increasing population. High levels of production, however, have recently been achieved in some areas in the country.

Krishnaprabu S., (2019) in his study considers that there is scanty information on organic technology for all crops. Systematic research on development of suitable varieties/hybrids, plant nutrition and IPM techniques may lead to the increasing demand of organic produce both in retail marketing and export. The authors conclude that the farmers need to be organized in a group/ association for crop cultivation such as, Organic Farming Association of India, Institute of Natural Organic Agriculture.

## Present status of organic farming

Presently, India ranks 9th in terms of the world's organic agricultural land and 1st in terms of the total number of producers (IFOAM, 2019). India is the home for 30 percent of the total organic producers in the world, accounting 2.59 percent i.e. 1.5 million hectares of the total (57.8 million hectares) organic cultivation area (World of Organic Agriculture 2018 report). But also, most of our organic farmers are struggling due to poor policy measure, inadequate knowledge, increasing input cost and lack of market knowledge (ASSOCHAM report, 2018).

## Area under Organic farming

The total area under organic farming in India is presented in table 1. It is evident from table 1, the total area under organic agriculture in India in 2020-21 is 43, 39, and 184.93 hectares. Among them 61.25 per cent of land is under organic agriculture in conversion. The area under wild harvest collection is 38.75 per cent.

**Table 1: Area under Organic Agriculture in 2020-21.**

Cultivated Area (Organic + In-conversion)	2657889.33 ha
Wild Harvest Collection Area	1681295.61 ha
Total Area (Cultivated + Wild Harvest)	4339184.93 ha

**Source:** Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, Government of India.

## State Wise Area under Organic farming

The state wise total area under organic farming in India is presented in table 2.

**Table 2: Total area under organic certification process during last 6 years.**

S. No.	State Name	(Cultivated + Wild Harvest)				(in Ha)	
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Madhya Pradesh	2275567.10	2292697.39	1156881.40	918303.08	1161015.03	1637730.46
2	Rajasthan	553447.70	539522.12	442133.72	632701.23	539245.81	481862.38
3	Maharashtra	266299.24	292391.78	304074.81	261571.74	293135.19	371798.28
4	Chhattisgarh	180924.94	179752.14	191464.66	206180.71	208392.80	286684.52
5	Himachal Pradesh	1358449.24	14376.72	170153.47	203847.50	204836.35	203736.47
6	Jammu & Kashmir	54515.01	181608.32	180870.34	187002.89	215275.95	192769.82
7	Karnataka	133647.27	81948.81	105515.02	104962.37	170418.49	174423.56
8	Uttar Pradesh	106292.39	101459.95	192734.40	205980.82	132031.67	159307.73
9	Gujarat	80421.40	70495.05	85400.71	94708.69	95207.58	147866.41
10	Odisha	109224.05	99736.17	117910.30	127851.77	115676.68	96306.88
11	Uttarakhand	99900.39	93586.42	104134.66	41409.55	43647.02	82210.20
12	Jharkhand	77048.73	36813.95	51187.93	58116.87	64254.18	81661.70
13	Sikkim	75851.21	75218.28	76076.18	75798.92	75717.65	75729.66
14	Kerala	44788.50	43701.88	34160.14	40911.24	47575.29	48364.18
15	Tamil Nadu	19529.79	10775.69	20070.51	26546.83	36766.59	41618.86
16	Meghalaya	4609.42	9629.60	40335.66	48409.74	45382.40	38376.39
17	Andhra Pradesh	93350.73	172783.03	184748.65	37409.72	42101.87	36801.36
18	Bihar	91.70	679.20	695.80	3519.51	22712.55	29902.54

19	West Bengal	17890.41	5176.03	5811.48	20989.65	6392.05	21002.61
20	Punjab	17577.20	17648.53	18000.77	25524.58	25637.95	18637.50
21	Assam	28493.24	23930.40	28071.81	28234.67	26753.67	18470.84
22	Goa	16957.59	15762.43	15698.98	20964.80	20786.66	18222.16
23	Nagaland	6186.93	4699.93	8839.86	8268.56	14254.97	14790.38
24	Manipur	251.40	241.40	5397.90	7460.82	14990.07	14724.92
25	Arunachal Pradesh	72485.26	72311.27	6179.69	9246.94	10657.66	13114.12
26	Mizoram	213.80	210.00	998.95	7039.89	10029.89	13038.89
27	Telangana	10355.59	9687.84	8919.82	8759.52	8742.28	6865.56
28	Tripura	203.56	203.56	2251.19	2534.52	3539.18	6521.31
29	Haryana	4889.21	5031.76	6912.40	5998.58	6155.75	4903.06
30	Lakshadweep	895.52	895.52	895.51	895.51	895.51	895.51
31	Ladakh	0.00	0.00	0.00	0.00	64.22	817.85
32	Pondicherry	2.84	2.84	2.84	2.84	23.65	23.65
33	New Delhi	23.03	9.23	9.23	0.72	0.72	5.17
34	Andaman & Nicobar Islands	0.00	0.00	0.00	7484.00	7484.00	0.00
Total		5710384.00	4452987.00	3566538.00	3428638.77	3669801.33	4339184.94

**Source:** Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, Government of India.

It is evident from table 2 that the area under organic agriculture is highest in Madhya Pradesh throughout the 6 years of study. In 2015-2016 second place is occupied by Himachal Pradesh and which in turn followed by Rajasthan in second and third places respectively. During the first four years of study the area under organic farming in Ladakh is 0. In the same way during the first 2 years of study as well as in the last year (2020-21) of study nil area under organic farming is registered in Andaman and Nicobar Islands. From second year onwards the first, second and third places were occupied by Madhya Pradesh, Rajasthan and Maharashtra respectively. These 3 states together were contributing 57.42 per cent of total area under the organic farming. With 37.74 per cent share the Madhya Pradesh top the list. The share of 20 States/Union Territories is less than 1 per cent of total area under organic agriculture.

### Organic Farm Production

The total organic farm production in India is presented in table 3. It can be noted from table 3 that the farm production constitutes 99.20 per cent of total organic production in India. The wild harvest production is 27808.36 MT, which constitutes 80 per cent of total production.

**Table: Production of Organic Agriculture in 2020-21**

Farm Production	3468991.98 MT
Wild Harvest Production	27808.36 MT
Total Production	3496800.34 MT

**Source:** Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, Government of India.

## State Wise Organic Farm Production

The state wise organic farm production in India is presented in table 4.

**Table 4: State wise Organic Farm Production for the year 2020-21**

S. No.	State Name	Organic Production (In MT)	Conversion Production (In MT)	Total Production (In MT)
1	Madhya Pradesh	1214919.50	177176.43	1392095.93
2	Maharashtra	752176.23	23598.76	775774.99
3	Karnataka	355718.73	0.00	355718.73
4	Rajasthan	237436.69	18949.46	256386.15
5	Uttar Pradesh	183089.90	319.14	183409.04
6	Odisha	128264.72	3587.28	131852.01
7	Gujarat	112797.25	5008.48	117805.73
8	Uttarakhand	46645.41	0.00	46645.41
9	Jammu & Kashmir	41043.93	0.00	41043.93
10	Kerala	27850.11	0.00	27850.11
11	Tamil Nadu	24068.86	0.00	24068.86
12	Meghalaya	21753.32	0.00	21753.32
13	Chhattisgarh	20630.65	0.00	20630.65
14	Andhra Pradesh	20145.27	0.00	20145.27
15	Assam	17839.16	0.00	17839.16
16	West Bengal	17434.79	0.00	17434.79
17	Himachal Pradesh	6368.45	0.00	6368.45
18	Haryana	5439.00	0.00	5439.00
19	Goa	3115.44	0.00	3115.44
20	Telangana	2509.68	0.00	2509.68
21	Sikkim	443.85	3.42	447.27
22	Tripura	348.53	0.00	348.53
23	Punjab	264.63	0.00	264.63
24	Manipur	27.74	0.00	27.74
25	Bihar	12.59	0.00	12.59
26	Nagaland	3.50	0.00	3.50
27	Arunachal Pradesh	1.09	0.00	1.09
Total		3240349.01	228642.97	3468991.98

**Source:** Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, Government of India.

Table 4 reveals that 93.41 per cent of total production is organic production and remaining 6.59 per cent is conversion production India. In 20 States the conversion production is not registered. In the total conversion production lion share of production is producing by the Madhya Pradesh State. In this regard it is followed by Maharashtra (10.32 per cent) and Rajasthan (8.29 per cent) in second and third places respectively. With regard to organic production the Madhya Pradesh State top the list with 37.49 per cent share of total production in the country. With 23.21 per cent share Maharashtra stood in second place. It is pertinent to note that Rajasthan which registered second highest area in the organic agriculture stood in fourth place after Karnataka with regard to production. The Karnataka State which is in 7<sup>th</sup> position in area rose to 3<sup>rd</sup> position in case of production.

## Conclusion

Organic farming is a part of Indian culture that values conservation of nature and life on earth as the ultimate philosophy. The popularity of organic food is growing dramatically as consumer seeks the organic foods that are thought to be healthier and safer. It is a new venue for export earnings, but the export potential is a short-term reward; restoration of environmental health is the long-term reward, which will influence all aspects of life of the people. Moreover, the organic produce market is now the fastest growing market all over the world including India. Therefore, action plans for developing organic farming should be part of a larger plan for nature conservation and health of the community and the land, and should be relevant to the social, economic and cultural ethos of Kerala. Organic Food Industry has been blossoming in India; it has to be recognized as a separate industry. Both the Government and private players need to develop a strong policy to benefit producers, processor and consumers as a whole. There is an immense potential and scope for organic farming to grow in India if fed with steady investment and benefits on both existing and new initiatives.

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