

## Overview : Organic Farming In India

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**Abstract** - Organic farming is not new to our country. The farmers of ancient India are known to have evolved nature friendly farming systems and practices such as mixed farming, mixed cropping and crop rotation. It is increasingly being recognized as an important alternative to the form of agriculture, which is highly dependent on chemical fertilizers and pesticides. Reasons for promoting organic farming include lower damage to environment/environment sustainability, reduction in chemical contamination, promotion of health and food safety and higher consumer awareness. India has export potential in this sector and there are some initiatives on this regard from the Indian government. Recently Sikkim has been declared as the first organic state of India. The Indian government is keen to promote organic farming and exports of organic products. A National Project on Organic Farming was launched during 10<sup>th</sup> plan with an outlay of Rs 115 crore. This scheme was continued in 11<sup>th</sup> Plan with an outlay Rs 101 crore. The earlier scheme “National Project on Development and Use of Bio-fertilizers” has been merged with the “National Project on Organic Farming”. It is evident from limited short-term research findings that many crops respond better to organic management particularly after an initial conversion period of 2-3 years. Organic farming can significantly contribute to improving the livelihoods of small holders as it generates higher incomes and involves less risk.

Keywords: Organic Farming, National Project on Organic Farming,

**Introduction**- The relevance and need for an eco-friendly alternative farming system arose from the ill effects of the chemical farming practices adopted worldwide during the second half of the last century. The methods of farming evolved and adopted by our forefathers for centuries were less injurious to the environment. People began to think of various alternative farming systems based on the protection of environment which in turn would increase the welfare of the humankind by various ways like clean and healthy foods, an ecology which is conducive to the survival of all the living and non-living things, low use

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of the non-renewable energy sources, etc. Many systems of farming came out of the efforts of many experts and laymen. However, organic farming is considered to be the best among all of them because of its scientific approach and wider acceptance all over the world.

The Indian Government has set a target of doubling of farmer’s income by the year 2022 and constituted the DFI, and Organic Farming is a way to achieve the target. Organic agriculture has grown out of the conscious efforts by inspired people to create the best possible relationship between the earth and men. Organic farming is very much native to this land. The farmers of ancient India are known to have evolved nature friendly farming systems and practices such as mixed farming, mixed cropping and crop rotation. The first “scientific” approach to organic farming can be quoted back to the Vedas of the “Later Vedic Period”, 1000 BC to 600 BC (Randhawa, 1986; and Pereira, 1993). The essence is to live in partnership with, rather than exploit, nature. In this regard, the “Vrikshayurveda” (Science of plants), the “Krishisastra” (Science of agriculture) and the “Mrugayurveda” (Animal Science) are the main works (Mahale and Soree, 1999). Organic movement owes its origin primarily to the work of Sir Albert Howard, often referred to as the father of modern organic agriculture, who believed that a shift from nature’s methods of crop production to adoption of newer methods leads to the loss of soil fertility (Howard, 1943). From 1905 to 1924, he worked as an agricultural adviser in India, where he documented traditional Indian farming practices and came to regard them as superior to his conventional agriculture science. His research and further development of these methods is recorded in his writings, notably in his book, “An Agricultural Testament”. It is this pioneering work which sowed the seeds of organic movement in India, placing greater emphasis on the use of compost and other organic sources of plant nutrients to the total exclusion of chemical fertilizers.

**Overview on Organic Farming**-Almost all the countries in the world have started to practice and encourage organic farming. Several countries have a fully implemented regulation on organic farming or are in the process of drafting regulations.

Keeping in view the ever increasing negative impacts on human health and ecology due to present commercial farming systems following intensive usage of synthetic inputs, researchers and policy makers are forced to find out alternative way of farming (Ramanjaneyulu et al., 2013). Organic farming is one such system which provides healthy and

safe food without ecological harm. Hence, the Government started promoting organic farming through various schemes like National Project on Organic Farming (NPOF), National Horticulture Mission (NHM), Horticulture Mission for North East & Himalayan States (HMNEH), National Project on Management of Soil Health and Fertility (NPMSH&F) and Rashtriya Krishi Vikas Yojana (RKVY). In addition, government agencies of many States are involved in either promotion of organic programmes or formulation of organic policies. Recently Sikkim has been declared as the first organic state of India.

The countries with the largest areas of organic farmland are: Australia, Argentina, Italy, Canada and USA. Some countries have reached a substantial proportion of organic land; these include Sweden, Austria, Switzerland, Finland and Italy. But as there is a growing awareness on organic practices and a slow but steady shift towards organic farming is observed among several farmers, there is a lot of debate between those supporting organic cultivation and those who question the scientific validity and feasibility of organic practices. There is a doubt looming large that a large scale conversion to organic practices would result in a drastic reduction of food production in the world.

In the early 1990s, Cuba was plunged into crisis as it lost its major source of food, fuel and agricultural input supplies with the end of the Soviet bloc. Yet, within a decade, the country recovered sufficiently to double agricultural production, increase calorific availability by 25 percent, and maintain a consistent and equitable social food programme.

In 1994, the women farmers of Medak district of Andhra Pradesh under organic agriculture brought 1000 hectares of marginalized farm lands cultivated by 1600 families in 32 villages. The programme also generated a massive additional employment in every village that it was implemented. The extent was about 75 person days of employment per acre which roughly worked out to about 8000 person days of employment per village. The fodder provided by the newly cultivated fields sustained over 6000 heads of cattle in 32 villages every year. (Source: LEISA India June 2005)

A survey conducted during 2008–09 in Maharashtra, Karnataka, Tamil Nadu (including Puducherry), Kerala and Uttarakhand involving 50 certified organic farms and 50 comparable conventional farms revealed that organic farming, in spite of the reduction in crop productivity by 9.2%, provided higher net profit to farmers by 22.0% compared to conventional

farming. This was mainly due to the availability of premium price (20–40%) for the certified organic produce and reduction in the cost of cultivation by 11.7%. In cases, where such premium prices were not available and the cost of cultivation was higher primarily due to purchased off-farm inputs, organic farming was not found economically feasible (Ramesh et al., 2010). Similarly, in another study conducted in Madhya Pradesh, Tamil Nadu and Uttarakhand involving 120 certified organic farms and 120 conventional farms, it was found that organic farming reduced the input cost without affecting the net margin in all three states. Organic farming in most cases was comparable to conventional farming in terms of yield in Uttarakhand and Tamil Nadu. However, the yield was lower under organic farming in Madhya Pradesh where farms focused on cash crop production (cotton). While yield of rice and wheat generally was lower under the organic systems, yield from intercropping food crops was generally higher (Panneerselvam et al., 2011).

A comparison of 60 organic and 60 conventional cotton farms in Central India revealed that the average cotton yields in organic fields were 4-6% higher compared to conventional farms. The variable production costs were 13-20% lower in organic cotton mainly due to 40% lower costs for inputs. Due to slightly higher cotton yields, the 20% organic price premium and lower production costs, gross margins in organic cotton fields were 30-43% higher. Further, many farmers observed that they need less rounds of irrigation and that the organic cotton can sustain longer periods of drought (Eyhorn et al., 2009).

A number of studies conducted across the country have clearly established that soil quality improves under organic management in terms of various parameters, viz. physical, chemical, biological properties, availability of macro- and micronutrients, indicating an enhanced soil health and sustainability of crop production in organic farming systems (Saha et al., 2008; Gopinath et al., 2011; Surekha et al., 2013; and Dubey and Datt, 2014).

In an extensive survey involving 376 farmers (199 organic and 177 inorganic farmers) in seven states (Himachal Pradesh, Uttarakhand, Maharashtra, Tamilnadu, Karnataka, Kerala and Rajasthan), the cost-benefit analysis indicated favourable economics of organic farming in India (Partap and Vaidya, 2009). Farmers in 5 out of 7 states were better placed as far as organic farming is concerned. The returns were

higher in Himachal Pradesh, Uttarakhand, Karnataka, Maharashtra and Rajasthan.

It is evident from the study that many crops respond better to organic management particularly after an initial conversion period of 2-3 years. Organic farming can significantly contribute to improving the livelihoods of small holders as it generates higher incomes and involves less risk.

**Progress of Organic Farming in India-** With the view to promote organic farming practices to reduce the burden on chemical fertilizers, to insure effective utilization of farm resources and to cater domestic and international growing Organic Food Market, a National Project on Organic Farming was launched during 10<sup>th</sup> plan with an outlay of Rs 115 crore. This scheme was continued in 11<sup>th</sup> Plan with an outlay Rs 101 crore. The earlier scheme “National Project on Development and Use of Bio-fertilizers” has been merged with the “National Project on Organic Farming”. The main objective of the scheme includes:

- I. Capacity building through service providers.
- II. Financial and technical support for setting up of organic input production unit such as Fruits and Vegetable market waste compost, Bio-fertilizers and bio-pesticides and vermiculture hatcheries.
- III. Human resource development through training and demonstration.
- IV. Awareness creation and market development.
- V. Quality Control of Organic Inputs.
- VI. Biological assessment of Soil Health.

It has been established to spearhead research in organic agriculture. The government of India constituted task force had also recommended the initiation of the postgraduate level courses in organic farming. The Morarka Foundation and Maharana Pratap University of Agriculture and Technology (MPUAT), Rajasthan have collaborated in the design and implementation of such a programme.

An important progress towards organic agriculture made by India is the increasing awareness of the ill effects of the modern farming system, which the country adopted about 35 years ago. The threat poised by the conventional food products to the human health and the damage done to the ecology are being viewed seriously. Efforts are made to produce healthy foods and the demand for them is increasing. The

importance of the marketing of the organic products is highlighted for the promotion of organic agriculture. Several individuals and associations have taken to organic farming and organic products are available in the large cities to a very limited extent.

Several projects and initiatives to promote organic farming in the country have begun at the behest of individuals and institutions. The following are only a few of such efforts the details as:

An initiative for the spread of organic farming by various stakeholders in the Indian organic agriculture sector is their coming together to constitute an apex body for providing centralized services and expertise for the increasing number of organic farmers in the country. Initial steps for setting up the Indian Competence Centre for Organic Agriculture (ICCOA) has been taken at a meeting held at the National Academy for Agricultural Sciences in New Delhi in 2003 under the joint auspices of INDOCERT, a Kerala based organic certification agency and the Swiss based FiBL (Research Institute of Organic Agriculture). The decision was the outcome of an Indian team’s visits to Switzerland in 2003 the study the structure of Swiss organic farming. The meeting elected a nine member promoter board of directors to facilitate the setting up of ICCOA, which would be registered as a charitable society. The Centre would strive to strengthen and supplement the efforts of the state governments in promoting the development of organic agriculture in the country.

In Haryana an enterprising farmer who began farming on his 16 acre land in the Sonapat district in 1971 could establish an organic farm on 108 acres, raising vegetables and other crops (Rathi, et. al., 2003). It appears that his success is mainly attributable to the efforts made by him to market the products. NGOs functioning in the neighbourhood of Delhi buy the produces like rice, wheat, pulses and vegetables from his farm at a premium price of 30 to 50 per cent. An exporting firm at a premium of 20 to 30 per cent buys his basmathi rice. Almost 70 per cent of his farm production is sold through advance agreements/contracts.

In Kerala the POABS Organic Estate at Nelliampathy is engaged in the organic cultivation of several agricultural produces. Research on organic farming methods including manures and pesticides is also undertaken there. Liquid manures, mixtures of slurry, cow urine and some herbal preparations are also made for use in the estate.

Karnataka has finalized the policy on organic farming and thus has become the first state (after Uttaranchal) in the country to adopt it. It encourages the farmers to adopt organic farming and gradually give up the use of chemical fertilizers and pesticides. The government has earmarked Rs 20 crores in the state budget of 2004-05 for the purpose. Tamil Nadu plans to encourage organic farming in horticulture and plantation crops to increase the income of the farmers of the state. The state government also wants to promote organic cultivation of fruits, vegetables and tea. The Tamil Nadu Agricultural University has established a model organic farm on a 2.5 hectare area in the campus. In Goa, a co-operative institution, the Adarsha Krishi Sahakari Kharedi Vikri Prakriya Sanstha (AKSKVPS), pioneered organic farming of cashew and coconut crops. The organisation has 1000 members and is led by its Chairman under whose leadership the organic cultivation is launched. The Cooperative Society has been receiving export orders from traders from abroad for supply of organic cashew nuts.

The state of Madhya Pradesh has gone for organic soya cultivation. Plans are also ready to convert maize, wheat and pulse cultivation to organic on the principle of crop rotation. Organic soyabean is cultivated in the Malwa region of the state in the districts of Khargone and Dhar on an area of 8,700 hectares under contract farming. Farmers who have not used chemical fertilizers and pesticides during the last two years on the land offered for organic farming are selected. This condition was necessary to restore the soil health to make the land suitable for organic cultivation. Certification of the farm has been done by SKAL, an international agency accredited to APEDA. On getting the certificate, the farm can use the logo 'India Organic' on soyabean and its products like soya oil and deoiled cake. The production is meant for both the national and international markets.

**Conclusion**-The ill effects of the conventional farming system are felt in India in terms of the unsustainability of agricultural production, environmental degradation, health and sanitation problems, etc. Organic agriculture is gaining momentum as an alternative method to the modern system. Many countries have been able to convert 2-10 per cent of their cultivated areas into organic farming. There has been significant increase in the area under certified organic farming during the last 10 years. It is evident from study that many crops respond better to organic management particularly after an initial conversion period of 2-3 years.

Organic farming can significantly contribute to improving the livelihoods of small holders as it generates higher incomes and involves less risk.

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