Organic Farming in Punjab: Growth and Prospects

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Abstract

The process of producing agricultural products using natural resources without using chemical fertilizers, herbicides, pesticides *etc.* is known as Organic Farming. After independence , with population explosion, India had faced severe food scarcity. The government launched the New Agricultural Strategy in 1960. The thousands hectares of land particularly the areas of Punjab, Haryana, Western Uttar Pradesh *etc.* was brought under cultivation with introducing hybrid seeds. The organic fertilizers and pesticides were replaced by chemical fertilizers and chemical pesticides. Thus the Indian agriculture was shifted from organic farming to inorganic farming. But the inorganic farming leads to increase in the cost of production. The burden of indebtedness on farmers in Punjab has been increasing at an alarming rate during the past few decades. There has been an alarming rise in the number of farmer suicides in Punjab. Organic agriculture has triggered a controversial debate in the last decades, most importantly because it shed light on the darker sides of chemical-intensive conventional farming by offering an alternative. There is a greater scope of organic farming in Punjab. Organic farming normally does not involve capital investment as heavy as that required in inorganic farming. The small and marginal farmers can do organic farming with small capital. The increasing demand for organic food is a major factor for organic farming in future as the awareness is increasing about health and environment.

Introduction

Agriculture plays an indispensable role in human life and nature. Any change in Agriculture affects the life of people and nature. Everything in nature is balanced. Any disturbance in nature by man has adverse effects on society. In the past agriculture was a part and parcel of nature. The process of producing agricultural products using natural resources without using chemical fertilizers, herbicides, pesticides *etc.* is known as Organic Farming. Organic Farming is the form of agriculture that relies on techniques such as crop rotation, green manure, compost and biological pest control to maintain soil productivity and control pest on a farm (Suri, 2012). The production system under organic farming sustains the soil health and human health without harming the environment. The basic idea for organic farming is to protect soil, water and plants.

Organic farming uses the earth's natural resources for sustainability. It emphasizes appropriate land management and aims to ecologically achieve the balance between animal life, the natural environment and food crops. Organic farmers do not use chemical fertilizers, pesticides, herbicides, genetically modified crops, growth promoters or hormones. Organic meat, poultry, eggs and dairy products come from animals that are given no antibiotics or growth hormones. (Dushyent Gehlot, 2010). Since thousands of years organic farming was practiced in India. The farmers were produced the agricultural

products using organic techniques. Under these techniques fertilizers and pesticides were obtained from the plants and animal products. In traditional India , organic farming was the backbone of the Indian Economy.

After independence , with population explosion, India had faced severe food scarcity. India had to import food grains from foreign countries. The government focused the new programs and policies to increase the agricultural production in the country. The development of agriculture was the main objective of the third Five Year Plan and aimed to drastically increase the production of food grains. The government launched the New Agricultural Strategy in 1960. The thousands hectares of land particularly the areas of Punjab, Haryana, Western Uttar Pradesh *etc*. was brought under cultivation with introducing hybrid seeds. The organic fertilizers and pesticides were replaced by chemical fertilizers and chemical pesticides. The New Agricultural Strategy has resulted into a drastic increase in the production of food grains. This heavy increase in the production and productivity of agriculture is called Green Revolution. Thus the Indian agriculture was shifted from organic farming to inorganic farming. But the inorganic farming leads to increase in the cost of production. The burden of indebtedness on farmers in Punjab has been increasing at an alarming rate during the past few decades. There has been an alarming rise in the number of farmer suicides in seven districts of Punjab with more than three times as many people taking their lives in the period April 2010 to December 2016 than was the case in the preceding decade 2000-2011. This report was based on the survey conducted by the Punjabi University Patiala which said that 1309 farmers and agriculture workers took their lives during 2010 to 2016. It reported that 90.23 per cent suicides were due to the mounting debt. Among these suicides 67 per cent were the small and marginal farmers. Major reason of the mounting debt is that the cost of agricultural production increasing more rapidly than the agricultural income (The Hindu dated June 16, 2017).

Organic agriculture has triggered a controversial debate in the last decades, most importantly because it shed light on the darker sides of chemical-intensive conventional farming by offering an alternative. It is felt that a new agricultural technology is needed which will protect the soil, enable it to absorb precipitation, allow for perennial surface run off, also provide the food, fiber, fuel and other materials needed to sustain the population, save energy, increase production and productivity, and also be economically viable at the small farm's level, environmentally friendly and socially acceptable. In so doing the technology should not fail to take full advantage of the knowledge of the traditional farmers. This is possible only by switch over to Organic Farming from Inorganic Farming. Two options are there - either to completely go in for the Organic Farming or to choose the combination between the Organic Farming and Inorganic Farming. But in spite of the Government efforts, Punjab is lagging behind than other states in organic farming. The union budget (2013) was proposed increasing the area under organic farming in the country by 5 lakh acres in next three years. However Punjab does not appear to be geared

up to take full advantage of the government initiative in this regard, given the dismal progress it has made. The current certified area under organic farming in Punjab is a negligible 2000 acres only and nowhere near the target of 3000 acres set for the end of March 2016 as per data available from Punjab Agro Industries (The Indian Express dated March 2, 2016).Even some farmer organizations like Kheti Virasat Mission (established in March 2005) are making efforts to promote organic farming but there is a meager progress in this direction.

Objectives of Study

The present study has the following objectives :

1. To analyse the growth of Organic Farming in Punjab
2. To study the future prospects of Organic Farming in Punjab
3. To suggest strategic implications for organic farming

Research Methodology

In accordance with its objectives, the study is based on secondary data. The data will be obtained from the available documents, reports journals *etc.*

Limitations of Study

The study is limited to the period from 2005-06 to 2010-11 as per the availability of secondary data.

Growth of Organic Farming in Punjab

Punjab has been leading the green revolution with a rich agricultural base. Thogh Organic farming was practiced in ancient time but it has been started in 20th century as an alternative agricultural system in reaction to the harmful effects of inorganic farming on human health and environment. Since 1990 the market for organic agricultural products has grown rapidly reaching $63 billion in the world in 2012. As far as Punjab has concerned it shows a dismal progress it has made during the study period. The current certified area under organic farming in Punjab is negligible 2000 acres only. It is two third of the target (3000 acres) set for the end of March 2016 as per data available from PAICL. The following table 1 shows the area under organic farming in Punjab in hectares:

Table 1: Area (in Hectares) under Organic Farming in Punjab

Year	Area under Organic Farming	Percentage Growth Rate
2005-06	3779.31	------
2006-07	1600.4	- 136.14
2007-08	3320.2	107.46
2008-09	4192.52	32.25
2009-10	5263.61	25.54
2010-11	6025.78	14.47

Source: National Centre for Organic Farming, Department of Agriculture and Cooperation, Ministry of Agriculture

The above table shows that there was a great decline in area under organic farming from 3779.31 hectares in 2005-06 to 1600.4 hectares in 2006-07 (136.14 per cent). After that it was increasing at diminishing rate from 1600.4 hectares in 2006-07 to 3320.2 hectares in 2007-08 (107.46 per cent). Then from 3320.2 hectares in 2007-08 to 4192.52 hectares in 2008-09 (32.25 per cent). It further increased from 4192.52 hectares in 2008-09 to 5263.61 hectares in 2009-10 (25.54 per cent). It increased from 5263.61 hectares in2009-10 to 6025.78 hectares in 2010-11 (14.47 per cent). The table shows the dismal progress of organic farming in Punjab during the study period.

Table 2: **Percentage share of Punjab in total area of Organic Farming in India**

Year	Punjab(Area in Hectares)	India(Area in Hectares)	Percentage Share
2005-06	3779.31	173682.54	2.17
2006-07	1600.4	538171.35	0.297
2007-08	3320.2	865323.086	0.3830
2008-09	4192.55	1207055.128	0.347
2009-10	5263.61	1085648.45	0.484

Source: National Centre for Organic Farming, Department of Agriculture and Cooperation, Ministry of Agriculture

Table 2 shows the percentage share of Punjab in total area of organic farming in India. It was only 2.17 percent in 2005-06. It declined to 0.297 percent in 2006-07. Then there was marginal increase (0.383 percent) in 2007-08. Again it declined to 0.347 in 2008-09. In 2009-10 it increased to 0.484 percent. This table shows that the percentage share of Punjab in total area of organic farming in India was negligible particularly during 2006-07 to 2009-10.

Future Prospects

There is a greater scope of organic farming in Punjab. As compared to inorganic food, organic food is much richer in nutrients. Organic food does not contain any chemical. Studies reveal that large section of the society fed on toxic substances used in inorganic farming and have fallen prey to diseases like cancer. In 1960-61 the total consumption of chemical fertilizers was five thousand tons only but during 2000-2001 it increased to 1687 thousand tons and it further increased to 2250 thousand tons in 2014-15. The consumption of insecticides and pesticides increased from 3200 metric tons in 1980-81 to 5721 metric tons in 2015-16 and it was stated to be 6386 (Provisional) metric tons during 2016-17 (Department of Agriculture, Government of Punjab). By now, there is a strong body of evidence showing that organic farming is more environmentally friendly: potential benefits from organic production arise from improved soil fertility, organic matter content and biological activity; better soil

structure and reduced susceptibility to erosion; reduced pollution from nutrient leaching and pesticides; and improved plant and animal biodiversity.

Organic farming normally does not involve capital investment as heavy as that required in inorganic farming. Huge number of small farmers, those who do the inorganic farming have very little capacity to pay for most of the chemical inputs into agriculture. Therefore small and marginal can do organic farming with small capital.

The increasing demand for organic food is a major factor for organic farming in future as the awareness is increasing about health and environment.

Suggestions to promote Organic Farming in Punjab:

Organic farming is not for everyone yet it is a viable approach that can be beneficial. The following suggestions are there to promote Organic Farming in Punjab:

1. Adequate research and extension support should be provided to the farmers.
2. Capacity building through on farm demonstrations and training.
3. The government should help the farmers to promote organic farming.
4. Government support in cheaper access to organic certificates.
5. Developing supply chain and ensuring competitive pric for organic products.

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