

Organic Farming and Sustainable Development

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ABSTRACT

With the increasing pressure of population on the resources has increased the demand of grains to fulfil the food requirement. Production of food grains in agriculture was very less in the first half of the 20th century. After Independence first five year plan was dedicated to agriculture. Green revolution also introduce in the country to reduce the scarcity of grains. Consequently India became self-depend on the production of grains and fulfil the demand of its huge population but with introduction of chemicals fertilizers, pesticides and weedicides it's also increases the problem of soil pollution, reducing the soil fertility and have bad impact on the health of human as well as on the animals. Today India is practicing organic farming for sustainable development in the field of agriculture. This paper is an attempt to study the benefits of organic farming and its issues and challenges in India. Organic farming which is a holistic production management system that promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity is hence important. Many studies have shown that organic farming methods can produce even higher yields than conventional methods. Here in this paper we tried to focus the organic farming it issues and challenges moving towards sustainable development with it.

Keywords : Organic Farming, Issues and Challenges, Green Revolution, Agro-Ecosystem Health, Conventional Methods.

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I. INTRODUCTION

Agriculture without the use of synthetic fertilizers and chemicals is called organic farming. It is a method of cultivation of plants and rearing of animals in a natural way. Biological materials such as cow and other animals dung is used to avoid synthetic substances and for the improvement of soil fertility and ecological stability. These methods minimize the

soil pollution and lead agricultural activities without chemicals and pesticides. Crop rotation, green manure, organic waste, biological pest control, mineral, and pesticides are used to follow the organic farming. International Federation of Organic Agriculture Movements (I F O A M) established in 1972 for organic farming specify organic farming. Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on

ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of input with adverse effects. Organic agriculture combines traditions, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.

II. Merits of Organic Farming

With the help of chemicals and synthetic fertilizers people may produce huge amount of grains, vegetables and other agrarian and horticultural products but they cannot achieve the goal of good health and sustainable development. Organic farming leads to sustainability and helps to health and better environment in India since it has many benefits given below - Use of local resources Organic farming utilizes the local renewable resources as many people in villages practice rearing of cattle providing with natural manure to the purpose of organic farming.

Improvement of soil fertility Organic farming improves the soil fertility as it avoids the use of synthetic fertilizers and chemicals. Support diversity Organic farming support diversity in production system and agricultural landscape. Support natural taste Organic farming protects beneficial nutrients to support natural taste and health. Free of Poison Organic farming is free of poison and as it works on living ecological system maintain the ecological balance and prevent human beings and animals from the products. Historical perspectives of organic farming India faced many agitations from 1970s onwards the most approaching was the Chipko Movement (1973) in Tehri Gharwal Utrakhhand. This movement created the awareness to protest against different social issues such as domestic violence, alcoholism and women's representation in village council etc across the country. In the 1970 and 1980s, green revolution brought huge production in grains and overuse of chemical fertilizers. The farmers and environmentalist set the stage for different farm movements such as Beej Bachao Andolan, organic

farming and Go Mata as these became the central way for organic farming in India to achieve sustainable development goal.

"Sustainable development meets the need of present without compromising the ability of future generation to meet their own needs". -Brundtland Report.

The Sustainable development goals set by UN In sept.2015, the UN General Assembly formally adopted the 2030 Agenda for sustainable development, a set of 17 Sustainable development Goals have been Implemented and achieved in every country from 2016 to 2030. These goals are 1) No poverty. 2) Zero hunger. 3) Good health or wellbeing. 4) Quality education. 5) Gender equality. 6) Clean water or sanitation. 7) Affordable or clean energy. 8) Promote sustained inclusive sustainable, economic growth, full and productive employment. 9) Industry innovation and infrastructure 10) Reduced inequality. 11) Sustainable city and communities. 12) Responsible consumption and production. 13) Climatic action 14) Life below water. 15) Life on land (Bio-diversity). 16) Peace, justice and strong institution. 17) Partnership for the goals. Thus sustainable agriculture is the need of the today world, to achieve the goal of economic development, social development and clean environment.

Organic Farming: Challenges to organic farming in India

Lack of Awareness - The most important challenge in the development of OrF is the lack of awareness among farmers about the OrF and its potential benefits. **Marketing Problems** -Before the beginning of organic crop cultivation, their marketability over conventional produce must be assured. **Inability to obtain a premium price** for the produce, at least during the nascent stages, leads to a setback. **Shortage of Biomass** - There could be a **shortage of required quantities of the nutrients** which could simply not be enough to meet the requirements. **Inadequate Infrastructure Support**- despite NPOP adoption, the state governments are yet to formulate a credible

mechanism and necessary policies for implementation. The certifying agencies are inadequate.

High Input Costs - The costs of the organic inputs are more than those of industrially-produced agrochemicals used in the conventional farming system.

Like other parts of the country has also adopted the chemicals in agriculture to increase the production of vegetables, fruits and grains etc. But day by day these chemicals are reducing the fertility of soil, causing harm to humans, animals and creating ecological imbalance.

People are not keeping more animals because of less participation of animals in agricultural activities. In India due to hilly terrain mostly work of sowing was performed by the oxen etc. but with the introduction of small agricultural machines in the region demand of oxen decreases hence people are not keeping calf and oxen. Number of cows also decreases as people are keeping one cow which produce 10-15ltr milk so the number of cow also decrease in present day scenario. This results in the decrease of cow dung. Less cows less dung.

The main objective of organic agriculture is to meet the human development goal and at the same time sustaining the ability of natural system to provide the natural resources upon which every living being depends.

Following are the objectives of organic farming in India –

- 1) Encouragement to the organic sector in the country which include organic farming to overall development of agriculture in the country.
- 2) To make Indian organic country.
- 3) To provide organic food to the people of country to lead the purpose of healthy country.
- 4) To provide organic fodder to the animals and livestock.
- 5) To promote organic agribusiness and organic villages, and agro tourism.

- 6) To create self-employment and development of rural areas.

III. Need/ Significance of the Study

There are three categories of opinions about the relevance of organic farming for India. The first one simply dismisses it as a fad or craze. The second category, which includes many farmers and scientists, opines that there are merits in the organic farming but we should proceed cautiously considering the national needs and conditions in which Indian agriculture functions. They are fully aware of the environmental problems created by the conventional farming. But many of them believe that yields are lower in organic cultivation during the initial period and also the cost of labour tends to increase therein. The third one is all for organic farming and advocates its adoption wholeheartedly. They think that tomorrow's ecology is more important than today's conventional farm benefits. Organic farming involves management of the agro-eco system as autonomous, based on the capacity of the soil in the given local climatic conditions. In spite of the ridicule poured out on organic farming by many, it has come to stay and is spreading steadily but slowly all over the world. India has been very slow to adopt it but it has made inroads into our conventional farming system. One advantage we have here is the fact that the farming techniques practiced in this country before the advent of the green revolution were basically eco-friendly and they have not faded away from the memories of the present elder generation of our farming community. India's options in finding out an alternative method to the conventional farming are limited. Sensing the importance, the Central and state governments have taken several initiatives to popularise organic farming in the country.

Objectives of the Study:

- 1) To overview the current status of organic farming in India.
- 2) To study about various schemes for organic farming of central and state government.
- 3) To study the issues and challenges for organic farming.

IV. Research Methodology

The study is based on the secondary data only. The data has been extracted from some Government of India’s websites and some reference books mentioned below in references.

Data table and statistics in this paper has been taken from government sources only.

Secondary data:

The data has been taken from Magazine, newspaper articles, Governments reports and related research paper.

Findings based on the objectives:

Organic coverage under NPOP, PKVY, and MOVCD

Coverage in India -

India introduced the organic farming policy in 2005. The 78 million hectares covered under organic farming in India is about 2% of the 140.1 million hectares of the net sown area in the country. 94 million hectares under National Programme for Organic Production (NPOP) 07 million hectares under Mission Organic Value Chain Development for North Eastern Regions (MOVCD) 59 million hectares under Paramparagat Krishi Vikas Yojna (PKVY) NPOP vs PKVY and MOVCD- NPOP scheme began in 2001 and covers nearly 70% of India’s total organic area coverage of which 30% is under conversion. NPOP aims to provide the means of evaluating certification programs for OrF and its products. It aims to encourage the development of OrF& processing and would be implemented by APEDA. Beginning in 2015-16, PKVY and MOVCD schemes

cover 21.5% and 2.6% respectively, of India’s total organic area coverage. PKVY is an elaborated component of Soil Health Management of the National Mission of Sustainable Agriculture (NMSA), while MOVCD is a Central Sector Scheme, a submission under NMSA, and aims to develop certified organic production.

State schemes -

The remaining 6.1% of the area under organic cultivation is either under a state scheme or not related to any scheme.

Organic Statistics: Important States, Area and farmers

States	Organic	In-conversion	Total area in ha	Total No of farmers
Madhya Pradesh	322863	140689	463553	167141
Maharashtra	129077	148703	277780	213456
Orissa	60006	21554	81560	43852
Gujarat	23559	27367	50927	17057
Andhra Pradesh	7377	25072	32450	34185
Mizoram	12097	22808	34906	41841
Uttarakhand	11093	19408	30501	46135
Rajasthan	9959	19307	29267	15214
Nagaland	1212	22830	24042	28365
Uttar Pradesh	9613	12633	22246	15417

Source: Government of India (present status of organic farming)

Organic farming master plan in India– Now with the spread of awareness about the demerits of synthetic Agriculture Country has also launched some project to enhance the organic agriculture in India. Master plan included adoption of organic farming to reduce the use of chemicals for sustainable development.

Organic agriculture increases the quality of agricultural product and makes better use of cow dung. It create additional source of income by selling worms and vermin compost project for the development of organic agriculture in the country.1) India government launched Zero Budget Natural Farming (ZBNF) project to promote organic farming. The project aims to increase agriculture produce and the income of the farmer by the year 2022. 2) NMSA – National Mission for Sustainable agriculture project by the central Government had launched in India to soil health management, enhanced water use efficiency, nutrient management, crop – livestock farming and integrated approaches like sericulture, agro- forestry, fish farming etc.

V. Conclusion

Natural farming is not a new concept in India, with farmers having tilled their land without the use of chemicals since time immemorial largely relying on organic residues, cow dung, composts, etc. This is also in accordance with the Sustainable Development Goal 2 which targets to 'end hunger, achieve food security and improved nutrition and promote sustainable agriculture. With capacity building and greater awareness of the producers, organic farmers could soon be reinforcing their rightful place in the global agriculture trade. In a world bruised by the COVID pandemic, the demand for safe and healthy food is showing an upward trend and hence could be an opportune moment to be captured for a win-win situation for our farmers, consumers, and the environment. To gain the national and international objectives of sustainable development in the country we need to adopt natural way of farming called organic farming. To promote organic farming in the country need to spread awareness among the people and farmer about the less cost of production inputs in the agriculture and higher value of organic product and bring higher income per unit area. Government and local bodies need to help the farmers to eradicate

the challenges and issues causing trouble to the farmers. Country has great potential to harvest the income by organic farming which leads sustainable development and green India.

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