



GROW ORGANIC, EAT ORGANIC: A STEP TOWARDS SUSTAINABLE AGRICULTURE

Priyanka Jalal

PhD scholar, Department of Agricultural Communication, College of Agriculture, GBPUA&T, Pantnagar, Uttarakhand

ABSTRACT

A real challenge for sustainable development in the modern era is the growing population across the world and to meet their demands, farmers are using modern farming practices (such as the use of pesticides, synthetic fertilizers, Stubble burning etc. to enhance crop output). These are causing several problems such as depletion of soil health, climatic changes, drop in river water and ground water table, increases pollution and health diseases like cancer, blood pressure, fragile bones and skin diseases etc. Therefore, GOs and NGOs are taking initiative to promote organic farming practices and aware the people about the excessive use of fertilizers. Organic agriculture is a productive and promising agricultural strategy for environmental sustainability. As it improves soil fertility, eliminates environmental issues and reduces the need of synthetic fertilizers. Meanwhile, this type of agriculture encourages sustainable, long-term economic growth. Rural women are also an integral part of Indian agricultural system so it is important to ensure their involvement in natural resource management and adaptation of organic farming practices as well. Thus, it is suggested to provide trainings to farmers, organize campaigns/ awareness programmes related to organic agriculture.

KEY WORDS: *Organic Farming, Climate Change, Sustainable Development, Soil health.*

INTRODUCTION

Major environmental problems that the world is currently dealing with include climate change, freshwater depletion, ocean overfishing, deforestation, water and air pollution, and hunger. The management and conservation of the earth's natural resources for present and future generations, as well as for the millions of other species that inhabit our planet, is a key component of sustainable development, which aims to improve human-environment interactions. It is important to maintain and improve our natural resources so that all nations can achieve their basic needs of work, food, energy, water, and sanitation by encouraging steady economic growth, resource conservation, environmental protection, and social advancement and equality.

About 2.78 million hectares of land in India are used for organic farming. Oilseeds, tea, coffee, dried fruits, millets, cereals, spices, and others are some of the major organic products grown in India. India produces a lot of these goods and exports these. India's top three states for organic product cultivation are Sikkim, Uttarakhand, and Tripura. Madhya Pradesh, Rajasthan, and Maharashtra are more states that practice organic farming. In India, approximately 58 percent of population relies mostly on agriculture for their livelihood and it has largest plain areas of the world which is immensely fertile and also known for its varied climatic conditions and soil types. These physical variations along with factors like availability of irrigation, use of machinery, modern agricultural inputs like High Yielding Varieties (HYV) of seeds, insecticides, and

pesticides have played their important roles in the evolution of different farming practices in the Indian agriculture sector. Kharif, Rabi, and Zaid are the three distinct cropping and agricultural seasons in India and different crops are grown throughout each of these three seasons. From recent years it is noticed that climate change is major challenge and one of the reasons is conventional farming. Pesticide pollution, soil erosion due to non-seasonal farming, and over-irrigation are causing changes in the levels of carbon dioxide and ozone in the soil, water, and air, which in turn is causing changes in weather patterns around the world. Thus, it becomes a serious issue for development. Therefore to overcome and mitigate this problem, adaptation of organic farming one of the most sustainable way to improve the agricultural production which can definitely lead to sustainability in various aspects.

CONCEPTS AND DEFINITION

Organic farming

“Organic farming is a comprehensive system of farm management and food production that combines the best environmental and climate resilient practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards, and high production standards in line with the demand of a rising number of consumers for products produced using organic ingredients and processes.” (The European Parliament Regulation of Brussels, 2018)



“Organic farming can be described as pro-active ecological management practices that preserve and improve soil fertility, stop soil erosion, encourage and enhance biological variety, and reduce risks to the health of people and animals as well as the environment.”

Organic farming is a combination of agricultural techniques or practices that emphasizes on using natural resources to cultivate food as opposed to synthetic outside inputs. Organic farming is basically a more traditional style of agriculture than most modern farming, despite the fact that it is sometimes referred to as “alternative farming.”

Sustainable Agriculture development

“Sustainable development is development that meets the needs of present masses without compromising the ability of future generations to meet their own needs.” (**The Brundtland Report, United nations**). In agriculture, sustainability can be achieved by growing an abundance of food without using too many resources or harming the environment. Agriculture should create systems for cultivating crops and rearing livestock that are self-sustaining according to the laws of nature.

Thus, it can be suggested that adopting right practices, policies, generating self motivation and awareness among the farmers will lead to sustainable agriculture and food system. It generally deals with three factors: 1) healthy environment 2) economic profitability 3) socio-economic equity. Therefore, small and large farmers, farm women must incorporate reliable sustained agricultural technologies/inputs to improve the farm production and to raise the economy.

Why Organic Farming?

Farming is the riskiest job. Caustic fertilizers, hazardous insecticides, and several other chemicals cause the risk to many individuals who live or work nearby farms until and unless proper precautions are taken. By switching to organic farming, the use of high-risk chemical products by the farmers is very less so the workers and rural Neighbors have nothing to worry about their health. There are some advantage and benefits of organic farming:

- Organic farming does not allow the farmers to use pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones to raise the production.
- Organic farming promotes the use of crop rotations and cover crops and encourages balanced host/predator relationships.

- Organic residues and nutrient produced on the farm are recycled back to the soil.
- Cover crops and composted manure are used to maintain soil organic matter and fertility.
- It improves the soil physical properties such as granulation, aeration, and improves water-holding capacity and reduces erosion.
- It ensures that natural resources are used as effectively as possible for immediate benefit and helps in their preservation for future generations.
- It is helpful in maintaining the environmental health by bringing down pollutant levels.
- As reducing the amount of residues in the product, it lowers the risks to human and animal health.
- Cost of production is low but the selling price and export values of organic products are high.

Hence in simplest words, organic farming refers to farming methods that are ecologically sound and utilize organic or biological fertilizers made from plant or animal waste. This employs eco-friendly pest control techniques as well. This approach does not encourage the use of agrochemicals on agricultural land. Through this technique, soil erosion and other environmental consequences are reduced.

Principles Of Organic farming

Organic farming is a method of agriculture that use animal or plant waste as well as organic manure as pest control. It is a brand-new approach to agriculture that improves, preserves, and fixes the ecological equilibrium. Green manures, cow dung, and other organic inputs are used in organic farming. OF is of two types one is pure organic and second is integrated organic farming and both are working on these four principles-



1. Principle of Health- health of ecosystem, people, and communities.



2. Principle of Ecology- balance between ecosystem and environment or nature



3. Principles of Fairness – Good relationships and quality of life.



4. Principles of Care –environment and environment of the future

GOVERNMENT INITIATIVES TO PROMOTE ORGANIC FARMING IN INDIA

Realizing the potential and benefits of organic farming Indian Government is promoting the production of major export crops, fruits and vegetables etc. through various schemes. These projects provide financial support (subsidies) to the framers and NABARD is responsible for establishment of bio-pesticides/biofertilizers production units and agro waste compost production units respectively which are as follows:

National Horticulture Mission (NHM), Horticulture Mission for North East and Himalayan States (HMNEH), Rashtriya Krishi Vikas Yojana (RKVY), National Project on Management of Soil Health and Fertility (NPMSHF), National Project on Organic Farming (NPOF), Network Project on Organic Farming under Indian Council of Agricultural Research (ICAR) and various schemes of Agricultural and Processed Food Products Export Development Authority (APEDA), Parampragat Krishi Vikas Yojna, Soil health Management scheme and Mission organic value chain development for North eastern region.

Thus, the main aim of organic farming is to reduce the total dependency on chemical fertilizers and pesticides and make farming sustainable, remunerative and respectable. Further, it was also realized that to increase the production of important major crops, use of both organic manures and artificial fertilizers (less), including biofertilizers in an integrated manner is

important because soil loses its nutrients after crop cultivation and need to recharge with all necessary nutrients. Therefore, adaptation of organic farming in an integrated manner is a demanding step to promote self-sufficiency and food security in India and Worldwide.

CONCLUSION

To create environmentally and economically sustainable system, organic farming practices play major role. Organic farming is expanding at a 25–30% annual rate in India. India would have 1.35 billion acres under organic cultivation by 2020. Meanwhile, vision Government of India is to flourish India's organic agriculture and provide healthy food for 1.5 billion people by 2030. Comparing organic and conventional farming, the former is 35% more profitable. The scope of organic farming is increasing at a great speed in India. This is mostly due to new experiments and researches done in the agricultural field. New techniques which are invented are fully in support of the health of the soil. People's health is another very important factor to shift to organic farming. Therefore, there is a big chance because customers are responding favorably to organic products, and this will also boost the farmers' prospects. The future of organic farming is highly bright and prosperous because these crops are more naturally grown and nutritious than conventional crops. Organic farming



is widely practiced since it is inexpensive and does not involve the use of harmful chemicals, medications, or other things. Although there are many obstacles, but organic farming can be a viable alternative production method for farmers.

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