International Journal of Advance and Applied Research (IJAAR)
Peer Reviewed Bi-Monthly

ISSN – 2347-7075
Impact Factor – 7.065
Vol.8 No.2 Nov – Dec 2020

FROM SOIL TO SOCIETY: ORGANIC FARMING FUELS SUSTAINABILITY

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INTRODUCTION:

The work of Howard, who developed and theorized the majority of the viewpoints that were eventually adopted by those who became engaged in this movement (Howard, 1940). A production in organic farming is system that mostly prohibits or minimizes the usage of synthetic growth regulators, insecticides, fertilizers, and animal feed additions. The fundamental goals of organic farming are social, economic, and environmental sustainability. The key characteristics include protecting the long-term fertility of soils by maintaining organic matter levels, fostering soil biological activity, careful mechanical intervention, nitrogen self-sufficiency through the use of legumes and biological nitrogen fixation, effective recycling of organic materials including crop residues and livestock wastes and weed, and diseases and pest control relying primarily on crop rotations, natural predators, diversity, organic manuring, and resistant varieties. A great emphasis is placed to maintain the soil fertility by returning all the wastes to it chiefly through compost to minimize the gap between NPK addition and removal from the soil (Chhonkar, 2002). In order to fulfill their ever-increasing food requirements, many countries are now compelled by the pressure of an expanding population to utilize pesticides and fertilizers to boost farm output. However, excessive and extended use of chemicals has led to pollution of the environment and health risks for people and soil. As a result, farmers in wealthy nations are urged to convert their current farms to organic farming. Conventional farming is the most commonly followed practice, but it makes use of synthetic fertilizers for growing crops and pesticides for killing weeds. These synthetic additives are detrimental to soil productivity, pollute the water resources and are harmful to human health. Different agricultural methods have evolved in the last couple of decades as a result of technological

innovations. By weakening the genetic foundation that scientists rely on to improve crops, the loss of agricultural biodiversity raised concerns about the sustainability of Indian agriculture. After a few years of introduction, HYVs and especially hybrids lose their viability and become vulnerable to pest and disease attacks. This calls for the introduction of new genetic material, which is once more derived from current traditional kinds. Because of these factors, people are searching for better and safer foods that are produced using more environmentally friendly and authentic local processes. It is thought that organic food and food products satisfy these needs (Rembialkowska, 2007). Organic farming has been more and more popular as a cultivation method in recent years (Dangour *et al*., 2010). Foods farmed organically are now among the finest options for farmers and customers alike. Eating organic food is a component of living a green lifestyle.

Therefore, one of the main reasons for the loss of conventional crop diversity is the introduction of these HYVs. In order to address the issue of escalating threats like climate change, pollution, and loss of biodiversity, it is critically essential to produce food in a sustainable manner. Organic farming makes use of biological fertilizers and pest control, compost, as well environmentally friendly approaches like intercropping, mulching, crop rotations, etc. This system restricts the application of chemical fertilizers, growth regulators, pesticides, herbicides and other chemical inputs. It also discourages and restricts the usage of ionizing radiation, sewage sludge, genetically modified organism and antibiotics. This article attempts to highlights the benefits, principles and challenges of organic farming.

PRINCIPLES OF ORGANIC FARMING:

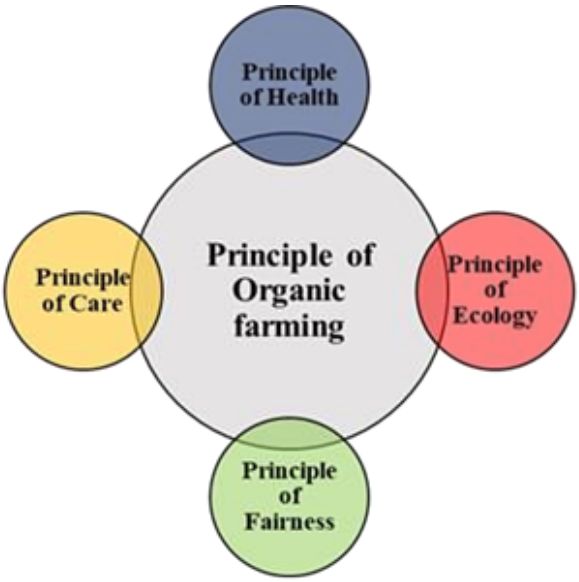
The four main principles of organic production given by IFOAM in 2005 (IFOAM, founded in 1972) are:

- The Principle of Health – Organic agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.
- The Principle of Ecology – Organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.

- The Principle of Fairness – Organic agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities.
- The Principle of Care – Organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

BENEFITS OF ORGANIC FARMING:

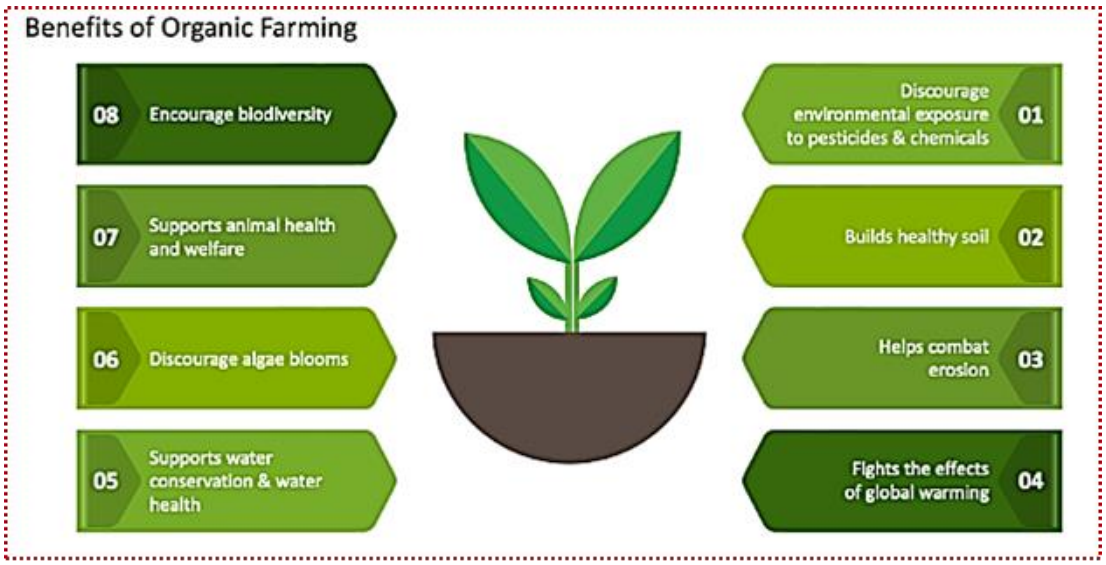
- It maintains health of environment by reducing pollution.
- It helps in increasing agricultural production in a sustainable way.
- It helps in improving the soil health.
- Agriculture products obtained from organic farming are better in quality. (Bigger in size, flavor, size & aroma)
- Water holding capacity of the soil is increased through organic farming.
- It improves the availability of nutrients required and essential for plants. (Macro nutrients & Micro- nutrients)
- Organic farm products are usually of better size, flavor, aroma (Quality)
- Underground water of the area under organic farming is free of toxic chemicals.
- Vermicomposting brings down waste bulk density.
- Vermicomposting has hormone like substance auxins which increases plant growth.
- Maintains C:N ratio in the soil and increases the fertility and productivity of the soil.



OBJECTIVES OF ORGANIC FARMING:

These are major objectives of sustainable organic farming:

- A high crop yield
- Synchronization between nature and agriculture system by rejuvenation of soil and e nutrient recycling
- Increasing microflora and microfauna of soil, thus enhancing fertility
- Enhancing soil quality without compromising biological diversity in the ecosystem
- Promoting alternative energy resource usage
- Developing equilibrium between crop farming and animal husbandry
- Keeping animals in an environment which is close to their natural habitat
- Preserving and applying traditional knowledge in farming and management



MARKET FOR ORGANICALLY GROWN FOOD:

Consumers concern over high levels of saturated fats, sugarcane, salt in foods as well as the risks from additives and pesticide residues, has stimulated the demand for health foods particularly organic foods. Furthermore, there is an increasing awareness of the environmental damage associated with the use of modern agricultural techniques, especially agrochemicals. Meanwhile, food surpluses, particularly in Europe, have led to the promotion of organic farming, where in the Low yield levels lead to a decrease in supply. It's noteworthy to note that there haven't been any significant marketing initiatives for organic food,

despite the fact that the aforementioned criteria have helped the market for organic food grow. Nonetheless, the absence of product promotion through conventional advertising channels has been partly offset by the media's strong support for organic farming. Marketing concepts must be important in this setting, but they cannot completely rule. Thus, successful organic farming requires careful attention to marketing. As the demand for organic products is increasing over years with people becoming more conscious about the quality of the food stuffs and awareness about the environmental effects due to overuse of chemicals in agriculture. They also opined that if the organic products have a well-defined marketing channel and ensured premium price the likeliness to increases the area under organic farming is wider.

RELATIVE ADVANTAGES OF ORGANIC FARMING IN INDIA:

NPOP takes care of accreditation for certification bodies, organic production standards, and organic agricultural marketing, among other things. Importing countries acknowledge Indian organic products that have been certified by India's certification bodies (Shukla *et al*., 2013). In India, there are six accreditation boards recognized by the Ministry of Commerce, namely- APEDA, Coconut Development Board, Tea Board, Directorate of Cashew and Cocoa, Spices Board, and Coffee Board. The accrediting boards authorize certification agencies to certify organic goods in accordance with the established standards. Additionally, certification through various boards and agencies is now necessary, especially for export markets, as authorized by the Government of India. Singh and colleagues in 2019 emphasized the comparative benefits of organic farming in India. India is a leading producer of premium commodities, including rice varieties, tea, spices, and medicinal herbs. Its lengthy agricultural history can be leveraged to develop organic farming techniques. The use of agrochemicals in agriculture is not very intense in many parts of India, particularly in hilly and tribal regions, which facilitates the switch to organic farming. It has been demonstrated that using organic farming methods, especially in the humid tropics, can produce yields that are on par with or even higher than conventional farming methods on marginal soils. In India, labour is relatively inexpensive in comparison to input costs, favouring the transformation to less inputdependent, but more labour intensive production processes, as long

as acceptable yields are attained. India's non-governmental organisations (NGO) sector is quite robust and promotes organic farming by providing training, information, extension services, and marketing services to farmers.

CHALLENGES ASSOCIATED WITH ORGANIC FARMING:

The demand for organic products and subsequently organic farming has been reported to get increased all over the world. Despite of numerous advantages it offers in terms of preservation of natural resources, protection of environment, better food quality etc., a shift to organic farming still remains a big challenge in developing countries like India. Besides other drawbacks, government policies in regard of promoting organic farming is one of the biggest challenge in India. In addition, there are other obstacles like poor marketing, inadequate agricultural policies and guidelines, improper marketing of organic input, complexity in the certification process, inadequate education and research among small-scale farmers and smallholders, lack of awareness, scarcity of biomass, lack of good manure and seed, lack of livestock, difficulty managing soil nutrients, low yield as well as failure to achieve the desired quality of the organic produce, inconsistent quality of the produce, and labor-intensive processes. Other limiting factor is that a large number of farmers belongs to a marginal and small category and therefore, to support organic farming in a country like India, the government needs to invest to provide financial incentives to the farmers. There is a need to bring out more schemes wherein cooperation with non-government agencies, they should help in the certification process and provide special training to the farmers to enhance their knowledge and skills that are required for the production, processing and for the marketing strategy of organic products.

CONCLUSION:

Organic farming is a cost-effective and ecologically sustainable technique that holds great promise for mitigating environmental deterioration and enhancing socioeconomic standing. Because customers are becoming more conscious of food safety, nutrition, and health issues, organic food is becoming more and more popular worldwide. Organic farming is also financially

advantageous since it lowers input costs, which allows farmers to charge a higher premium for their produce.

In contrast to organic growers, conventional producers benefit from greater economies of scale. Nonetheless, producers would be encouraged to switch to organic farming if the premium price of organic product was supported and appreciated, as well as if it was easily accessible to consumers.

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