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A REVIEW STUDY ON ORGANIC FARMING

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ABSTRACT

Organic farming is a management and agricultural production method that incorporates a high level of biodiversity with environmental measures that protect natural resources. Chemical pesticides and synthetic fertilisers were causing environmental harm, thus this farming began as a response. It's a new agricultural system that restores, maintains, and enhances the ecological equilibrium. Organic farming makes use of organic inputs such as green manures, cow dung, and other organic materials. Organic farming makes use of organic inputs such as green manures, cow dung, and other organic matter. Organic farming is highly environmentally beneficial since it does not utilize fertilizers or chemicals. The Organic Farming Action Program goal is to promote and significantly improve organic farming via a series of key actions. The only way to preserve and enhance the amount of carbon that can be absorbed by the soil is to add organic materials to it on a regular basis, which is the foundation of organic farming. Organic agriculture is a unique production management approach that maintains and increases agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity, while excluding all synthetic off-farm inputs. Chemical and fertilizer-based products are less nutritious, delicious, and excellent for your health than organic items. Organic farming generally more profitable.

KEYWORDS: *Agriculture, Biodiversity, Crop rotation, Health, Organic farming.*

1. INTRODUCTION

Some people have recently placed their lives in danger by using hazardous pesticides and fertilizers. In India, population increase is a big issue. The need for food is increasing as a result of population expansion. To meet the need for food, artificial fertilizers, hazardous pesticides, and hybrids are used. Which has a negative impact on human health and the environment. Organic farming is the only method to keep ourselves and the environment safe from harmful chemicals. Organic agriculture is becoming increasingly popular among Indian farmers. Organic farming is not a new farming method. In India, organic farming is a type of agriculture that attempts to cultivate crops in a way that keeps the land alive[1]–[4]. Using organic waste, waste crops, animal and agricultural waste, aquatic waste, and other organic resources in a healthy manner. Organic farming is a method of cultivating land and raising crops that uses organic wastes and other biological materials, as well as beneficial microbes, to release nutrients to crops for increased sustainable production in an environmentally

friendly, pollution-free environment. Pest control is generated from organic manure and animal or plant waste in this agricultural procedure. Chemical pesticides and synthetic fertilisers were causing environmental harm, thus this farming began as a response. It's a new agricultural system that restores, maintains, and enhances the ecological equilibrium. Organic farming makes use of organic inputs such as green manures, cow dung, and other organic materials. Organic farming is a societal necessity, not just from the standpoint of consumers, but also from the standpoint of farmers. Organic farming may become a cure for transforming rural agriculture into a well-sustainable agriculture, as it may provide a foundation for sustainable agriculture, repay conversion costs, and preserve soil sustainability. Overuse of fertilizers and artificial growth regulators has resulted in a problem known as pollution. For survival, a natural balance between life and property is required. Given the reality that fossil fuels are rapidly depleting and are non-renewable, organic, environmentally friendly farming and agriculture has gained traction. Crop rotation, crop leftovers, animal manures, legumes, green manure, off-farm organic wastes and bio fertilizers, mechanical cultivation, and mineral containing rocks are all used in organic farming methods. Controlling weeds, insects, and other pests while maintaining soil production to give plant nutrients and biological pest management. Grain, meat, dairy, eggs, fibres like cotton, jute, flowers, and other agricultural goods may all be produced organically. As a result, organic farming ensures a long-term sustainable lifestyle for future generations[5].

1.1 Objectives of Organic Farming

- Crops should be grown in a way that allows them to grow without interfering with their natural behaviors and circumstances.
- To offer appropriate long-term fertilization for crop biological processes using natural pesticides.
- The production of healthful and nutritious meals on a regular and adequate basis.
- In industries, encourage the use of recycled materials and rely on renewable energy sources.
- To make organic pesticides and weed killers to protect crops from pests and weeds.
- To reduce erosion, pollution, and deterioration of the soil.

1.2.Principle of Organic farming:

According to IFOAM (International Federation of Organic Agricultural Movement), there are four main principles of organic farming are mentioned below:

1.2.1 The principle of Health:

Organic agriculture's goal, whether in farming, processing, distribution, or consumption, is to maintain and improve the health of ecosystems and creatures, from the tiniest bacteria in the soil to humans. Organic agriculture, in particular, aims to create high-quality, nutrient-dense food that aids in health prevention and well-being. As a result, it should avoid the use of potentially harmful fertilisers, pesticides, animal medicines, and food additives. The concept emphasises the need of good soil health. If the soil is healthy, it will produce healthy crops, which will in turn produce healthy animals. If crops are healthy, they will have a beneficial influence on human health, and we will have a healthy body if we consume healthy crops. The most essential thing is to concentrate on good soil.

1.2.2. principle of Ecology:

The production of crops and animals should be based on nutrient-rich land, according to this idea. This principle's major goal is to achieve ecological balance through farming, therefore it emphasizes recycling. Through the design of farming systems, the development of habitats, and the preservation of genetic and agricultural variety, organic agriculture should achieve

ecological balance. Landscapes, climate, ecosystems, biodiversity, air, and water should all be protected and benefited by those who produce, process, trade, or consume organic goods. Local circumstances, culture ecology, and size must all be considered while implementing organic management. In order to maintain and improve environmental quality while conserving resources, inputs should be minimized through reuse, recycling, and efficient material and energy management.

1.2.3. The principle of fairness:

This idea stresses that people involved in organic agriculture should handle human interactions in such a way that all parties -processors, distributors, farmers, merchant's laborers, and customers are treated fairly at all levels. Organic agriculture should improve the quality of life for everyone engaged, as well as contribute to food sovereignty and poverty reduction. It aims to produce a sufficient supply of good quality food and other products. This principle insists that animals should be provided with the conditions and opportunities of life that accord with their physiology, natural behavior and well-being. Fairness necessitates open and equitable production, distribution, and trading systems that account for actual environmental and social costs.

1.2.4. The principle of care

This concept argues that in organic agriculture, prudence and accountability are the most important considerations in management, development, and technological choices. Organic agriculture requires science to guarantee that it is healthy, safe, and environmentally sound. Scientific knowledge, on the other hand, is insufficient. Time-tested solutions are based on practical experience, accumulated wisdom, and traditional and indigenous knowledge. Organic agriculture should avoid major hazards by implementing suitable technology and avoiding risky ones like genetic engineering. Through open and participatory procedures, decisions should reflect the values and needs of all those who may be affected.

1.3. Types of Organic farming

There are two types of organic farming which are shown below**:**

1.3.1. Pure organic farming:

Every artificial chemical is avoided in pure organic farming. Fertilizer and insecticides are obtained from natural sources in the process of clean farming. It's referred to as "pure" organic farming. For high production, pure organic farming is the best option.

1.3.2. Integrated organic farming

To meet ecological requirements and expectations, integrated organic farming include pest management and nutrition management.

1.4. Techniques of organic farming:

Agricultural production seeks to nurture the land and grow crops in such a way that organic waste improves the soil's health. It focuses on growing foods that are high in nutrients. Organic farming is done using a variety of ways, which are follows:

1.5. Soil Management:

In India, soil management is the most important aspect of organic farming. Soil loses nutrients and fertiliser as a result of agriculture. Soil management is the process of replenishing soil with all of the nutrients it requires. Organic farming makes use of natural methods to boost soil fertilityit makes use of microorganisms found in animal waste. The microorganisms contribute to the soil being more productive and fruitful. The first method of organic farming is soil management.

1.6. Crop Rotation:

Crop rotation is the process of growing many crops on the same piece of land in order to maintain soil health, maximize nutrients, and battle insect and weed pressure. Crop rotation is an excellent agricultural practice that organ. A basic rotation may consist of two or three crops, whereas more complicated rotations may include a dozen or moronically refills the soil by allowing various plants to provide different nutrients. By disturbing pests', weeds', insects', and other organisms' habitats, this approach aids in pest management. A basic rotation may consist of two or three crops, whereas more complicated rotations may include a dozen or more[6], [7].

1.7. Weed Management:

Weeds, often known as wild grass, are unwanted plants that thrive in agricultural areas alongside the crops. These weeds suck up the majority of the nutrients in the soil, affecting crop output. Instead of eliminating weeds, organic agricultural practises attempt to minimize their development.

There are two ways that may be used to get rid of the weed:

1.8. Crop Diversity

These days, a new activity known as "Polyculture" is all the rage. Polyculture allows a range of crops to be grown at the same time in order to meet the world's growing demand for food[8]. Traditional farmers, on the other hand, were accustomed to cultivating only one type of crop in a specific place, known as "monoculture."Crop Diversity is the bedrock of agriculture, allowing it to change and adapt to the never-ending problem of supplying enough healthy food for an ever-growing population.

1.9. Management of Chemical

Agricultural farms include both beneficial and dangerous species that have an impact on the farm. The growth of organisms must be managed in order to safeguard crops and soil. To protect soil and crops, natural or less chemicals, herbicides, and pesticides are employed in this procedure. To keep other species at bay, proper care is necessary throughout the region. Management of chemical are very important in agriculture sector, overuses of the chemical damage the crop or reduce the crop production as well as also harmful on human health[9], [10].

1.10. Controlling pests Biologically

Many creatures call agricultural areas home. Some of these creatures are beneficial to agricultural productivity, while others are detrimental to crop production and cause crop disruption. In order to preserve soil fertility and crop protection, we must also restrict the growth and population of dangerous organisms. As a result, organic farmers may organically manage pests by using moderate (lower-chemical) or natural herbicides and insecticides. Farmers may also properly sterilize the farm to keep dangerous organisms out of the field.

1.11. Genetic Modification

Organic farming methods are primarily concerned with improving crop output and soil quality through natural means. As a result, we should keep genetic alteration out of organic farming. It should be emphasized, however, that pollen from transgenic crops can also be found in seed stocks used in organic farming. As a result, keeping organic farming free of genetic alteration becomes increasingly difficult.

2. DISCUSSION

Organic farming in India is highly cost effective since it does not utilize expensive fertilizers, pesticides, or HYV seeds for crop planting. There are no costs associated with it. Chemical and fertilizer-based products are less nutritious, delicious, and excellent for your health than

organic items. Organic farming is highly environmentally beneficial in India since it does not utilizefertilizers or chemicals. A farmer can get a strong return on investment by using cheaper and local inputs. One of the most significant advantages of organic farming is the reduction of pollution. Agricultural techniques result in greater pricing, more commerce, and advantages for farmers, which has raised demand for organic commodities. The primary drawback of organic farming is a lack of product promotion and insufficient infrastructure. In the early years, organic agricultural goods are scarce. Farmers are having a hard time accommodating mass output. The organic product have the shorter life because of it doesn't use of any artificial preservatives.

3. CONCLUSION

Farmers selling their produce to the local community used to be considered organic farms. The farms were small and private, with interaction between the farmers and the customers. Customers were able to learn more about the farmer and how their food was grown. Agriculture should be a part of the solution, not the issue. The only way to preserve and enhance the amount of carbon that can be absorbed by the soil is to add organic materials to it on a regular basis, which is the foundation of organic farming. We need to transition to contemporary organic agricultural practices in order to help reduce the potential for severe environmental impacts. Organic agriculture is the only way to nourish the land and regenerate the soil by returning to our ancient farming methods, which are free of chemicals, pesticides, and fertilizers. Choosing not to utilize chemicals, synthetic materials, pesticides, or growth hormones to produce high nutritional quality food in sufficient numbers is a feasible step toward sustainable development. Organic farming is a type of agricultural system that allows for rapid modifications in farming practices. Organic farming is a science in and of itself, which any conventional farmer may readily master. It can create thriving, micronutrient-rich soils that can be utilised to raise crops for decades without being depleted. Organically grown items are devoid of hazardous chemicals, artificial flavors, and preservatives, which result in higher prices for customers than non-organically cultivated products.

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