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Organic Farming: A Sustainable Farming Road

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Abstract: ***Organic farming is the natural farming method in which no chemical substances are used either as fertilizers or as pesticides. Only natural manures such as organic waste, farm waste, animal waste, compost, etc. are used for organic farming. It essentially seeks to keep the soil alive by preserving soil health. Some of the techniques used are crop rotation, blended crop cultivation and biological pest control. Organic farming utilizes fewer pesticides compared to conventional farming, reduces soil erosion, reduces nitrate leaching into groundwater and surface water, and recycles animal waste back into the farm. These advantages are counterbalanced by greater consumer food expenses and usually reduced returns. In fact, organic crop yields have been discovered to be approximately 25 percent lower overall than conventionally grown plants, although this may differ significantly based on the crop type. The challenge for future organic farming will be to keep its economic advantages, boost returns, and lower prices while meeting the difficulties of climate change and a growing world population.***
Keywords: Organic farming, conventional farming, ecology, crop diversity, soil management

I. INTRODUCTION

Organic farming is nothing but an alternative agricultural scheme that emerged in the early 20th century. Various organic farming organizations have created and altered this scheme from time to time. Compost manure, green manure, bone meal, etc. were involved in this type of farming. Synthetic fertilizers and pesticides are strictly prohibited.

Before the mid-19th century, artificial fertilizers had not been used in agriculture. It was the moment when the market launched artificial fertilizers. These were inexpensive and strong artificial fertilizers. These fresh methods have been useful for a short time, but have had side effects on human health over the long term. The impact can be seen on soil circumstances like soil compaction, erosion and decrease.

Organic farming, an agricultural system that utilizes ecologically oriented pest controls and biological fertilizers derived mainly from animal and plant waste and nitrogen-fixing plants. Modern organic farming has been created as a reaction to the environmental harm induced by the use of chemical pesticides and synthetic fertilizers in conventional farming and has countless ecological advantages.

In the early 1900s, the ideas of organic farming were created by Sir Albert Howard, F.H. King, Rudolf Steiner and others who thought that the use of animal manures (often produced into compost), plant cover, crop rotation, and biologically based pest control resulted in a better farming scheme.

A. Importance Of Organic Farming

Organic agriculture is a significant way to preserve the natural habitat. The atmosphere stays pure and less polluted through organic farming, and all the sources on this planet to sustain life stay less threatened. In addition, organic farming is being imported to provide individuals with good food. When they eat organic farming products in the form of healthier foods, they eat very little or no chemical

B. Organic Farming Methods

Organic farming is performed in a setting that is environmentally friendly and pollution-free to release nutrients to plants for enhanced sustainable production. It seeks at producing high dietary value crops. There are different ways of practicing organic farming as follows:

1) *Crop Diversity:* A fresh practice that is called polyculture has now come into the image for days in which a range of plants can be grown concurrently just to satisfy growing crop demand. Unlike the old practice in which only one sort of crop was grown in a specific place-Monoculture.
2) *Soil Management:* The soil loses its nutrients and depletes its quality after crop cultivation. Organic farming starts using natural methods to enhance soil health. It focuses on the use of animal waste bacteria that helps make the soil nutrients more productive to improve the soil.

3) *Weed Management:* Weed, which develops in agricultural areas is the unwanted plant. Organic farming puts pressure on the weed to be lowered rather than totally removed.
4) *Control Of Other Organisms:* the agricultural farm has both helpful and dangerous organisms that influence the field. To safeguard the soil and plants, it is necessary to control the development of such organisms. Using herbicides and pesticides that contain less or are natural chemicals can do this. In addition, adequate sanitation of the entire farm should be retained in order to regulate other organizations.
5) *Livestock:* Organic agriculture encourages the use of domestic animals to improve the farm's sustainability.
6) *Genetic Modification:* Genetic modification is kept away from this type of farming because organic farming focuses on the use of natural methods and discourages engineered animals and crops.
7) *Use of Green Manure***:** the farmers use the dying or uprooted crops as green manure in organic farming. Through tilling to further decomposition, these crops are transformed into the soil and form nutrients for the soil to boost their fertility.
8) *Use of Compost:* Compost is prepared by farmers by digging a pit and filling it with green waste and decaying water. Later this extremely nutrient-rich compost for plants will be used in farms as fertilizer to boost soil fertility.

C. *Advantages Of Organic Farming*

1) *Degraded Soil Regeneration:* Organic farming is the best way to avoid pollution of the environment and soil degradation. In some regions of the globe where the soil has been degraded owing to excessive use of chemical fertilizers, organic farming helps to regenerate the soil by recharging it with nutrients that are needed.
2) *Maintaining the Ideal Soil Situation:* Because only organic manures are used in organic farming, it enables to maintain the ideal soil condition to achieve greater crop quality output.
3) *No need to buy Chemical Manures:* farmers only use natural and organic manures in organic farming so that farmers do not have to buy any chemical manures that reduce the cost.
4) *Improves Soil Quality:* Organic farming enables the soil recover its fertility energy, as this type of farming supplies multiple needed nutrients to the soil and also helps the soil retain its nutrients.

D. *Disadvantages Of Organic Farming*

1) *Higher Production Costs:* Farmers need more manpower to preserve multiple related works for organic farming, which raises the cost of crop manufacturing.
2) *Crop Yields Are Becoming More Extensive:* as farmers receive little yield from their farms through organic farming compared to conventional farming, their produce is becoming more expansive.

II. SIKKIM: INDIA'S FIRST ORGANIC STATE

Sikkim became India's first "100% organic" state in January 2016. Today, all agricultural activities in Sikkim are carried out without the use of synthetic fertilizers and pesticides, offering access to safer food options and making agriculture more environmentally friendly.

Nine other states in India — Karnataka, Mizoram, Kerala, Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Tamil Nadu, Maharashtra, and Gujarat — have a policy or legislation on organic farming. Kerala has announced its intention of becoming 100% organic of these.

The Sikkim model has a lot to learn from these countries. Sikkim is a fantastic illustration of how it has succeeded in changing mindsets, something that the state of Kerala could learn from Sikkim.

A. *At the end of the row*

With the launch of the Sikkim Organic Mission, the process of converting Sikkim into a 100% organic state was fast-tracked in 2010:

1) *2003* – Sikkim starts to discourage the use of chemical fertilizers and decreases the subsidy for fertilizers by 10%. The Sikkim Organic Board is formed.
2) *2003-2009* - State adopts 396 villages to evaluate organic inputs as bio-villages.
3) *2006-2009* - Approximately 8,000 ha of property is organically certified. In five government farms and three Krishi Vigyan Kendras, eight units of vermi-culture hatcheries are created.

4) *2008-09* - Ginger processing unit in Birdang Farm, West Sikkim is created. Ginger is one of Sikkim's four high-value plants for its commercial potential.
5) *2010* - Sikkim Organic Mission is introduced to rapidly convert Sikkim to a 100% organic state.
6) *2010-11* – Certified more than 18,234 ha of land. Automated greenhouses are set up to produce quality planting material that is disease free.
7) *2011-12* - 19,216 ha land is certified.
8) *2012-13* – 19,188 ha of certified land. Organic agriculture is part of the college curriculum.
9) *2015* - The entire agricultural region of the state is transformed into ' organic certified. '
10) *2016* - Sikkim is officially proclaimed an organic state of ' 100 percent. '

India's 100% organic state "Sikkim won the" Best Policy Oscar "Conferred by the Food and Agriculture Organization for the best agroecological and sustainable food systems strategies in the world. Sikkim was awarded the 2018 Future Policy Award. The award is co-organized by the Food and Agriculture Organization of the United Nations, the World Future Council (WFC) and IFOAM-Organics International.

More than 66,000 farming families have benefited from the shift. The tourism industry in Sikkim has benefited significantly from the shift of the state to 100% organic since the amount of visitors increased by more than 50 percent between 2014 and 2017.

III. CONCLUSION

To maintain life on Mother Earth, organic farming is essential if we take a long-term view. Organic farming is essential in order to naturally recharge the fertility of the soil and generate good food for the individuals. Although farmers may be affected by low crop yields, organic farming is essential for all to lead life in a natural manner by preserving the economic and ecological balance for future generations. Looking at the present situation when the soil in our farming areas is deteriorating owing to excessive use of chemical fertilizers, organic farming can be the best way to recharge Mother Earth with all the natural nutrients so that people can lead healthier lives.

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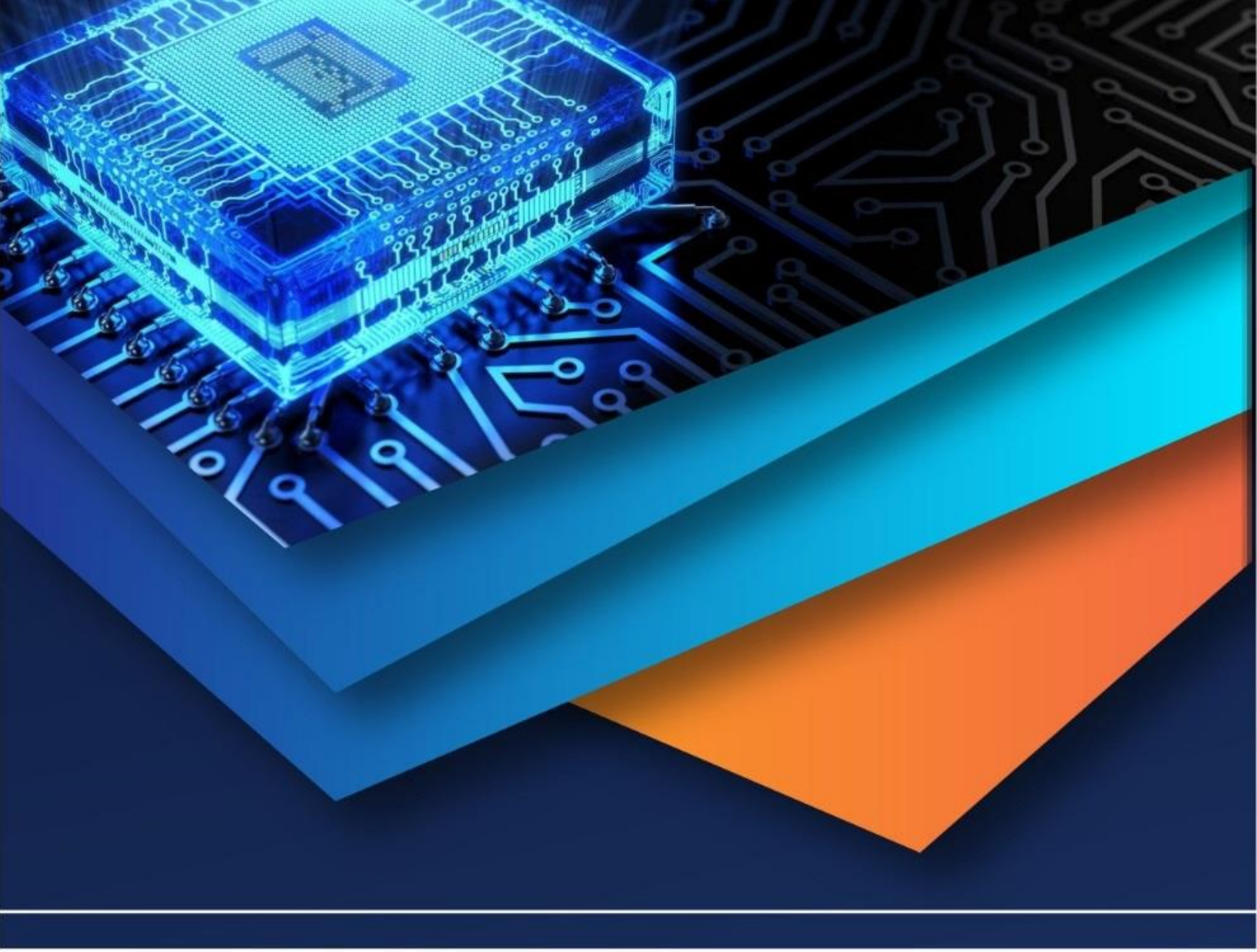

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