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ROLE OF ORGANIC FARMING IN SUSTAINABLE AGRICULTURE

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ABSTRACT

According to FAO "Organic farming is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity. This is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs". Sustainable agriculture is a system of agriculture that maintains its productivity over the long run. This system of agriculture seeks to integrate three main objectives into their work: a healthy environment, economic profitability and social and economic equity. Sustainable agriculture systems are designed to take maximum advantage of existing soil nutrient and water cycles, energy flows and soil organisms for food production. Also, such systems aim to produce food that is nutritious, without being contaminated with products that might harm human health. Organic farming has emerged as a sustainable agriculture system which has great impact on socioeconomic status of small farmers in rural areas, particularly of developing countries. It is now established that current farming practices are disrupting the natural cycles of nutrients and soil, these are not sustainable, and must be transformed. In due course, excessive soil and nutrients are lost from farmland. Organic farming tries to protect the natural cycles of nutrients, so that off-site losses are minimum and the effectiveness of nutrient cycling may be enhanced. Organic agriculture places value not only on the production of the present but also on future production and the future capability of the earth to sustain mankind and diverse ecosystems. In the present scenario organic agriculture needs substantial new developments so that it can effectively and efficiently supply a large proportion of human needs. This field needs to be explored with a higher level of creativity and innovation so that current systems of productivity can be replaced by organic farming and it has huge prospects in the long term scenario of sustainable agriculture.

Keywords: *Organic farming; Sustainable agriculture; nutrient cycling, ecosystem*

INTRODUCTION

Present day agriculture has received worldwide consideration in three unique regards: (a) expanding interest for food by blossoming human populace; (b) changes in the global environment caused by agriculture's rising risks; also (c) rising dangers of natural order of things defilement and related wellbeing perils because of inordinate utilization of agrochemicals. The global food crisis was greatly reduced by the green revolution, but at a high environmental cost. As well as adding to green house gases, agriculture influences both the environment and human wellbeing through added supplements and pesticides. Most soils lose their fertility stability as a result of continuous and extensive cropping without comparable nutrient input. Thus, arable terrains are proceeding to request rising degrees of supplements to accomplish similar degrees of collect. Ceaseless expansion of synthetic composts and pesticides, albeit enormously expanding the worldwide food creation,

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have debased farming grounds, brought down the quality and taste of agrarian produce, and have expanded climate instigated chances. A sustainable agriculture is one that produces a lot of food without polluting the environment or using up the earth's resources. The management practices of crop and animal production that guarantee long-term ecological productivity without deteriorating their natural resource base or impoverishing human health are referred to as sustainable agriculture. Preservation of soil organic matter through methods like conservation tillage and residue management are examples of sustainable agricultural management practices. a selection of crops that are ecologically suited to the climate of the area; improvement of agro-biodiversity (e.g., intercropping and agro-ranger service); soil erosion prevention (terracing and windbreaks, for example); and bolstering biogeochemical cycles (such as effective crop rotation and the use of appropriate drainage and irrigation methods); and safeguarding public health (such as organic farming, integrated pest management, and minimizing the use of synthetic fertilizers and biocides) The 1992 Rio Declaration on Environment and Development, Chapter 14 of Agenda 21, adopted by the United Nations General Assembly, and the 1996 Rome Declaration on World Food Security serve as the foundation for the concept of sustainable agricultural development. According to a decision made by the Commission on Sustainable Development, the goal of sustainable agriculture development is "to increase food and enhance food security in an environmentally sound way so as to contribute to sustainable natural resource management." People's preference for safe and high-quality food has changed significantly as they become more aware of the health risks posed by agrochemicals and sustainable agriculture. As a result, there is a growing interest in alternative farming methods, such as organic farming.

THE CONCEPT OF ORGANIC FARMING

Organic farming is a safe and long-lasting method of farming that does not harm the environment and produces healthy crops. It dodges the utilization of counterfeit substance manures and pesticides on the land, depending rather on fostering a sound, ripe soil and growing a combination of yields. Along these lines, the homestead remains organically adjusted, with a wide assortment of useful bugs and other untamed life to go about as normal hunters for crop bothers and a dirt brimming with microorganisms and worms to keep up with its essentialness. Organic farmers reduce health and pollution issues by avoiding synthetic chemicals. The two most common objectives of organic agriculture are: I) to get poison free agricultural produce for human beings, and (ii) to achieve a shut supplement cycle for reclamation of negative soil supplement adjusts. With an annual average growth rate of 20% to 25%, demand for organic food has steadily increased in both developed and developing nations due to its lack of toxins. Natural cultivating depends on "organically determined supplements' and achieves a shut supplement cycle, a vital element to accomplish manageable horticulture.

NEED OF ORGANIC FARMING

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The farming industry's commercialization had a significant negative impact on the environment. The use of pesticides has resulted in a significant buildup of chemicals in our environment; animals, the air, the soil, and even our own bodies Pesticides and other synthetic deposits in our food and a by and large decreased nature of food have prompted a market expansion in different illnesses, mostly different types of malignant growth and diminished body resistance. This is where natural cultivating comes in. Each of these issues can be addressed by organic farming. In addition to the obvious, immediate benefits it confers on the environment and food quality, organic farming greatly aids farmers in becoming self-sufficient in their requirements for agricultural inputs and reduces costs.

FAVOURABLE EFFECTS OF ORGANIC FARMING ON ENVIRONMENT AND HUMAN HEALTH

In general, organic farming is significantly more environmentally friendly than conventional farming. Energy use is one of the biggest issues facing the environment today, and organic farming uses much less energy than conventional farming. In actuality, energy proficiency is around seven percent more noteworthy for the natural cultivating framework. The use of significantly less fertilizer and the complete absence of synthetic fertilizers, both of which are harmful to soil, water, animals, and people, are additional environmental benefits of organic farming. Likewise, the nitrate content of natural field is essentially lower than on customary homesteads because of the shortfall of solvent manures. An excessive amount of nitrogen can upset the balance of the community in the soil and cause water-based algal blooms that suffocate other aquatic organisms. Biodiversity, or the wide range of animal and plant species that are necessary for the survival of all species on Earth, is another benefit of organic fields. Organic farming produces significantly fewer carbon dioxide emissions than conventional farming. Carbon dioxide is the main ozone depleting substance that causes a dangerous atmospheric devation. The amount of salicylic acid in organic vegetables was six times higher than in non-organic vegetables. Salicylic corrosive aides battle the solidifying of veins as well as gut malignant growth.

ORGANIC FARMING IN INDIA

Natural cultivation is picking up speed in the country as a manageable and earth safe creation framework. It is catching up quickly with Indian farmers and businesspeople in two productive rain-fed regions—tribal areas in the north-east and hilly regions of the country—where agricultural practices and production systems are largely organic due to the absence of or low use of pesticides and fertilizers. By enhancing the natural processes and cycles that are in harmony with the natural environment, the system promises to maintain the fertility of the soil as well as control of pests and diseases. Organic manures have been used in Indian agriculture since the Vedic period. Farmers in some parts of India have been using it ever since, either out of habit or due to a lack of resources. The business natural cultivating as rehearsed today, is currently at a beginning stage. In February 2005, the International Federation of Organic Agriculture Movement (IFOAM) and Stiftung Oekologie & Landbau (SOL) conducted a survey, which found that only 0.05% of all agricultural

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land in India is managed organically. As per this study, there are around 5147 confirmed natural ranches in India. The organic farming industry in India is almost entirely focused on exports and is estimated to be worth $20 million US. As per rural and Handled Food items Commodity Improvement Authority (APEDA) a nodal organization engaged with advancing Indian natural farming, around 6792 tons of natural items with a value of 72 million rupees are bring sent out from India.

AREAS OF CONCERN

The production of organic food does not "cost the earth." It shouldn't likewise cost buyers 'the earth' to eat. Simultaneously notwithstanding, expecting that the decision market costs for customarily developed food (synthetically developed food) are fair, it is just right that a natural rancher ought to get basically a possibly more exorbitant cost for his produce and his endeavors, particularly when buyers know that natural food is better compared to artificially developed food in all regards, including taste, flavor and for their own wellbeing, other than that of the earth. A common issue that organic farmers frequently face is another facet of the "issue" of organic food, at least in India: due to the absence of a ready market and frequently unprofitable prices for their produce. By and large, the cultivator doesn't get convenient installments from go betweens including natural food merchants. On the other hand, interested consumers of organic food are unable to find what they require, at least not at reasonable prices. Supplies are much of the time flighty or untrustworthy and now and again purchasers are not even certain on the off chance that the food they are purchasing is without a doubt natural. There are various ranches in India which have either never been chemically managed/developed or have changed back over completely to natural cultivating as a result of their ranchers' convictions or only for reason of financial matters. Despite being organic, these tens of thousands of farmers cultivate hundreds of thousands of acres of land. Their produce is sold at the same price as conventionally grown produce on the open market, or it is sold solely on the basis of goodwill and trust as organic through a few specialty shops and regular bazaars. These ranchers won't ever select affirmation due to the costs required as well as the broad documentation that is expected by certifiers.

CONCLUSION

Soil, minerals, water, plants, microflora, insects, animals, and humans are all interconnected in organic farming. It makes useful scenes and effectively accommodates food creation and natural preservation. Natural administration depends on nearby HR and information to improve regular asset processes, regarding environmental conveying limits. By diminishing reliance on off-ranch inputs and making more adjusted supplement and energy streams, biological system flexibility is reinforced food security is expanded and extra wages are produced. Natural cultivating respondents emphatically to all feasible agribusiness and rustic advancement goal and assists in keeping up with ruining fruitfulness, further develop crop creation and financial states of the ranchers.

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