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Organic Agriculture and Its Effects on Development

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ABSTRACT: ***Organic agriculture is a method of agriculture, which increases soil quality by maximizing local productivity while minimizing agrochemicals, GMOs and the numerous cytotoxic compounds used as food additives. The harmful health consequences of traditional products are all contributed to by pesticide residues, nitrates, toxic metals, hormones, antibiotic residues and genetically engineered plants. In recent decades, demand for organically grown food has increased in the quest for nutritious food due to possible positive benefits and food safety issues. The commercialization of organic agricultural practices is a means of reducing the environmental impacts of agriculture. The present study examined all pro and con elements of organic agriculture and found that, although organic production has several benefits, it is currently not regarded an adequate agriculture method to meet world food demand. The scope of organic farming for the future appears very feasible if it increases production volumes and is cost-efficient, since organic products are expensive, reducing their demand and thus small-scale production.***

KEYWORDS: ***Agriculture, Biodiversity, Farming, Organic, Soil Fertility.***

1. INTRODUCTION

"Organic agriculture is a comprehensive management method for production that supports and improves health and biodiversity in agro-ecosystems, biological cycles and soil biology. It stresses the use of managerial methods to employ off-farm inputs, bearing in mind that local circumstances demand for systems locally tailored. Instead of utilizing synthetic materials, this is achieved by applying agricultural, biological and mechanical means to fulfil any given function in the system as far as it can." Systems and products of organic farming are not always recognized and are known as "non-certified organic agriculture" This does not include agro. This excludes farming methods which do not default artificial inputs (e.g. systems that lack soil building practices and degrade land). For organic agriculture, three distinct driving forces may be recognized [1].

As defined by the Organization on Food and Agriculture (FAO) Organic farming is a specific method of quality control that promotes and improves sustainable farming by applying agronomical, biological and mechanical processes on farm, in the absence of any chemical input, along with habitat cycles, ecosphere cycles and soil biology functions. Crop rotation, farming leftovers, animal manure, organic waste off-farm, rock minerals quality and biological nutrients movements and plant preservation systems are, rather than traditional inputs, utilized to the maximum degree possible in organic farming (Figure 1) [2].

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Figure 1: Different Kinds of Practices Performed in Organic Farming.

Organic agriculture is needed as it will be important, as the world's population increases, not only to preserve but also to enhance production in a sustainable way. The 'Green Revolution,' which depended on inputs in large part, has come to a standstill and is now supported by a drop in investment returns in the form of falling dividend [3]. As a consequence, a normal balance must be kept at all costs for the survival of life and property. In our current era, when these agrochemicals are manufactured of fossil fuels and are not durable, the obvious choice is more significant. Organic farming serves to improve stability in soils for a long time by maintaining organic carbon and fostering mechanical and biological activity (Figure 2). It passively supplies plant nutrients by using relatively insoluble sources of nutrients accessible to the plant via soil microorganisms. Organic agriculture monitors the impact of the approach on the entire climate and also on biodiversity. Biodiversity and surrounding landscape maintenance monitor the impact of the agriculture procedure on the climate as a whole [4].

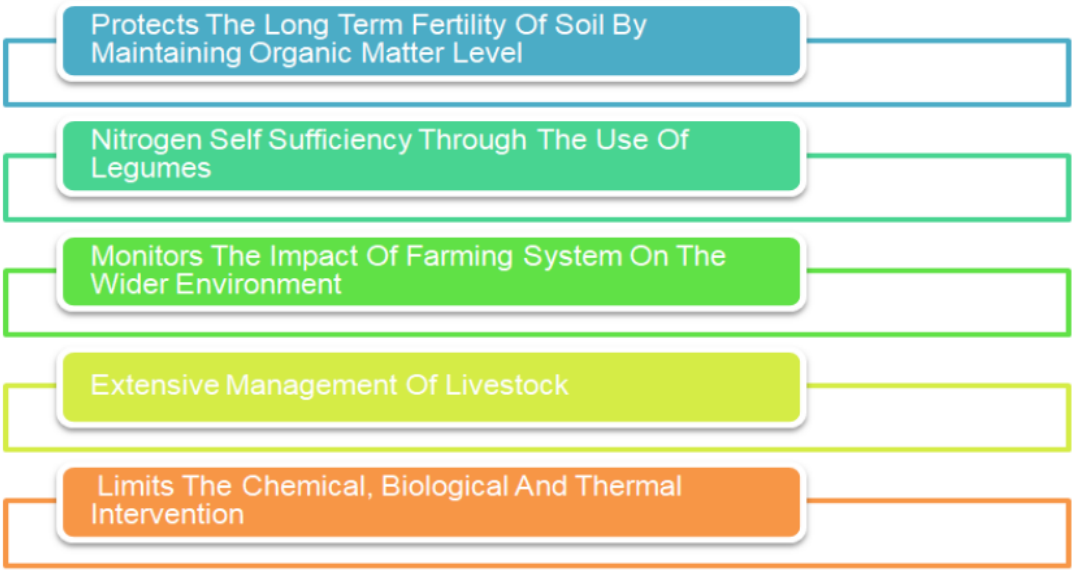

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Figure 2: Key Features Includes in Organic Farming System.

Future of Organic Farming Policy:

In view of export excess, degradation of biodiversity and a significant reliance on product subsidies for traditional crops from the late 1980s, bio-agricultural policies in Europe have been created. The conditions influencing organic agriculture output in the last two decades are radically dissimilar as just another European policy preparatory cycle approach. Organic farming may contribute significantly to the paradigm for European agriculture's role in building local economies, in accordance with the routes of transformation for organic agriculture output. With the focus on. With a focus on climate change, there are now radically opposing views that minimize greenhouse gas emissions via agricultural methods.

Some view organic farming as a disadvantage, whereas others saw that as a direction to minimize dramatically imports of fossil fuels, reduce nitrous oxide pollution from the production and use of nitrogen fertilisers and create opportunities for soil organic carbon confiscation. This would be an advantage for organic farming. The focus of organic farming on food security, at least in the urban agricultural sense, is viewed with its reduced yields as a major impediment. On the one hand it is important to expand food supply, using GMOs as well as more intensive agriculture. On the other hand, it is important. However, what is created and how it is made of us is important to look at. It is important, though, to see what is created and how it will ultimately be used.

Policy in Organic Farming:

Organic agriculture has lasted for over 80 years, but the policy-makers, stock holders, demonstrators, and producers have been only the topic of great attention since the mid-1980s. This defining time corresponds with growing concerns about the harmful environmental consequences of the post-War agricultural growth and the adoption of the agri-environmental programmes, such as organic agriculture, rules. In the unavailability of additional sources of income, organic farmers have always relied on customers to uphold their beliefs and regulations. Nutritious, natural and great quality food is generally valued, and buyers may pay a premium cost. Since organic farming is now progressively a public agricultural policy instrument, organic farming is now receiving state financing in domains such as science, business development and organizational support [5].

Organic Agriculture and Yields:

Organic agriculture's performance relies on productivity in relation to the preceding method of farm administration. Over-simplification of impacts on yields of conversions on organic farming shows that organic systems reduce outputs in industrial nations; the range relies on the level of intensity prior converting of the analog output usage. Conversion to organic farming generally produces almost equal yields in the so-called Green Revolution zones (irrigated land). Organic agriculture has the ability to boost yields in traditional rain-fed agriculture (with poor input from outside sources).

Many of the different crop systems such as those created by small - scale farmers and livelihood farmers are actually more productive in terms of total yield per unit area. These return benefits were ascribed to an improvement in nutrient, water and light use and a mixture of other variables, such as the incorporation into the farm of new renewable components (e.g. legumes) and lower loss of insects and pathogens. Greater returns on organic farms can be determined if the departure

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point is a conventional system even though it is decreased. Results will rely on environmental and managerial abilities, although this is likely to increase. Results will vary according on environmental and managerial abilities but this is predicted to enhance in the course of increasing human capital assets. But a solid land tenure system is crucial since a person will not likely engage in land improvements if their future is not secure.

Organic Agriculture and Food Security:

The persistent world hunger has proven that farming alone (whether or not conventional) cannot alleviate insecurity in the food market alone. However, there are numerous doubts regarding organic farming's capacity to supply food, and various guesses are made, without even a complete database. On the basis of food availability, access to food, consistency and food chain systems, and use of foodstuffs, the FAO held the worldwide conferences on organic agriculture and food safety in May 2007; the materials and the expertise discussed shows that organic agriculture has the ability to nourish the global community under the correct conditions.

Significance of Organic Farming:

As a reaction to detrimental impacts of contemporary industrialized agriculture in the 20th century, organic farming (OF) evolved. These consequences, mostly due to the use of agrochemicals, are pollution of specific environment components, decreased soil quality, decreased plant life and immunology, decreased biodiversity, and reduced food quality with poor health implications. Another factor for OF development was an intense livestock sector that brought animal harm, increasing use of medicines, the use of poor food, poor animal health and decreased livelihoods (Figure 3). Rural emigration is the ultimate effect of industrialized agriculture. OF techniques were have mostly been created by farmers themselves, and then tested in the practice and then confirmed by scientific study as an alternative to standard agricultural routines. The OF now has the definition of organic foods by law and government markings. OF is funded through rural development programmes (agro environmental and food-quality programs). Both organic farms and the market for organic foods continue to increase.

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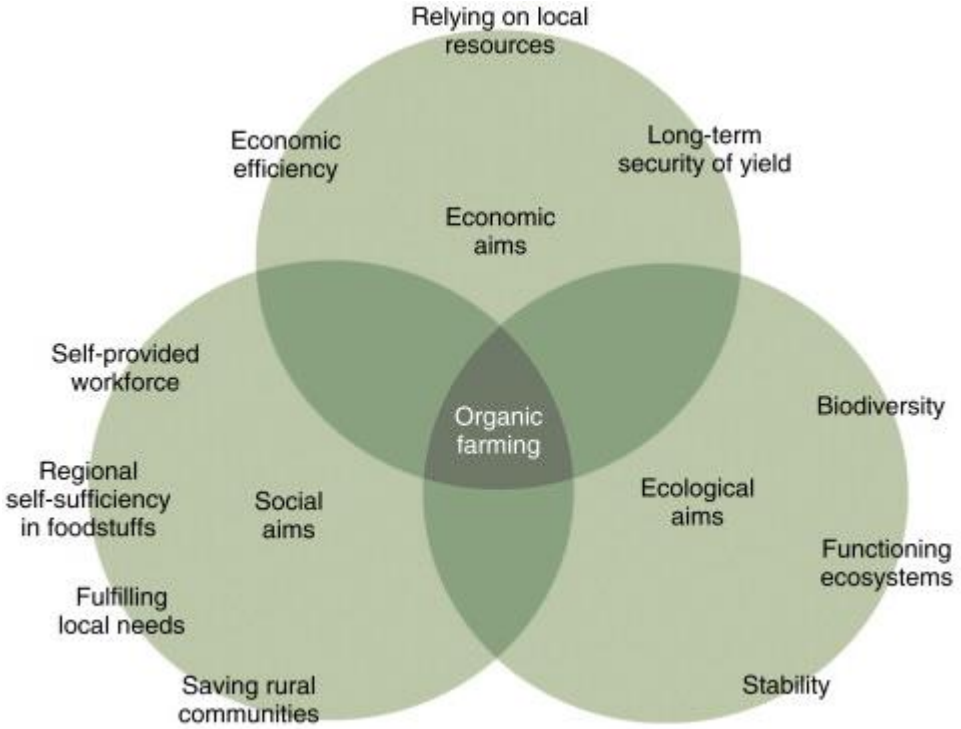

Figure 3: The Importance of Organic Farming, Where Organic Farming Complies with All Demands Required by Contemporary Invariable.

Environmental Aspects and Biodiversity:

According to the environmental aspect, traditional farming quickly depletes natural resources, especially fossil fuels and freshwater, and significantly pollutes land, water and air. Despite OF criticisms, it is particularly advantageous to reduce the environmental effect using organic manufacturing processes. Many increasingly regard sustainable farming approaches like OF as a viable answer to a sustained global loss of biodiversity for a large number of agricultural-related species. Various taxa have been found, which benefit from organic administration due to the increase in quantity, and/or species richness, includes birds and mammals, invertebrates, and arable plants. Three broad management practices (interdiction/reduction of the use of chemical pesticides and inorganic fertilisers; sympathetic management of uncropped habitats; and different agricultural preservation) which are largely (but not exclusively) OF and are especially advantageous for agricultural wildlife are also highlighted. In OF trials, increased soil fertility and increased flora and fauna diversity were found [6].

2. LITERATURE REVIEW

Jorgen E. Olesen et al. have demonstrated a proposal of organic farming crop-rotation experimentation. A farm test for crop yields in organic farming was done on crop rotations. The project aimed to determine if cultivated nature may be exploited in short- and long-term improving organic cereal output on a wide spectrum of soils. The experiment findings mentioned in the first article were provided and discussed in further publications. The study was conducted at four sites in Denmark, each with a distinct soil type and climatic zone. The experimental variables are given

so that management may be adapted to maximize particular therapy compositions. This led to a more realistic technique and the consequences. This made the approach more real and more suitable to farming in the real world [7].

Ivan Tsvetkov et al. reviewed the modern developments of the scientific, governmental, monetary and ecological facets of plant organic agriculture. In addition to normal agriculture, the researcher has examined the influence of organic farming on biodiversity and soil fertility. A key barrier for organic agriculture to general acceptance and further development is the current diversity of domestic and international public rules in this field. Up-to-date methods of analysis have special regard, as they can assist to overcome many of the problems prevalent in organic plant cultivation. According to the research, organic agriculture is also not effective enough to be completely renewable assessed. This emphasizes the importance of huge backing for better scientific findings implementation and enhanced. This underlines the importance of huge backing for the effective realization of scientific results and the increasing networking between all stakeholders, especially organic farmers [8].

C.A. Watson et al. has explained the management of the fertility of the soil in the system of organic farming. The fertility of the ground from the developmental and ecological aspects of the system is fairly hard to distinguish. Crop rotation is the basic technique of combining conservation and increase of soil fertility with diverse plant and animal elements in organic systems. Aid for good structure in the soil and biological activity important to nutrient generation, crop protection and animal's growth, particularly through the application of short-term grasslands. Diversified, well arranged rotations assist to decrease the occurrence and control of pesticides and illnesses. Maintaining fertility in organic farming relies on an integrative long term strategy in lieu of standard agricultural shorter-term approaches because of the complex interactions among different devices [9].

Harun Tanrivermis discussed the development of organic farming and its impacts on farms in Turkey. The first organically manufactured crops were dried sultans, apricots, figs and hazelnuts. Today, 110 different crops and livestock are organically manufactured. The planted area of organic farming was 162,193 hectares and output in 2004 was 217,454 tons. Studies at farm level shows that typical organic crop yields (save for specific crops), farmers' pricing, demands for labour and net profit/hectare of the area planted are usually lower than the conventional crop in Turkey. This study examines the assessment of organic farming in light of current findings of agricultural study and also new national advancements with regard to production, export volume, the legal and institutional framework in Turkey. [10].

3. DISCUSSION

Over the last couple of decades, organic agriculture, particularly in developing countries, has become progressively significant and desire for organic food has risen globally. The new research looks at both the good and the negative aspects of organic agriculture. As the research has shown, organic agriculture helps to maintain the long-lasting overall productivity of soils by maintaining organic matter and increasing soil-biological activity, including rejecting the use of chemical materials, ensuring quality of the food and recycling natural waste for manure, and boosting the quality of soil as already mentioned. This agricultural method has several risks and disadvantages regardless its benefits. The biggest and first difficulty is that it decreases productivity or volume and this is why organic farming is not regarded a suitable way of feeding the world's population.

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Further problems exist, such as the fact that a study of farmers' views on obstacles to organic agriculture was performed in one of the above said literature review sites and the outcomes of this study disclosed that numerous farmers regard organic farming as risky, with a significant output danger after and during conversion. Organic farming produces less than normal farming, but nevertheless has greater economic and environmental sustainability, offering food free of nutritional pesticides and giving additional environmental and social benefits for agri-environmental products. However, these methods are not particularly economical, therefore they are rarely carried out on a very big scale, like ordinary agricultural operations.

4. CONCLUSION

Organic agriculture is a form of agriculture which promotes healthy commodities which do not harm people and the ecosystem. These include commercial pesticides, insecticides, fertilizers, clones, genetically modified organisms, pharmaceutical medicines, hormones and growth boosters. The concept of organic farming requires rigorous compliance with current rules, which restrict practices. The current study examined organic agricultural techniques and their effects on evolution. The main purposes of the research are organic agriculture, diverse methods in organic agriculture, and urban myths in organic agriculture, organic agriculture politics, short history and important aspects. Based on the study findings, organic agriculture in comparison with traditional agriculture has not yet reached economic effectiveness. Aside from the fact that organic farming offers various benefits, their demerits cannot be disregarded because the world food requirement cannot be satisfied using that approach in comparison to conventional farming. This agriculture fails in many respects, and needs further study and development, so that it can expand its output volume and meet the need for food worldwide in the future and will be regarded a suitable approach.

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