

ENVIRONMENTAL BENEFITS OF ORGANIC FOOD PRODUCTION

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Abstract

The claim of conventional food producers is that there is not enough scientific evidence for organic food production good for the environment. This may be true but the facts are proving. Organic food production is capable of eliminating soil and water contamination. It strictly avoids the use of all synthetic chemicals. It does not pose any risk of soil and underground water contamination like conventional farming which uses tonnes of fertilizers and pesticides. It helps preserve local wildlife. Organic farming provides a retreat to local wildlife rather than taking it away its natural habitat like conventional agriculture by avoiding toxic chemicals, using of mixed planting as a natural pest control measure, and maintaining field margins and hedges. It helps conserve biodiversity. Avoidance of chemicals and use of alternative, all natural farming methods are used to help conserve biodiversity as it encourages a natural balance within the ecosystem and helps prevent domination of particular species over the others. Most organically produced food is distributed locally. As a result, less energy is used for transportation which automatically reduces carbon dioxide emission. Organic crop production methods do not foresee elimination of all vegetation except for crops. As a result, more soil is covered with vegetation preventing the wind to carry away the top most fertile soil layers. This paper summarizes the environmental benefits of organic food production.

Key words: Organic food production, organic farming, environmental protection, environmental degradation, organic food, etc.

1. Introduction

Conventional food producers say that there is not enough scientific evidence for organic food production being better for the environment. This may be true but the facts are different. Organic food production eliminates soil and water contamination. Since organic food production strictly avoids the use of all synthetic chemicals, it does not pose any risk of soil and underground water contamination like conventional farming which uses tonnes of fertilizers and pesticides. Organic food production helps preserve local wildlife. By avoiding toxic chemicals, using of mixed planting as a natural pest control measure, and maintaining field margins and hedges, organic farming provides a retreat to local wildlife rather than taking it away its natural habitat like conventional agriculture. Avoidance of chemicals and use of alternative, all natural farming methods has been shown to help conserve biodiversity as it encourages a natural balance within the ecosystem and helps prevent domination of particular species over the others. Most organically produced food is distributed locally. As a result, less energy is used for transportation which automatically reduces carbon dioxide emissions which are believed to be the main cause

of global warming. Organic crop production methods do not foresee elimination of all vegetation except for crops. As a result, more soil is covered with vegetation preventing the wind to carry away the top most fertile soil layers. Despite the lack of scientific studies and existence of a few which even deny the environmental benefits of organic food production. Organic food production is by some accused to use more land to produce equal amounts of food. Many organic farmers encourage wildlife species such as birds, bats and other predatory animals to live on their farmland and assist them in pest control.

2. Environmental benefits of organic food production

Green spaces are a great benefit to our environment. They filter pollutants and dust from the air, they provide shade and lower temperatures in urban areas, and they even reduce erosion of soil into our waterways. A few of the environmental benefits of organic food production are given below:

Urban advantages: More green space within a city's boundaries can improve the urban environment. Among the green space advantages listed in Eco Plan IT Madison: Green Space Goal are: helping regulate air quality and climate reducing energy consumption by countering the warming effects of paved surfaces, recharging groundwater supplies and protecting lakes and streams from polluted runoff.

Water quality protection: Proper landscaping reduces nitrate leaching from the soil into the water supply and reduces surface water runoff, keeping phosphorus and other pollutants out of our waterways and preventing septic system overload.

Reduced heat buildup: Trees in a parking lot can reduce onsite heat buildup, decrease runoff and enhance night time cool downs.

Reduced soil erosion: A dense cover of plants and mulch holds soil in place, keeping sediment out of lakes, streams, storm drains and roads; and reducing flooding, mudslides and dust storms.

Improved air quality: Trees, shrubs and turf remove smoke, dust and other pollutants from the air. One tree can remove 26 pounds of carbon dioxide from the atmosphere annually, equaling 11000 miles of car emissions.

Lower attic temperatures: Trees shading homes can reduce attic temperatures as much as 40 degrees. According to the EPA, urban forests reduce urban air temperatures significantly by shading heat sinks such as buildings and concrete and returning humidity to the air through evaporative cooling.

Natural resource conservation: By using trees to modify temperatures, the amount of fossil fuels used for cooling and heating is reduced. Properly placed deciduous trees reduce house temperatures in the summer, allowing air conditioning units to run 2 to 4 per cent more efficiently.

Green roofs cool urban hot spots: Green roofs can play an important role in saving energy, reducing the urban heat island effect and adding more green space to a built environment.

Reduced pollution: Trees naturally remove pollutants from the air, so every tree that's subtracted from a city's ecosystem means some particulate pollution remains that should have been filtered out.

Health food: Health food is food marketed to provide human health effects beyond a normal healthy diet required for human nutrition. Foods marketed as health foods may be part of one or more categories, such as natural foods, organic foods, whole foods, vegetarian foods or dietary supplements.

Health: Health, as defined by the World Health Organization is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health may be defined as the ability to adapt and manage physical, mental and social challenges throughout life.

Healthy diet: A healthy diet is a diet that helps to maintain or improve overall health. A healthy diet provides the body with essential nutrition: fluid, macronutrients, micronutrients, and adequate calories. The requirements for a healthy diet can be met from a variety of plant-based and animal-based foods, although a non-animal source of vitamin B12 is needed for those following a vegan diet. A healthy lifestyle may lower disease risks, such as obesity, heart disease, type-2 diabetes, hypertension and cancer.

Human nutrition: Human nutrition deals with the provision of essential nutrients in food those are necessary to support human life and health. Poor nutrition is a chronic problem often linked to poverty, food security or a poor understanding of nutrition and dietary practices. Good nutrition helps children grow physically, and helps to promote human biological development.

Natural food: The natural food is often assumed to imply food that is not processed and whose ingredients are all natural products, thus conveying an appeal to nature.

3. Organic food

Organic food is food produced by methods that comply with the standards of organic farming. Standards vary worldwide, but organic farming, in general, features practices that cycle resources, promote ecological balance, and conserve biodiversity. Organizations regulating organic products may restrict the use of certain pesticides and fertilizers in the farming methods used to produce such products. In general, organic foods are usually not processed using irradiation, industrial solvents, or synthetic food additives. Organic food is produced in a way that complies with the organic standards set by regional organizations, national governments, and/or international organizations. From an environmental perspective, fertilizing, overproduction, and the use of pesticides in conventional farming may affect local ecosystems, biodiversity, groundwater, and drinking water supplies. However, the outcome of farming organically may have uncertain benefits. Organic agriculture has higher potential costs from an economic perspective due to lower yields, higher labour costs, and higher consumer prices. Demand for organic food is primarily driven by concerns for personal health and the environment. From the perspective of the consumer, there is not sufficient evidence in the scientific and medical literature to support claims that organic food is either safer or healthier to eat than conventional food. While there may be some differences in the nutrient and ant nutrient contents of organically and conventionally produced food, the variable nature of food production, shipping, storage, and handling makes it difficult to generalize results.

4. Nutritional value of organic food

Organic food is not only healthier because it does not contain residues of any synthetic chemicals but also due to the fact that it is more nutritious. The conventional farmers claim that their fruits and vegetables contain equal amounts of nutrients and many studies confirm their claims. However, they often forget to mention that the nutritional value of a freshly harvested apple, for instance, is significantly higher than that of an apple that has been offered for days or even weeks. This is due to the fact that nutritional value of fruits and vegetables begins to drop almost immediately after being harvested. For example, fresh broccoli loses as much as 50 per cent of vitamin C content as early as 7 days after harvest. Loss of nutritional value of fresh fruits and vegetables after harvest may seem to have little to do with the way they are grown. However, it has a lot to do with plant growing methods. Organic farming does not only strictly avoid the use of chemicals during plant growth but also forbids the use of any kind of preservatives or chemicals to extend their shelf life. As a result, organic food spoils a lot earlier and needs to be eaten in a considerably shorter period of time.

5. Organic food and its effects on health

The public is becoming increasingly aware of the importance of healthy nutrition for general health and overall well-being. Processed foods which are high in saturated fats, sugar and sodium, and low in essential nutrients are not only responsible for overweight problems but have been also shown to be major contributors to a number of health problems including diabetes, high blood pressure and heart disease. To make things worse, there are various artificial preservatives, flavour enhancers and a number of other chemicals with dubious effects on health. But on the other hand, unprocessed foods are not as healthy as they seem to be either because most of them are conventionally grown which means with the use of pesticides, chemical fertilizers, antibiotics, growth hormones and who knows what else. Fortunately, there is a safer and healthier alternative - organic food.

6. Suggestions and conclusion

Interest in organic agriculture methods is growing, especially in areas where the present farming system has degraded resources essential to agricultural production. Non-production factors, such as the farmer's health, are also mentioned as a reason for shifting to organic management. Consumers also have an interest in organic agriculture. Consumer awareness of the environmental costs of agriculture is increasing. The awareness of environmental quality and health is often promoted by environmental groups, especially in developed countries. Some governments have begun to recognize the possibility that it may be cheaper to support organic agriculture than to rectify problems associated with certain resource-destruction production practices. For this reason, several governments have introduced subsidies for organic agriculture.

In developing countries, two schools of interest in organic agriculture practices can be detected. First, some farmers switch to organic production without the incentive of price premiums, finding other economic and environmental reasons sufficient for management changes. In this case, improved conditions on the farm are the main focus of concern, especially increased and more sustained production as compared with what has been possible previously. The introduction of organic principles in agricultural management brings social benefits as farmers adopt logic close to their traditions and values. In the second case, the increased income can help in improving the local food security situation, but variations in price over time should be anticipated. At present, the size of the organic market is small, and therefore a small change in organic production will mean a large percentage change in quantity available, influencing price. Increased organic production in the future may have a depressing influence on prices; however, increased consumption may offset any downward pressure on prices. It is often believed that organic agriculture is easier to undertake under certain conditions, especially where the situation is good for agriculture in general, such as on fertile soils. FAO can play a key role in promoting a

more objective debate on the potential role of organic agriculture, and identifying the circumstances where organic agriculture can be applied most beneficially. The specific suggestions which can be given are as follows.

- To promote sustainable food production, the government should limit the consumption of meat products.
- Local agriculture products, particularly fruits, vegetables, and crops should be purchased.
- Research on agriculture should take climate and the nutrition plants have into consideration.
- More subsidy and research funding should be provided for eco friendly agriculture.
- Agriculture in the city should be encouraged and promoted.
- Meat consumption should be limited, and people should have meat-free diets at least once a week.

7. Reference

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