

## Organic Farming: A Boon or Curse for Environment

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### Introduction

Organic farming is an integrated agricultural strategy that produces food and meat without the use of conventional fertilisers, industrial pesticides, growth hormones, chemicals, or genetically modified organisms. Organic farming aims for long-term sustainability, ensuring that crops are free of toxic residues and employing practises that are both sustainable and in tune with nature(Darnhofer et al, 2010).Organic food consumption has been one of the most popular trends among the general population in recent years. Organic food is perceived to be considerably healthier for consumers and that the farming procedures used to produce it are more environmentally friendly. When it comes to organic food production, however, there are benefits and drawbacks, and many farmers choose not to produce organic food.Organic farming has been shown to have a lower impact on the environment than traditional methods. However, there is no evidence that eating organic foods provides any significant nutritional benefits or deficits when compared to conventionally grown foods, and there are no well-powered human studies that directly demonstrate health benefits or disease protection because of eating an organic diet.Organic food is purchased by consumers for a variety of reasons, including personal health, flavour, and animal welfare, but also because they feel organic farming is more sustainable and better for the environment (Yiridoe et al., 2005; Hughner et al., 2007).Organic farming has grown rapidly in popularity over the last few decades, resulting in a significant shift in agriculture in most developed countries. The organic system is supposed to provide solutions to environmental problems created by traditional agriculture, such as non-renewable resource exhaustion and contamination from agricultural chemicals. Internal variables relating to farmers and their personal situations in relation to their decision to adopt an organic farming system have been extensively investigated through international collaboration. Several characteristics of organic farms and farmers have been identified in this regard. Organic

farms, which are typically small and extensive, have a variety of operations that differ from farm to farm. Furthermore, it has been found that organic farmers are more likely to be better educated, younger, and have an urban background, as well as having less farming experience than conventional farmers.

### **1. Benefits of organic farming:**

#### **A. Organic farming improves the soil's fertility and productivity.**

Soil that has been naturally nurtured through composting, green manure, symbiotic partnerships, and minimal tillage is more productive and fertile. Organic fertilizer-treated soil is home to billions of beneficial microorganisms from over a thousand different species. These beneficial bacteria and fungi convert pollutants, plant residues, and livestock wastes into usable soil nutrients that improve soil binding and structural properties, resulting in more stable systems (Bhardwaj et al, 2014).

#### **B. Organic farming contributes to the preservation of biodiversity.**

Organic farmers are the guardians of biodiversity's resilience. Resistance to infectious diseases and climatic change are ensured using traditional and non-conventional seeds, breeds, and farming methods. When compared to inorganic farming practises, organic farming reduces agricultural biodiversity loss and increases species richness and abundance by about 30%. The absence of chemical use on farms creates a rich organic environment for pollinators and pest predators (Hole et al, 2005).

#### **C. Water conservation and management are promoted by organic farming.**

Organic farmers do not allow water to be exposed to any pollutants and do not use antibiotics on their livestock to avoid water contamination. Organic matter-rich soil holds moisture well and promotes water retention and infiltration. Healthy soil serves as a sponge, retaining moisture for plants. Furthermore, organic farms recharge underground water by up to 20%. (Dumanski et al, 2006).

#### **D. Climate change and air quality.**

Organic farming reduces the usage of conventional energy by reducing the need for agricultural chemicals. By sequestering carbon in the soil, non-traditional farming methods address the issue of GHG emissions and global warming. Reduced tillage, crop rotation, nitrogen-fixing legumes, and other organic agriculture practises increase carbon

concentration in the soil. Agriculture's potential to mitigate climate change is proportional to the amount of organic carbon stored in the soil (Kassov et al, 2010).

#### **E. Algal blooms are prevented by organic farming.**

Algal blooms are triggered by runoff from farms where nitrogen and phosphorus-rich fertilisers are utilised. Even organic fertilisers, it may be argued, include nitrogen and phosphorus. They do, however, include a variety of additional nutrients that help to maintain a nutritional balance. Organic farming also enhances soil binding and decreases runoff. A nutrient-rich soil is complete, with earthworms and nematodes, resulting in improved soil density and decreased sandiness, resulting in less runoff. Organic farming also encourages the growth of bacteria known as rhizobia, which help plants fix nitrogen and use and transform these nutrients before they run off.

#### **2. Demerits of organic farming:**

- A. Decline in yields
- B. Increased labour intensity
- C. Costs of compliance with organic farming requirements
- D. Small scale production
- E. High marketing costs
- F. Dependence on products export markets
- G. High labour costs of organic product
- H. Unavailability of local markets
- I. Decline in yields
- J. Agri-technical barriers
- K. Unavailability of organic seeds and fertilizers
- L. Lack of processing plants
- M. Unavailability of machinery and equipment

#### **3. Environmental impact and production efficiency**

Impact on the Environment, the question of whether organic farming methods have a lower environmental impact, can be similarly productive, and are not more expensive than conventional ones is a popular issue in the organic debate. Several surveys and research have sought to compare these difficulties for organic and conventional farming. Many people believe that organic farming is better for the environment since it doesn't utilise or release

synthetic pesticides into the environment, which can affect soil, water, and nearby terrestrial and aquatic fauna. Furthermore, organic farms are regarded to be better than conventional farms at sustaining various ecosystems, including populations of plants, insects, and animals, due to crop rotation strategies. Organic farms utilise less energy and produce less trash when measured per unit area or per unit yield. Organically maintained soil has been shown to be of superior quality and retain more water, potentially increasing organic farm production during drought years.

### Conclusion

One of the most popular trends among the public is the eating of organic foods. Synthetic or chemical fertilisers are used in the traditional system. To nourish the soil and stimulate plant growth, the organic system of cultivation encourages the use of natural fertilisers such as manure or compost. Organic and conventional yields have been demonstrated to be comparable in studies. Organic farming is more efficient than conventional farming since it uses less energy. Conventional agriculture emits more greenhouse gases as compare to organic farming.

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