

HUMAN POPULATION GROWTH & CHALLENGES OF ORGANIC FARMING IN RURAL AREAS OF INDIA

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Abstract

India will be the world's number one populous country, surpassing China by 2025. The population has crossed the optimum limit in India and has become a liability. So, the problem of population explosion in India has proved to be a big hindrance to the success of economic planning and development. At present we have 137 crores of population and about to surpass China (which has 141 crores at present). Every year 1.5 crore of the population is added to our population. The inability of Indian agriculture to meet the demand for food in the country at present or in near future is a matter of concern now. The green revolution fulfilled our aspirations from a food importing to a food exporting nation but the achievement was at the expense of ecology and environment. The practice of organic farming as an alternative to the conventional method is also suffering from the ill effects of chemical agriculture. However, organic farming is based on the similar principles underlying our traditional agriculture. Organic agriculture aims at the human welfare without any harm to the environment which is very much important for the existence of human life itself. This paper discusses the human population growth and challenges of organic farming in rural areas of India. The ill-effects of the modern and conventional farming system in India are being analysed also how far organic farming is a better alternative to feed its large population. The system of our agriculture based on the traditional knowledge and practices handed down from generation to generation could not produce enough to feed the increasing population. The big question is that by practicing organic farming are we in a position to feed our bulging and fast-growing population?

Keywords

Organic farming, conventional farming, non-renewable resources, green revolution, social sustainability.

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Introduction

At present on Earth, a total of 7.7 billion people are living, and India is a shelter of 1.3 billion people. India is the second-largest populous country in the world after China. India is expected to be the world's number one populous country, surpassing China by 2025. The population has crossed the optimum limit in India and has become a liability. At present, we have a reckless, lethal explosion in India like baby boom in Europe. We have only 2.5% of the world's land area fit for living and only 4-5 percent of the world's water resources and support 18 percent of the world's population. Every minute 33 children are born in India as compared to 11 in China. Every year we are adding one Australia to our country. At present we have 137 crores of population and about to surpass China (which has 141 crores at present). Every year 1.5 crore of the population is added to our population. Population growth in India has become a pressing issue as the growing population requires a growing economy and meeting the needs of the people. So, the problem of population explosion in India has proved to be a big hindrance to the success of economic planning and development. The growing population converts into a problem when a nation falls short of the space for living, enough food, and necessary supplies to live off. The growth of the population needs to be administered carefully for the betterment of the increasing population.

Behind all the environmental problems, the population growth is one of the main driving forces as it needs a considerable amount of non-renewable resources. Among all the resources needed by the growing population growth, food is the first and the foremost requirement. The inability of Indian agriculture to meet the demand for food in the country at present or in near future is a matter of concern now. The green revolution fulfilled our aspirations from a food importing to a food exporting nation but the achievement was at the expense of ecology and environment. With the advent of the green revolution, the use of the chemical fertilizers, insecticides, and pesticides has degraded the quality of soil, water, air, and human health. The target of achieving the food sufficiency has led to the ignorance of the environment and population. For the sustainable food availability and a safe and secure environment, the need of the hour is to adopt such methods of farming that focus on the security of the environment.

The practice of organic farming as an alternative to the conventional method is also suffering from the ill effects of chemical agriculture. However, organic farming is based on the similar principles underlying our traditional agriculture. Organic agriculture aims at the human welfare without any harm to the environment which is very much important for the existence of human life itself. But organic farming to

has some limitations. The biggest cause of thinking to search for the alternative methods of farming was the rapidly rising population of India. To meet the growing needs of the population green revolution was started in India in the 1960s and the High Yielding Variety of seeds was used. This led to the advent of conventional farming in India.

Organic Farming

Organic farming is done without any use of chemical fertilizers and synthetic pesticides. Organic farming can prove to be very fruitful for a nation like India where the population is rising far rapidly than the food grains. It will lead to the sustainable development of the agriculture. Organic farming aims at health, ecology, fairness, and care. The components of organic farming are vermin compost, green leaf manures, crop rotation, manure, bio-fertilizers, animal husbandry, and biological management. It enhances the biological cycle in the farming, enhances soil fertility, reduces pollution, conserves diversity in food, and produces sufficient food quantity with the maintenance of quality. Farming is the backbone of the rural India as maximum population of the rural areas depends on farming to earn their living. But the rural areas face many challenges in the adoption of the organic technique of food production. The conventional methods of farming are equally important as the rapidly rising population needs large-scale production of food grains which alone organic farming cannot support. Although the quality of the crops is better in organic farming but the priority of the population supports the alternative methods.

Objectives of the Study

1. To study the need for alternative methods of farming other than organic farming in the rural areas of India.
2. To study the problems of organic farming in India.
3. To find the future prospects of organic farming in the rural areas of India.

Major Problems and Challenges for the Organic Farming in Rural India

- **Lack of Awareness:** The people in the rural areas are not aware of the progress of organic farming. The government has to promote the benefit of adopting organic farming. Many farmers in the rural areas have vague ideas about organic farming. More and more knowledge should be spread about the usefulness and availability of supplementary nutrients that enrich the soil and can increase productivity.

- **Problems of Marketing:** Adequate marketing of the organic crops before the cultivation of the crops should be ensured.

- **Inadequate Infrastructure:** The state government has not formulated policies. There are only four accreditation agencies and the expertise of these agencies

is limited to only spices, tea, coffee, fruits, and vegetables.

- **Inadequate Bio-mass:** The available organic matter available in the rural areas is not enough to meet the requirements of the agriculture.

- **Input Cost is more:** The cost of organic input factors is more than the synthetic fertilizers which pose a restriction on the organic farming.

- **Low Yield:** The organic farming yields low as compared to the chemical-based agriculture. Due to this problem, farmers feel reluctant towards organic farming.

Social Sustainability and Organic Farming in Rural India:

Social sustainability is a process of promoting the welfare of the population and conservation of the present natural resources for the future generation. Social sustainability can be increased by enabling rural poor to enjoy the benefit from the development of agriculture, giving weightage to indigenous knowledge and practices, enhancing equality in labor, to enhance the confidence of labour full participation of labor communities to reduce the suicidal rates among the farmers. Organic farming is based on production standards that support the environment and socially, economically, and ecologically sustainable. Organic farming is considered as a step ahead to safeguard the biodiversity, improving the soil health and sustainable development of farming community. There are around 6,50,000 organic producers, 699 processors, 699 exporters, and 7,20,000 hectares under cultivation. But unfortunately, only 0.4 % of the total agricultural land is under organic cultivation. But still, India stands at 9th position in terms of agricultural land under organic cultivation. The development of the Indian economy can be ensured through the development of the rural areas. Organic farming is also increasing the extra income of the rural people as the need for the manure made of the dung of cattle has increased due to organic farming. Now people rear cattle to enhance their earnings. The future of the rural people can become secure through the organic farming. But the hunger of the people favors the conventional methods which yield more and in a short period of time.

Table 1.1 Different Countries with Organic Agricultural Land in the year 2015

Country	Rank	The area under cultivation (in million hectares)	Total Population
Australia	1 st	22,69	2.38 crores
Argentina	2 nd	3,07	4.31 crores
USA	3 rd	2,03	32.07 crores
India	9 th	1,18	131.02 crores

Source: FIBIL Survey, 2017

The above data shows that the share of organic agriculture is very small as compared to the total population of different countries. Only organic farming cannot satisfy the hunger of the rising population so, conventional farming is the need of the hour.

Table 1.2 Share of Net Area under organic Farming with proportion to the total increase in population in India from the Year 2016-2020

Year	Organic Farming Area (in %)	Population Increase in India (in Million)
2020	2.75	1381.59
2019	1.46	1367.6
2018	1.31	1352.62
2017	1.09	1338.66
2016	1.07	1324.51

Source: Statistics Research Department, 2020

The increase in the population of India is much more than the increase in the area under organic farming. The above data support the conventional sources of farming as the hunger needs of the population can only be satisfied with the bumper production in agriculture.

Future Prospects of Organic Farming in India

Agriculture is the backbone of the Indian economy as 67% of its population depends on agriculture and contributes to 30% of the total income. The rural economy of India, directly and indirectly, depends on agriculture for livelihood. The introduction of modern techniques and increased demand for food grains led to the use of synthetic fertilizers, poisonous insecticides, and pesticides, etc. This has posed a threat to the existence of the future generation. Modern methods of farming are spoiling the fertility of the soil and the environment. The health of the people is at stake due to the hybrid food items. The need is to introduce such methods of farming that are eco-friendly sustain soil health and ensure sustainable development of the agriculture and food crops.

The people have now become more conscious and aware. They focus more on the safety and quality. This resulted in the introduction of the organic farming in India. Organic farming is an indigenous method of farming which is being practiced in India since the millennium. Now India ranks first in the organic crop production in the world. In the field of economic growth, newer technologies have been invented like drip farming, mapping technology, and agroecological technologies, etc. These technologies help in retaining the fertility of the soil and sustainable growth.

Conclusion

Organic farming yields more nutritious and high-quality food. The popularity of the organic food is rising as the consumers see it as more healthy and safe food. The organic farming process is considered more eco-friendly than conventional farming as it keeps soil nutritious and maintains the integrity of the environment and in turn, promotes the health of the consumers. The benefit of the organic farming is that it promotes the health of the consumers of the country, the ecological health, and economic growth of the country by improved income generation. This scenario directly or indirectly is improving the condition of the rural areas of India. Organic farming can build nutritionally, ecologically, and economically healthy economies of the rural areas of the nation in the near future. But the growing demand for the food grains led to the conventional farming. The people believe in profit maximization with minimum resources, that is why the rural farmers use High Yielding Variety of seeds that meet their objective of wealth maximization. Thus it can be concluded that alone organic farming cannot be used for farming in India as it has limited output.

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