



Role of Organic Farming in Sustainable Development in India: Rural Development and Health

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DOI - 10.5281/zenodo.14873819

Abstract:

India is an agricultural country. The importance of organic farming in developing and mixed economy democratic nations like India is very important for sustainable development. Sustainable development and organic farming are very closely related. As India is a country of villages, most of the people in India are engaged in agriculture and animal husbandry is the secondary occupation of Indian people. Nutrition plays an important role in maintaining human health. Therefore, organic farming is very important for a developing nation like India to achieve sustainable development. Organic farming is considered as an important part for the development of India like any other country in the world. Organic farming is the need of the hour to maintain the health and wellbeing of every person in India.

Key words: Organic Farming, Sustainable Development, Agriculture, Farmers, Health, Economy, Social status, water, Management etc.

Introduction:

In the present modern era, many large-scale farmers use chemical fertilizers to maximize their income. Therefore, human health is in danger. Many types of diseases are affecting people due to the use of chemical fertilizers. In order to maintain healthy human health, it is very necessary to make maximum use of organic fertilizers and to make efforts to benefit the local people by making the essential commodities available in agriculture. Efforts should be made in all the rural areas of India to maintain the health of the local people by providing maximum commodities through organic farming. From the point of view that organic farming is important for maintaining health, it is beneficial for the government and public welfare to provide information

and create public awareness about it. Despite the important role of agriculture in human health, it is essential for everyone to consume organically produced products. Organic farming is conventional farming. Organic farming is done by using only crop residues, cow dung, cow urine and natural tools without using chemicals while farming. Before the Green Revolution, only dung was used in the fields. The seeds are used straight, i.e. without any kind of process.

Problems of the Study:

Agriculture is an important sector in India. Agriculture plays a major role in the Indian economy, yet farmers face many problems. Farmers face many problems in organic farming including lack of water, lack of synthetic fertilizers, lack of pesticides, lack of technology, lack

of irrigation, volatility of prices of suitable commodities, low use of organic fertilizers, Lack of Information, Problems like lack of suitable labor etc. are faced by the farmers while practicing organic farming. Water is scarce in many parts of India. Inadequate water supply causes problems in crop production. Water is a very important factor for agriculture. Due to lack of irrigation facilities in many places, it is not possible for farmers to give enough water to their crops. This results in a decrease in production.

Objectives of the Study:

The main objective of this research is to study the role of organic farming and rural sustainable development in developing India and the researcher has given some objectives as follows. In this, the researcher has studied in detail the role of organic farming and health in rural areas.

1. To Study the Organic Farming in India.
2. To Study the organic farming and health in rural areas.
3. To study the role of organic agriculture in sustainable development.
4. To study the factors affecting organic farming.

Significance of the Study:

Organic farming is a method of farming, in which the use of synthetic chemical fertilizers, pesticides and growth regulating chemicals is minimized or not at all, but instead of organic fertilizers, crop residues, animal manures such as cow dung, vermicompost. Adding green plants to the soil increases organic matter and especially nitrogen. Apart from that, it also increases the moisture level and nutrients for microorganisms which

improves the quality of the soil. Finally, the farming practices described above reduce weed infestation. Most organic farmers rely on a mixture of cover crops and compost to supply fertility and soil conditioning needs. Compost manure and compost tea are used in a small number of organic farms.

Scope of the Study:

Lack of modern technology is a major problem for farmers. Appropriate use of technology can increase productivity, but its availability and information is low. As the farmers are not aware of modern technology, they practice traditional farming and the production is low. Proper planning of water and construction of irrigation system is necessary. Proper use of water can be achieved by implementing water conservation measures. There are various methods to manage water such as drip irrigation, sprinkler irrigation, etc. Proper use of these methods will reduce water wastage and increase production.

Limitation of the Study:

Farmers face difficulty in getting good quality fertilizer. If fertilizers are not used in proper quantity, the quality of the crops decreases. Balanced use of organic and chemical fertilizers is very important for crop growth. However, the increase in the cost of fertilizers makes it difficult for farmers to use them properly. Pest and disease attack is a big problem for farmers. If proper measures are not taken, there is a big drop in production. It is necessary to take timely measures to avoid the attack of insects. However, there is a lack of information on how to take appropriate measures. Farmers are not getting fair price for their produce.

Farmers suffer losses due to market volatility. Many factors are considered while determining the price of produce, but ultimately market volatility is a major problem for farmers.

Period of the Study:

To study in detail the role of organic agriculture in sustainable development and the health of people in developing rural India, researchers have conducted a research based on data from 2024. In this research, the researchers have done a detailed study on the impact of organic farming on human health and the role of agriculture in sustainable development as well as the contribution of organic farming to the Indian economy on the basis of secondary research.

Research Methodology:

In order to study the contribution of organic farming in economic development and especially the health of people in rural areas, the researcher has used descriptive analysis method and conducted member research based on secondary research. In this the researcher has used various secondary resources such as research papers articles journals newspapers audio videos reference books serial books annual reports books. The role of organic agriculture in economic development and human health has been studied by researchers in an integrated descriptive manner.

Research Method:

The researcher of organic farming has done a detailed study on the extent to which it contributes to bringing people into the stream of economic development in rural areas and also the importance of organic farming from the health point of

view. Although organic farming is important from the point of view of human health, the machinery required, and innovative approaches are important.

Results and Discussion:

Farmers should use organic fertilizers. Also, proper application of fertilizers can increase the quality of the produce. Application of organic fertilizers improves soil quality and improves crop growth. Also, the use of organic fertilizers is also safe for the environment. Pesticides should be used properly to protect crops from insect attack. For this, a boom sprayer mounted on a tractor like an agricultural sprayer should be used with the help of modern technology. This will effectively control pests and increase production. The government needs to reform the market so that farmers can get a fair price for their produce. This can increase the income of farmers. Farmers should sell their produce directly in the market, thus eliminating the need for middlemen and increasing their income.

Use of Technology and Insecticide:

Farmers should use modern technology. Production capacity can be increased by using various technological tools. For example, by using modern machinery, smart farming, drone technology, etc. Farmers can make their work easier and increase productivity. With the use of Mitra Agriculture Sprayer, crops are evenly sprayed with pesticides and fertilizers. This increases the quality of crops. Proper use of pesticides and fertilizers while spraying crops improves crop growth and increases yield.

Time Saving and Easy Task:

The use of agricultural sprayer saves the time of farmers. It is faster and more effective than the traditional method. Conventional spraying takes more time, but with the use of Agriculture Sprayer, more work can be done in less time. A large area can be sprayed easily with the boom sprayer mounted on the tractor. This reduces the labor of farmers. It becomes easier to spray large areas and farmers can do more with less labour.

Advantages of Organic Farming:

The use of organic farming improves soil quality. Soil microorganisms grow and improve soil nutrition. This improves crop growth and increases yield.

1. Soil Quality:

The use of organic farming improves soil quality. Soil microorganisms grow and improve soil nutrition. This improves crop growth and increases yield.

2. Crop Quality:

Organic farming improves the quality of crops. Application of organic fertilizers increases the nutrition of crops and improves their taste and quality.

3. Eco-Friendly Method:

Organic farming is an environmentally friendly method. Its use does not cause any harm to the environment. Soil and water pollution is

reduced due to non-use of chemical fertilizers.

4. Healthy Food:

Organically grown food is healthier. Due to non-use of chemical fertilizers, there is no presence of toxic substances in the food. This has a good effect on human health. The use of agricultural technology makes the work of farmers easier and increases production. Farmers can make their work easier and increase productivity by using various technical tools.

Agricultural Development and Technology:

With the help of drone technology, farmers can see the status of crops. Drones make it easy to spray crops, count and monitor crop status. Smart farming makes it easier for farmers to monitor their crops. In smart agriculture, the condition of the crops can be monitored using various technical tools and appropriate measures can be taken. The use of modern machinery makes the work of farmers easier. With the help of modern machinery it becomes easier to monitor crops, spray and perform other tasks. With the help of Wi-Fi technology, farmers can monitor the status of their crops. Using Wi-Fi technology makes it easy for farmers to see the status of their crops and take appropriate measures.

Table No.1 Organic Farming Global Market Report: 2024 (in billion)

Year	Content	Details
2024	Market Size Value	208.66
2033	Revenue Forecast	321.79
2024 to 2033	Growth Rate	11.4%

Source: [Organic Farming Market Report, 2024](#)

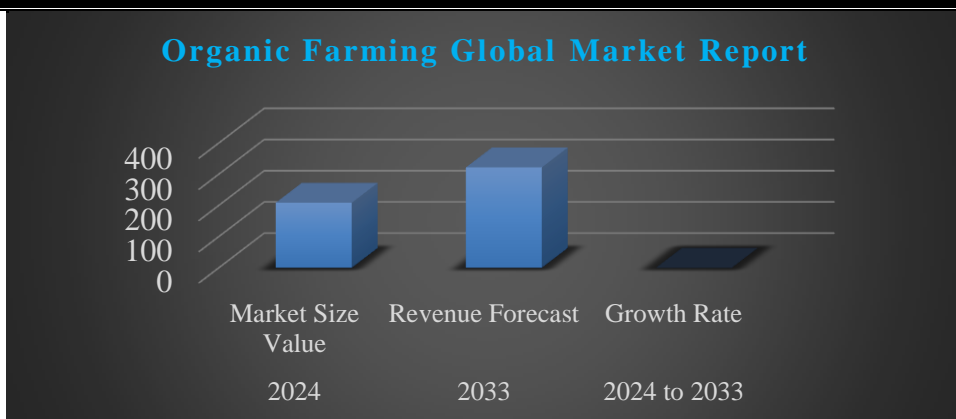
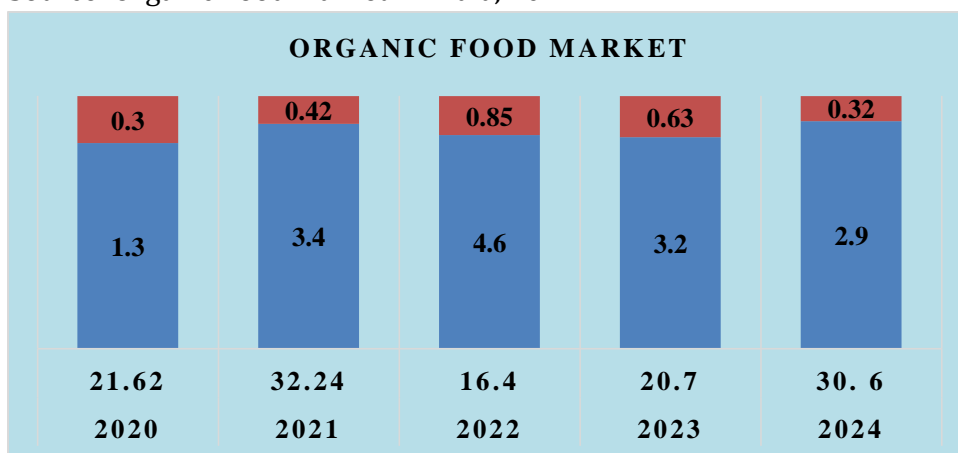


Table No. 2 Organic Food Market

Year	Percentage	Std.	Correlation
2020	21.62	1.3	0.30
2021	32.24	3.4	0.42
2022	16.4	4.6	0.85
2023	20.7	3.2	0.63
2024	30.6	2.9	0.32

Source: Organic Food Market in India, 2024



Organic Farming:

Proper irrigation scheme, use of organic fertilizers, proper use of pesticides, improvement of market and use of technology are all necessary measures for agriculture. It is a great option for farmers to increase their production. The assistance will enable farmers to protect their crops and increase production. Compared to conventional farming, organic farming uses fewer pesticides, reduces soil erosion, reduces leaching of nitrates into groundwater and surface water, and

recycles animal waste on the farm. These benefits are balanced by higher food costs and generally lower incomes for consumers.

Contribution to Public Revenue:

Agriculture is the most important source of revenue for central and state governments. The government of the country gets enough revenue by raising revenue from land. Moreover, the movement of agricultural produce helps the Indian Railways to generate revenue, which in turn helps the government to

generate revenue. It helps in maintaining the health of the environment by reducing the level of pollution. This reduces the risk to human and animal health by reducing the level of residues in the product. It helps in keeping agricultural production at a sustainable level. This reduces agricultural production costs and improves soil health.

Role of Agricultural in Organic Farming:

Agricultural progress is necessary to provide food for a growing non-agricultural labor force, raw materials for industrial production and the rest of the economy to grow, to earn foreign exchange and to provide savings and tax revenue to provide a growing market for domestic products. Agriculture plays an important role in the economic development of India. 70 % of our country's population depends on agriculture. Agriculture is a very important part of the Indian economy as it contributes about 17% to the total GDP and employs about 58% of the population. Due to the substitution of industrial non-food cereals for food grains during the commercialization of Indian agriculture, the total area under food grain production decreased.

Role of Agriculture in Rural Development:

Agriculture contributes to rural development by supporting employment, ancillary businesses and environmental services. In peripheral regions, agriculture supports economic and social infrastructure. Indian agriculture sector accounts for 18 percent of India's Gross Domestic Product and provides employment to 50% of the country's workforce. India is the world's largest producer of pulses, rice, wheat, spices and

spice products. It provides employment opportunities to rural agricultural as well as non-agricultural labour. It is a source of food and fodder. It also plays an important role in international business in import and export activities.

Health and Organic Farming:

Organic farming must maintain the health of soil, plants, animals, humans and the planet as one and indivisible. Keeping this in mind, the use of fertilizers, pesticides, animal medicines and food products which have adverse effects on health should be avoided. Traditional seed varieties began to die out due to modern seeds. Excessive use of chemical fertilizers is causing adverse effects on human health. While organic production does not help reduce public health risks, growing evidence shows that organically grown foods are richer in nutrients such as vitamin C, iron, magnesium, and phosphorus. Nutrient studies have shown small to moderate increases in some nutrients from organic produce. Organic produce may contain certain antioxidants and types of flavonoids, which have antioxidant properties.

Sustainable Development and Organic Farming:

Sustainable development means economic development without depleting natural resources. Basically, organic farming is closely related to sustainable development. Organic farming is helping us to restore ecological balance. Organic farming does not use the harmful practices of conventional farming like the use of artificial fertilizers. In short, organic farming is an agricultural technique that preserves, maintains and enhances the quality of ecosystems. Hence it is closely related to sustainable development. Organic nutrients alone are

not sufficient to increase crop production to meet global food demand and nutrients from inorganic and organic sources. Organic farming is one of the many approaches to meeting the Sustainable Development Goals of agriculture. It avoids the use of artificial chemicals as well as genetically modified organisms and generally subscribes to the principle of sustainable agriculture. Organic farming is a method of farming that emphasizes the use of natural processes and biological systems to grow crops and raise livestock without relying on synthetic chemicals and other non-organic inputs. Organic farming aims to create a sustainable and environmentally friendly agricultural system in harmony with nature.

Conclusion:

Compared to conventional farming, organic farming uses fewer pesticides, reduces soil erosion, reduces nitrate leaching into groundwater and surface water, and recycles animal waste back to the farm. These benefits are balanced by higher food costs and generally lower incomes for consumers. Organic produce contains less pesticide residue than conventionally grown produce. The amount of both types of products is within the level for safe use. Whether pesticides used in organic farming are safer than pesticides used in conventional farming. Organically grown crops use natural fertilizers such as manure to improve plant growth. Organically raised animals are not fed antibiotics or hormones. Organic farming improves soil quality and groundwater conservation. Since no harmful chemicals are used in the manufacture of organic products, they are non-toxic and safe for senior citizens. Because organic farming has reduced factors such as

biomagnification, it is believed that such products are less prone to contamination by harmful substances.

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