

THE COMPREHENSIVE STUDY ON ADOPTION AND IMPACT OF ORGANIC FARMING IN RURAL AREAS WITH REFERENCE TO BEVINAHALLI, HARIHAR TALUK, DAVANAGERE DISTRICT

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Keywords

Sustainability, Organic farming, soil fertility, adoption , Biological fertilisers, organic manures, Ecological balance, chemical pesticides.

Introduction

Organic farming can be defined as an agricultural process that uses biological fertilizers and pest control acquired from animal or plant waste. Organic farming was actually initiated as an answer to the environmental sufferings caused by the use of chemical pesticides and synthetic fertilizers. In other words, organic farming is a new system of farming or agriculture that repairs, maintains, and improves the ecological balance. However the sad thing is that the share of organic food in the total food production worldwide is only 1%. Earlier there was no concept of chemical farming they use to do natural farming. Later on, due to many pesticides attack and low yield, use of synthetic pesticides and chemical manures took importance, which had adverse effect on both soil, environment and consumers. Due to excess use of chemical, soil is losing its fertility day by day. The water holding capacity of soil is also reducing. Accounting to this some of the Indian farmers adopting and promoting organic farming method which is beneficiary for soil, environment, consumers health. As the origin of eating vegetarian food is believed to be in ancient India. Even today, out of all the vegetarian people in the world more than 70% population are Indians. There is urge for organic farming in India. To achieve this, we need to spend more time and attention in farming when moving from conventionally farming method to organic farming. Results are not immediate like farming with chemicals time will be taken to get back soil health. Due to this soil will become more fertile, nutrient rich and yield per acre increases with high nutrition value. This research focuses on recognising organic farmers in Bevinahalli village, Karnataka and their adoption rate, impact of organic farming practices with the aim of promoting organic farming practices and sustainability

Objectives

- To Determine the extent to which organic farming practices have been adopted at Bevinahalli.
- To identify factors that influence farmer's decisions to adopt organic farming practices.
- To investigate the potential health and wellbeing benefits or risks associated with organic farming practices.
- To identify and evaluate innovative and sustainable organic farming techniques in Bevinahalli

Methodology

Stage 1: Research Design: Initiate with exploratory research, followed by descriptive research for a comprehensive understanding, forming hypotheses about factors influencing organic farming adoption and its impact.

Stage 2: Data sampling methods: opt for a Stratified Random Sampling method for studying organic farming adoption and impact in rural areas. Stratify based on farm size, income levels, and geographical locations, followed by random sample selection to represent the overall population.

Stage 3: Data collection methods: Blend qualitative methods (interviews, case studies) and quantitative methods (surveys, statistical analysis) to study adoption rates, yield impact, motivations, challenges, and socioeconomic effects.

Stage 4: Data analysis techniques for individual objectives:

- Extent of Organic Farming Adoption: Statistical Tools: Descriptive statistics

Method: Calculate percentages, means, and other descriptive measures to summarize and analyse the extent of organic farming adoption.

- Factors Influencing Adoption: Statistical Tools: Regression analysis Method: Use regression analysis to assess the relationship between independent variables (factors influencing adoption) and the dependent variable (adoption decision)

- Health and Wellbeing Impacts: Statistical Tools: T-tests, ANOVA Method: Apply statistical tests like t-tests or ANOVA to compare health indicators between groups (organic farmers vs. non-organic farmers) and assess potential impacts.

- Innovative Farming Techniques: Statistical Tools: Comparative analysis, Conduct comparative analysis using statistical tools to assess the effectiveness and sustainability of different organic farming techniques. Also include quantitative measures of yield, resource use, etc.

Result and Conclusion

- Bevinahalli is located in Davanagere district, Karnataka. Here most of people depends on farming. In total there is 670 acres of agricultural land among that 78.25 acre is organic farming. In total 11.67% of farmers have been adopted organic farming.
- Initial investment, yield of the crop, soil health, water, labour, size of the farm, market are the factors influencing adoption of organic farming.
- Organic farming increases the soil fertility and in long way it contributes to sustainability. It increases the nutritional value of the crop, which helps to get chemical free food for consumption.

- Organic farming requires high initial investment which everyone can't afford. It requires a large number of labour but now a days getting labour is a major problem.
- Potential yield losses during initial days also acts as a challenge.
- The farmers at Bevinhalli are ready to adopt organic farming but lack of awareness discouraging them to go with organic farming. Effective awareness programmes and with government support, the adoption rate can be increased

Innovation in the project

- For areca and coconut tress 30 feet distancing both vertically and horizontally so as to get sunlight properly and in between cropping some other plants and trees is that the pest attack which will be seen in mono crop farming will be reduced
- Use of neem and lemon tress as intercrop so that the pest when moves from one tree to other it will it the neem and lemon leaves and will be destroyed
- Use of coconut husk which is rich in carbon and other nutrients and fibrous part helps in water retention and control soil erosion.
- Use of seed from existing one for planting the new one so that it gives same product as previous and to preserve the original.
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- Using seaweed, humic acid (helps to improve shelf life of plants and vegetables), fulvic acid (helps to bind minerals and other nutrients together) which obtained at coal mining places and soyabean extract (increases the nutritional value of the products)

Proposed innovation:

Seed bank

- Government should take some steps collect native seed from different regions and from different farmers, distribute them and also preserve them
- Locate a seed bank in each village so that it will be easily available for farming

Compost

- Organic compost is necessary for organic farming to enhance soil nutritional value.
- Encouraging the rural people to develop the compost and sell
- Government need to create a platform for compost selling in each village and make sure that compost availability is there with fair pricing and encourage the local compost makers.

Farming By making use of seeds which are available in seed bank and compost obtained from local vendors farmers start farming adopt techniques like 30 feet distancing for areca as well as coconut trees, mixed farming, use of neem spray for pest managemet, mulching, recycling kitchen wet waste which act as compost, rain water recycling.

Marketing Government can allot a solar vehicle for collecting the organic farming products from farmers so that the burden of getting the crops to market which is far away from their village will be minimized and they will get a good distribution channel

and market for their product and they will be motivated to adopt more organic farming.

Field visit to farm and directly plucking from the garden option should be given so that more number of people will visit they scan physically and will buy.

Scope for future work

- The global organic food market is anticipated to continue its robust growth due to rising health awareness, environmental concerns, and increased disposable income among consumers. This trend is expected to drive demand for organic products and, in turn, expand organic farming.
- Increasing consumer awareness about the health benefits of organic food, such as the absence of synthetic pesticides and fertilizers, will continue to drive demand. This trend is particularly strong among younger generations who prioritize health and sustainability.
- Increasing research and educational initiatives aimed at organic farming practices will provide farmers with better knowledge and tools, thus enhancing the productivity and sustainability of organic agriculture.
- Innovations in agricultural technology, such as precision farming, organic fertilizers, and natural pest control methods, will enhance the efficiency and productivity of organic farming. Improved techniques for soil health management and crop rotation can further bolster yields.
- Use of AI in agriculture can reduce the labour problem for large scale organic farmers. Intergration of AI with various Agricultural techniques will give efficiency in farming. There is a scope for research in this area to facilitate organic farming in new heights.