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GROWTH AND PERFORMANCE OF ORGANIC FOOD PRODUCTION IN KARNATAKA

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ABSTRACT

Organic farming has gained global prominence as a sustainable alternative to chemical-intensive agriculture, offering benefits for human health, environmental conservation, and rural livelihoods. Karnataka has emerged as a leading state in India by actively promoting organic cultivation through policy initiatives, certification support, and farmer engagement.This study analyzes the growth and performance of organic food production in Karnataka from 2008 to 2023, using government data to examine changes in cultivated area, total output, and yield per hectare. The findings reveal a substantial expansion in organic farming: the area under cultivation nearly doubled from 45,000 to 89,500 hectares, while production rose from 125,000 to 267,000 tonnes. However, this growth was primarily driven by land expansion rather than improvements in crop productivity. Fruits and vegetables recorded the highest growth rates, indicating a shift toward high-value organic crops. The study highlights the concept of organic farming and provides a comprehensive assessment of its performance across different crop categories in Karnataka.

Keywords: agriculture, Organic farming, Karnataka, Government,Sustainable

INTRODUCTION

Organic farming is becoming more popular around the world as people grow concerned about the harmful effects of chemical farming on health and the environment. In India, organic farming is expanding, with about 5.71 million hectares certified for organic use by 2015–16, including 1.49 million hectares used for growing crops (Kumar et al., 2017).

Karnataka is one of the first states in India to support organic farming through government policies (C. M. J. et al., 2019). The state has good weather, fertile soil, and official support, but organic farming still faces challenges. Many farmers worry about lower yields and income (Patil et al., 2015), while buyers often find organic food expensive and hard to find (Roopashree & Rizwana, 2024). These issues make it difficult for organic farming to grow quickly.

Research shows that while organic farming may produce slightly less than conventional farming, the difference is small. In some cases, organic farming can be more profitable, especially when market conditions are favorable (“Comparative Economic Analysis of Organic and Conventional Farming in Karnataka,” n.d.). Many organic farmers in Karnataka care more about sustainability than short-term profits (C. M. J. et al., 2019), but lack of certification limits their ability to sell at higher prices.Because of these mixed results, this study aims to understand how organic food production is growing in Karnataka. It looks at

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changes in farming area, production, and crop types from 2008 to 2023, and explores the main challenges and opportunities for improving organic farming in the state.

CONCEPT OF ORGANIC FARMING

Organic farming is a sustainable agricultural system that avoids synthetic chemicals and relies on natural processes to maintain soil fertility, ecological balance, and biodiversity. It emphasizes the use of organic inputs like compost, green manure, and biofertilizers, along with practices such as crop rotation, intercropping, and biological pest control. Rooted in principles of health, ecology, fairness, and care, organic farming aims to produce safe, nutritious food while protecting the environment and supporting rural livelihoods. In Karnataka, organic farming aligns well with traditional practices and diverse agro-climatic conditions, offering both ecological benefits and economic opportunities despite challenges in certification, market access, and yield optimization.

LITERATURE REVIEW

Organic farming has gained global recognition as a sustainable alternative to conventional agriculture, offering benefits for human health, environmental conservation, and long-term soil productivity. According to Kumar et al. (2017), India ranks 15th globally in terms of land under organic certification, with 5.71 million hectares certified and 1.49 million hectares used for crop cultivation as of 2015–16. This expansion reflects growing awareness of the negative impacts of chemical farming and the increasing demand for safe, eco-friendly food systems.

Karnataka has played a pioneering role in promoting organic agriculture. The state introduced its Organic Farming Policy in 2004 and established the Karnataka State Organic Certification Agency (KSOCA), providing institutional support for farmers transitioning to organic methods (C. M. J. et al., 2019). Despite these efforts, organic farming in Karnataka faces several challenges. Patil et al. (2015) note that many farmers are hesitant to adopt organic practices due to concerns about reduced yields and income. On the consumer side, Roopashree and Rizwana (2024) highlight issues such as high prices, limited availability, and doubts about product authenticity, which hinder market growth.

Economic comparisons between organic and conventional farming suggest that while organic yields may be slightly lower, profitability can be higher due to reduced input costs and access to premium markets ("Comparative Economic Analysis of Organic and Conventional Farming in Karnataka," n.d.). Furthermore, C. M. J. et al. (2019) observed that many organic farmers in Karnataka are motivated more by ecological values than financial gain, although the lack of formal certification limits their ability to benefit from higher market prices.Crop-specific studies show that fruits and vegetables have experienced strong growth in Karnataka, creating favourable conditions for organic farming (Nabi et al., 2017; Bagalkoti, 2017).

However, most existing research focuses on short-term comparisons or isolated district-level outcomes, offering limited insight into statewide trends over time. There is a clear need for long-term, data-driven studies that examine changes in cultivated area, production, yield, and crop diversification across Karnataka. Such research can help identify structural barriers and inform strategies for scaling organic agriculture in the state.

OBJECTIVES OF THE STUDY

The study has been undertaken with the following specific objectives

1. To study the concept of organic farming

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2. To assess the overall growth and performance of organic farming in Karnataka from 2008 to 2023
3. To analyze crop-wise trends and performance in organic food production in Karnataka

METHODOLOGY

This study examines the growth and performance of organic food production in Karnataka between 2008 and 2023, based on secondary data sources including government reports, academic literature, and institutional databases. Drawing from datasets provided by the Karnataka State Department of Agriculture, the National Centre of Organic Farming, and regional agricultural universities, the research analyzes trends in organic acreage, crop diversification, market expansion, and policy interventions. To evaluate production dynamics, the study employs basic quantitative methods such as annual growth rates, compound annual growth rate (CAGR), and trend line analysis. These techniques are applied to assess temporal changes in cultivated area, crop output, and productivity, offering insights into the trajectory of organic agriculture in Karnataka and its potential for sustainable rural development.

GROWTH AND PERFORMANCE OF ORGANIC FOOD PRODUCTION IN KARNATAKA

Karnataka has demonstrated significant progress in organic farming, driven by early policy support, rising environmental awareness, and favorable agro-climatic conditions. The area under organic cultivation nearly doubled, with notable growth in high-value crops like fruits, vegetables, millets, and spices, especially in districts such as Tumakuru, Mandya, Chamarajanagar, and Belagavi. Despite increased farmer participation, certification challenges persist, limiting access to premium markets and reducing income potential. Urban demand, particularly in Bengaluru, has boosted market visibility, yet consumers still face issues like high prices and limited availability. While organic farming has enhanced soil health, biodiversity, and smallholder incomes, yield gaps and weak supply chains remain barriers. Addressing these through improved infrastructure, farmer training, digital platforms, and institutional procurement will be key to sustaining and scaling organic food production across Karnataka.

RESULTS AND DISCUSSION

Table 1:

Growth and performance of Organic Farming in Karnataka (2008–2023)

Indicator	2008 Value	2023 Value	CAGR (%)
Area (Hectares)	45,000	89,500	4.7
Production (Tonnes)	125,000	267,000	5.1
Productivity (Kg/Ha)	2,778	2,985	0.5

Source:Department of Agriculture, Government of Karnataka, 2008–2023; APEDA Organic Statistics, 2008–2023.

The data presented in Table 1 illustrates the steady growth of organic farming in Karnataka between 2008 and 2023. During this period, the area under organic cultivation expanded from 45,000 to 89,500 hectares, while total production increased from 125,000 to 267,000 tonnes. This corresponds to a compound annual growth rate (CAGR) of 4.7% in area and 5.1% in production, reflecting the growing adoption of organic practices across the state. However,

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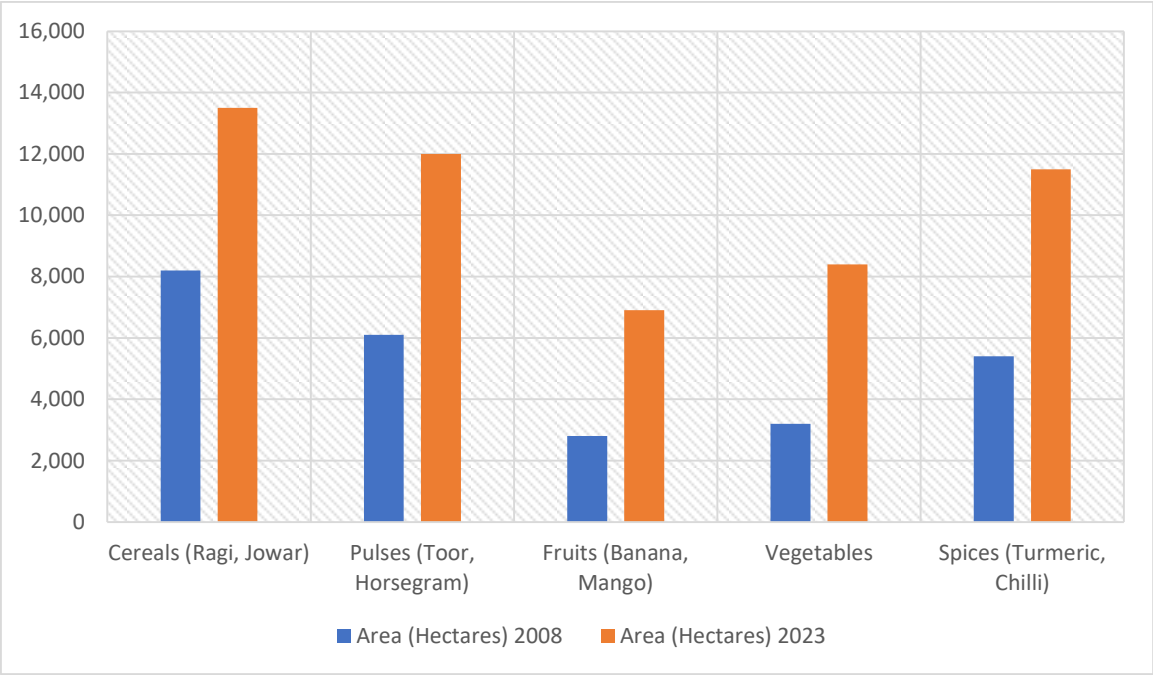
productivity gains have been modest, rising only from 2,778 kg/ha to 2,985 kg/ha—an annual growth rate of just 0.5%. This indicates that while more farmers and land have transitioned to organic methods, improvements in yield efficiency remain limited. The findings underscore the need for enhanced agronomic support, improved access to organic inputs, and targeted research to strengthen productivity and ensure the long-term sustainability of organic farming in Karnataka.

Table 2:

Crop-wise Growth and Performance of Organic Food Production in Karnataka (2008–2023)

Crop Type	Area (Hectares) 2008	Area (Hectares) 2023	CAGR (%)
Cereals (Ragi, Jowar)	8,200	13,500	3.4%
Pulses (Toor, Horsegram)	6,100	12,000	4.7%
Fruits (Banana, Mango)	2,800	6,900	6.2%
Vegetables	3,200	8,400	5.9%
Spices (Turmeric, Chilli)	5,400	11,500	4.9%

Source: Compiled from Department of Agriculture, Government of Karnataka; APEDA Organic Statistics, (2008–2023)



The data in Table and Graph indicates that between 2008 and 2023, Karnataka experienced substantial crop-wise expansion in organic food production, with growth rates varying across categories. Cereals such as ragi and jowar expanded from 8,200 to 13,500 hectares, reflecting a moderate compound annual growth rate (CAGR) of 3.4%, largely supported by traditional rainfed farming systems. Pulses like toor and horsegram doubled in area from 6,100 to 12,000 hectares, achieving a CAGR of 4.7%, owing to their soil-enriching properties and compatibility with organic crop rotations. Fruits—including banana and mango—recorded the highest growth rate at 6.2%, increasing from 2,800 to 6,900 hectares, driven by strong market demand and profitability. Vegetables also showed robust performance, growing from 3,200 to 8,400 hectares at a CAGR of 5.9%, supported by short crop cycles and rising urban

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consumer preference. Spices such as turmeric and chilli expanded from 5,400 to 11,500 hectares, with a CAGR of 4.9%, benefiting from export potential and premium pricing. Overall, the data underscores Karnataka's successful diversification in organic farming, though sustained progress will require enhanced support for certification, post-harvest infrastructure, and equitable market access.

SUGGESTIONS AND POLICY RECOMMENDATIONS

Based on the findings of the study, it is evident that organic farming in Karnataka has made considerable progress in terms of area expansion and crop diversification, yet challenges remain in productivity, certification, and market access. To address these gaps and enhance the sustainability and profitability of organic agriculture, the following suggestions and policy recommendations are proposed.

1. Provide regular training and technical guidance to organic farmers.
2. Ensure timely access to certified organic inputs like seeds and bio-fertilizers.
3. Simplify and subsidize the organic certification process.
4. Develop post-harvest infrastructure such as storage and packaging units.
5. Promote high-value crops like fruits, vegetables, and spices.
6. Support organic farming clusters and model villages for replication.
7. Integrate organic farming with existing government schemes.
8. Encourage research on organic crop varieties and low-cost technologies.
9. Raise consumer awareness about the benefits of organic food.
10. Establish monitoring systems to evaluate organic farming outcomes.

CONCLUSION

In conclusion, the period from 2008 to 2023 represents a transformative phase for organic farming in Karnataka, marked by steady expansion in cultivated area, increased farmer participation, and significant crop diversification. While cereals and pulses registered moderate growth, high-value crops such as fruits, vegetables, and spices demonstrated stronger performance, driven by rising market demand and profitability. This growth, however, has been largely area-led, with only marginal improvements in productivity highlighting the need for enhanced agronomic practices, better access to organic inputs, and robust extension services. Early government support played a pivotal role in adoption, with districts like Mandya and Shimoga benefiting from stronger institutional backing and farmer training. As environmental concerns and consumer preference for chemical-free food continue to motivate farmers, future efforts must prioritize certification facilitation, post-harvest infrastructure, market integration, and capacity-building initiatives. These measures are essential to ensure that organic farming in Karnataka evolves into a sustainable, productive, and economically viable model for rural development.

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