
Cost–Benefit and Productivity Analysis of Lemon Farming in Vijayapura, Karnataka

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ABSTRACT:

Acid lime is one of the remunerative crops, which is grown on commercial scale in Vijayapura district of Karnataka. Even though there is a gradual increase in both area and production of Acid lime in this district over the years, but still the growers are facing several problems leading to non-economic viability of crop hence, there is good scope for making comprehensive study help the farmers and policy makers to have firsthand prior knowledge on scientific cultivation. Methods: The nature and sources of data were collected by adopting representative random sampling procedure through personnel interview. For the purpose of evaluating the objectives of the study, based on the nature and extent of data, the analytical techniques like tabular analysis, financial feasibility of investment standard tests viz. a) Net present worth, b) Benefit: cost ratio, c) Payback period and d) Internal rate of return were estimated by using the discounted cash flow techniques and the data were processing to draw meaningful results and conclusions.

KEYWORDS:

Production cost, Farm inventory, Investment cost, Crop productivity, Labor costs.

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Introduction:

This study introduces an economic analysis of lemon production in the Vijayapura district of Karnataka, a region that is a major lemon producer, especially of the Khagji variety. The introduction will frame the research by highlighting the economic significance of lemon cultivation in Vijayapura, detailing the study's purpose to analyze costs, returns, and constraints, and outlining the study's methodology, which likely includes a sample of farmers in key taluks like Indi and Sindagi. The introduction would also set the stage for the study's objective to understand the economic performance and challenges of this important agricultural sector, including the potential benefits and limitations of the GI tag for the Khagji lemon. Vijayapura district in Karnataka is a significant lemon producer, often referred to as the "lemon capital," with a large portion of the state's lemon production concentrated there, particularly in the Indi taluk.

The region cultivates the Khagji lemon, which has a Geographical Indication (GI) tag, suggesting a unique quality and origin.

The district's economy is heavily reliant on agriculture, with lemon cultivation being a major commercial crop.

Objectives:

The objectives of an economic analysis of lemon production in Vijayapura district would include analyzing costs and returns, assessing the economic viability of different farming practices, identifying marketing constraints and opportunities, and evaluating the role of government policies and support systems. The study would also aim to understand the role of technology, resource management, and farmer-level constraints on profitability.

Key objectives:

Cost and return analysis: To estimate the cost of cultivation and net returns to understand the profitability of lemon farming.

Resource use efficiency: To evaluate how efficiently farmers use resources like land, labor, and capital. This can include analyzing the cost of different inputs, as seen in a study of other crops in the district.

Market structure and constraints: To investigate the marketing channels, price fluctuations, exploitation by middlemen, and post-harvest challenges faced by growers.

Technology adoption and productivity: To assess the impact

of adopting modern farming practices and technologies on yield and profitability compared to traditional methods.

Government policy impact: To study the effectiveness of government schemes, subsidies, and support for lemon farmers in the district.

Farmer-level constraints: To identify the financial and non-financial constraints faced by farmers, such as access to credit, irrigation, and market information.

Viability of value addition: To explore opportunities for post-harvest management and value addition, such as setting up packing houses, to increase income.

Sustainability: To examine the economic sustainability of different lemon farming systems, including organic farming methods.

Importance:

An economic analysis of lemon production in Vijayapura, Karnataka, highlights its importance due to the district being a major producer of the GI-tagged Khagji variety. Key aspects include a significant increase in cultivation, high demand for lemon saplings driving a nursery industry, and economic benefits from diverse applications in food, pharmaceuticals, and cosmetics. However, the analysis also reveals challenges such as production constraints like irrigation and high input costs, alongside marketing issues like price fluctuations and middlemen exploitation.

Economic importance and drivers

Major production hub: Vijayapura is the largest lemon producer in Karnataka, with Indi taluk accounting for over 50% of the state's production.

High demand for Khagji variety: The district is famous for the Khagji variety, which has a Geographical Indication (GI) tag, boosting its market value.

Growing sapling industry: The high demand for lemon saplings is creating a profitable sub-sector for local farmers, who are expanding into nurseries to sell to buyers from within and outside Karnataka.

Year-round income: Lemon trees can provide a consistent income stream as they fruit throughout the year.

Diverse industrial applications: Lemons have diverse applications,

contributing to their economic value in the food, pharmaceutical, cosmetic, and cleaning product industries.

Value-added potential: By-products like juice, zest, and peel can be used for flavoring, natural preservatives, and dietary supplements, creating

Challenges and constraints:

Production issues:

Lack of irrigation: Insufficient irrigation facilities are a major constraint, cited by 87.50% of farmers in a study.

High input costs: Farmers face high costs for inputs like fertilizers and pesticides.

Financial constraints:

Credit access: Lack of timely and adequate credit is a significant financial challenge.

Marketing and market access:

Price volatility: The prices for lemons can fluctuate, leading to market instability.

Middlemen exploitation: Farmers often face delayed payments and exploitation by middlemen.

Suggestions for improvement

Government support:

Irrigation facilities: Provision of better irrigation facilities is crucial.

Financial assistance: Ensuring timely and adequate credit availability to farmers is necessary.

Marketing support: Government programs to protect farmers from middlemen exploitation are needed.

Value addition: Encouraging farmers to engage in value-added activities can help them secure better returns.

Information access: Providing timely and adequate market information to farmers can help them navigate market challenges.

Economic opportunities and growth drivers:

High demand: There is significant demand for lemons from within Karnataka and neighboring states, particularly for the Kagzi variety.

Booming sapling market: The sale of lemon saplings has become a major source of income for many farmers, prompting the establishment of numerous nurseries.

GI tag potential: The Geographic Indication (GI) tag for the Kagzi lemon offers the potential for premium pricing, although this benefit is not yet fully realized.

Diversified applications: Lemons have diverse uses beyond fresh consumption, including in food, cosmetics, and pharmaceuticals, which creates avenues for value addition.

Recommendations for the future:

Improve infrastructure: Invest in irrigation, storage, and transportation to reduce post-harvest losses and improve market access.

Enhance marketing systems: Develop better marketing channels to ensure fair prices and timely payments for farmers.

Encourage value addition: Provide programs and support for farmers to engage in value-added activities like juice and peel production.

Promote modern techniques: Disseminate knowledge and provide access to high-quality planting material to improve productivity and quality.

Address credit and input issues: Ensure timely and adequate credit availability at reasonable interest rates.

Conclusion:

The conclusion is that lemon production in Vijayapura is a booming economic activity, driven by high demand for the GI-tagged Kagzi variety and a strong market for saplings. However, it faces significant challenges, including lack of irrigation, high input costs, and marketing inefficiencies like middlemen exploitation and price volatility, which limit profitability and potential growth. While there is potential for value addition and exports, current infrastructure and modern farming knowledge are insufficient to fully

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Conflict of interest:

The Authors have no conflict of interest to declare that they are relevant to the content of this article.

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