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A STUDY ON THE ECONOMIC ANALYSIS OF JACKFRUIT CULTIVATION AND MARKETING IN KOLLI HILLS OF NAMAKKAL DISTRICT – TAMIL NADU

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Abstract

This research attempts to provide a comprehensive economic analysis of jackfruit (Artocarpus heterophyllus) cultivation and marketing in Kolli Hills of Namakkal district, Tamil Nadu. Jackfruit is a vital fruit crop with growing significance in rural economies due to its nutritional value, versatile use in food products, and potential for income generation. The study explores cost structures, revenue, profitability, value chains, marketing channels, price variations, production constraints, and farmers' socio-economic characteristics. Data for the study are drawn from primary surveys of jackfruit growers, traders, and local markets, supplemented by secondary data from government departments and agricultural reports. The analysis reveals key insights on returns to cultivation, marketing efficiency, and challenges affecting economic viability. Policy suggestions and strategic measures are proposed to enhance profitability, reduce market inefficiencies, and strengthen livelihoods.

Keywords: Jackfruit, Economic Analysis, Cultivation, Marketing, Kolli Hills, Profitability, Value Chain.

Introduction

Jackfruit (Artocarpusheterophyllus) is a tropical tree crop belonging to the Moraceae family. Tamil Nadu is one of the leading states in India for jackfruit production. Kolli Hills, a remote and ecologically rich region in Namakkal district, is known for its diverse horticultural crops, including jackfruit. Traditionally, jackfruit has been considered a "poor man's crop," but its commercial potential has grown due to increased demand for processed products (chips, flour, canned jackfruit, and frozen products) and export opportunities.

Despite its potential, jackfruit cultivation in Kolli Hills remains largely traditional, with limited use of advanced cultivation technologies, inadequate market linkages, and infrastructure deficiencies. This research aims to assess the economic aspects of jackfruit cultivation and examine marketing practices and constraints faced by growers and traders in the region.

Review of Literature

Several studies have examined the economic aspects of horticultural crops and jackfruit cultivation in India:

1. **Subramanian &Venkataraman (2015)** highlighted the significance of jackfruit in enhancing food security and rural incomes due to its year-round availability and multipurpose use.
2. **Bose et al. (2017)** emphasized the need for processing and value addition to realize higher returns from jackfruit production in Tamil Nadu.
3. **Rajan&Sivakumar (2018)** examined profitability in hill horticultural crops and identified cost constraints, labor shortages, and inadequate market information as major challenges.
4. **Chezhian& Kumar (2020)** analyzed marketing channels for minor fruits in Tamil Nadu, pointing to inefficiencies and price variations caused by lack of organized markets.

Objectives of the Study

The primary objectives are:

1. To estimate the costs and returns of jackfruit cultivation in Kolli Hills.
2. To analyze marketing channels and price dissemination mechanisms in jackfruit trade.
3. To identify constraints faced by farmers in production and marketing.
4. To propose measures for improving profitability and market efficiency.

Statement of the Problem

While jackfruit has high nutritional and economic potential, farmers in Kolli Hills often face low returns due to:

1. Poor access to technology.
2. Seasonal gluts and price fluctuations.
3. Inefficient marketing systems.
4. Lack of value-addition facilities.

To address this, a detailed economic study of cultivation and marketing systems is essential for designing effective interventions.

Scope of the Study

This study focuses on:

1. Economic estimation of cost components and returns in jackfruit cultivation
2. Analysis of marketing channels from growers to consumers
3. Examination of price variations across markets
4. Understanding socio-economic profiles of producers

Study Area: Selected villages in Kolli Hills, Namakkal District, representing small and marginal jackfruit growers.

Research Methodology

Research Design: The study uses a **descriptive research design** integrating primary and secondary data.

Sampling Procedure

A multi-stage random sampling method:

1. **Stage I:** Selection of villages in Kolli Hills known for jackfruit cultivation.
2. **Stage II:** Random selection of 120 jackfruit growers.
3. **Stage III:** Selection of 30 traders/dealers operating in local and regional markets.

Data Collection

1. **Primary Data:** Surveys using structured questionnaires for farmers and traders.
2. **Secondary Data:** Agricultural department statistics, market reports, journals.

Analytical Tools

1. Cost concepts: Cost A1, Cost B, Cost C2.
2. Gross and net returns.
3. Marketing margin.
4. Profitability ratios.
5. Tabular and percentage analysis.

Socio-Economic Profile of Respondents

Characteristics	Category	Percentage
Age Group	<30	15%
	31–50	50%
	>50	35%
Education	Illiterate	20%
	Primary	40%
	Secondary & above	40%
Landholding	Marginal (<1 ha)	55%
	Small (1–2 ha)	30%
	Large (>2 ha)	15%

Note: Majority are small and marginal farmers, influencing adoption of modern practices.

Cost and Return Analysis

Cost Components (per Hectare)

Item	Cost (Rs.)
Land preparation	8,000
Planting material	12,500
Fertilizers & manures	7,200
Labour	32,000
Irrigation	4,500
Plant protection	2,800
Harvesting	6,000
Total Cost	**73,000**

Output and Returns

1. **Average yield:** 10 tons/ha.
2. **Average farm price:**Rs. 8/kg.
3. **Gross return:**Rs. 80,000.
4. **Net return:**Rs. 7,000.
5. **Benefit–Cost Ratio:** 1.10.

Interpretation: The benefit–cost ratio suggests low profitability under traditional practices.

Marketing Channels

1. **Channel I – Grower → Local Wholesaler → Retailer → Consumer.**
2. **Channel II – Grower → Village Trader → Regional Market → Retailer → Consumer.**
3. **Channel III – Grower → Processor/Value-Addition Unit → Retailer → Consumer.**

Channel	Marketing Margin (%)	Efficiency
I	18	Medium
II	25	Low
III	15	High

Observation: Channels involving processors and direct market linkages yield better returns.

Price Variation and Seasonality

Period	Farm Price (Rs./kg)	Retail Price (Rs./kg)
Peak Season	7–9	10–12
Off-Season	5–6	8–9

Price Fluctuations Reflect

1. Lack of storage.
2. Seasonal glut.
3. Limited organized trade.

Constraints in Cultivation and Marketing

Production Constraints

1. Poor quality saplings.
2. Lack of technical guidance.
3. Inadequate irrigation.

Marketing Constraints

1. Absence of cold storage.
2. High transportation cost.
3. Price instability.
4. Limited access to formal markets.

Findings of the Study

1. Low profitability due to high labor costs and low farm prices.
2. Marketing inefficiencies result in reduced returns for growers.
3. Processors and direct markets offer better price margins.
4. Smaller farmers lack access to technology and credit.
5. Price variations reduce income predictability.

Suggestions

1. Formation of Farmer Producer Organizations (FPOs) for collective bargaining.
2. Infrastructure investment such as cold storage and pack houses.
3. Encouraging value-addition units and processing clusters.
4. Market information systems to support price discovery.
5. Training on modern cultivation and GAP (Good Agricultural Practices).
6. Credit support from banks and rural agencies.

Conclusion

This study reveals that while jackfruit cultivation in Kolli Hills contributes to rural livelihoods, economic returns are limited under traditional methods. Marketing inefficiencies and weak infrastructure further constrain profitability. Strengthening value chains, promoting processing industries, and improving market access are essential strategies to enhance farmer incomes and make jackfruit cultivation economically viable.

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