7 Challenges in Marketing of Jack Fruit - An Empirical Analysis at Kolli Hills in Tamilnadu

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Abstract

This study examines the challenges associated with the marketing of jackfruit in the Kolli Hills region of Tamil Nadu through an empirical analysis. Despite jackfruit being a nutritionally rich and economically valuable crop, its commercialization remains limited due to several structural and market-related constraints. The study is based on primary data collected from 45 jackfruit cultivators and local traders using a structured questionnaire, supported by secondary data from relevant agricultural sources. Statistical tools such as descriptive analysis, Anova analysis, and ranking techniques were employed to identify and analyze key marketing challenges. The findings reveal that inadequate transportation infrastructure, lack of organized market channels, high perishability, price fluctuations, and insufficient storage and processing facilities significantly hinder effective marketing. Additionally, limited awareness about value-added products and weak institutional support further constrains farmers' ability to realize better returns. The study highlights the need for improved supply chain mechanisms, establishment of processing units, better market linkages, and policy interventions to enhance the marketing efficiency of jackfruit in the region.

Keywords: Jackfruit Marketing, Marketing Challenges, Kolli Hills, Agricultural Marketing, Perishability, Tamilnadu Agriculture.

Introduction

Agriculture is the backbone of the Indian economy, providing livelihood opportunities to a large segment of the population and ensuring food security. It performs a main role in economic development by contributing to employment generation, rural development, and industrial growth. Jackfruit cultivation is an important horticultural activity in tropical regions, valued for its high nutritional content and economic potential. It provides a sustainable source of income for farmers

through the sale of fresh fruits and value-added products. Kolli Hills in Tamil Nadu is one of the prominent regions for jackfruit cultivation due to its favorable climatic conditions and rich biodiversity. Jackfruit farming serves as an important livelihood activity for many farmers in the region and contributes significantly to the local economy. Despite its high nutritional value and growing market demand, the marketing of jackfruit remains a significant challenge. Farmers often face problems such as lack of organized market channels, inadequate transportation facilities, and unstable market prices. The highly perishable nature of the fruit results in substantial post-harvest losses. In addition, insufficient storage and processing facilities limit the opportunities for value addition and market expansion. The presence of intermediaries further reduces the profit share of producers. These challenges adversely affect the income and livelihood of jackfruit growers.

Review of Literature

According to Shyamsunder et al. (2025) aimed to review sustainable agronomic practices for jackfruit cultivation and assess its nutritional value, health benefits, and utilization of non-edible by-products. The studyobserved that sustainable farming practices improve productivity and environmental sustainability. Further, jackfruit was identified as a rich source of nutrients and bioactive compounds with significant health benefits. The study also highlighted substantial post-harvest losses due to inadequate infrastructure and management practices. The author Tarun (2026) presented a study to analyse the value addition, processing techniques and global market potential of jackfruit (Artocarpus heterophyllus). It is identified that value-added products such as chips, pickles, ready-to-cook packs, vegan meat alternatives and nutraceuticals can enhance profitability and reduce post-harvest losses. Also, the study noted the growing global demand for plant-based, gluten-free and functional foods, creating significant export opportunities for jackfruit. The study confirmed that jackfruit has strong potential to contribute to sustainable agricultural growth and rural economic development.

In view of Reddy et al. (2019)evaluated that the efficiency of jackfruit production and marketing in Cuddalore District of Tamil Nadu. The findings revealed that jackfruit cultivation is economically beneficial and generates considerable income for farmers. The study found that market intermediaries earn higher profits than producers, resulting in an unfavorable price spread for farmers. It also identified lack of awareness, inadequate guidance on value addition and limited knowledge of export opportunities as major constraints faced by jackfruit growers. The study suggested that government support and the establishment of a Jack Promotion Council could improve marketing efficiency and farmer income. The research of Raghi et al. (2024)aimed to identify the constraints faced by agripreneurs engaged in the value addition of jackfruit in Kerala. The findings revealed that the inability to invest in modern machinery was the major financial constraint faced by agripreneurs.

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Limited market accessibility, shortage of skilled labour and high labour costs were identified as major marketing and technological barriers. The study also found that complex licensing procedures, lack of awareness and climate change-induced scarcity of quality jackfruit created significant operational challenges. The study concluded that government support through financial assistance, training programmes, exhibitions and technical guidance can enhance the growth of jackfruit value-addition enterprises and improve employment opportunities.

Statement of the Problem

Jackfruit is one of the important tropical fruits cultivated in Kolli Hills of Tamil Nadu and serves as a significant source of income for many farmers through its high market demand, nutritional value and opportunities for value-added product development. Despite its nutritional value and increasing market demand, jackfruit growers face several marketing challenges that affect their profitability and livelihood. The highly perishable nature of the fruit, lack of organized market channels, inadequate transportation facilities, price fluctuations, and insufficient storage and processing infrastructure often result in post-harvest losses and reduced returns to farmers. Moreover, the presence of intermediaries limits the share of profit received by producers. These challenges hinder the efficient marketing of jackfruit and restrict its commercial potential. Hence, this study aimed to examine the challenges in marketing of jack fruit at Kolli Hills in Tamilnadu.

Objectives of the Study

- To explore the socio-economic profile of the selected farmers who cultivate jackfruit at Kolli Hills in Tamilnadu.
- To analyze the challenges in marketing of jack fruit among farmers in the study area.

Hypothesis of the Study

- There is no significant difference in mean challenges in marketing of jack fruit with respect to cultivation area.
- There is no significant difference in mean challenges in marketing of jack fruit with respect to farming experience.

Research Methods

This study adopted a descriptive research design with a quantitative approach to examine the challenges in marketing of jack fruit among farmers at Kolli Hills in Tamilnadu. Data were collected from both primary and secondary sources. The primary data were obtained through a structured questionnaire designed to capture information on the socio-economic profile of farmers and their challenges in marketing of jack fruit. The questionnaire employed a 5-point Likert scale to measure farmers' responses. A sample of 45 jack fruit farmers were selected using a random

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sampling technique. The collected data were systematically organized in MS-Excel and subjected to statistical analysis, including descriptive analysis (percentage analysis, mean score, standard deviation), Analysis of Variance (ANOVA) and Henry Garrett Ranking Technique by using SPSS version 26.0.

Result and Discussion

- **Socio-Economic Profile of the selected farmers and Challenges in Marketing of Jack Fruit**

The details about socio-economic profile of the selected farmers and their challenges in marketing of jack fruit are given in the following table.

Table 1: Socio-Economic Profile of the Farmers and Challenges in Marketing of Jack Fruit

No.	Variables Name	Number of Respondents	%	Mean	SD
1	**Age**				
	• Less than 30 Years	6	13.3	3.63	0.52
	• 30 – 40 Years	13	28.9	4.11	0.37
	• 41-50 Years	17	37.8	3.73	0.53
	• Above 50 Years	9	20.0	3.78	0.24
	Total	**45**	**100.0**		
2	**Gender**				
	• Male	29	64.4	3.59	0.49
	• Female	16	35.6	3.92	0.38
	Total	**45**	**100.0**		
3	**Sources of Awareness about Marketing**				
	• Friend	8	17.8	3.52	0.27
	• Extension Agent	14	31.1	3.77	0.23
	• Social group	18	40.0	3.95	0.53
	• Television / Newspaper	5	11.1	3.85	0.66
	Total	**45**	**100.0**		
4	**Cultivation Area**				
	• Upto 3 acres	7	15.5	3.73	0.29
	• 3-6 acres	18	40.0	3.50	0.29
	• 7-9 acres	12	26.7	3.68	0.49
	• Above 10 acres	8	17.8	4.04	0.44
	Total	**45**	**100.0**		
5	**Farming Experience**				
	• Less than 10 years	8	17.8	4.16	0.36
	• 10-20 years	13	28.9	3.70	0.49
	• Above 20 years	24	53.3	3.74	0.41
	Total	**45**	**100.0**		

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- From the above analysis, it is observed that 13.3% of the jack fruit farmers are below 30 years, 28.9% of the farmers belong to the age group of 30–40 years, 37.8% of the farmers fall under 41–50 years and 20.0% of the farmers are above 50 years.
- It is mentioned that 64.4% of the farmers are male and 35.6% of the farmers are female.
- From the analysis, it is noted that 17.8% of the farmers receiveawareness through friends, 31.1% through extension agents, 40.0% through social groups and 11.1% through television/newspapers.
- From the above analysis, it is displayed that 15.5% of the farmers cultivate jack fruits upto 3 acres, 40.0% cultivate 3–6 acres, 26.7% cultivate 7–9 acres and 17.8% cultivate above 10 acres.
- It is confirmed that 17.8% of the jack fruit farmers have less than 10 years of farming experience, 28.9% have 10–20 years of farming experience and 53.3% have above 20 years of farming experience.

- **Challenges in Marketing of Jack Fruit (Henry Garrett Ranking Technique)**

An attempt has been made to identify the major challenges faced by farmers in marketing of jack fruit. For the purpose of this study, it has been classified into five categories viz., inadequate transportation infrastructure, lack of organized market channels, high perishability, price fluctuations and insufficient storage and processing facilities. To identify the most important challenge, Henry Garrett Ranking Technique was employed and the details of ranking the challenges in marketing of jack fruit are shown in the following table.

Table 2: Challenges in Marketing of Jack Fruit

S. No	Factors	Total Score	Mean Score	Rank
1	Inadequate Transportation Infrastructure	1948	3.9	V
2	Lack of Organized Market Channels	2641	5.3	I
3	High Perishability	2096	4.2	IV
4	Price Fluctuations	2391	4.8	II
5	Insufficient Storage and Processing Facilities	2219	4.4	III

It is illustrated from the above table that the major challenge in marketing of jack fruit is ‘lack of organized market channels’ which is ranked first with the Garrett score of 2641 points. It is followed by ‘price fluctuations’ and ‘insufficient storage and processing facilities’ which are assigned the second and third ranks with the Garrett scores of 2391 and 2219 points respectively. The fourth and fifth ranks are assigned to ‘high perishability’ and ‘inadequate transportation infrastructure’ with the Garrett scores of 2096 and 1948 points respectively.

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Testing of Hypothesis (ANOVA)

- **Relationship between Socio-Economic Profile and Challenges in Marketing**

This section has examined the relationship between the selected variables and challenges in marketing of jack fruit. In order to analyse the relationship between selected independent variables of the farmers and their challenges in marketing of jack fruit, hypotheses have been developed and examined by using ANOVA.

Cultivation Area and Challenges in Marketing of Jack Fruit

H_0: There is no significant difference in mean challenges in marketing of jack fruit with respect to cultivation area.

Table 3: Cultivation Area and Challenges in Marketing of Jack Fruit

	Sum of Squares	df	Mean Square	F	'p' value
Between Groups	1.896	3	0.632	3.736	0.018**
Within Groups	6.934	41	0.169		
Total	8.830	44			

Note: ** – Significant at 5% level

From the above table, it is depicted that the 'p' value is lesser than 0.05 (p = 0.018), hence the null hypothesis is rejected. Therefore, there is a significant difference in mean challenges in marketing of jack fruit with respect to the cultivation area of the farmers.

Farming Experience and Challenges in Marketing of Jack Fruit

H_0: There is no significant difference in mean challenges in marketing of jack fruit with respect to farming experience.

Table 4: Farming Experience and Challenges in Marketing of Jack Fruit

	Sum of Squares	df	Mean Square	F	'p' value
Between Groups	1.212	2	0.606	3.341	0.045**
Within Groups	7.618	42	0.181		
Total	8.830	44			

Note: ** – Significant at 5% level

From the above table, it is noticed that the 'p' value is lesser than 0.05 (p = 0.045), hence the null hypothesis is rejected. Hence, there is a significant difference in mean challenges in marketing of jack fruit with respect to the farming experience of the farmers.

Findings

- It is indicated that majority (37.8%) of the farmers belong to the age group of 41–50 years. Also, farmers in the age group of 30–40 years have the highest level of challenges in marketing of jack fruit with a mean score of 4.11.

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- The analysis shows that majority (64.4%) of the farmers are male. Additionally, female farmers have high level of challenges in marketing of jack fruit with a mean score of 3.92.
- From the analysis, it is revealed that majority (40.0%) of the farmers get awareness through social groups. Further, farmers receiving awareness through social groups have highest level of challenges in marketing of jack fruit with a mean score of 3.95.
- It is mentioned that majority (40.0%) of the farmers cultivate jack fruits for 3–6 acres. In addition, farmers cultivating above 10 acres have the highest level of challenges in marketing of jack fruit with a mean score of 4.04.
- The analysis proves that majority (53.3%) of the farmers have above 20 years of farming experience. Moreover, farmers with less than 10 years of farming experience have the highest level of challenges in marketing of jack fruit with a mean score of 4.16.
- It is justified from the Henry Garrett Ranking Techniqueanalysis that majority of the respondents opined that the main challenges in marketing of jack fruit are ‘lack of organized market channels’ and ‘price fluctuations’.
- The ANOVA noticed that there is a significant difference in mean challenges in marketing of jack fruit with respect to the cultivation area of the farmers.
- The ‘F’ test observed that there is a significant difference in mean challenges in marketing of jack fruit with respect to the farming experience of the farmers.

Suggestions

- The findings observed that farmers in the age group of 30–40 years experience the highest level of challenges in marketing of jack fruit. Hence, this study suggested that government agencies and agricultural extension departments should provide targeted marketing training and market linkage support to help these farmers overcome marketing difficulties.
- From the study, it is evinced that female farmers face a higher level of challenges in marketing of jack fruit. Therefore, policymakers and rural development agencies should strengthen women-focused farmer groups, provide marketing assistance and facilitate easier access to market information and financial support.
- It is justified that farmers receiving awareness through social groups experience the highest level of challenges in marketing of jack fruit. So, extension agencies should improve the quality and reliability of marketing information disseminated through social groups and integrate them with official market intelligence services.

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- The study indicated that farmers cultivating above 10 acres face the highest level of challenges in marketing of jack fruit. Hence, large-scale cultivators should be encouraged to establish direct marketing networks, contract marketing arrangements and collective marketing systems to improve market access and profitability.
- It is confirmed that farmers with less than 10 years of farming experience obtain the highest level of challenges in marketing of jack fruit. Accordingly, training programmes, mentoring support and market orientation initiatives should be organized to enhance the marketing capabilities of less-experienced farmers.

Conclusion

This study aimed to examine the economic growth of farmers through mechanization in sugarcane cultivation in Erode district. This study indicated that there is a significant difference in mean challenges in marketing of jack fruit with respect to selected variables like cultivation area and farming experience of the farmers. It is justified that lack of organized market channels and price fluctuations are the major challenges in marketing of jack fruit. Hence, government should establish organized marketing channels, strengthen farmer producer organizations, introduce regulated market facilities and ensure price stabilization mechanisms to improve the marketing efficiency of jack fruit farmers.

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