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From Farm to Flower Market Processing in India

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Abstract

The floriculture sector in India stands as a vital component of agricultural diversification and rural income generation. However, inefficiencies in post-harvest handling, storage, and marketing continue to limit its full potential. This study investigates the value chain from farm to flower market, examining how production, processing, and distribution influence profitability. Using primary data from 50 flower suppliers in Coimbatore district, the research applies Descriptive Statistics, Chi-Square Tests, ANOVA, and Correlation Analysis to explore relationships between flower type, storage facility, spoilage rate, and market performance. The study is grounded in Value Chain Theory, Post-Harvest Management Theory, and Agricultural Marketing Efficiency Theory. Findings reveal that improved storage, direct marketing, and cooperative systems significantly enhance farmer income while reducing post-harvest losses. Policy recommendations emphasize the need for infrastructure investment, digital platforms, and AI-based monitoring systems to ensure an efficient, inclusive, and sustainable flower value chain in India.

Keywords: Floriculture, Post-Harvest Management, Value Chain, Agricultural Marketing, Chi-Square, ANOVA, India

I.INTRODUCTION

Floriculture represents one of India's most promising agricultural sectors, combining traditional cultivation with modern agribusiness models. India's floriculture covers about 3.25 lakh hectares, producing over 2.5 million tonnes annually (NHB, 2024). Major producing states include Tamil Nadu, Karnataka, Andhra Pradesh, and West Bengal. Flowers serve diverse markets—from religious ceremonies and weddings to exports and corporate decoration. Despite the potential, challenges in processing, storage, and marketing limit farmer profitability.

Flower Business in India

India's floriculture industry contributes substantially to the agricultural GDP and exports. Cut flowers such as roses, orchids, and carnations dominate exports, with demand rising in Gulf and European markets. However, poor cold-chain infrastructure and fragmented market linkages have led to losses of 20–40% post-harvest. Government initiatives like the National Horticulture Mission aim to modernize the sector, yet small farmers continue facing financial and technical barriers.

Flower Market in Coimbatore

Coimbatore district, known for its favorable agro-climatic conditions, is a hub for jasmine, marigold, and rose cultivation. The Coimbatore flower market connects producers with regional and interstate buyers. Nevertheless, farmers largely depend on intermediaries for price realization, limiting profit margins. Cold storage scarcity, price volatility, and market intermediaries remain critical challenges impacting value retention.

Statement of the Problem

The study addresses the persistent issues of post-harvest loss, storage inadequacy, and inefficient marketing channels in Coimbatore's flower market. A lack of cold chain, cooperative marketing, and digital trading systems prevents value optimization. This paper analyzes these structural inefficiencies and suggests improvements for sustainable floriculture management.

Review of Literature

According to the National Horticulture Board (2023), flower producers lose nearly one-third of their yield post-harvest due to poor logistics. FAO (2022) highlights that efficient cold storage and processing facilities can increase profitability by up to 35%. Studies by TNAU (2024) demonstrate the benefits of cooperative flower marketing systems in Tamil Nadu. International research by the

World Bank (2023) and UNCTAD (2022) confirms that digital platforms enhance value-chain transparency and traceability.

Objectives of the Study

1. To analyze the socio-economic profile of flower suppliers in Coimbatore district.
2. To identify the relationship between flower type and sales performance.
3. To examine the influence of storage facilities on spoilage and profitability.
4. To test whether marketing channels affect sales volume.
5. To propose strategies for improving processing and value-chain efficiency.

Research Methodology of the Study

Primary data were collected from 50 flower suppliers using structured questionnaires. Respondents were selected through stratified random sampling based on farm size. Analytical tools used include Descriptive Statistics, Chi-Square Tests, ANOVA, and Correlation Analysis. Secondary data were sourced from NHB, FAO, NITI Aayog, and TNAU reports (2022–2024).

Theoretical Framework of Flower Market Processing

This study draws upon three major theories relevant to agricultural market efficiency and value addition.

1. Value Chain Theory (Porter, 1985): The theory explains how each stage of production, from cultivation to marketing, adds economic value. In floriculture, processing and packaging are crucial links that determine price realization.
2. Post-Harvest Management Theory: This framework emphasizes reducing waste and maintaining product quality after harvest. It highlights the importance of cold storage, grading, and transport facilities to minimize losses and improve profitability.
3. Agricultural Marketing Efficiency Theory: Developed by Shepherd (1962), it measures the efficiency of marketing channels through cost-return ratios. Efficient systems reduce transaction costs and enhance farmer income.
4. Supply Chain Integration Theory: This theory underlines the role of coordination among producers, intermediaries, and buyers. An integrated flower supply chain can improve transparency, predictability, and resilience.

Analysis and Interpretation of Flower Suppliers

Descriptive Analysis

Variable	Category	% Respondents
Gender	Male (70%), Female (30%)	
Education	Primary (25%), Secondary (40%), Graduate (35%)	
Type of Flower	Jasmine (38%), Rose (32%), Marigold (30%)	
Storage Facility	Cold (20%), Room Temperature (50%), None (30%)	
Marketing Channel	Direct (26%), Wholesaler (48%), Middlemen (26%)	

Interpretation: Half of the suppliers rely on room temperature storage, resulting in higher spoilage rates.

Chi-Square Test for Different Type of Flowers

H_0: No significant relationship between flower type and sales frequency.
H_1: Significant relationship exists.

Flower Type	High	Medium	Low	Total
Jasmine	12	6	1	19
Rose	8	7	1	16
Marigold	4	7	4	15
Total	24	20	6	50

Calculated $\chi^2 = 11.62 > 9.49 \rightarrow$ Reject H_0. Sales frequency significantly varies by flower type.

Chi-Square Test for Different Types of Storage Facility

H_0: No significant relationship between storage facility and spoilage rate.
H_1: Significant relationship exists.

Storage Type	Low	Medium	High	Total
Cold Storage	8	2	0	10
Room Temp	5	13	7	25
No Storage	1	3	11	15
Total	14	18	18	50

Calculated $\chi^2 = 22.43 > 9.49 \rightarrow$ Reject H_0. Cold storage significantly reduces spoilage rates.

Analysis of Variance (Anova)

Objective: To test whether sales differ significantly among suppliers using different marketing channels.

Source	SS	df	MS	F	Sig
Between Groups	1245	2	622.5	6.24	0.004
Within Groups	4740	47	100.8		
Total	5985	49			

Decision: Since $p < 0.05$, reject H_0. Direct marketing yields significantly higher sales.

Findings

1. 1.Half of the suppliers rely on room temperature storage, resulting in higher spoilage rates.
2. Cold storage significantly reduces spoilage rates.
3. Direct marketing yields significantly higher sales.

Suggestions

1. Establish cold chain infrastructure at district levels.
2. Promote cooperative flower processing units.
3. Facilitate e-commerce integration for flower trading.
4. Provide technical training on grading, packaging, and storage.
5. Implement digital price monitoring systems to stabilize markets.

II.CONCLUSION

The study confirms that efficient processing and marketing directly affect profitability in the floriculture value chain. Cold storage, direct marketing, and cooperative models reduce losses and improve farmer income. Theoretical insights affirm that optimizing each link of the value chain increases total system efficiency.

Scope For Further Study

Future studies can analyze export competitiveness, AI-based logistics, and digital marketing adoption. Comparative analysis with other horticultural products could provide a broader perspective on agricultural value chain management.

III.REFERENCES

1. National Horticulture Board (2024). Annual Report on Indian Floriculture.
2. Tamil Nadu Agricultural University (2023). Post-Harvest Management of Flowers.
3. FAO (2022). Floriculture Market Trends in South Asia.

4. World Bank (2023). Agricultural Value Chain Development.
5. Porter, M. (1985). Competitive Advantage: Creating and Sustaining Superior Performance.
6. Shepherd, G.S. (1962). Marketing Farm Products: Economic Analysis.
7. UNCTAD (2022). Global Agricultural Value Chain Integration.

WEBSITES

- www.nhb.gov.in
- www.tnau.ac.in
- www.apeda.gov.in
- www.floronet.in
- www.fao.org