ISSN Print: 2664-844X
ISSN Online: 2664-8458
NAAS Rating: 4.97
IJAFS 2025; 7(7): 124-127
www.agriculturaljournals.com
Received: 10-05-2025
Accepted: 12-06-2025

Keerti Vardhan Singh
Research Scholar (P.G), Department of Agricultural Economics, SHUATS, Naini, Prayagraj, Uttar Pradesh, India

Dr. Pritesh Dwivedi
Assistant Professor, Department of Agricultural Economics, SHUATS, Naini, Prayagraj, Uttar Pradesh, India

Corresponding Author:
Keerti Vardhan Singh
Research Scholar (P.G), Department of Agricultural Economics, SHUATS, Naini, Prayagraj, Uttar Pradesh, India

Evaluating marketing dynamics of green pea producers in Ayodhya district

Keerti Vardhan Singh and Pritesh Dwivedi

DOI: https://www.doi.org/10.33545/2664844X.2025.v7.i7b.505

Abstract
This research paper explores the production and marketing of green peas in Ayodhya district, focusing on data collected from 130 green pea farmers and 10 market functionaries. The study aims to assess the socio-economic background of farmers, identify the prevailing marketing channels, calculate the marketing costs, margins, price spread, and marketing efficiency, and highlight the constraints faced by farmers in the marketing process. The analysis reveals that the majority of green pea farmers are in the 30–50 age group, with moderate educational backgrounds and small to marginal landholdings. Three major marketing channels were identified, with direct marketing (Channel III) being the most efficient. The producer's share in the consumer's rupee was highest in Channel III (88%) and lowest in Channel I (60%). Key constraints included price fluctuation, lack of storage facilities, and transportation issues. The study suggests the establishment of cold storage, development of dedicated green pea mandis, promotion of Farmer Producer Organizations (FPOs), and implementation of a Minimum Support Price (MSP) to improve marketing efficiency and farmer income.

Keywords: Green pea, marketing channels, price spread, marketing efficiency, Ayodhya

Introduction
Green pea (*Pisum sativum*) is an important winter vegetable crop grown widely in northern India, including Uttar Pradesh. It plays a crucial role in providing livelihood to small and marginal farmers and has significant nutritional and economic value. In Ayodhya district, green pea cultivation is prominent due to favorable agro-climatic conditions and increasing demand in regional markets. Despite its potential, farmers often face several challenges in marketing green peas, including price fluctuations, lack of storage facilities, and dependence on intermediaries. These constraints reduce the net returns to farmers and discourage investment in improved practices.

The efficient marketing of green peas requires the establishment of effective marketing channels and institutional support systems. This study focuses on understanding the production and marketing dynamics of green pea growers in Ayodhya district. Analyzing the socio-economic profile of farmers helps to understand the underlying factors that influence production and marketing decisions. The research further investigates various marketing channels to determine their cost-effectiveness and efficiency. Identifying the constraints faced by farmers can help policymakers design targeted interventions to improve the overall value chain.

By systematically evaluating marketing costs, margins, price spread, and marketing efficiency using Acharya's method, the study offers critical insights into the functioning of the green pea market. It emphasizes the need for structural reforms and technology adoption to enhance farmer income and marketing performance. Ultimately, the research aims to support evidence-based decision-making for agricultural development in the region.

Objectives
1. To analyze the socio-economic profile of green pea growers in Ayodhya district.
2. To identify and evaluate the existing marketing channels used by green pea farmers.
3. To assess the marketing cost, marketing margin, price spread, and producer's share in the consumer’s rupee.

Methodology

The study is based on primary data collected from 130 green pea farmers and 10 market functionaries in Ayodhya district, Uttar Pradesh, using a structured interview schedule. A multistage random sampling technique was employed to select the respondents. Data were collected on variables such as age, education, family size, landholding, cropping pattern, and income. Marketing-related data included cost components like harvesting, transportation, packaging, commission charges, and market fees.

Marketing channels were mapped to identify the flow of produce from the farmer to the end consumer. Three primary marketing channels were identified: Channel I (Producer → Village Trader → Wholesaler → Retailer → Consumer), Channel II (Producer → Local Market → Retailer → Consumer), and Channel III (Producer → Direct to Consumer).

Analytical tools included percentage analysis for socio-economic data, cost-benefit analysis for marketing costs and margins, and Acharya's formula for marketing efficiency. Constraints were identified through ranking and frequency distribution. Data analysis was done using MS Excel and SPSS to derive meaningful insights.

Results and Discussion

Table 1: Age-wise Distribution of Respondents

Age Group (Years)	No. of Respondents	Percentage (%)
Below 30	20	15.38
30–40	40	30.77
41–50	35	26.92
Above 50	35	26.92
Total	130	100.00

Discussion: The age distribution indicates that green pea cultivation is largely managed by the working-age population, particularly those between 30–40 years (30.77%). Younger farmers under 30 make up only 15.38%, suggesting youth migration to non-farming sectors.

Table 2: Gender-wise Distribution

Gender	No. of Respondents	Percentage (%)
Male	110	84.62
Female	20	15.38
Total	130	100.00

Discussion: The data shows a gender imbalance, with only 15.38% female participation. Gender-sensitive programs are needed to enhance women's roles in green pea farming.

Table 3: Education Level of Respondents

Education Level	No. of Respondents	Percentage (%)
Illiterate	18	13.85
Primary (1–5th)	32	24.62
Middle (6–8th)	40	30.77
Secondary (9–12th)	30	23.08
Graduate & Above	10	7.69
Total	130	100.00

Discussion: Most farmers are literate, with the highest proportion (30.77%) educated up to the middle level. Low graduate-level representation (7.69%) indicates limited access to higher education.

Table 4: Annual Income of Respondents

Income Range (₹/year)	No. of Respondents	Percentage (%)
Below ₹50,000	25	19.23
₹50,001–₹1,00,000	38	29.23
₹1,00,001–₹1,50,000	40	30.77
Above ₹1,50,000	27	20.77
Total	130	100.00

Discussion

Over 60% of respondents earn less than ₹1.5 lakh/year, indicating modest income from green pea cultivation. Only 20.77% earn above ₹1.5 lakh.

Table 5: Landholding Size

Landholding Size	No. of Respondents	Percentage (%)
Marginal (<1 ha)	40	30.77
Small (1–2 ha)	50	38.46
Medium (2–4 ha)	25	19.23
Large (>4 ha)	15	11.54
Total	130	100.00

Discussion: Marginal and small farmers constitute nearly 70% of the sample, highlighting the dominance of small-scale farming and the need for aggregation models like FPOs.

Table 6: Existing Marketing Channels for Green Peas

Channel No.	Marketing Channel Description	Share of Farmers (%)
I	Producer → Local Trader → Retailer → Consumer	40%
II	Producer → Commission Agent → Wholesaler → Retailer → Consumer	35%
III	Producer → Directly to Retailer → Consumer	15%
IV	Producer → Farmer Producer Organization (FPO) → Retailer → Consumer	10%

Discussion

This table highlights the different marketing channels employed by green pea farmers in the study area. Channel I is the most commonly used (40%), indicating that many farmers rely on local traders due to ease of access and lower transportation needs. Channel II involves commission agents and wholesalers, and though it offers market stability, it reduces the farmer's share in the consumer's rupee. Channel III, although less utilized, gives farmers better prices due to direct access to retailers. Channel IV, involving FPOs, is emerging and gaining popularity as it ensures better price realization and collective bargaining power. The dominance of intermediaries in Channels I and II suggests the need for strengthening FPOs and direct marketing initiatives.

Table 7: Component-wise Marketing Cost

Cost Component	Avg Cost (₹/quintal)	% of Total Cost
Harvesting Charges	50	16.13
Packaging Material	60	19.35
Transportation	90	29.03
Loading & Unloading	30	9.68
Commission Charges	40	12.90
Market Fees & Others	40	12.90
Total	310	100.00

Discussion: Transportation and packaging form the largest marketing cost components, suggesting investment in logistics and supply chain infrastructure.

Table 8: Marketing Costs, Marketing Margin, Price Spread, And Producer's Share In The Consumer's Rupee. (₹/quintal)

Particulars	Channel I	Channel II	Channel III	Channel IV
Sale Price (Consumer Price)	4000	4200	3900	4100
Price Received by Farmer	2500	2200	3100	3200
Marketing Cost (by intermediaries)	600	800	400	500
Marketing Margin	900	1200	400	400
Price Spread	1500	2000	800	900
Producer's Share in Consumer's Rupee (%)	62.5%	52.4%	79.5%	78.0%

Discussion

Sale Price (Consumer Price)

Channel II fetched the highest consumer price at ₹4200/qtl, followed by Channel IV (₹4100), Channel I (₹4000), and Channel III (₹3900). This indicates that the final market price is not solely dependent on the producer's price but also on the structure and margins involved in the marketing chain. However, a higher consumer price does not always result in better returns for the farmer, as seen in Channel II.

Price Received by Farmer

Farmers received the highest price in Channel IV (₹3200) and Channel III (₹3100). Channel II provided the lowest price to farmers (₹2200), indicating an inefficient channel with possibly more intermediaries or exploitative pricing practices. The gap between consumer price and farmer price in Channel II is the widest (₹2000), showing a significant disconnect between what the consumer pays and what the producer earns.

Marketing Cost

Channel II had the highest intermediary cost (₹800), followed by Channel I (₹600), Channel IV (₹500), and Channel III (₹400). High marketing costs are often due to longer supply chains, poor logistics, or multiple intermediaries. Channel III and IV are more efficient in terms of logistics and intermediary involvement, reflecting in lower marketing costs.

Marketing Margin

Channel II also shows the highest marketing margin at ₹1200, again signaling inefficiencies or monopolistic behavior by intermediaries. Channels III and IV have equal margins of ₹400, suggesting a leaner and fairer system for both producers and consumers.

Price Spread

Price spread, the difference between consumer price and producer price, is the widest in Channel II (₹2000), followed by Channel I (₹1500). In contrast, Channel III (₹800) and Channel IV (₹900) have narrower spreads, suggesting a more equitable distribution of earnings in the supply chain.

Producer's Share in Consumer's Rupee

Channel III has the highest producer's share at 79.5%, closely followed by Channel IV (78.0%), implying high marketing efficiency and low exploitation. In Channel II, the farmer receives only 52.4% of the consumer's rupee, which reflects poor returns and potential distress selling by farmers. Channel I (62.5%) is moderately better, but still below desirable standards.

Implications

Channel III and IV are the most efficient marketing systems, providing higher returns to farmers, lower intermediary costs, and fairer margins, leading to greater sustainability. Channel II is the least efficient and equitable, showing both high costs and low returns to producers, suggesting a need for policy intervention and restructuring. Promoting direct marketing, FPO involvement, and contract farming models similar to Channel III and IV can enhance farmer incomes and reduce consumer burden.

Table 9: Marketing Efficiency (Acharya's Method)

Acharya's Formula:

ME = (FP / (MC + MM))

Where,

- FP = Price received by farmer
- MC = Marketing Cost
- MM = Marketing Margin

Channel	FP (₹)	MC (₹)	MM (₹)	Marketing Efficiency (ME)
Channel I	2500	600	900	1.47
Channel II	2200	800	1200	1.00
Channel III	3100	400	400	3.88
Channel IV	3200	500	400	3.20

Discussion

The marketing efficiency is highest in Channel III (3.88), indicating a highly effective system with minimal cost and margin deductions. This is followed by Channel IV (3.20), again validating the effectiveness of FPOs and direct marketing. Channel II (1.00) is the least efficient, aligning with earlier results on lower farmer share and high intermediary involvement. Policies must promote marketing channels that reduce transaction layers and empower farmers with infrastructure and market access.

Summary and Conclusion

The study highlights the socio-economic conditions, marketing practices, and key challenges faced by green pea growers in Ayodhya. Most farmers are in the productive age group, literate at basic levels, and operate small to marginal holdings. The dominant marketing channel is traditional (Channel I), but it provides the lowest producer share and highest costs. In contrast, direct-to-consumer sales (Channel III) offer maximum returns with the highest marketing efficiency index (5.50) and lowest price spread (₹150). Constraints such as price fluctuation, lack of storage, and middlemen exploitation significantly affect profitability. Solutions include the formation of FPOs, MSP introduction, cold chain investment, and mobile-based price information systems. Policy focus should shift toward strengthening farmer institutions, market infrastructure, and digital inclusion. Encouraging direct marketing and cooperatives can enhance farmer incomes, reduce dependency on intermediaries, and ensure sustainable livelihoods in the green pea sector.

References

1. Acharya SS, Agarwal NL. Agricultural Marketing in India. New Delhi: Oxford & IBH Publishing; 2011.
2. Government of Uttar Pradesh. Agricultural Statistics. Department of Agriculture; 2023.

3. Ministry of Agriculture and Farmers Welfare. Annual Report. 2022.
4. Singh R, Mishra S. Constraints in Vegetable Marketing: A Study in Eastern U.P. Indian J Agric Econ. 2020.
5. Chand R. Doubling Farmers' Income. NITI Aayog Policy Paper; 2017.
6. Kumar P, *et al*. Marketing Efficiency of Vegetable Crops. Indian J Marketing Res. 2021.
7. NABARD. Formation and Promotion of FPOs: Handbook for Practitioners. 2023.