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A Study on Marketing of Mushroom (Oyster Mushroom) in Gaya District of Bihar

Pulkit Raj[1], Dr. Ameesh John Stephen[2]

[1]MBA Scholar, SHUATS, Prayagraj, UP, India
[2]Assistant Professor, SHUATS, Prayagraj, UP, India

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Abstract— *This study investigates the marketing channels for mushrooms in Gaya district, Bihar, focusing on two primary channels: direct sales from producers to consumers (Channel I) and sales through retailers (Channel II). The research employs a multistage sampling procedure to collect primary data from producers and retailers. Channel I, where producers sell directly to consumers, exhibits a higher marketing efficiency of 36.70% and a producer share of 97.28% in the consumer's rupee. In contrast, Channel II, involving retailers, results in a significantly lower marketing efficiency of 17.23% and a producer share of 81.76%, due to higher intermediary costs and retailer margins. The study highlights the benefits of direct marketing channels in enhancing producer profitability and efficiency, suggesting that reducing intermediary involvement can substantially improve economic returns for mushroom growers. These findings provide valuable insights for policymakers and stakeholders aiming to optimize agricultural marketing strategies and support sustainable mushroom cultivation in the region.*

Keywords— ***Marketing channels, Mushroom producers, Direct sales, Marketing efficiency, Producer profitability***

I. INTRODUCTION

Mushroom cultivation has emerged as a significant agricultural activity, particularly in regions like Gaya district of Bihar, where it contributes to the livelihoods of many small and marginal farmers. The efficiency of marketing channels is crucial in determining the profitability and sustainability of mushroom production. This study aims to analyze the marketing channels for mushrooms, focusing on direct sales from producers to consumers (Channel I) and sales through retailers (Channel II), to identify the most efficient and beneficial methods for farmers.

India has seen a substantial increase in mushroom production over the years due to its high nutritional value and increasing consumer demand. According to the ***National Horticulture Board (2019),*** India produces approximately 1.35 lakh metric tons of mushrooms annually, with a significant portion coming from small-scale farmers in states like Bihar. Gaya district, in particular, has been identified as a prominent area for mushroom cultivation due to its favorable climate and the presence of a large number of small and marginal farmers engaged in this activity ***(Bora et al., 2017).***

Marketing is a critical component of agricultural enterprises, affecting the income and sustainability of farmers. Efficient marketing channels ensure that producers receive a fair share of the consumer's rupee while minimizing costs and losses. Previous studies have highlighted the importance of direct marketing channels in improving profitability for small-scale farmers. For instance, ***Sharma et al. (2018)*** found that direct sales to consumers significantly increased the net returns for vegetable farmers in Himachal Pradesh. Similarly, ***Singh and Kaur (2019)*** noted that direct marketing reduced intermediary costs and increased the producer's share in the consumer's price in Punjab's fruit markets.

However, the role of intermediaries in agricultural marketing cannot be entirely overlooked. Retailers and

other intermediaries often provide essential services such as storage, transportation, and market access, which can be beneficial for producers, especially those with limited resources ***(Patil and Bhagat, 2020).*** Therefore, understanding the trade-offs between direct and intermediary-involved marketing channels is essential for developing strategies that enhance farmer incomes and market efficiency.

In Gaya district, two primary marketing channels for mushrooms have been identified: Channel I, where producers sell directly to consumers, and Channel II, where producers sell to retailers who then sell to consumers. This study aims to compare these channels in terms of marketing costs, margins, price spread, producer's share in the consumer's rupee, and overall marketing efficiency. By doing so, it seeks to provide actionable insights for policymakers and agricultural stakeholders to optimize mushroom marketing strategies in the region.

Data for this study were collected using a multistage sampling procedure. Primary data were gathered from producers and retailers through personal interviews and surveys, while secondary data were obtained from various sources, including government reports, academic journals, and relevant literature. The analysis focuses on key metrics such as marketing costs, price spreads, and the producer's share in the consumer's price to determine the most efficient marketing channel for mushroom growers in Gaya district.

This study aims to provide a comprehensive analysis of mushroom marketing channels in Gaya district, highlighting the benefits and challenges of direct and intermediary-based marketing. The findings will contribute to the development of more efficient and profitable marketing strategies for mushroom growers, ultimately enhancing their economic sustainability and livelihood security.

II. METHODOLOGY

The present study was based on primary data collected from producers and retailers using a multistage sampling procedure. Gaya district in Bihar was purposively selected due to its prominence in mushroom cultivation. Within Gaya district, the Gaya town block was chosen based on the high concentration of mushroom growers. Villages such as Chakand, Dhansir, Ghutiya, Kandi, and Kujapi, known for mushroom production, were included. A list of mushroom growers was compiled, and 10% of these growers were randomly selected as respondents. Farmers were categorized by production levels into small (0-50 kg), medium (50-100 kg), and large (more than 100 kg) producers. Two major mushroom markets, Delha Mandi and Durgabari Sabji Mandi, were selected for their significance in mushroom sales. From these markets, five out of ten mushroom retailers were chosen for the study. Primary data on mushroom production, marketing practices, and related challenges were collected through personal interviews and surveys using well-prepared interview schedules. Secondary data were gathered from literature reviews and various government sources such as the Directorate of Marketing and Agricultural websites and journals.

III. RESULT

Table 1. Marketing Channels of Mushroom

Channel I	Producer > Consumer
Channel II	Producer > Retailer > Consumer

Table 2. Marketing Cost, Marketing Margin and Price Spread in Channel I

SI. No.	Particulars	Rs/Kg
1.	Producer's sale price	120
2.	Cost of packing	0.25
3.	Transport cost	1.75
4.	Cleaning, grading, etc.	1.02
5.	Miscellaneous expenses	0.25
6.	Total expenses	3.27
7.	Net price received by the producer	116.73
8.	Consumer's purchase price	120
9.	Price Spread	3.27
10.	Producers Share in Consumer Rupee	97.28
11.	Marketing Efficiency	36.70

Table 3. Marketing Cost, Marketing Margin and Price Spread

SI. No.	Particulars	Rs/Kg
1.	Producer's sale price	110.00
i.	Expenses borne by the producer	3.27
ii.	Cost of packaging material	0.25
iii.	Cleaning, Grading, filling etc.,	1.02
iv.	Load & transport	1.75
V.	Miscellaneous charges	0.25
2.	Net price received by the farmer	106.73

i.	Expenses borne by the retailer	4.54
ii.	Transportation cost	1.54
iii.	Rent of the shop	2.25
iv.	Loss, wastage and spoilage	0.75
V.	Margin of the retailer	20.00
3.	Retailer's sale price/ consumer's purchase price	134.54
4.	Price spread	24.54
5.	Producers Share in Consumer Rupee	81.76
6.	Marketing Efficiency	17.23

Table 4. Estimation Total Marketing Cost and Marketing Margin

SI. No.	Particulars	Channel I	Channel II
1	Total marketing cost	3.27	7.81
2	Total marketing margins		20.00
3	Price spread	3.27	24.54
4	Producer share in consumer rupee in per cent	97.28	81.76
5	Marketing efficiency in per cent	36.70	17.23

IV. DISCUSSION

The study examines two marketing channels for mushrooms: Channel I, where the producer sells directly to the consumer, and Channel II, where the producer sells to a retailer who then sells to the consumer. The analysis reveals distinct differences in marketing costs, margins, price spreads, and efficiency between the two channels.

In Channel I, the producer's sale price is Rs 120 per kg. After accounting for costs such as packing, transport, and cleaning, the total marketing expense is Rs 3.27 per kg, leaving the producer with a net price of Rs 116.73 per kg. The price spread, or the difference between the consumer's purchase price and the producer's net price, is Rs 3.27. The producer's share in the consumer's rupee is notably high at 97.28%, indicating minimal intermediary costs. Marketing efficiency is also high at 36.70%.

In Channel II, the producer sells at Rs 110 per kg and incurs expenses similar to Channel I, resulting in a net price of Rs 106.73 per kg. However, the retailer incurs additional costs, including transportation, shop rent, and losses due to spoilage, totaling Rs 4.54 per kg. The retailer's margin is Rs 20 per kg, leading to a consumer purchase price of Rs 134.54 per kg. This results in a price spread of Rs 24.54, significantly higher than Channel I. Consequently, the producer's share in the consumer's rupee drops to 81.76%, and marketing efficiency decreases to 17.23%.

Comparing the two channels, Channel I is more efficient with lower marketing costs and higher producer share in the consumer rupee. Channel II, while involving more intermediaries and higher costs, offers retailers a substantial margin but reduces overall marketing efficiency. These findings highlight the trade-offs between direct and indirect marketing channels, emphasizing the benefits of direct sales for producers in terms of higher returns and greater efficiency.

V. CONCLUSION

The study on the marketing channels of mushrooms in Gaya district, Bihar, reveals significant insights into the efficiency and profitability of different marketing strategies. Channel I, where producers sell directly to consumers, demonstrates higher efficiency with a producer share of 97.28% and lower marketing costs. Conversely, Channel II, involving retailers, results in higher marketing costs and lower producer shares at 81.76%. Despite providing retailers with significant margins, Channel II reduces overall marketing efficiency. These findings underscore the advantages of direct marketing channels in maximizing producer returns and efficiency. Policymakers and agricultural stakeholders should consider promoting direct sales and reducing intermediary costs to enhance the economic benefits for mushroom growers. Future research could explore ways to improve marketing infrastructure and support systems to further increase the profitability and sustainability of mushroom cultivation in the region.

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