

# AN ECONOMICS ANALYSIS ON MARKETING OF BUTTON **MUSHROOM IN DEHRADUN DISTRICT OF UTTARAKHAND**

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## ABSTRACT

Mushroom cultivation is a rapidly expanding agricultural sector, contributing significantly to food security, rural employment, and economic development. This study examines the marketing dynamics of button mushrooms in the Dehradun district of Uttarakhand, analysing production trends, market structure, and associated challenges. India ranks among the top global mushroom producers, with an annual production exceeding 2 lakh tonnes, primarily dominated by button mushrooms (Agaricus bisporus). In Uttarakhand, the mushroom industry has experienced a surge, with annual production reaching 12,395 tonnes in 2023-24. Dehradun is emerging as a key production hub, contributing around 200 quintals annually from approximately 150 growers. Despite this growth, the marketing of button mushrooms in Dehradun faces significant hurdles, including inadequate cold storage infrastructure, fragmented supply chains, and low consumer awareness. The study identifies existing marketing channels and assesses marketing costs, margins, and efficiency using analytical tools such as price spread analysis and marketing efficiency method. The findings highlight the necessity for improved supply chain integration, investment in storage facilities, and awareness campaigns to enhance market penetration. This research provides actionable insights for policymakers, agricultural economists, and farmers, aiming to optimize mushroom marketing strategies and boost profitability in Uttarakhand's agribusiness sector.

Keywords: Mushroom cultivation, Button Mushroom, Marketing Margin, Marketing Margin, Marketing Efficiency.

## **INTRODUCTION**

Mushrooms, broadly defined as macro-fungi with visible fruiting bodies, have emerged as a valuable agricultural commodity due to their nutritional benefits, culinary appeal, and potential to enhance rural economies. Among the diverse varieties cultivated globally, the button mushroom (Agaricus bisporus) stands out for its high protein content, fiber richness, and adaptability to tropical and subtropical climates. India ranks as the fifth-largest mushroom producer in the world, with button mushrooms accounting for over 85% of

functional foods innovations and cultivation techniques, including effective and efficient methods like cage farming. In the Indian state of Uttarakhand, mushroom farming has become a key driver rural development and generation, especially in regions Dehradun, Haridwar, and the Garhwal and

national production, particularly in states like

Himachal Pradesh, Punjab, and Uttar Pradesh.

The industry is rapidly expanding due to

rising consumer interest in plant-based,

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Kumaon divisions. Annual production has significantly increased, with the state contributing notably to the national yield through the cultivation of button, oyster (Pleurotus spp.), and milky mushrooms (Calocybe indica). Government initiatives, such as training programs targeting rural vouth and incentives like subsidies and research centers, underscore the state's commitment to expanding this promising sector. Despite ongoing challenges like limited market access and infrastructural constraints, mushroom cultivation continues to present a sustainable and lucrative agribusiness opportunity, offering both nutritional security and a means to combat rural migration.

#### **RESEARCH METHODOLOGY**

This study employed a systematic and multistage research design to assess mushroom cultivation practices, marketing structures, and constraints faced by growers in the Dehradun district of Uttarakhand. The methodology integrates both qualitative and quantitative approaches to gather robust data reflective of the local agricultural environment. The research was carried out through a step-wise sampling procedure, starting with the purposive selection of Dehradun district due to its accessibility and the prevalence of mushroom cultivation. Within the district, Doiwala block was chosen for its high concentration of mushroom growers.

A stratified random sampling method was employed to choose representative villages and participants, ensuring variation in farm sizes and levels of agricultural output. Primary data was obtained directly from mushroom farmers and market stakeholders through structured interviews using pre-tested schedules, while secondary data was gathered government reports, academic from publications, and institutional records. The study also included an examination of local marketing channels and the roles of intermediaries such as wholesalers and brokers. The combination of descriptive analysis and empirical observation offers insights into the region's mushroom economy and the challenges inhibiting its growth. The research was conducted during the 2023-2024 agricultural year.

## ANALYTICAL TOOLS

## 1. Cost of Marketing

 $C = Cf + Cm1 + Cm2 + Cm3 + \dots + Cmn$ 

2. Margin of Market

AMI=Pri-(Ppi+Cmi)

#### 3. Spread in Price

Marketing Cost + Market Margin

#### **Efficiency of Marketing**

= Price received by producer

Marketing Cost + Marketing Margin



## **RESULT AND DISCUSSION**

#### Table: 1 Reveals the preferred marketing channels by respondents

*Channel I: Direct sales from farmers to end consumers* 

**Channel II:** Farmers sell to local merchants or retailers, who then sell to consumers **Channel III:** Farmers supply goods to commission agents or wholesalers, who distribute them to retailers before reaching consumers

S.No.	Channel	No. of Respondents	Percentage
1	Channel-I	45	45%
2	Channel- II	30	30%
3	Channel- III	25	25%
Total		100	100%

The study reveals that among the 100 sample respondents 45 farmers preferred marketing channel-I for buying and selling button mushroom due to high economic profits, secondly 30 respondents preferred marketing channel- II and lastly people preferred marketing channel- III that is 25 respondents.

Channel I: Producers-Consumers

Table 2: Marketing cost, Marketing margi	n, Marketing	Efficiency and	l Price spread in	different size
of farm groups.				

S.No.	Details	Rs/Kg
1.	Producer's selling price to the consumer	140
2.	Producer-raised cost	
i	Cost of packaging	1.2 (0.85)
ii	Cost incurred on packaging materials	1.50(1.07)
iii	Shipping cost	1 (0.71)
iv	Labor expenditure	2.05 (1.46)
V	Market cost	1.9 (1.35)
vi	Handling charges	0.90 (0.64)
vii	Weighbridge fee	0.75 (0.53)
viii	Miscellaneous charge	0.70 (0.50)
3	Total cost (i-viii)	10 (7.14)
4	Net price received by producer	130 (92.85)
5	Producer's share in consumer Rupee	92.85%
6	Price spread	10 (7.14)
7	Consumer paid price	140 (100)
8	Marketing efficiency	14 (10)

From the table-2. It was observed that from the table that in selling mushrooms, producer charges for packing cost, packing material cost 1.50, transportation cost 1, market cost 2.00, labour cost 2.05, loading and unloading charges 0.90, weighing charges 0.75, miscellaneous charges 0.70 and total cost 10

per kg. The farmer retained a net amount of  $\gtrless130$  per kilogram. The producer's share in the consumer's payment stood at 92.90%, while the price spread was  $\gtrless10$ . The consumer paid a total of  $\gtrless140$ , resulting in a marketing efficiency of 14.



S. No.	Details	Values in rupees
1	Price set by producer for retailer	100
2	Producer's incurred costs	
i	Cost of packaging	1.2 (0.85)
ii	Packing material cast	1.50 (1.07)
iii	Transportation cost	1 (0.71)
iv	Labour cost	2.05 (1.46)
V	Market cost	1.9 (1.35)
vi	Loading and unloading cost	0.90 (0.64)
vii	Weighing charges	075 (0.53)
viii	Miscellaneous charges	0.70 (0.50)
3	Total cost $(a - h)$	10 (8.34)
4	Net price received by producer	90 (78.34)
В	Retailers purchase price	100 (83.34)
1	Retailer's expenses	
i	Handling fees	0.65 (054)
ii	Shipping fee	1.8 (1.5)
iii	Weighing fee	0.40 (0.34)
iv	Losses	1.40 (1.16)
V	Miscellaneous charges	0.75 (0.62)
vi	Total cost	5 (4.17)
vii	Retailers margin	15 (12.50)
2	Sale price of retailers	120
3	Price spread	30 (25.00)
4	Consumer paid price	120
5	Marketing efficiency	4.00 (3.34)

Channel II: Producers- Village Merchant/Retailers- Consumers

Table 3: Marketing cost, Marketing Margin, and Price spread in different size of farm groups

From the table-3. It was observed that from the table that in selling mushrooms, producer charges for packing cost. packing material cost is 1.50, transportation cost is 1.00, market cost is 1.90, labour cost is 2.05, loading and unloading charges is 0.90, weighing charges 0.75, miscellaneous charges 0.70 and total marketing cost 15 per kg. So, the net price received by the producer was 90 per kg. Producer share in consumer Rupees percent is 78.34. price spread 30, consumer paid price 120 and marketing efficiency is 4.00



**Channel III:** Producers-Commission agent / Wholesalers-Retailers-Consumers Table 4: Marketing Cost. Marketing Margin, and Price spread in different size of farm groups

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<b>S.</b> No.	Particulars	Values in Rupees
1	Producer price to Retailer	100
2	Producer's expenses	
a	Cost for packaging	0.60 (0.42)
b	Cost of packaging materials	(0.12) 1.00 (0.71)
c	Shipping cost	(0.71) 0.9 (0.64)
d	Labor expenditure	(0.60) (0.60) (0.42)
e	Market price	1.00 (0.71)
f	Handling charge	0.50 (0.35)
g	Weighing service charge	0.30 (0.21)
h	Additional charges	0.30 (0.21)
3	Total expenditure (i-viii)	5.20 (3.71)
4	Producer's net revenue	84.80 (60.57)
В	Commission Agent Purchase Price	100 (71.42)
1	Cost incurred by Commission Agent	
a	Loading and Unloading Charges	1.20 (085)
b	Transportation Charge	0.90 (0.64)
c	Grading	1.00 (0.71)
d	Packing	1.10 (0.78)
e	Losses and Miscellaneous Charges	0.80 (0.57)
f	Commission Agent Margin	10 (7.14)
2	Sale Price of Commission Agent to Retailer	105



a	Weighing Charges	1.40	-
		(1.00)	
b	Handling costs	1.30	
	-	(0.90)	
c	Shipping fees	0.60	
		(0.40)	
d	Town Charge	1.50	
	-	(1.07)	
e	Miscellaneous Charges	0.70	
		(0.50)	
f	Retailer Margin	29.5	
	-	(21.07)	
g	Total cost	34.5	
-		(24.64)	
3	Retail price to consumers	140	
	-		
4	Spread between prices	55.2	
		(39.42)	
5	Consumer paid price	140	
6	Marketing Efficiency	2.53	
		(1.80)	

Table 4: The data shows that the marketing efficiency was 2.53, with a price spread of 55.2. It also highlights that the commission agent earned a margin of  $\gtrless 10$  per kilogram,

while the retailer's margin was ₹29.5 per kilogram. The consumer paid ₹140, while the producer received ₹84.80.

## CONCLUSION

In conclusion, the study on button mushroom production and marketing in Doiwala block of Dehradun district highlights the nutritional and economic value of mushrooms, particularly in regions reliant on cereal-based diets. Mushrooms not only offer a protein-rich food source but also promote sustainable agriculture by converting agricultural and industrial waste into productive substrate and organic compost. With Uttarakhand ranking third in national mushroom production, the region holds substantial potential for market expansion. The study revealed that the total marketing cost for 480 kg of mushrooms was ₹1,490, with transportation constituting the largest share (60%), followed by

packaging (33.56%) and market entry fees (6.04%). The average marketing cost per kilogram amounted to ₹3.10. These findings can inform targeted strategies and policies to enhance mushroom farming efficiency and marketing, ultimately benefiting farmers, policymakers, and the broader community.

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E - ISSN No. 2584 - 2498



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