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https://doie.org/10.10346/AE.2025507611

ABSTRACT

Honey, often regarded as nature's golden elixir, has been esteemed by humans for millennia due to its rich taste, medicinal value, and cultural importance. Used since ancient times-from Egypt to modern civilizations—honey has served not only as a food and sweetener but also as a healing agent and a symbol of prosperity. Its production involves honeybees collecting floral nectar and converting it into a dense sugar solution through enzymatic processes. The plant sources bees visit directly influence honey's taste, color, and scent, creating a broad range of honey types. In addition to its culinary appeal, honey offers various health advantages. It is packed with antioxidants that combat oxidative stress and has natural antibacterial and antifungal effects, making it useful in treating wounds and skin ailments. Unlike refined sugar, it has a milder impact on blood glucose because of its lower glycemic index, honey is increasingly chosen as a healthier sugar substitute. Raw honey, in particular, retains vital nutrients and enzymes, enhancing its value as an immune-boosting, antioxidant-rich food. Honey also appears in skincare and personal care products. Other bee products, such as bee pollen and propolis, are valued for their nutritional and antimicrobial benefits. The Nainital district in Uttarakhand has favourable conditions for beekeeping due to its rich biodiversity and suitable climate. Yet, the local honey industry faces several hurdles, including inadequate marketing structures, poor market access for small producers, the absence of farmer cooperatives, insufficient branding, lack of standardized quality protocols, and seasonal production limitations. Pests and bee diseases further impact productivity. To harness the district's full potential, a detailed marketing strategy is needed—focusing on brand development, quality assurance, product diversification, and improved distribution channels. Government support in the form of subsidies, training, and sustainable beekeeping policies is crucial. This study adopts a mixed-methods approach, combining both qualitative and quantitative data gathered through beekeeper interviews and secondary sources. Analytical tools like mean values, marketing cost and margin analysis, price spread evaluation, marketing efficiency assessment, and Garrett's ranking method will be used to examine marketing dynamics in the region.

Keywords: Honey, Apiculture, Farmer producer organizations (FPOs), Marketing Efficiency, Marketing costs, Price Spread.

INTRODUCTION

India's economy, deeply rooted in agriculture, greatly benefits from complementary sectors

like beekeeping—an age-old yet progressively modernizing practice that enhances rural livelihoods, supports





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biodiversity, and improves crop yields through pollination. This activity mainly involves managing honey bees, particularly the productive Apis mellifera, to harvest honey, beeswax, royal jelly, and other hive products. The country is home to five main honey bee species and more than 50 plant species that offer nectar, though their seasonal nature necessitates the movement of beehives across regions. Despite requiring minimal investment and offering high returns, India currently maintains only 3.4 million bee colonies, far short of the 200 million needed to optimize pollination across all bee-reliant crops-highlighting a substantial opportunity for growth.

Advancements in beekeeping technology have replaced older, harmful methods, ensuring better honey quality and colony preservation. In the 2023-24 period, India produced around 1.1 million metric tons of honey, exporting over 65,000 metric tons and generating US\$177.8 million in foreign revenue, with key contributions from West Bengal, Uttar Pradesh, Punjab, and Bihar. However, domestic honey consumption remains relatively low. In Uttarakhand, beekeeping plays a vital role in small-scale systems, providing farming additional income, especially in districts like Nainital and Haridwar. The government has launched focused initiatives to promote beekeeping, especially in hilly and northeastern regions, recognizing its potential as a sustainable and profitable rural enterprise.

RESEARCH METHODOLOGY

The research was carried out in Nainital district, which recorded the highest number of beekeepers (200) rearing Apis mellifera and the largest volume of honey production (396 metric tonnes) in Uttarakhand during 2023-24, as per data from (Rajkiya Moan Palan Kendra, Jeolikote). The region is particularly suitable for beekeeping due to its widespread litchi orchards and favourable agro-climatic conditions. offering considerable scope for enhancing honey output. A significant number of certified beekeepers in the district practice migratory beekeeping, predominantly managing Apis mellifera colonies to ensure optimal access to floral resources throughout different seasons. For the purpose of this study, a multistage stratified random sampling technique was employed to systematically select the final sample units.

ANALYTICAL TOOLS

1. Marketing Cost:

 $C=CF+Cmi+Cm2+Cm3+\ldots+Cmn$

2. Marketing Margin:

Ami = Pri - (Ppi + Cmi)

3. Price Spread: Price spread

= MC + MM

- 4. Marketing Efficiency:
- = Price received by producer

Marketing Cost+ Marketing Margin



RESULTS AND DISCUSSION

CHANNEL I- PRODUCER- TRADER- PROCESSOR- RETAILER- CONSUMER CHANNEL II- PRODUCER- RETAILER- CONSUMER CHANNEL III- PRODUCER- CONSUMER

Table:1 Reveals the preferred marketing channels by respondents

S. NO.	CHANNELS	NO. OF RESPONDENTS	PERCENTAGE
1.	Channel I	19	32%
2.	Channel II	17	29%
3.	Channel III	24	39%
TOTAL		60	100%

The study reveals that among the 60 sample respondents 19 respondents preferred marketing channel-I, secondly 17 respondents preferred marketing channel- II and lastly people preferred marketing channel- III that is 24 respondents.

CHANNEL I- PRODUCER- TRADER- PROCESSOR- RETAILER- CONSUMER

Table 2: Marketing cost, Marketing margin, Marketing efficiency and Price spread of Honey in
Channel-I

S. No	Particulars	Honey Rs/kg
1.	Producer's Sale Price to Trader	180
2.	Cost incurred by the producer	
a.	Handling Charges	25
b.	Losses	15
c.	Miscellaneous Charges	10
	Total Marketing cost (a-c)	50
3.	Net price received by producer	130
4.	Trader sale price to Processor	250
5.	Cost incurred by the Trader	
a.	Transportation	20
b.	Losses and Damage	10
	Total Marketing cost(a-b)	30
6.	Margin of Trader	40
7.	Processor sale price to Retailer	350
	Marketing cost incurred by Processor	
a.	Transportation	40



Losses and Damage	30
Total Marketing Cost (a-b)	70
Margin of Processor	80
Retailer sale price to Consumer	450
Cost incurred by the Retailer	
Transportation	30
Losses and Damage	20
Total Marketing cost(a-b)	50
Margin of Retailer	50
Total Marketing cost	150
Total Marketing margin	300
Price Spread	270
Marketing Efficiency	2.5%
	Losses and Damage Total Marketing Cost (a-b) Margin of Processor Retailer sale price to Consumer Cost incurred by the Retailer Transportation Losses and Damage Total Marketing cost(a-b) Margin of Retailer Total Marketing cost Total Marketing margin Price Spread Marketing Efficiency

The **Table 2.** represented the cost structure, price spread, and marketing efficiency of Honey involving producers, traders, processors, retailers, and consumers. The producer sold honey to the trader at Rs. 180 per kg, incurring Rs. 50 as handling, losses, and miscellaneous charges. This resulted in a net price of Rs. 130 per kg for the producer. The trader then sold the honey to the processor at Rs. 250 per kg, earning a margin of Rs. 40 per kg after covering marketing

costs. The processor then sold the honey to retailer at Rs. 350 per kg, with a marketing cost of Rs. 70 per kg and a profit margin of Rs. 80 per kg. The retailer finally sold the honey to consumer at Rs. 450 per kg, with profit margin of Rs. 50 per kg. Eventually, total marketing cost is Rs. 150/kg, total marketing margin in channel -I is Rs 300/kg, price spread in channel -I is Rs. 270 and marketing efficiency of channel – I is 2.5% respectively.

CHANNEL II- PRODUCER- RETAILER- CONSUMER

Table 3: Marketing cost, Marketing margin, Marketing efficiency and Price spread of Honey inChannel-II.

S. No	Particulars	Honey
		Rs/Kg
1.	Producer's Sale Price to Retailer	180
2.	Cost incurred by the producer	
a.	Handling Charges	25
b.	Losses	15
c.	Miscellaneous Charges	10
	Total Marketing cost (a-c)	50



3.	Net price received by producer	130	
4.	Retailer sale price to Consumer	350	29
5.	Cost incurred by the Retailer		
a.	Transportation	40	
b.	Losses and Damage	30	
	Total Marketing cost(a-g)	70	
6	Margin of Retailer	100	
A.	Total Marketing cost	120	
B.	Total Marketing margin	230	
C.	Price Spread	170	
D.	Marketing Efficiency	3.41%	

The **table 3** represented the cost structure, price spread, and marketing efficiency of Honey involving producers, traders, processors, retailers, and consumers. The producer sold honey to the retailer at Rs. 180 per kg, incurring Rs. 50 as handling, losses, and miscellaneous charges. This resulted in a net price of Rs. 130 per kg for the producer.

The retailer then sold the honey to the consumer at Rs. 350 per kg, earning a margin of Rs. 100 per kg after covering marketing costs. Eventually, total marketing cost is Rs. 120/kg, total marketing margin in channel -II is Rs 230/kg, price spread in channel -II is Rs. 170 and marketing efficiency of channel – II is 1.94% respectively.

CHANNEL III- PRODUCER- CONSUMER

 Table 4: Marketing cost, Marketing margin, Marketing efficiency and Price spread of Honey in

 Channel-III.

S. No	Particulars	Honey	
		Rs/Kg	
1.	Producer's Sale Price to Consumer	300	
2.	Cost incurred by the producer		
a.	Handling Charges	35	
b.	Losses	25	
с.	Miscellaneous Charges	10	
	Total Marketing cost (a-c)	70	
	Margin of Producer	230	
Α	Total Marketing cost	70	
В	Total Marketing margin	230	
С	Price Spread	300	
D	Marketing Efficiency	7.5%	

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The **table 4** represented the cost structure, price spread, and marketing efficiency of Honey involving producers, traders, processors, retailers, and consumers. The producer sold honey directly to the consumer at Rs. 300 per kg, incurring Rs. 70 as handling, losses, and miscellaneous charges.

CONCLUSION

Honey marketing in the region primarily occurred through three main distribution channels. Channel I consisted of a sequence involving the producer, trader, processor, retailer, and ultimately the consumer. Channel II simplified this flow by including only the producer, processor, retailer, and consumer. Channel III was the most direct route, where producers sold honey straight to consumers. The highest volume of honey (57.11%) was marketed via Channel II, while Channel I accounted for 39.24% of sales and was utilized by 55% of beekeepers. Interestingly, although only 3.65% of total honey was sold through Channel III, it was used by 65% of beekeepers, albeit for limited quantities.

Honey sales were at their highest in April, followed by March, as producers typically held on to their stock until the season's end to secure better market prices.

Despite having multiple sales pathways, beekeepers encountered significant difficulties in marketing their products. Among the most prominent issues were unpredictable and unstable honey pricing, a disorganized and unregulated market structure, limited governmental assistance, and complex procedures for direct retail sales. These obstacles significantly hindered the ability of beekeepers to earn fair and sustainable income from their honey production.

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