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Economic analysis of honey processing and marketing channels: Costs, returns, and constraints in Bilaspur District of Chhattisgarh

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Abstract

The study examines the processing and marketing of natural honey in Bilaspur district, Chhattisgarh, focusing on cost–return analysis, marketing channels, and constraints faced by producers and processors. Data was collected from honey processing units, forest honey collectors, beekeepers, Van Dhan Vikas Kendras (VDVKs), and institutions such as the Kanan Pendari Honey Processing Unit and NWFP Mart, supported by secondary sales and procurement records from 2024–25. A total of 13,040.04 kg of raw honey was collected, of which 11,240.04 kg was processed, with a 9% processing loss. Sales generated Rs 2,508,345 at Mart rates and Rs 4,302,645 at MRP, resulting in a net return of Rs 1,794,300 and a B:C ratio of 1:0.71, indicating moderate profitability. Seasonal peaks were observed in April (sales) and October (processing). Cost–revenue analysis for 1g and 1000 g packs highlighted economies of scale, with the 1000 g pack yielding significantly higher returns. The marketing system was found to be diverse, involving direct sales, cooperatives, government-supported outlets, retailers, and emerging online platforms. Despite institutional support, challenges such as weak branding, unorganized marketing, price fluctuations and limited market access persist. Garret Ranking analysis identified major constraints in honey processing, including frequent bursting of vacuum and water pumps, difficulty in extracting honey from tall tree hives, shortage of skilled collectors, seasonal raw material availability, and lack of standardization in moisture and purity. Market competition and unorganized collection practices also hinder efficiency. The study recommends strengthening processing infrastructure, improving technical training, enhancing cooperative and digital marketing, and adopting standardized quality practices to boost profitability and support sustainable honey-based livelihoods in the region.

Keywords: Natural honey, honey processing, marketing channels, cost–return analysis, marketing efficiency and Bilaspur District

Introduction

Honey, a natural biological product evolved from nectar and of great benefit to human beings both as medicine and food, is consumed in every country of the world in some form. Honey contains glucose, fructose, and water, in addition to small quantities of proteins, minerals, organic acids, and vitamins. It is liked for its characteristic flavor, sweetness, and texture.

Honey extracted from combs and apiaries contains pollens, beeswax, and other undesirable materials, besides yeast, that are to be removed for better product quality and shelf life. Hence, honey is processed before packing in bottles or other containers. The type of equipment used and steps followed in processing, however, depends upon the scale of operation. Two important stages of honey processing are filtration and heating. The separation of pollens, beeswax, and other materials are normally done through straining and pressure filtration. Heat or thermal processing of honey eliminates the microorganisms responsible for spoilage and reduces the moisture content to a level that retards the fermentation process

Wild honey is one of the products of apiculture (beekeeping) which is the art and science of beekeeping, other products are bee wax, bee venom, propolis, royal jelly and pollen. It includes the collection and care of bee swarms, the processing of bee products and the breeding of bees for large scale honey production.

Beekeeping is an ancient act that has been in practice in Africa, including Nigeria for hundreds of years. Bees have been kept for the production and harvest of honey since 400BC. In times past, honey was of great importance particularly for its medicinal purposes. It was believed to be a powerful aphrodisiac and a valuable anti-bacterial for wound dressing.

This study aims to analyze the current status of honey processing and marketing in the Bilaspur district. It will assess the traditional and modern practices used by honey producers, evaluate the marketing channels available to them, and identify the main constraints affecting the growth of this sector. The study also intends to offer practical suggestions for improving honey quality, enhancing value addition, and creating better market opportunities, which could ultimately contribute to the economic empowerment of rural communities.

By focusing on the processing and marketing aspects, this research seeks to bridge the gap between production and market demand, helping to promote sustainable practices and inclusive growth in the region.

Materials and Methods

Methodology Selection of the study area: Chhattisgarh state is divided into three sub-agro-climatic zones that are Chhattisgarh plains, Northern hills, and Bastar Plateau, out of these three agroclimatic zones Chhattisgarh plains was selected for the present study.

Selection of District and Block: honey processing centre Pendari of Takhatpur block of Bilaspur examine the Processing of Natural honey in Chhattisgarh and NWFP Mart & Chhattisgarh herbal Sanjeevani of Bilaspur block of Bilaspur district was be selected purposively for Examining the sales and marketing of honey.

Selection of Respondents: There is a Honey processing Centre Pendari Bilaspur Out of five Honey processing centre of Chhattisgarh, NWFP Mart & Sanjeevani working under Chhattisgarh State Minor Forest Produce Cooperative Union Limited.

Research Instrument

Questionnaire: so as to gather primary information to structured, complete and descriptive (open ended) questionnaires were designed. an equivalent query was asked to all or any style of subjects that cowl all areas of client shopping for behavior. Specific info and open concluded queries for general info is employed. Correct care is taken for sequencing the queries and ambiguous queries square measure avoided when survey.

Individual Interviews: An unstructured interview was taken. it absolutely was concerned a series of open concluded queries that supported the study points that the researches desires to hide. Unstructured Interviews square measure a way of interviews wherever queries is modified or tailored to satisfy the respondent's intelligence, understanding or belief.

Method of Data Collection

Primary data: The primary data was be collected through a personal interview method or survey based on a well-structured interview schedule on various aspects which are related to fulfilling the objectives of the study.

Secondary Data: The secondary data was also be required for the study obtained from different published sources like the Chhattisgarh minor forest, Research paper, Ministry of Agriculture and also secondary data was obtained from the published sources like journals, bulletins, Newspaper internet, etc.

Analytical tools: Suitable statistical analysis was be selected at analysis looking.
to the quantity and availability of data. Simple average and mean method was use to analyze the data

- Henry Garret Ranking
- Marketing efficiency (Shepherds approach)
- Cost and return ratio
- Tabulation

Results and Discussion

To Analyse Costs and Returns of Processing of Honey in the Study Area

Output data were collected on yield and selling prices of honey from beekeeping. The prevailing prices of honey were computed by determining the mean of respondents' selling prices and various market prices of honey and bee wax in the study area. This is the total value of the entire beekeeping enterprise's output if they dispose off all their products at the farm gate prices. The outputs considered in this study were; honey and bee wax. The gross return in monetary terms were assumed to be the Total revenue which is the quantity of honey and bee wax (Q) measured in liters, multiplied by the prevailing price (P) of a unit of honey and bee wax in GH¢.

Honey Processing Quantity, Loss and Received Quantity

Table 1: Honey Processing Quantity, Loss and Received Quantity

S. No.	Year	Processing Quantity (Kg)	Loss (Kg)	Received Quantity (Kg)
1.	2022-23	14188.5	1084.92	13103.03
2.	2023-24	16100.44	1394.2	14706.21
3.	2024-25	11240.04	1011.60	10658.21

Source: Primary Data

The study collected and analyzed data on the monthly honey processing activities over the period from 2022-23, 2023-24, 2024-25 in the Bilaspur district and surrounding areas. The data records the quantities of honey processed, losses incurred during processing, and the quantities of honey received for processing. And the loss of honey per year I 1084.92, 1394.2, 1011.60 and receiving quantity I 13103.03, 14706.21, 1065.21 respectively. Loss of honey during processing is about 9% of total raw honey.
Overall, the data reflects a robust honey processing activity with significant volumes handled monthly, but also identifies areas where operational improvements could enhance efficiency and profitability in the natural honey value chain.

Cost and Return of Processing of Honey Per gram

Cost and Return of Processing of Honey Per gram

No.	Particular	Honey/Gram(Rs.)
1.	Raw material cost	0.225 (70%)
2.	Packaging material cost	0.05 (16%)
3.	Labour cost	0.025 (8%)
4.	Other cost (maintenance & Transport)	0.02 (6%)
5.	Total variable cost	0.32 (100%)
6	Price for mart	0.385
7	Sale price (Total returns)	0.385
8	Net return (TR-TC)	0.065

Source: Primary Data

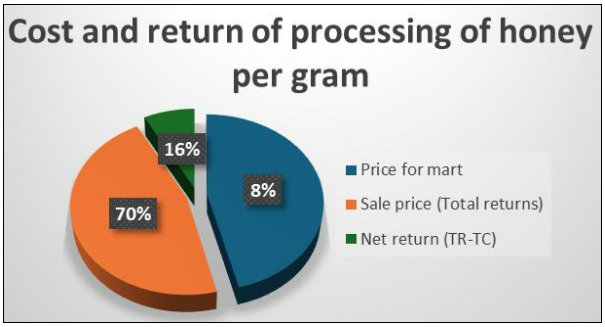

Fig 1: Cost and Return of Processing of Honey Per gram

Table 2 presents the detailed cost and return analysis of honey processing on a per gram basis. The analysis includes various components of variable costs involved in the production and sale of processed honey. The raw material cost constitutes the largest share of the variable cost, amounting to Rs. 0.225 per gram. This cost refers to the procurement of raw honey for processing. The packaging material cost is Rs. 0.050 per gram, reflecting the expenditure required for packaging the processed honey in market-ready containers. The labour cost, which accounts for Rs.0.025 per gram, includes wages paid to workers directly engaged in the production process. In addition, other costs, such as maintenance of equipment and transportation of materials, are estimated at Rs.0.020 per gram. The cumulative value of all variable cost components results in a total variable cost of Rs.0.320 per gram. The processed honey is sold to the mart at a price of Rs.0.385 per gram, which also represents the total return received from the sale. Consequently, the net return or profit per gram is calculated as ₹0.065, derived by subtracting the total cost (Rs. 0.320) from the sale price Rs.0.385). This analysis indicates a net profit margin of approximately 20.88%, demonstrating that the processing and sale of honey yield a positive return over variable costs. The data provides a useful insight into the economic viability of small-scale honey processing and can assist in decision-making regarding pricing, cost management, and potential scaling of operations.

Cost and Return of Processing of Honey in Processing Center

Table 2: Cost And Return of Processing of Honey in Processing Center

No.	Particulars	Honey 200 gm. (Rs.)	Honey 300 gm. (Rs)	Honey 600 gm. (Rs.)	Honey 1200 gm (Rs.)
1	Raw material cost	45 (70%)	68 (76%)	135 (81%)	270 (85)
2	Packaging material cost	10 (16%)	12 (13%)	18 (11%)	25 (8)
3	Labour cost	5 (8)	5 (6)	7 (5)	12 (3)
4	Other cost (maintenance & Transport)	4 (6%)	4 (5%)	6 (5%)	10 (3)
5	Total variable cost	64 (100)	89 (100)	166 (100)	317 (100)
6	Price for mart	77	111	207	395
7	Sale price (Total returns)	77	111	207	395
8	Net return (TR-TC)	13(77-64)	22 (111-89)	41(207-166)	78(395-317)
9	Input output ratio	1:1.20	1:1.25	1:1.25	1:1.25
10	Variable cost (VC) ratio	0.83	0.80 (89/111)	0.80	0.80 (317-395)
11	Sale price of Mart	135	195	355	670
12	Net return of mart	58	84	148	275
13	Net profit margin	0.42	0.43	0.41	0.41

Source: Primary Data

The analysis of costs and returns from honey processing in the study area reveals important trends across different packaging sizes—200 g, 300 g, 600 g, and 1200 g. As the quantity of honey processed increased, the total variable cost rose proportionally from ₹64 in the 200 g package to ₹317 in the 1200 g package. Raw material cost formed the largest portion of total variable cost, starting at ₹45 (70%) in the 200 g package and increasing to ₹270 (85%) in the 1200 g package. Conversely, the share of packaging material cost declined from ₹10 (16%) in the 200 g size to ₹25 (8%) in the 1200 g pack, while labour cost also decreased proportionally, from ₹5 (8%) in 200 g to ₹12 (3%) in 1200 g. Other costs, including maintenance and transport, were relatively stable in absolute terms but dropped in percentage share from 6% in the 200 g pack to 3% in the 1200 g pack.

The selling price of honey increased with package size, from ₹77 for the 200 g bottle to ₹395 for the 1200 g bottle. Consequently, net returns also increased—from ₹13 in 200 g, ₹22 in 300 g, and ₹41 in 600 g, up to ₹78 in the 1200 g size. The input-output ratio was slightly lower for the 200 g size (1:1.20) but consistent at 1:1.25 for the 300 g, 600 g, and 1200 g packages, indicating better economic efficiency at higher volumes. Similarly, the variable cost ratio, which represents the proportion of cost to total revenue, decreased slightly from 0.83 for the 200 g pack to 0.80 for the larger sizes. These findings suggest that honey processing becomes more profitable and cost-efficient at larger packaging volumes due to economies of scale, with fixed and semi-fixed costs being better distributed across higher output levels.

Revenue of Mart

Table 3: Revenue of Mart

S. No.	Pack Size	Price for Mart (Rs.)	Transport (Rs.)	Labour Charge and other (Rs.)	Other (GST, packaging, etc.)	Sale Price (Total Returns) (Rs.)	Revenue (20% of Sale Price) (Rs.)
1	200 g	77	4	5	16	135	27
2	300 g	111	4	5	36	195	39
3	600 g	207	6	7	64	355	71
4	1200 g	395	10	12	149	670	134

Source: Primary Data

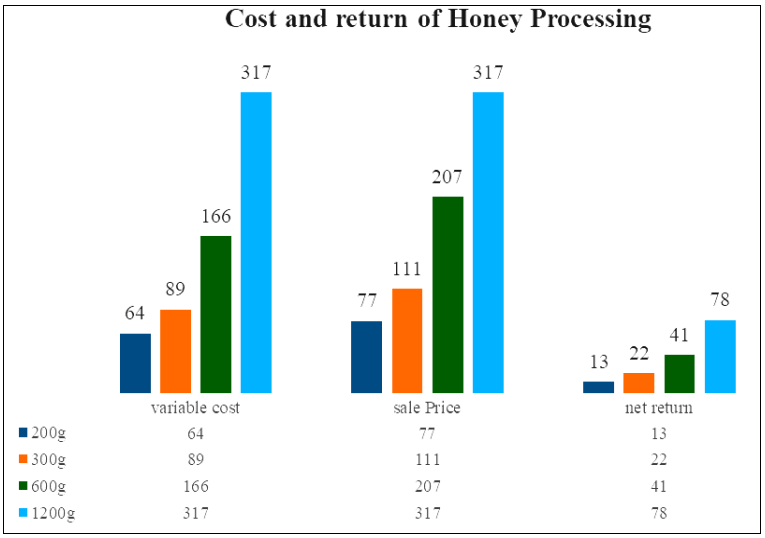

Fig 2: Cost and Return of Honey Processing.

The table presents a detailed cost and revenue analysis for two packaging sizes: 1 gram (1g) and 1000 grams (1000 g). It outlines the price for mart (procurement cost), transport cost, labour and other operational charges, the final sale price, and the revenue, calculated as 20% of the sale price. For the 1000 g pack, the price for mart is Rs 364, with a transport cost of Rs 9 and labour/other charges of Rs 10. The product is sold at Rs618, yielding a revenue of Rs 124. In contrast, the 1g pack is a micro-unit created by proportionally scaling down the 1000 g values. It shows a mart price of Rs 0.40, transport cost of Rs 0.02, and labour/other charges of Rs 0.03. The estimated sale price is Rs 0.60, generating a revenue of Rs 0.12. While this pack size is mart prices, sale prices, and revenue share calculated as 20% of the sale price for different honey packaging sizes ranging from 200 grams to 1200 grams. Labour costs remain relatively consistent for smaller pack sizes, recorded at Rs 5 per 200 g and 300 g packs, increasing moderately to Rs 7 and Rs 12 for 600 g and 1200 g packs, respectively. ranging from Rs 4 for smaller packs to Rs 10 for the largest 1200 g pack. The price for mart varies proportionally with pack size, from Rs77 for the 200 g pack up to Rs 395 for the 1200 g pack. Similarly, the sale price (total returns) reflects market demand and packaging economies, increasing from Rs 135 for 200 g to Rs 670 for 1200 g packs. A revenue share equivalent to 20% of the sale price has been calculated to estimate the portion of total sales revenue that might be allocated for operational expenses, profit sharing, or other financial distributions. This revenue share ranges from Rs 27 for the smallest pack to Rs 134 for the largest, reflecting the scaling effect on overall income generation.

Table 4: Total Revenue of Mart 2022-2025

S. No.	Year	Amount on mart (Rs)	Amount on MRP (Rs)
1.	2022-23	33.88 Lakh	52.87 Lakh
2.	2023-24	29.65 Lakh	45.65 Lakh
3.	2024-25	25.08 lakh	43.02 Lakh

Source: Primary Data

Analysis of Honey Sale Report 2024-2025 in Kanan Pendari Bilaspur

Table 5: Analysis of Honey Sale Report 2024-2025 in Kanan Pendari Bilaspur

Size	Quantity (kg)	Mart Rate (Rs)	MRP Rate (Rs)	Amount on Mart (Rs)	Amount on MRP(Rs)
5 KG	100	1660	2700	166000	270000
1200 g (Org)	210	427	1080	89670	226800
800 g (Org)	63	294	760	18522	47880
1200 g	2136	395	670	843720	1431120
600 g (Org)	60	223	600	13380	36000
800 g	1476	272	465	401472	686340
loose honey	840	287.1	360	241164	302400
600 g	1876	207	355	388332	665980
300 g (Org)	180	119	315	21420	56700
200 g (ORG)	125	82	220	10250	27500
300 g	1740	111	195	193140	339300
200 g	1575	77	135	121275	212625
Total				2508345	4302645

Source: Primary data
Note: Org = organic

An analysis of honey sales at both market (wholesale) and Maximum Retail Price (MRP) levels across different product sizes reveals significant differences in revenue potential. The study considered multiple packaging sizes, including bulk (5 kg), regular (200 g to 1200 g), and organic variants. The results show a clear distinction between revenues earned through mart (bulk or wholesale sales) and those earned via MRP (retail market pricing), highlighting the importance of the chosen marketing and sales channel. In year 2022-23, 2023-24, 2024-25 amount on mart is 3388693.2, 2965456.31, 2508345.22 and their amount on MRP is 5287820, 4565563, 4302645 rs respectively.

On the organic side, the 1200 g organic honey contributed ₹89,670 at mart and ₹2,26,800 at MRP, while the 800 g organic pack brought in ₹18,522 and ₹47,880, respectively. Although the volume of organic honey sold was lower, the MRP for organic variants was considerably higher, reflecting consumer willingness to pay a premium for organic certification and quality.

Smaller packages such as the 200 g and 300 g variants showed lower absolute revenues but performed reasonably well when considering price per unit weight. For instance, the 200 g regular pack generated ₹1,21,275 at mart and ₹2,12,625 at MRP, while the 300 g regular pack contributed ₹1,93,140 and ₹3,39,300, respectively. Organic versions of these packs also showed reasonable returns—for example, the 300 g organic variant yielded ₹21,420 from mart sales and ₹56,700 at MRP.

Overall, the total revenue from honey sales amounted to ₹25,08,345 at market rates and ₹43,02,645 at MRP. This significant gap illustrates the higher profit potential of retail (MRP-based) sales over wholesale or mart pricing. However, selling at MRP typically requires better packaging, branding, and market access, which may increase fixed costs.

Marketing Efficiency of Honey Sales Kanan Pendari Bilapur

S.N.	Year	Total value of honey marketed (Rs)	Total marketing cost (Rs.)	Marketing efficiency
1.	2022-23	52.87 Lakh	42.30	1.24
2.	2023-24	45.65	36.52	1.25
3.	2024-25	43.30	33.61	1.25

Interpretation: >1 = Efficient
<1 = Inefficient

Table 5 presents the marketing efficiency of honey sales in Kanan Pendari, Bilaspur, for the financial years 2022–23 to 2024–25. Marketing efficiency is a key indicator of the performance of the marketing system and is calculated as the ratio of the total value of honey marketed to the total marketing cost incurred. A higher ratio indicates a more efficient marketing system, as it reflects higher returns relative to the expenses involved in bringing the product to market. In the year 2022–23, the total value of honey marketed was Rs. 52.87 lakh, while the marketing cost amounted to Rs. 42.30 Lakh, resulting in a marketing efficiency of 1.24. The following year, 2023–24, witnessed an increase in the total value marketed to Rs 45.65 Lakh, alongside a reduction in marketing costs to Rs. 36.52 Lakh. This improved the marketing efficiency to 1.25, the highest among the three years considered. However, in 2024–25, although the marketed Value slightly decreased due data available till feb. 2025 is Rs. 43.30 Lakh, and marketing cost of honey is Rs. 33.61 Lakh. Consequently, the marketing efficiency is 1.25 the same level as in 2023–24.

The Marketing efficiency is efficient if the value is >1 and Marketing efficiency is inefficient if value is <1. This fluctuation in marketing efficiency over the three-year period highlights the impact of both value realization and cost control on marketing performance. The data suggest that while efforts to reduce marketing costs were consistent, the decline in sales value in 2024–25 negatively affected overall efficiency. To improve marketing efficiency in the future, it is essential to focus on strategies that not only optimize cost but also enhance market value through better pricing, product positioning, or expanded market access.

Honey Sales Report and Revenue Analysis

The honey sales data from April 2024 to February 2025 for the Bilaspur district and neighboring regions provides an insightful overview of the marketing performance of natural honey produced and processed in the study area. The data includes detailed records of honey sales categorized by date, product size, quantity sold, market price (Mart rate), maximum retail price (MRP), and corresponding revenue generated from both price points.

Sales Volume and Product Sizes

Honey was sold in multiple packaging sizes ranging from small quantities such as 200 g, 300 g, 600 g, 800 g, 1200 g packets to loose honey in kilograms, and even bulk 5kg packs towards the end of the period. The diversity in product sizes indicates a strategic approach to cater to different market segments and consumer preferences.

Sales Revenue

The total revenue generated at the Mart rate over the period was Rs 2,508,345, while the potential revenue at the MRP rate stood at Rs 4,302,645, indicating a significant margin between the market sale price and retail price, highlighting the scope for profit maximization.

The highest sales volume and revenue were recorded in April 2024, with a total Mart rate amount of Rs 1,479,777 and an MRP revenue of Rs 2,652,865. This month also featured a wide variety of packet sizes sold, indicating peak marketing activity. May 2024 followed, with Mart rate sales of Rs 258,158 and MRP revenue of Rs 453,865. The sales included consistent demand across packet sizes and loose honey. Sales from June and July 2024 were lower in volume but sustained with loose honey sales totaling Rs 48,807 (Mart rate) and Rs 61,200 (MRP) combined for both months. Subsequent months saw steady sales of loose honey with revenues ranging from Rs 43,065 (November 2024) to Rs 57,420 (December 2024), showing sustained market presence.

January 2025 marked a significant surge in sales with a total Mart rate revenue of Rs 406,311 and MRP revenue of Rs 677,515, driven by increased quantities across all packaging sizes.
February 2025 showed a continuation of strong sales, notably with bulk sales of 5 kg packets contributing Rs 166,000 (Mart rate) and Rs 270,000 (MRP), demonstrating successful penetration into larger-volume markets.

Pricing and Market Strategy
The marked difference between Mart rates and MRP rates indicates an effective pricing strategy allowing room for discounts or market-driven price variations while maintaining profitability. The MRP rates were consistently higher than Mart rates by approximately 70% to 80%, reflecting the value addition through packaging, branding, and marketing efforts.
The pricing across different packet sizes was proportional to weight, maintaining price consistency and consumer affordability. Loose honey sold primarily at higher Mart rates indicates demand for unprocessed or bulk honey among certain customer segments.

Processing Data
Processing Quantity = 11,240.04 kg
Loss = 1,011.6036 kg
Received Quantity (Net after loss) = 10,658.215 kg

Sales Data
Total Revenue (Mart rate) = ₹2,508,345
Total Revenue (MRP rate) = ₹4,302,645
Net return = 1794300
B: C Ratio = 1:0.71

Revenue generated by Sale of Honey

Table 6: NWFP mart & Sanjeevani's Center in State

S. No.	Year	Sale
1.	2022-23	25.50 Lakh
2.	2023-24	25 Lakh
3.	2024-25	27 Lakh
4.	Total	77.5 Lakh

Source: Primary Data

Table 6 present the net profit of NWFP mart 20 percent of total revenue in the year 2022-23 25.50 lakh Sale and 2023-24, 25 lakh Sale and the year 2024-25, 27 lakh Sale of NWFP mart the are the indicate 20% of total revenue.

Table 7: Quantity of Honey collection in Processing center

Particular	Financial year 2022-23	Financial year 2023-24	Financial year 2024-25
Quantity (raw) (kg)	14,826	16100.44	11240.04
Quantity process (kg)	13103.58	14706.214	10658.215
Loss (kg)	1084.92	1394.2	1011.60

Source: Primary Data

Fig:3 - Quantity of Honey collection in Processing center
The data on raw honey availability, processing, and associated losses for the financial years 2022–23, 2023–24, and 2024–25 \a total of 14,826 kg of raw honey was collected, of which 13,103.58 kg was successfully processed, resulting in a processing loss of 1,084.92 kg. The following year, 2023–24, saw an increase in raw honey availability to 16,100.44 kg, and the quantity processed also rose to 14,706.21 kg, with a slightly higher loss of 1,394.20 kg. However, in 2024–25, there was a noticeable decline in both raw honey availability and processing, with only 11,240.04 kg of raw honey collected and 10,658.22 kg processed. Correspondingly, the processing loss decreased to 1,011.60 kg.

To Examine the Marketing Channels of Honey in the study area

Table 8: Marketing Channel of Honey Processing unit Kanan Pendari Bilaspur District

Participant	Function	Key Activities	Value Addition
Forest Honey Collector	Collection	Harvesting raw honey from forest areas or local beehives	Natural honey extraction
Honey Processing Center (Kanan-Pendari)	Processing & Primary Packaging	Filtration, moisture control, bottling, labeling	Quality assurance, hygiene, shelf-life improvement
NWFP Mart (Chhattisgarh Minor Forest Produce Federation)	Procurement & Distribution	Bulk purchase from processing centers, branding under *Chhattisgarh Herbals*	Branding, warehousing, transportation
Retail Outlets (Sanjeevani) / Govt. Exhibitions / Online Platforms	Retailing	Selling to final consumers through fixed stores, fairs, or digital platforms	Market access, awareness, and convenience
Consumers	End-use	Purchase and consumption	Final benefit from natural product

Source: Primary Data

Forest honey collectors form the foundational layer of the natural honey value chain in Bilaspur district. These primary producers are responsible for the extraction of raw honey, either through managed traditional forest collection methods. Their role is vital in maintaining both the quantity and quality of honey supplied to processing centers like the one at Kanan Pendari.

Table 9: Business Performance of Processing Centre

	Financial year 2022-23	Financial year 2023-24	Financial year 2024-25
Total Revenue (Rs)	33.88 Lakh	56.25 Lakh	25.08 lakh
Total Cost (Rs)	27.10 lakh	45.00 Lakh	20.06 lakh
Net profit (Rs)	6.27 Lakh	11.25 lakh	5.01 lakh

Source: Primary Data

The financial analysis of honey processing over three financial years—2022–23, 2023–24, and 2024–25—demonstrates significant variation in total revenue, cost, and net profitability. In the financial year 2022–23, the total revenue generated from honey sales amounted to ₹33,88,693.09, while the total cost incurred was ₹27,10,094.40, resulting in a net profit of ₹6,27,914.60. This indicates a relatively healthy profit margin during the initial year, which reflects efficient cost management and favorable market conditions.

In the subsequent year, 2023–24, the financial performance improved further. The total revenue increased substantially to ₹56,25,525.75, while the total cost rose to ₹45,00,420.60. Despite the increase in operational expenses, the enterprise recorded the highest net profit of the three years, amounting to ₹11,25,105.15. This suggests improved market outreach, higher sales volume, and possibly more favorable pricing strategies.

Table 10: Business Performance of NWFP Mart/Sanjeevani

Particular	Financial year 2022-23	Financial year 2023-24	Financial year 2024-25
Total Revenue (Rs)	25.50 Lakh	25.00 Lakh	27.00 Lakh
Total Cost (Rs)	20.40 Lakh	18.75 Lakh	21.60 Lakh
Net profit (Rs) (Total revenue – total cost)	5.10 Lakh	6.25 Lakh	5.40 Lakh

Source: Primary Data

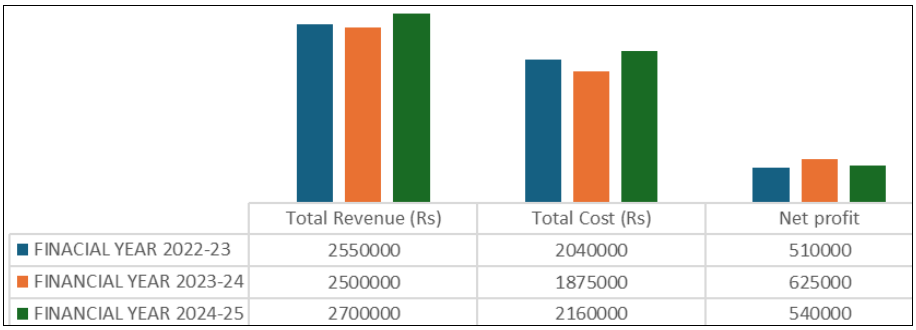

Fig 3: Business Performance of NWFP Mart/Sanjeevani

The financial performance of NWFP Mart/Sanjeevani over the three consecutive financial years—2022–23, 2023–24, and 2024–25—reflects a pattern of consistent growth and profitability. In the year 2022–23, the Mart generated a total revenue of ₹25,50,000 with an associated total cost of ₹20,40,000, resulting in a net profit of ₹5,10,000. This initial performance established a strong foundation for the following years.

In 2023–24, the total revenue saw a slight decrease to ₹25,00,000; however, total costs also declined significantly to ₹18,75,000. This cost reduction enabled the organization to achieve its highest net profit during the period, amounting to ₹6,25,000. This improvement suggests increased operational efficiency, better resource utilization, or possibly strategic cost management practices implemented during the year.

By 2024–25, total revenue increased to ₹27,00,000—the highest over the three years—indicating growth in sales or customer base. Despite a rise in costs to ₹21,60,000, the Mart managed to secure a net profit of ₹5,40,000, slightly higher than the first year. This growth in both revenue and cost suggests an expansion in scale while still maintaining healthy profitability.

To Examine the Constraints in Honey Processing and Marketing and Provide Recommendations for Addressing these Challenges

Constraints in Honey Processing

Table 11: Constraints in Honey Processing

No.	Constraint	Average Garret Score	Garret Ranking
1	Bursting of vacuum pump	75.5	1
2	Bursting of hot & cool water pump	68.3	2
3	Challenging to extract honey from long tree hives	65.1	3
4	lack of skilled Honey Collectors	61.8	4
5	Seasonal availability of forest honey	59.6	5
6	Lack of standardization (moisture content, purity)	58.2	6
7	Competition in market	55.7	7
8	Unorganized collection methods lead to inconsistent quality	52.4	8

Constraints in Honey Marketing

Table 12: Constraints in Honey Marketing

S. No.	Constraint	Average Garrett Score	Garret Ranking
1	Lack of awareness of Organic/natural honey	78.5	1
2	Low price realization	70.6	2
3	Market Competition	66.4	3
4	High Packaging Cost	60.5	4
5	No Exportation of Honey	59.3	5
6	Low consumer awareness about pure/natural honey	58.2	6
7	No access to online marketing platforms	55.2	7
8	Price fluctuation	52.4	8

Conclusion

The present study, titled "Processing and Marketing of Natural Honey in Bilaspur District of Chhattisgarh", aimed to analyze the cost-efficiency of honey processing, examine the structure of honey marketing channels, and identify key constraints faced by producers and marketers in the region. The findings clearly show that natural honey production holds significant potential as a source of income and rural employment in Bilaspur. However, the sector remains largely unorganized, with minimal use of modern processing techniques and underdeveloped marketing infrastructure. Traditional methods of honey extraction and processing continue to dominate, leading to low-quality output and reduced market value. The absence of advanced tools, cold storage, and packaging facilities severely affects the profitability of producers. Similarly, marketing is primarily dependent on intermediaries and local traders, resulting in limited returns to beekeepers and reduced consumer trust due to lack of branding and certification. pointing to infrastructural and policy-related limitations that restrict producers from tapping into international markets physical and logistical challenges associated with forest-based or traditional honey harvesting. This analysis highlights the urgent need for investment in modern equipment, technical training, and standardized processing practices to enhance productivity, reduce losses, and improve the quality of honey in the market.

Despite these issues, Bilaspur has natural advantages such as diverse flora, favorable climate, and traditional knowledge of beekeeping, which offer great promise for the growth of the honey sector. If supported with appropriate policy interventions, skill development programs, and improved infrastructure, honey processing and marketing can become a viable and sustainable enterprise for rural communities.

Therefore, a holistic approach involving training, credit access, cooperative formation, quality control, and better market linkages is essential to realize the full potential of apiculture in the district.

Suggestions

Based on the analysis of honey processing and marketing in Bilaspur district, the following recommendations are proposed to improve the livelihoods of beekeepers and enhance the overall apiculture sector

- Promotion of Modern Processing Techniques
- Capacity Building and Training Programs
- Formation and Strengthening of Cooperatives
- Improvement of Storage and Transportation Facilities
- Access to Financial Services

References

1. Agbelemoge A, Adekola PJ. Assessment of traditional harvesting techniques of wild honey in forest reserves of Oyo State, Nigeria. FUTO J Ser. 2020;6:14-22.
2. Dahariya RK, Pathak H. Processing and marketing of natural honey in Bilaspur District of Chhattisgarh. Raipur (CG): Indira Gandhi Krishi Vishvavidyalaya; 2025.
3. Subramanian R, Hebbar HU, Rastogi NK. Processing of honey: a review. Int J Food Prop. 2007;10(1):127-143.
4. Weldeyohanis GT. Review on challenges and opportunities of honey marketing in Ethiopia. J Mark Consum Res. 2016;23:33-36.