STUDY OF MARKETING OF MILK IN HARDOI DISTRICT OF UTTAR PRADESH

ABSTRACT

Aims: The primary objective of this study is to thoroughly examine milk marketing dynamics within Shahabad Block, Hardoi District, Uttar Pradesh, with a focus on the different channels used for milk marketing. The research aims to categorize cattle owners, investigate demographic trends among them, and understand how these factors correlate with milk marketing strategies and efficiency.

Study design: This research employs a descriptive and analytical design to explore various aspects of milk marketing and cattle ownership.

Place and Duration of Study: The study was conducted in the Shahabad Block of the Hardoi District, Uttar Pradesh, focusing on the current state of milk marketing and cattle ownership demographics.

Methodology: The methodology includes a survey of cattle owners in the Shahabad Block, classifying them into small, medium, and large-scale operations based on the number of cattle owned. The study also assesses the age, gender, education level, and social categories of cattle owners, alongside a comprehensive analysis of milk marketing channels, including costs, pricing spreads, marketing margins, and market efficiency.

Results: The survey found 250 cattle owners, with a predominance of small-scale operations (72%). A significant demographic of cattle owners is young, aged 18-35 (80%), with a notable distribution across male (140) and female (110) owners. Education level shows a correlation with the size of cattle operations, with lower education levels more common among smaller-scale operations. Socioeconomic analysis indicates that small-scale operations prevail across all social categories, including General, OBC, and SC/ST. Marketing analysis reveals a preference for the second channel involving producers, private dairy companies, retailers, and end users, providing insights into marketing efficiency and consumer preferences.**Conclusion:**~~Non-invasive independent predictors for screening esophageal varices may decrease medical as well as financial burden, hence improving the management of cirrhotic patients. These predictors, however, need further work to validate reliability.~~

Keywords: Milk Marketing Dynamics Cattle Ownership Demographics ~~Socio-Economic Characteristics~~ Ma Channels Efficiency~~Educational Impact on Cattle OperationsSocial Categories in Livestock Business Co Preferences in Milk Distribution Shahabad Block, Hardoi District~~

Comment [h1]: Delete subheadings in abstract

Comment [h2]: Not relevant as concerned with this study try to write the conclusion of this study

Comment [h3]: Insert commain between two words.

Comment [h4]: Marketing Efficiency

1. INTRODUCTION

In the heart of Uttar Pradesh (UP), India's largest milk-producing state, Hardoi District stands as a pivotal area for examining dairy sector intricacies. This research delves into milk marketing within Hardoi, shedding light on the socio-economic attributes of stakeholders, diverse marketing pathways, cost dynamics, and prevalent obstacles. With India housing approximately 308 million cattle as of 2022 and UP's dairy output surpassing 27 million tonnes annually through a vast network of over 80,000 dairy cooperatives, the state's contribution to national dairy production is significant. This

decentralized milk production and distribution model is rooted in UP's fertile Indo-Gangetic plains, making dairy farming in Hardoi a community-centeredendeavor that goes beyond mere economic activity.[1]

Dairy operations in Hardoi are mainly led by cooperative societies and small-scale farmers, highlighting a model where the socio-economic backgrounds of these farmers play a crucial role in determining their operational and marketing strategies. Marketing channels vary, encompassing direct farmer sales to interactions with intermediaries and larger dairy companies, with cooperatives essential for facilitating market access.[2]

Challenges such as infrastructural deficits, logistical issues, fluctuating demand, and quality concerns, alongside the small scale of many farms, impact the sector's efficiency. Government initiatives like the Nand Baba Milk Mission aim to bolster the industry by enhancing production, infrastructure, and farmer incomes. Addressing these issues is vital for improving profitability, marketing efficiency, and overall sustainability in Hardoi's dairy landscape, making this study an essential contribution to understanding and advancing the district's dairy sector.[3]

Key focuses include the socio-economic profiles of dairy farmers, the efficiency of marketing channels, and the intricate cost structures impacting profitability and efficiency. The research aims to identify and analyze these elements, understanding their effects on the dairy industry's socio-economic fabric. It seeks actionable insights to enhance marketing strategies, improve farmer incomes, and contribute to the sector's sustainable growth, addressing the need for better marketing practices and economic development in Hardoi.

Comment [h5]: Marketing cost

2. MATERIAL AND METHODS

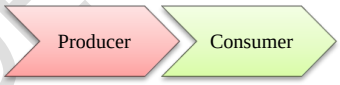
Through a combination of qualitative and quantitative methods to address challenges and opportunities within the dairy sector. Utilizing both primary and secondary data—gathered from structured interviews, questionnaires, and focus groups with stakeholders like farmers, cooperative members, and industry experts, along with literature and official records—this study offers in-depth insights into dairy marketing. The selection process involved purposive choices for the district and block, and random selections for villages and respondents, ensuring a diverse and representative sample. A total of 300 participants from various villages provided data through interviews, surveys, and focus groups, analyzed using statistical tools and thematic analysis while adhering to ethical standards like informed consent and confidentiality.

Hardoi, known for its agriculture, was chosen for its unique socio-economic attributes. The "Shahabad" block was specifically selected, with 3 of its 418 villages randomly chosen for detailed study. Respondents were categorized by the size of their cattle holdings into small (1-10), medium (11-20), and large (>20), with a stratified sample ensuring broad representation across different dairy farming scales. The Mehtab Singh Market in Shahabad was identified for focused market analysis, selecting market functionaries randomly to gather insights into marketing costs and practices. Data collection blended personal interviews and reviews of agricultural publications, contributing to a comprehensive understanding of Hardoi's milk marketing dynamics.

3. RESULTS AND DISCUSSION

3.1 Distribution Channels

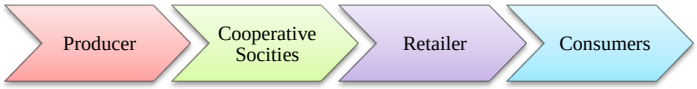
3.1.1 Channel I.



Channel I ~~involve~~ direct sales from producers to consumers, eliminating intermediaries, which can reduce costs and potentially increase producer profits while allowing consumers to access fresh products.

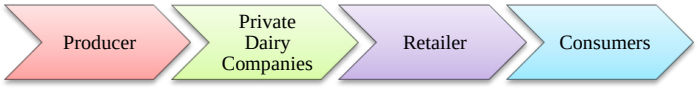
Comment [h6]: involves

3.1.2 Channel II



Channel II connects producers with consumers through cooperative societies and retailers, adding layers of quality control and potentially broader distribution but increasing the final product cost due to added margins at each step.[4]

3.1.3 Channel III



Channel III sees producers selling to private dairy companies, which then distribute the milk through retailers to consumers. This channel often involves significant processing and branding, possibly improving quality and consumer trust at the cost of higher prices.

3.1.4 Channel IV

Channel IV entails producers selling their milk to village vendors or local collectors, who then sell directly to consumers. This channel can offer local, often unprocessed milk at lower prices but may lack the quality assurance and consistency of more structured channels.[5]

3.1.4 Preferred marketing channel

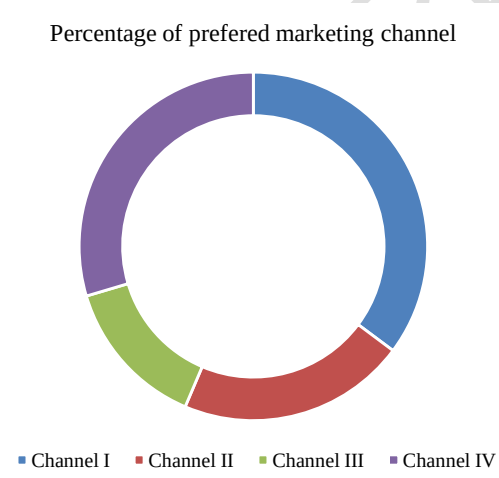


Fig. 1. Revealed the preferred marketing channel by respondents.

The survey revealed preferences among 250 respondents for milk marketing channels: 35.2% favored direct sales (Channel I), 21.2% preferred cooperative societies to retailers (Channel II), 14% chose sales through private dairy companies (Channel III), and 29.6% opted for village vendors/local collectors (Channel IV).

3.2Marketing cost, price spread, marketing margin, and market efficiency of Different Channels

Table1. Marketing cost, price spread, marketing margin, and market efficiency ofChannel I

S.No.	Particulars	Value in INR/Ltr.
1.	~~Producer sale~~Price to Consumers	55
2.	Final Price to Customer	55

Comment [h7]: mention the percentage in fig.

Comment [h8]: Producers selling

A.	**Total Marketing Cost**	**00**
B.	**Total Market Margin**	**-**
C.	**Marketing Efficiency**	**-**
D.	**Price Spread**	**0**

In Channel I, where producers sell directly to consumers, the sale price and final price to the customer are identical at INR 55 per liter, indicating no marketing costs or price spread. This model suggests a direct, efficient transaction without added margins, highlighting its simplicity and potential cost-effectiveness for both parties.

Table2. Marketing cost, price spread, marketing margin, and market efficiency ofChannel II

S.No.	Particulars	Value in INR/Ltr
1.	**~~Producer sale~~ Price to Cooperative Societies**	**30**
Cost Incurred by Cooperative Societies		
i.	Packaging Cost	**3.0**
ii.	Labour Cost	**2.0**
iii.	Transportation Cost	**4.0**
iv.	Storage Cost	**5.0**
v.	Processing Cost	**2.0**
vi.	Miscellaneous Charges	**2.0**
Total Marketing Cost (i-vi)		**18**
vii.	Margin of Cooperative Societies	**10**
2.	**~~Sale Price from Cooperative~~to Retailer**	**58**
i.	Margin of Retailer	**2.0**
3.	**Final Price to Customer**	**60**
A.	**Total Marketing Cost**	**18**
B.	**Total Market Margin**	**12**
C.	**Marketing Efficiency**	**2.0%**
D.	**Price Spread**	**100%**

In Channel II, the producer sells milk to cooperative societies at INR 30 per liter, with various costs totaling ~~INR~~ 18 and a cooperative margin of INR 10. This increases the price to retailers to INR 58, and after adding a retailer margin of INR 2, the final customer price is INR 60. This channel incurs a 100% price spread from producer to consumer, reflecting the added value and costs through packaging, labor, transportation, storage, processing, and miscellaneous expenses, resulting in a 2% marketing efficiency.

Table3. Marketing cost, price spread, marketing margin and market efficiency ofChannel III

S.No.	Particulars	Value in INR/Ltr
1.	**~~Producer sale Price~~to Private Dairy Companies**	**30**
Cost Incurred by Private Dairy Companies		
i.	Packaging Cost	**4.0**
ii.	Labour Cost	**2.0**
iii.	Transportation Cost	**5.0**
iv.	Storage Cost	**5.0**
v.	Processing Cost	**3.0**
vi.	Miscellaneous Charges	**1.0**
Total Marketing Cost (i-vi)		**20**
vii.	Margin of Private Dairy Company	**12**
2.	**~~Sale Price from Dairy Company~~to Retailer**	**62**
i.	Margin of Retailer	**3.0**
3.	**Final Price to Customer**	**65**
A.	**Total Marketing Cost**	**20**
B.	**Total Market Margin**	**15**
C.	**Marketing Efficiency**	**1.85%**

Comment [h9]: Producers selling

Comment [h10]: Cooperative societies sell price

Comment [h11]: Instead of INR use the rupee symbol

Comment [h12]: Producers selling price

Comment [h13]: Dairy companies sell price

D.	**Price Spread**	**100%**

In Channel III, producers sell milk to private dairy companies at INR 30 per liter. The companies then incur costs totaling INR 20 for packaging, labor, transportation, storage, processing, and miscellaneous expenses, adding a margin of INR 12. This elevates the price to retailers to INR 62, and with a retailer margin of INR 3, the final price for consumers reaches INR 65. The 100% price spread indicates significant value addition and costs associated with this channel, leading to a 1.85% marketing efficiency. This channel reflects the substantial investment in processing and distribution infrastructure by private dairy companies.

Table4. Marketing cost, price spread, marketing margin and market efficiency ofChannel IV

S. No.	Particular	Value in INR/Ltr
1.	**~~Producer Sale~~Price to Village Vendor/Local Collector**	**32**
Cost Incurred by Village Vendor/Local Collector		
i.	Labour Cost	**5.0**
ii.	Transportation Cost	**3.0**
iii.	Miscellaneous Charges	**5.0**
Total Marketing Cost (i-iii)		**13**
iv.	Margin of Village Vendor/local Collector	**15**
2.	**Village Vendor/Local Collector to Consumer Price**	**55**
A	**Total Marketing Cost**	**13**
B	**Total Market Margin**	**15**
C	**Marketing Efficiency**	**1.96%**
D	**Price Spread**	**41.8%**

In Channel IV, producers sell milk to village vendors or local collectors for INR 32 per liter. These intermediaries incur costs of INR 13 for labor, transportation, and miscellaneous expenses, and add a margin of INR 15. This sets the consumer price at INR 55 per liter. The total marketing cost and vendor margin lead to a 41.8% price spread from producer to consumer, reflecting the operational and logistical costs involved in this channel. With a marketing efficiency of 1.96%, this channel shows a balance between added costs and the convenience of local distribution, highlighting its role in making milk accessible to consumers through local networks.

Table5. Constraints in Marketing of Milk

S. No.	Constraints	Frequency	Ranking
1.	High cost of transportation	33	IV
2.	Low Prices	41	III
3.	Storage Problems	68	II
4.	Quality of Milk	10	V
5.	Low margins	98	I

The survey highlights the primary constraints faced in milk marketing, ranked by frequency of mentions by respondents. Low margins emerge as the top issue (98 responses), indicating significant pressure on profitability for producers and marketers alike, making it the most critical challenge. Storage problems rank second (68 responses), reflecting difficulties in preserving milk quality and preventing spoilage, which is crucial for maintaining product integrity. Low prices receive the third-highest concern (41 responses), suggesting that the selling price often doesn't cover production and marketing costs, affecting the economic sustainability of dairy operations. High transportation costs are the fourth concern (33 responses), pointing to the impact of logistics on overall expenses. Lastly, milk quality issues are ranked fifth (10 responses), indicating that while it's a concern, it's less prevalent compared to economic and logistical challenges. This ranking provides insight into the key areas where interventions could significantly improve the efficiency and profitability of milk marketing.

4. CONCLUSION

This study illustrates the diverse milk marketing channels in Hardoi District, highlighting Channel II (Producer > Cooperative Societies > Retailer > Consumers) as the most favored due to its structured approach despite higher marketing costs and price spreads. Channels I and IV, offering direct sales to consumers, show varied efficiency and cost benefits, with Channel I being the most cost-effective but less common. The analysis reveals that while all channels have their unique costs and margins, the presence of intermediaries increases the final price to consumers. Constraints such as low margins, storage issues, and high transportation costs significantly impact marketing efficiency and farmer profitability, underscoring the need for strategic improvements in the milk marketing system to address these challenges.

Comment [h14]: Producers selling

Comment [h15]: Instead of storage problems you can use perishability

REFERENCES

1. Hemme, T., Garcia, O., & Saha, A. (2003). *A review of milk production in India with particular emphasis on small-scale producers* (PPLPI Working Paper No. 2). https://ageconsearch.umn.edu/record/23777
2. Verma, S. K., Singh, R., Yadav, A. P. S., Shakya, A. K., & Kumar, K. (2023). Economics of production and resource use efficiency in wheat cultivation in Hardoi district of Uttar Pradesh. *Environment and Ecology,* 41(1A), 284–291. https://doc.article-environmentandecology.com/external/file/lt463e71a0cdf97224438a127810c9db80e9a
3. Rajendran, K., & Mohanty, S. (2004, July). Dairy co-operatives and milk marketing in India: Constraints and opportunities. *Journal of Food Distribution Research*, 35(2), 34–41. https://ageconsearch.umn.edu/record/27233
4. Basavarajappa, D. N., & Chinnappa, B. (2012). Distribution channels, price spread and constraints in marketing of milk-evidences from Karnataka. Research Journal of Animal Husbandry and Dairy Science, 3(2), 63–66. http://www.researchjournal.co.in/online/RJAHDS/RJAHDS%203(2)/3_A-63-66.pdf
5. Mishra, K. V., & Goyal, C. K. (2015, January). Marketing channels used by small-scale milk producers: A study in Azamgarh District. UNNAYAN, II.