Milk Marketing in Nagaland

Sedeno Chale[*] . Anju Choudhury . K.K. Datta . L. Devarani . L. Hemochandra

School of Social Sciences, College of Post Graduate Studies, CAU-I, Umiam - 793103, Meghalaya

ARTICLE INFO

ABSTRACT

The main objective of the study was to identify the most profitable and efficient marketing channel in the marketing of milk in Nagaland. The study was based on the data collected from milk producers, local trader and dairy co-operative cum processor after identification of the major channels in the study area. The study found out that there were three marketing channels in the study area. Most of the milk marketed was disposed through Channel-I, in which the producer directly sells to the consumer; followed by Channel-III, where the producer sells directly to the co-operative; and the least through Channel-III, where producer sells to local trader cum retailer, who then sells to the consumers. The marketing cost and marketing margin were least when the producer directly disposes their produce to the consumer or the co-operative. However, presence of large number of intermediaries reduces the marketing efficiency as the marketing cost and margin increases with the number of intermediaries in the channel.

1. Introduction

Dairying is a centuries-old tradition for millions of Indian rural households; domesticated animals have been an integral part of the farming systems from time immemorial. In the context of poverty and malnutrition, milk has a special role to play for its many nutritional advantages as well as providing supplementary income to farmers. Milk production in India has shown a rising trend ever since the inception of 'Operation Flood (OF)' Programme in 1970-71, the Indian dairy industry acquired substantial growth from Eighth Plan onwards. India ranks first in milk production, accounting for 18.5 percent of world production, achieving an annual output of 165.5 million tonnes during 2016-2017 as compared to 155.5 million tonnes during 2015-2016 and 146.3 million tonnes during 2014-15. (GoI, 2018). Despite the impressive growth in milk production, milk-marketing systems are still primitive in the country. Currently, more than 80 percent of the milk produced in the country is marketed by unorganized sectors and less than 20 percent by the organized sector.

The organized sector involves government and co-operatives; the unorganized sector involves local milk vendors, wholesalers, retailers, and producers themselves. Despite impressive developments taking place in the dairy sector throughout the country, the situation and performance of the dairy sector in Nagaland is in contrast to the national scenario. Local demands for milk continue to increase, which is being met through imports, though the state has set forth development goals to promote smallholder production and marketing in order to meet or partially meet local demands for milk and dairy products. In order to become competitive and self-sufficient in the dairy sector, there is a need for the state of Nagaland to create an efficient marketing network, for which a systematic knowledge of the marketing channels of milk in Nagaland is required. Milk being perishable commodity needs to have an effective and efficient marketing system. An efficient and effective marketing system minimizes the cost of marketing services and ensures the largest share of consumers' price to the producers. But the presence of the intermediaries in the channel of milk marketing and distribution not only works against the managerial skill of milk producers but also decreases the marketing efficiency. For the development of the dairy industry, it is necessary to know the marketing margin, and price spread of milk which may help to

_____
*Corresponding author: sedenochale11@gmail.com

explore the possibilities of reducing marketing costs and margins for the welfare of the producers and consumers. Marketing is as important as production and indeed it is an integral part of production. This study examines the distribution, price spread and constraints in marketing of milk.

Under this backdrop, this study was conducted with the following specific objective:
• To identify the marketing channels of milk.
• To analyse the marketing cost, marketing margin, price spread and producer's share in consumer's rupee of different channels.
• To determine the marketing efficiency of each channel.

2. Materials and Methods

The study was conducted in Kohima district of Nagaland. It is based on primary data from 100 respondents from two blocks of the district, *viz.* Jakhama block and Chiephobozou block. A list of leading villages was obtained from concerned government departments and four villages from each block were selected at random. For selection of milk producers, a list of milk producers was obtained from village level extension workers of respective villages. From the list, a sample of about 100 respondents was selected using Probability Proportionate to size. Intermediaries at each stage of different channels were selected randomly. The primary data were collected from respondents by personal interview method. For this purpose, a special schedule was designed and pre-tested for workability. The data were analyzed using statistical tools such as percentages, ratios, means, *etc.* Marketing cost, marketing margin, price spread, producer's share in consumer's rupee, marketing efficiency were calculated.

3. Results

Marketing channels of milk

For the disposal pattern of milk and milk products from the producer to the ultimate consumer, three marketing channels were identified in the study area. They are as follows –
i.   **Channel-I**: Producer → Consumer
ii.   **Channel-II**: Producer → Local trader cum Retailer   → Consumer
iii.   **Channel-III**: Producer → Dairy Cooperative
Table 1 showed the disposal pattern of the milk through different marketing channels. It was found that maximum of the total milk marketed surplus were handled through the

unorganized sector (74.89 percent). Similar findings were also reported by Khoveio (2011) in Nagaland. It can be seen that maximum of the total milk marketed surplus was disposed through Channel-l (63.35 percent), followed by Channel-lll (26.1 percent) and Channel-ll (10.54 percent). Hence, it can be concluded that Channel-l (Producer → Consumer) was the most prominent marketing channel in the study area. Inderpreet *et al.* (2011) also found that the Producer – Consumer channel was the most popular channel in Punjab.

Table 1. Disposal pattern through different marketing channels

Marketing channel	Quantity (Litres)	Quantity (%)
Channel-l	943.00	64.35
Channel-ll	157.00	10.54
Channel-lll	388.50	26.10

Marketing cost, marketing margin, price spread and producer's share in consumer's rupee

It is very important to study the marketing cost, margin and price spread of middlemen in order to understand the profitability, nature and genuineness of each market channel, which has been discussed under three major channels. In this section, various parameters, namely marketing cost, marketing margin and price spread and producer's share in consumer's rupee of milk for different channels have been analysed and results are presented in Table 2.

In Channel-l (Producer → Consumer), the producer directly sold the produced milk to the consumer. This channel is also called direct marketing as no intermediaries were involved. The net price received by the producer was 44.52 which was 97.85 per cent of the price paid by the consumer. The marketing cost incurred by the producer per litre of milk was 0.98. The price paid by the consumer per litre of milk in this channel was 45.5. It was observed that majority of the producer-respondents were involved in this channel as the net price received by them was maximum as compared to the other observed channels. Vedamurthy and Chauhan (2005) also reported that the price received by the household was highest when they sold directly to the consumer in Shimoga district of Karnataka In Channel-ll, local trader cum retailer purchased the milk from the producer and further sold it to the consumer. Hence, only one intermediary was involved in the process. The net price received by the producer was found to be 35 which was 70 per cent of the consumer's rupee. The marketing cost incurred by the local trader was estimated to be 3.06 per litre of milk, of which transportation (78.43 percent)

and loading and unloading (21.57 percent) were the components. The marketing margin of the local trader was 11.94 per litre which accounted for 23.88 per cent of the consumer's rupee. The price paid by the consumer in this channel was 50 per litre. The number of sample households involved in this channel was the least among all channels. However, due to the distant location of their farms from the market, the farmers in this channel prefer to dispose off their produce to the local trader cum retailer. The producer's rationality to sell their produce to local trader was to avoid transportation cost as well as the marketing risk. The local trader by way of his risk bearing ability and market information enjoys margin or profit in this channel.

In Channel-III, the dairy co-operative i.e. Milk Co-operative of Nagaland purchased milk directly from the producer, thus acting as the consumer of the milk. The procurement cost was 1.09, which comprised of cost of milk collection, transportation, chilling and reception. This milk was processed and converted to different value added products like toned milk, lassi, curd, ghee and paneer, etc. In this channel, the co-operative acts as the consumer of the milk. The value added dairy products were then sold to the distributor who then sold it to the retailer and the retailer to the ultimate consumer. The milk producers in this channel prefers to dispose off their produce to the co-operative though they receive lower price than directly selling to consumers as the low price was compensated by various services and feed supplements. The co-operative came to collect the

milk from the doorsteps of the producers, so they need not worry about the transportation and other marketing costs Table 2 also showed the price spread of milk in different channels. It is evident from the table that the net price received by producer (44.52) was highest and the price spread was lowest (0.98) under Channel-I (Vedamurthy and Chauhan, 2005). In channel-lll, the net price received by producer was 35.5, which was 100 percent of the consumer's price (the consumer being the co-operative). In this channel, no marketing cost was incurred by the producers. While in Channel -ll, the net price received by the producer was 35 and the price spread was 15. Hence, increase in marketing cost reduces the producer's share in consumer's rupee. The producer received higher share of consumer's rupee in Channel-l than in Channel-II due to absence of intermediaries and less marketing cost incurred by the producer.

Marketing efficiency of different channels

The marketing efficiency of different channels has been calculated using Acharya's modified marketing efficiency approach and is presented in Table 3.

Table 3. Marketing efficiency of different channels (₹/litre)

Particulars	Channel-l	Channel-ll	Channel-lll
Marketing cost	0.98	3.06	1.70
Marketing Margin	0.00	4.90	-
Price received by producer	44.52	35.00	35.50
Marketing efficiency	45.43	4.40	20.88

Table 2. Marketing cost, marketing margin price spread and producer's share in consumer's rupee   (₹ per litre)

Particulars	Channel-l	Channel-ll	Channel-lll
Net price received by producer	44.52	35	35.5
Marketing cost incurred by producer	0.98	0	0
Retailer's purchase price		35	-
Marketing cost incurred by milk vendor			
a) Transportation cost	-	2.4	-
b) Loading and unloading	-	0.66	-
Total marketing cost incurred by trader/retailer	-	3.06	-
Marketing Margin of trader/retailer	-	11.94	-
Dairy co-operative purchase price	-	-	35.5
Procurement cost incurred by co-operative	-	-	1.09
Price spread	0.98	15	-
Consumer's price	45.5	50	35.5
Producer's share in consumer's rupee (%)	97.85	70	100

Table 3 revealed that the marketing efficiency was highest in Channel-l (45.43) followed by Channel-lII (20.88) and Channel-ll (4.40). The marketing efficiency was found to be highest in Channel-l which is due to less marketing cost (0.98) and non- involvement of any intermediaries. Highest marketing cost and marketing margin were observed in Channel-ll, leading to least marketing efficiency. Hence, it can be concluded that lesser the price spread, higher will be the marketing efficiency.

Discussion

The study has revealed that maximum of the total milk marketed surplus were handled through the unorganized sector. The study has inferred that the marketing efficiency and the net price received by producers were highest in the channel where no intermediary was observed and least where number of intermediaries was more. This showed that higher marketing cost incurred and marketing margin gained by intermediaries reduces the marketing efficiency of marketing channels. The study also found that the milk production and market were observed to be still at its infancy in Nagaland for which there is a need for specialization and improvement of dairy sector. For the development of the dairy industry, it is necessary to know the marketing margin, and price spread of milk which may help to explore the possibilities of reducing marketing costs and margins for the welfare of the producers and consumers.

References

Acharya SS and NL Agarwal (2011). Agricultural marketing in India, 5th edn. Oxford and IBH publishing Co. Pvt. Ltd., New Delhi, pp 48.

GoI (2018). Annual report (2016-17) Ministry of Agriculture, Department of Animal Husbandry, Dairying and Fisheries, Govt. of India, New Delhi.

Kumar A, Shinoj P and S Jee (2013). Do dairy co-operatives enhance milk production, productivity and quality? Evidences from the Indo- Gangetic Plains of India. *Indian Journal of Agricultural Economics*, 64(3): 457-468.

NDDB (2016). Annual Report 2015-16. National Dairy Development Board, Anand, Gujarat.

Inderpreet K, Dhindsa SS, Harpreet K and S Prabhjot (2011). Various factors of dairy farming in central zone of Punjab. *Journal of Dairying and Home Sciences*. 30(4): 242-245.

Khoveio MLL (2011). Economics of milk production, marketed surplus and its disposal pattern in Nagaland. M.Sc. Thesis submitted to National Dairy Research Institute (Deemed University), Karnal, Haryana

Vedamurthy KB and AK Chauhan (2005). Economic analysis of milk marketing in Shimoga district of Karnataka. *Indian Journal of Agricultural Marketing,* 19(3): 39-51.