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Milk Marketing of Non-members and Members of Dairy Co-operatives in Champawat District of Uttarakhand- A Comparative Analysis

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ABSTRACT

Background: The present study was under taken in Champawat district of Uttarakhand state with the objective to work out marketing of milk between non-members and members of dairy co-operatives societies.

Methods: Study was mainly based on primary data collected for a period of 300 days lactation period. Two blocks namely, Champawat and Barakot block were selected purposively. A sample of 60 milk producers selected out of which thirty milk producers belonged to co-operative system, while the rest thirty belonged to private system.

Result: Among the three channels observed, only one channel was found under co-operative while two channels were found to exist under private system of marketing. In private system of marketing, channel I (milk producer-consumer) was found to be most efficient channel from producer's point of view. The study revealed that the members of dairy cooperatives were not beneficiaries due to higher marketing margin, price spread and lower producer's share in consumer's rupee. The major constraint faced by non-members was poor means of transport whereas the same is not considered as a problem for members of dairy co-operatives. The study suggested to improvement of infrastructural facilities and minimizes the superfluous expenses.

Key words: Dairy Co-operatives, Marketing, Members, Non-members.

INTRODUCTION

The dairy sub sector occupies a very important productive activity in agricultural economy in India. But Agriculture in the hills is largely rain fed with small and scattered landholdings, under such circumstances livestock rearing and farming assumes a significant role in the household economy. About 80% of milk produced in the country is handled by unorganized sector and the remaining 20% is shared equally by co-operative and private dairies. Uttarakhand is 10th hilly state of India (64% area is under hilly tract) and its economy is predominantly agricultural based.

Uttarakhand is characterized by the small milk producers having one to two milch animals (comprising cows and buffaloes) backed by poor production technology, weak economy and unorganized milk producers, thus their marketed surplus is very low (Meena *et al.* 2011). The District suffers from a severe shortage of fodder, lack of processing plants and lack of training programmes. Thus considering the facts, an attempt was to accomplish the following specific objectives:

Objectives

1. To identify the channels for distribution of milk by non-members and members of dairy co-operatives.
2. To estimate margins and price spread in different marketing channels of milk by non-members and members of dairy co-operatives.
3. To study the constraints faced by the non-members and members of dairy co-operatives.

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MATERIALS AND METHODS

Sampling plan and design

The study was conducted in Champawat district of Uttarakhand, in view of the fact that the district is lowest milk producer with 41.505 tonnes (3.41 per cent) of milk per year among thirteen districts of Uttarakhand, further no such study has been conducted in the district. Out of the four blocks of Champawat district, two blocks namely, Champawat and Barakot block were selected purposively because of their highest and lowest position in milk production.

Primary data were collected by personal interview following survey method approach. The data collected comprised of data on quantity of milk sold, quantity of milk used for family consumption, price of milk received and problems encountered during marketing of milk. Simple statistical tools, Acharya's approach and Garret's ranking

technique were employed to accomplish different objectives of the study.

Marketing cost

It is the total cost incurred on marketing either in cash or in kind by the producer, seller and by various intermediaries, till the produce reaches to the ultimate consumer.

$$C = C_F + C_{m1} + C_{m2} + C_{m3} + \text{--------} + C_{mi}$$

Where,

C= Total cost of marketing.

C_F= Cost paid by the milk producer from the time milk leaves the farm till he sells it.

C_{mi}= Cost incurred and margin taken by i^{th} middleman in the process of buying and selling the milk.

Price spread

This was calculated to find out the absolute difference between the price paid by the consumer and price received by the producer.

$$P = P_C - P_P$$

Where,

P = Price spread.

P_C= Price paid by consumer.

P_P= Price received by the producer.

Marketing margin

This was calculated as the difference between buying price and selling price of the middlemen (Acharya and Agarwal, 2018).

Absolute margin of the i^{th} middleman = Selling price - Buying price

This absolute margin was first expressed as the percentage of selling price to find out the percentage margin of i^{th} middlemen and was given as.

Percentage margin of i^{th} middlemen (Pmi) =

$$\frac{\text{Absolute margin}}{\text{Selling price}} \times 100$$

After this, the absolute margin was expressed as the percentage of buying price to find out the mark up of the i^{th} middlemen and was calculated as:

$$\text{Mark-up of } i^{th} \text{ middlemen (Pmi)} = \frac{\text{Absolute margin}}{\text{Bying price}} \times 100$$

Garret's ranking rechnique

In order to identify the problems faced by the non-members and members of dairy co-operatives Garret's Ranking Technique was computed by using following formula:

$$\text{Per cent position} = \frac{100\,(R_{ij} - 0.5)}{N_{ij}}$$

Where,

R_{ij} = Rank given for i^{th} item by j^{th} individual.

N_j = No. of items ranked by j^{th} individual.

The per cent position of each rank was converted to scores by referring to tables given by Garret and Woodworth. Then for each factor, the scores of individual respondents were summed up and divided by the total number of respondents from whom scores were gathered. The mean scores for all the constraint were arranged in descending order and thus ranks were assigned to the constraints.

RESULTS AND DISCUSSION

Marketing channels

The observations revealed that two marketing channels existed under non-members of private system of marketing whereas only one marketing channel was identified under members of co-operative system. Table 1 show that marketing channels present in the study area under private and co-operative systems along with the milk producers involved (Lambhe 2010).

Marketing channels for non-members (private system)

Channel- I: Milk producer- Consumer.

Channel- II: Milk producer-Halwai-Consumer.

Marketing channel for members of dairy co-operatives

Channel-III: Milk producer-PMPS-DUSS-Consumer.

It was found that Channel I was most common under the private system of milk distribution in the study area followed by channel II. Channel I accounted for 73.30 per cent of total milk producers as against the channel II where 26.70 per cent of total milk producers were involved. Under the III channel all the 30 selected milk producers (100 per cent) sold their milk through the collection centres of dairy milk co-operatives of the study area.

Price spreads in different marketing channels of milk

Table 2 gives the price spread, percentage margin, mark up and producers share in consumer rupee in milk marketing system. As shown in the Table 2 the channel I was the most efficient one having the 100 per cent producers share in consumer rupee because the milk was directly sold to the consumer. In channel II producer share was found to be around 84 per cent. The III channel in which the milk producer were selling their milk through co-operatives, producers share in consumer rupee around 59 per cent, the percentage margin of the co-operative society was around 41 per cent. It may be because of the reason; the dairy co-operative societies had to incur costs on collection, transportation, pasteurization and other processing activities of milk.

Table 1: Channels present under private marketing system and co-operative system.

Marketing channels	No. of milk producers	
	Members	Non-members
I. Milk producer-consumer	22 (73.30)	-
II. Milk producer-halwai-consumer	8 (26.70)	-
III. Milk producer-PMPS**-DUSS*-consumer	-	30 (100)
Total	30 (100)	30 (100)

Figures in parenthesis are percentage to total.

**Primary Milk Producres Co-Operative Societies.

*Dugdh Utpadak Sahkari Sangh.

Table 2: Price spreads in different marketing channels of milk.

Channels	Price received by milk producer (Rs.)	Price paid by consumer (Rs.)	Absolute margin (Rs.)	Percentage margin (%)	Mark up (%)	Producers share in consumer rupee (%)
I	16.50	16.50	-	-	-	100
II	16.00	19.00	3.00	15.80	18.75	84.20
III	13.50	23*.00	9.50	41.00	70.37	58.70

*This consumer price of milk is inclusive of the pasteurization, packaging and transportation costs born by the milk co-operative.

Table 3: Constraints faced by the non-members and the members of dairy cooperatives.

Constraints	Garret's mean score for Members	Rank given by members	Garret's mean score for Non-members	Rank given by non-members
Transport	-	-	55.50	I
Breed	29.13	IV	51.07	II
Feed	31.90	III	46.92	III
Medical	24.90	V	25.10	IV
High cost inputs	20.56	VI	16.12	V
Lack of knowledge	12.03	VII	12.12	VI
Marketing	-	-	8.70	VII
Credit	5.85	VIII	7.08	VIII
Poor linkage with extension agencies	5.00	IX	5.20	IX
Faulty methods of weighing	51.85	I	-	-
Insufficient prices	44.03	II	-	-

Channel first was found to be the most efficient channel, when analyzed from the view point of producer's share in consumer's rupee followed by channel second. Out of three marketing channels, the producer's share in consumer's rupee was lowest for members of dairy co-operatives under channel-III. Price spread was much more for dairy co-operatives under channel-III, because dairy co-operatives incur transportation, pasteurization and packing cost. Thus, dairy co-operatives were not beneficiaries in the study area due to higher marketing margin, price spread and lower producer's share in consumer's rupee (Devaraja 2001).

Constraints faced by the non-members and members of dairy co-operatives

Constraints faced by the non-members and members of dairy co-operatives are presented in Table 3. Table 3 reveals that poor means of transport emerged as the first major constraint faced by the non-members while transportation is not considered as a problem for members of dairy co-operatives because facility of milk collection centers are available for members of dairy co-operatives and milk producers directly sell their milk to co-operatives (Arora *et al.* 1998). Most of the milk producers in the study area kept local breeds of milch animals and their milk productivity was very low compared to hybrid milch animals while heavy capital investment is involved in purchasing of hybrid milch animals. It was the second major problem of non-members and fourth major problem of members of dairy co-operatives. Most of the milk producers fed to their animals green fodder as well as farm produced dry fodder. Milk producers faced shortage of fodder during the summer season; feed problem was the third constraint of non-members and members of dairy co-operatives. The problem of non-availability of facilities of animal health care *i.e.* veterinary aid was reported as fourth and fifth major problem for non-members and members of dairy co-operatives respectively. Faulty methods of weighing and insufficient prices were the first and second problems faced by the members of dairy co-operatives. Lower returns were received by members of dairy co-operatives due to presence of lower content of fat in the milk and faulty methods of weighing. In addition to the above problems non-members and members of dairy co-operative faced problem of high cost inputs, lack of knowledge, marketing and credit. Poor linkage with extension agencies was also found as another important problem faced by non-members and members of dairy co-operatives.

CONCLUSION AND POLICY IMPLICATION

Study of marketing system revealed that only one marketing channel existed for members of dairy co-operatives and *i.e.* milk producer-Primary milk producer societies-Consumer while for non-members of dairy co-operatives two marketing channels were found. Thus total three marketing channels were found. Out of these two marketing- channels I (milk producer-Consumer) was found most efficient when producer's share in consumer rupee was considered (Sharma *et al.* 2007).

Out of three marketing channels the producer's share in consumer rupee was lowest for members of dairy

co-operatives under channel-III. Marketing costs and price spread were much more for dairy co-operative under channel-III, because dairy co-operatives incur transportation, pasteurization and packing cost. Thus, dairy co-operatives were not beneficiaries in the study area due to higher marketing margin, price spread and lower producer's share in consumer's rupee.

In the study area poor means of transport emerged as the first major constraint faced by the non-members where as transportation is not considered as a problem for members of dairy co-operatives. The major constraints faced by non-members and members of dairy co-operative were high cost inputs, lack of knowledge and marketing and credit (Chauhan and Sharma 2007). The study suggested that there should be improvement in infrastructure facilities such as cattle sheds, drinking water and boarding arrangements for sellers and buyers *etc.* The product mix should be reoriented as per the changing market environment and superfluous expenses (in pasteurization, packaging transportation *etc.*) should be avoided. There is a need to provide good transport facilities to non-members and efforts are needed to make of health-care facilities.

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