



**Price Spread And Marketing Efficiency Of Buffalo Owners In Different Milk Marketing Channels In Allahabad District (Uttar Pradesh)**

**Singh O.N. and Dubey A.K.\***

*Ex Ph.D. Student and Associate Professor\*, Janta Mahavidyalay, Ajitmal, Aurya (U.P.)*

**Abstract**

*Indian dairy sector contribute the largest segment in agriculture gross domestic product. Presently there are around 70000 village dairy cooperative across the country. The cooperative societies are federated into 170 district milk producers unions, which is turn has 22 state cooperative dairy federation. There is great variation in the marketing efficiency of different cooperative and non-cooperative milk producing firms in different resource situations, due to variations in marketing costs and marketing margins. Keeping this in view, the present study is an attempt to examine empirically the price spread, marketing costs, marketing margins, marketing efficiency, and profit efficiency among market middlemen in cooperative and non-cooperative marketing channels in the domestic trade market of liquid milk. The result shows the marketing cost was estimated higher in channel-I but marketing margin was comparatively higher in channel-II in small and medium group. The study indicates that improvement in the cooperative movement and their efficiency for increasing the profit among small and medium herd owner.*

**I. Introduction**

India with 134 mn cows and 125 mn buffaloes, has the largest population of cattle in the world. More than fifty percent of the buffaloes and twenty percent of the cattle in the world are found in India and most of these are milch cows and milch buffaloes. Indian dairy sector contribute the largest segment in agriculture gross domestic product. Presently there are around 70000 village dairy cooperative across the country. The cooperative societies are federated into 170 district milk producers unions, which is turn has 22 state cooperative dairy federation. Milk production gives employment to more than 72 mn dairy farmers . In term of total production , India is the leading producer of milk in the world followed by USA. The milk production in India accounts for more than 13 percent of the total world output and 57 percent of total Asia's production (www.indian industry).

The dairy sector is a very important productive activity in Indian agriculture, as milk is the second largest agricultural commodity contributing to GNP, next only to rice, and generates a regular flow of income to the farmer's family throughout the year. It is recognized as an important activity suitable for employment generation and value addition in the agricultural sector in the Indian economy in general and for rural families especially, small and marginal farmers and landless agricultural laborers in particular. But the success of dairy farms (or plants) largely depends on the effective management of operations like milk marketing, because marketing provides a stimulus to greater production and thereby increases demand, which provides its own incentive to increase supply. An efficient marketing system results in a higher proportion of producer profit in the consumer rupee, which influences the producer's decision to invest resources in a particular economic activity in a particular time period. An efficient marketing system also helps bring quality product to the consumers at the lowest possible cost (Debnarayan and Ghosh. 2010).

However there have been several studies of the marketing of liquid milk in both cooperative and non-cooperative Indian dairy plants (Rangaswamy and Dhaka, 2008; Pawar and Sawant, 1979;

Devaraja, 2001; Rajendran and Mohanty, 2004; Sharma et al, 2007; Kanmony and Gnanadhas, 2004; Sujatha et al, 2004; Duhan et al, 2004; Singh and Dayal, 2004; Naik and Dalwai, 1998, Koshta and Chandrakar, 1998; Beohar, 1998; Singh and Rai; 1998). These studies show that there is great variation in the marketing efficiency of different cooperative and non-cooperative milk producing firms in different resource situations, due to variations in marketing costs and marketing margins. Keeping this in view, the present study is an attempt to examine empirically the price spread, marketing costs, marketing margins, marketing efficiency, and profit efficiency among market middlemen in cooperative and non-cooperative marketing channels in the domestic trade market of liquid milk. On the basis of above view the present study was conducted with the objective of analyzing the work out cost of marketing of milk in different channels.

## **II. Methodology**

The sampling technique used in this study was a multistage stratified mixed sampling. At the first stage district Allahabad having maximum number of buffaloes and milk production among all other districts of eastern region was selected purposively. Further out of 20 development blocks, two development blocks namely Kaurihar from Gangapar region and Koraon from Yamunapar region were chosen randomly on the basis of maximum milk production at the second stage. From these blocks thus, selected 5 villages from each block were selected randomly on the basis of maximum number of buffalo owners and milk production making a total of 10 villages at the third stage. From these 10 villages, thus, selected a list of buffalo owners along with their numbers of buffaloes raised and milk production was prepared. This list was categorized into 3 main size groups on the basis of herd i.e. (1) up to 5 buffaloes (2) 6-15 buffaloes and (3) Above 15 buffaloes. The ultimate samples of buffalo owners, who sell milk were chosen according to probability proportion to total numbers in each category at the fourth stage restricting the total number of samples to 100 in all for the study purpose.

## **III. Result and Discussion**

The result of the study was categorized in three categories of farmer on the basis of herd size and data recorded in each category. The table one contain the view of small buffalo owner group. The price spread and marketing efficiency in case of small (up to 5 Buffaloes) buffalo owners in different milk marketing channels in the selected Regions analysed in Table 1, indicates that in Kaurihar Block (Gangapar Region) there were two main marketing channels for milk i.e.

Channel – I Buffalo owners – vendors-consumers

Channel – II Buffalo owners – others-consumers

In channel-I the owners sell to vendors and vendors to consumers. In this channel the share of producer in consumer's rupees was estimated to 98.46 percent. While the producer's cost was 79.84 percent. The total marketing cost was 7 percent and total margin charged was 13.15 percent. The margin received by the producers was highest i.e. 12 percent in this channel. Suresh C. Mallik, (1998) and Virender Singh *et al.* (1998) also found similar results in their studies. In channel-II of Kaurihar Block the owners sell to others and others to consumers. The producer's share in consumer's rupees was 94.81 percent in this channel. The total marketing cost was 1.92 percent and total margin charged was 21.18 percent. While the producer's cost was 76.88 percent in this channel. Thus, in Kaurihar Block the marketing efficiency in channel-I was higher than in channel-II in case of small buffalo owners. While in Koraon Block (Yamunapar Region) in channel-I Buffalo owners sell to cooperatives and cooperatives to consumers. In channel-II the owners sell to others and others to consumers. In this Region the producer's share in consumer's rupees in channel-I was higher i.e. 92.85 percent against 89.65 percent in channel-II. The producer's cost was also higher i.e. 81.21 percent in channel-I against only 78.41 percent in channel-II. Thus, in Koraon Block channel-I was an efficient marketing

channel than channel-II in case of small buffalo owners. Accordingly the marketing cost and margin was low in channel-II of this Region the related data are given in Table 1.

The price spread and marketing efficiency in case of medium buffalo owners in different channels of milk marketing in the selected Regions worked out in Table 2 indicates that in Kaurihar Block in case of medium buffalo owners also the producer's share in consumer's rupees was higher i.e. 96 percent in channel-I against only 92.30 percent in channel-II. The producer's cost was also higher i.e. 78.48 percent in channel-I against 75.46 percent in channel-II. While the marketing margin charge was higher 22.15 percent in channel-II against 14.88 percent in channel-I. Thus, in Kaurihar Block channel-I was comparatively more efficient channel than channel-II in case of the medium owners. While in Koraon Block the producer's share in consumer's rupee was estimated higher i.e. 96.25 percent in channel-I against 94.54 percent in channel-II. The producer's cost was also higher i.e. 82.51 percent in channel-I against 81.01 percent in channel-II. The total market margin was higher in channel-II. Thus, in Koraon Block channel-I was comparatively more efficient than channel-II in case of medium buffalo owners.

The price-spread and marketing efficiency in case of large buffalo owners in different channels of milk marketing in selected Regions analysed in Table 3 indicates that in Kaurihar Block the producer's share in consumer's rupees was estimated to the higher i.e. 95.34 percent in channel-I against 93.18 percent in channel-II in case of large owners. The producer's cost was also higher i.e. 78.60 percent in channel-I against 76.81 percent in channel-II. While the market margin was higher i.e. 21.27 percent in channel-II against 14.60 percent in channel-I. Thus, channel-I was comparatively more efficient than channel-II for marketing of milk in case of large owners of Kaurihar Block. While in Koraon Block the producer's share in consumer's rupees was also estimated to be higher i.e. 96.29 percent in channel-I against 94.54 percent in channel-II. The producer's cost was also higher i.e. 81.18 percent in channel-I against 79.70 percent in channel-II. The marketing cost was estimated higher in channel-I but marketing margin was comparatively higher i.e. 18.69 percent in channel-II against 14.51 percent in channel-I. Thus, in Koraon Block the channel-I was found to be comparatively more efficient than channel-II for marketing of milk in case of large buffalo owners. (G.R. Patil *et al.* 1998) also found that owners generally sell to vendors in their own villages in their study. The related data are given in Table 3.

#### IV. Conclusion

Regarding price spread and marketing efficiency in case of small buffalo owners in Kaurihar Block the share of producer in consumer's rupees was 98.46 percent in channel-I against 94.81 percent in channel-II. Thus, in Kaurihar Block the marketing efficiency in channel-I, was higher than in channel-II in case of small buffalo owners. In Koraon Block too channel-I was efficient than channel-II. As regards the price spread and marketing efficiency in case of medium buffalo owners also the producer's share in consumer's rupees was higher i.e. 96 percent in channel-I against only 92.30 percent in channel-II. Thus, in Kaurihar Block channel-I was comparatively more efficient than channel-II in case of medium owners. In Koraon Block too channel-I was comparatively more efficient than channel-II in case of medium owners.

Regarding the price spread and marketing efficiency in case of large buffalo owners in Kaurihar Block the producer's share in consumer's rupees was higher i.e. 95.34 percent in channel-I against 93.18 percent in channel-II. Thus, channel-I was comparatively more efficient than channel-II in case of large owners of Kaurihar Block. In Koraon Block too channel-I was found to be comparatively more efficient than channel-II in case of large buffalo owners.

#### Bibliography

- [1] Beohar, B.B. (1998). Economic and Marketing of Milk Production in Central Part of Madhya Pradesh. Indian Journal of Agricultural Economics, Vol.53, No.3, July-Sept, p 401.
- [2] Debnarayan S, and Ghosh B. K. (2010) Marketing under cooperative and non cooperative marketing channels evidence from West Bengal. Economic Annals, Volume iv, no. 187.

- [3] Devaraja, T.S. (2001). Channels and price spreads in milk marketing in cooperative and private sectors of Karnataka. *Agricultural Marketing*, 28: 21-23.
- [4] Duhan, V.K., Khatkar, R.K. & Singh, V.K. (2004). Nature of Markets and role of Cooperatives in Marketing of Milk in Rewari District of Haryana. *Indian Journal of Agricultural Economics*, Vol.59, No.3, July-Sept. p .651.
- [5] Kanmony, J. C. & Gnanadhas, M. E. (2004). The Role of 'Avin Kumari' in Marketing Milk and Milk Products. *Indian Journal of Agricultural Economics*, Vol.59, No.3, July-Sept. p. 645.
- [6] Koshta, A.K. & Chandrasekhar, M.R. (1998). Production and Disposal Pattern of Fluid Milk by Members and Non-Members of Milk Producing Co-operative Societies. *Indian Journal of Agricultural Economics*, Vol.53, No.3, July-Sept, p. 400.
- [7] Mallick Suresh C (1998). "Marketing of Milk in Cuttak District (Orissa)". *Indian Journal of Agricultural Economics*, Conference No. **Vol. 53**, No.3, p. 419.
- [8] Naik, D. & Dalwai, A. (1998). Production and Marketing of Milk in Orissa. *Indian Journal of Agricultural Economics*, Vol.53, No.3, July-Sept. p. 379.
- [9] Patil G.R., Bagalkoti S.T. and Tahashildar M.H. (1998). "Production and Marketing of Fluid Milk in Draught Prone Village." *Indian Journal of Agricultural Economics*, Conference No. **Vol. 53**, No.3, p. 396-397.
- [10] Pawar, J.R. & Sawant, S.K. (1979). Comparative efficiency of alternative milk marketing agencies in western Maharashtra", *Indian Journal of Agricultural Economics*, Vol.34, No.4, Oct.-Dec, pp.160-167
- [11] Rajendran K. & Mohanty, S. (2004). Dairy Cooperatives and Milk Marketing in India: Constraints and Opportunities. *Journal of Food Distribution Research*, 35(2), July, pp. 34-41.
- [12] Rangasamy, N. & Dhaka, J.P. (2008). Marketing Efficiency of Dairy Products for Co-operative and Private Dairy Plants in Tamil Nadu –A Comparative Analysis. *Agricultural Economics Research Review*, Vol.21, July-December, pp. 235-242.
- [13] Sharma, M.L., Saxena, R. Mahato, T. & Das, D. (2007). Potential and Prospects of Dairy Business in Uttarakhand: A Case Study of Uttaranchal Cooperative dairy Federation Limited. *Agricultural Economics Research Review*, Vol.20 (Conference Issue), pp. 489-502.
- [14] Singh, R.B. & Dayal, R. (2004). Economic Analysis of Production and Marketing of Milk in Central Region of Uttar Pradesh. *Indian Journal of Agricultural Economics*, Vol.59, No.3, July- Sept. pp. 654.
- [15] Singh, V. & Rai, K.N. (1998). Economics of Production and Marketing of Buffalo Milk in Haryana. *Indian Journal of Agricultural Economics*, Vol.53, No.1, Jan.-Mar., pp. 41-52.
- [16] Sujatha, R.V., Eswaraprasad, Y., Srilatha, Ch. & Arunkumari, A. (2004). Milk Marketing in Cooperative and Private Sectors - A Comparative Study in Andhra Pradesh. *Indian Journal of Agricultural Economics*, Vol.59, No.3, July-Sept. pp. 650.
- [17] Singh Virender; Rai K.N. (1998). "Economics of Production and Marketing of Buffalo Milk in Haryana". *Indian Journal of Agricultural Economics*, **53(1)**, p. 41-52.
- [18] <file:///C:/Users/Administrator/Desktop/Indian%20dairy%20Industry.html>

**Table - 1**

**Price spread and marketing efficiency in case of medium (6 to 15 buffaloes) buffalo owners in different channels of milk marketing in the selected regions**

(In Rs./Litre)

Sl. No	Particulars	Kaurihar Block (Gangapar Region)				Koraon Block (Yamunapar Region)			
		Channel-I		Channel-II		Channel-I		Channel-II	
		Cost	%	Cost	%	Cost	%	Cost	%
1.0	Producers cost	9.81	78.48	9.81	75.46	11.14	82.51	11.14	81.01
1.1	Margin received	1.46	11.68	2.13	16.38	1.38	10.22	1.80	13.09
1.2	Marketing cost	0.73	5.84	0.06	0.46	0.48	3.55	0.06	0.43
1.3	Gross price received are paid by the vendors/coops/others	12.00	96.00	12.00	92.30	13.00	96.29	13.00	94.54
2.0	Vendors/coops/others price paid to producers	12.00	96.00	12.00	92.30	13.00	96.29	13.00	94.54
2.1	Marketing cost	0.10	0.80	0.25	1.92	0.10	0.74	0.20	1.45

2.2	Marketing margin	0.40	3.20	0.75	5.76	0.40	2.96	0.55	4.00
2.3	Price received by vendors or paid by the consumers.	12.50	100.00	13.00	100.00	13.50	100.00	13.75	100.00
	Total marketing cost incurred by all.	0.83	6.64	0.31	2.38	0.58	4.29	0.26	1.89
	Total marketing margin	1.86	14.88	2.88	22.15	1.78	13.18	2.35	17.10

Kaurihar { Channel-I Buffalo owners – vendors – consumers  
 Channel-II Buffalo owners – others – consumers  
 Koraon { Channel-I Buffalo owners – cooperative societies – consumers  
 Channel – II Buffalo owners – others – consumers

**Table - 2**

**Price spread and marketing efficiency in case of large (above 15 buffaloes) Buffalo owners in different channels of milk marketing in the selected regions**

(In Rs./Litre)

Sl. No.	Particulars	Kaurihar Block (Gangapar Region)				Koraon Block (Yamunapar Region)			
		Channel-I		Channel-II		Channel-I		Channel-II	
		Cost	%	Cost	%	Cost	%	Cost	%
1.0	Producers cost	8.45	78.60	8.45	76.81	10.96	81.18	10.96	79.70
1.1	Margin received	1.17	10.88	1.74	15.81	1.56	11.55	1.97	14.32
1.2	Marketing cost	0.63	5.86	0.06	0.54	0.48	3.55	0.07	0.50
1.3	Gross price received are paid by the vendors/ coops/ others	10.25	95.34	10.25	93.18	13.00	96.29	13.00	94.54
2.0	Vendors/coops/others price paid to producers	10.25	95.34	10.25	93.18	13.00	96.29	13.00	94.54
2.1	Marketing cost	0.10	0.93	0.15	1.36	0.10	0.74	0.15	1.09
2.2	Marketing margin	0.40	3.72	0.60	5.45	0.40	2.96	0.60	4.36
2.3	Price received by vendors or paid by the consumers.	10.75	100.00	11.00	100.00	13.50	100.00	13.75	100.00
	Total marketing cost incurred by all.	0.73	6.79	0.21	1.90	0.58	4.29	0.22	1.60
	Total marketing margin	1.57	14.60	2.34	21.27	1.96	14.51	2.57	18.69

Kaurihar { Channel-I Buffalo owners – vendors – consumers  
 Channel-II Buffalo owners – others – consumers  
 Koraon { Channel-I Buffalo owners – cooperative societies – consumers  
 Channel – II Buffalo owners – others – consumers

**Table - 3**

**Problems expressed by the sample buffalo owners relating to purpose of rearing, procurement and breed of buffaloes.**

Size-groups of Buffalo owners	No. of samples	Commercial purpose		Rearing buffaloes		Procurement of buffaloes		Breeds	
		Yes	No	personal interest	motivated by others	own produced	purchase d	satisfie d	un-satisfie d
<b>(I) (upto 5)</b>									
Kaurihar	12	8 (66.67)	4 (33.33)	10 (83.33)	2 (16.67)	9 (75.00)	3 (25.00)	11 (91.67)	1 (8.33)
Koraon	15	8 (53.33)	7 (46.67)	9 (60.00)	6 (40.00)	12 (82.00)	3 (18.00)	10 (66.67)	5 (33.33)
<b>Total</b>	<b>27</b>	<b>16 (59.26)</b>	<b>11 (40.74)</b>	<b>19 (70.38)</b>	<b>8 (29.62)</b>	<b>21 (77.78)</b>	<b>6 (22.22)</b>	<b>21 (77.78)</b>	<b>6 (22.22)</b>
<b>(II) (6 to 15)</b>									
Kaurihar	25	15 (60.00)	10 (40.00)	20 (80.00)	5 (20.00)	21 (84.00)	4 (16.00)	23 (92.00)	2 (8.00)
Koraon	32	17 (53.12)	15 (46.88)	25 (78.12)	7 (21.88)	27 (84.37)	5 (15.62)	20 (62.50)	12 (37.50)
<b>Total</b>	<b>57</b>	<b>32 (56.14)</b>	<b>25 (43.85)</b>	<b>45 (78.95)</b>	<b>12 (21.05)</b>	<b>48 (8.21)</b>	<b>9 (15.79)</b>	<b>43 (75.4)</b>	<b>14 (24.56)</b>
<b>(III) (Above 15)</b>									
Kaurihar	13	9 (69.23)	4 (30.77)	10 (76.92)	3 (23.08)	10 (76.92)	3 (23.08)	11 (84.62)	2 (15.38)
Koraon	03	2 (66.67)	1 (33.33)	3 (1.00)	– (–)	2 (66.67)	1 (33.33)	2 (66.67)	1 (33.33)
<b>Total</b>	<b>16</b>	<b>11 (68.75)</b>	<b>5 (31.25)</b>	<b>13 (81.25)</b>	<b>3 (18.75)</b>	<b>12 (75.00)</b>	<b>4 (25.00)</b>	<b>13 (81.25)</b>	<b>3 (18.75)</b>
Overall total									
Kaurihar	50	32 (64.00)	18 (36.00)	40 (80.00)	10 (20.00)	40 (80.00)	10 (20.00)	45 (90.00)	5 (10.00)
Koraon	50	27 (54.00)	23 (46.00)	37 (74.00)	13 (26.00)	41 (82.00)	9 (18.00)	32 (64.00)	18 (36.00)
<b>Total</b>	<b>100</b>	<b>59 (59.00)</b>	<b>41 (41.00)</b>	<b>77 (77.00)</b>	<b>23 (23.00)</b>	<b>81 (81.00)</b>	<b>19 (19.00)</b>	<b>77 (77.00)</b>	<b>23 (23.00)</b>