



## Distribution channels, price spread and constraints in marketing of milk-evidences from Karnataka

D.N. BASAVARAJAPPA AND B. CHINNAPPA

**ABSTRACT:** The present investigation was taken up in Karnataka state with an overall objective of studying marketing of milk. The study is based on primary data obtained from 90 dairy farmers and analyzed using simple and conventional tabular method. The study revealed that dairy co-operative located at the grass root level was the major channel in distribution network of milk. The price spread analysis indicated that milk producers got 95 per cent of the ultimate price paid by the consumers. The marketable surplus of milk at the farm level was affected by factors such as production and family size. The major constraints in milk production and marketing were low price, delay in payment, high cost of crossbred cows and inadequate credit facilities.

**KEY WORDS :** Price spread, Marketable surplus, Constraints

**HOW TO CITE THIS PAPER :** Basavarajappa, D.N. and Chinnappa, B. (2012). Distribution channels, price spread and constraints in marketing of milk-evidences from Karnataka, *Res. J. Animal Hus. & Dairy Sci.*, 3(2) : 63-66.

### INTRODUCTION

India is the largest producer of milk and milk products in the world. Milk and milk products account for more than 18 per cent of farm production. Nearly 70 million farm families are deriving their livelihood from dairy. Dairy being a labour intensive activity provides / generates sustainable employment opportunities. Government of India launched NDDDB in 1964 to promote dairy industry throughout the country on comprehensive basis and this was popularly known as operation flood. This programme was designed to create flood of milk by helping rural producers to organize village dairy co-operatives on the pattern of Anand to provide access to milk processing and marketing. At present there are about one lakh dairy co-operatives covering 10 million membership.

Karnataka state which is the forerunner in milk production ranking third largest milk producer in the country. The state has been able to earn this distinction with comparatively more daily milk production. The State Government is trying to

encourage milk production in order to meet the ever growing demand for milk in the consuming areas. The emphasis is to increase milk production in rural areas by encouraging small and marginal farmers to undertake dairy as subsidiary enterprise. Constant efforts are being made to develop dairy enterprise in rural areas on scientific lines to increase the productivity of dairy animals through proper feeding, breeding and management to ensure fair returns to milk producers. Efficient marketing system for marketing of milk plays an important role in increasing the share of dairy farmers in consumer rupee. 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.

### MATERIALS AND METHODS

The study was undertaken in Shimoga district of Karnataka state. It is based on primary data obtained from 90 milk producers from three Taluks namely, Shimoga, Bhadravathi and Hosanagar since these accounted for about 50 per cent of total population of milk producers of Shimoga district. A list of leading milk producing villages was obtained from concerned government departments and three villages from each Taluk were selected at random. For selection of milk producers, a list of milk producers owning at least one crossbred or local cow

#### MEMBERS OF RESEARCH FORUM

##### Address for correspondence :

D.N. Basavarajappa, AICRP on IFS Scheme, Agricultural Research Station, KATHALAGERE (KARNATAKA) INDIA

##### Associated Authors' :

B. Chinnappa, Department of Agricultural Economics, College of Agriculture, SHIMOGA (KARNATAKA) INDIA

or buffalo was obtained from village level extension workers of respective villages. From the list, 10 milk producers from each village were selected at random. Thus, the sample consisted of three Taluks, nine villages and 90 milk producers (3 x 3 x 10=90). The primary data were collected from sample farmers 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 and frequency distribution etc.

## RESULTS AND DISCUSSION

The experimental findings of the present study have been presented in the following sub heads:

### General characteristics of milk producers:

The general information of selected milk producers regarding age, education, size of the family and occupation is presented in Table 1. The sample size consisted of 90 milk producers with breakup of 38 small, 32 medium and 20 large milk producers. It is evident from the table that the average age of selected milk producers varied from 43 years in case of small producers to 34 years in large size producers, with an average age of 42 years. Age is an important factor which will influence the attitude of farmers ultimately affecting managerial ability, skill and judgment of dairy business. This indicated that the farmers were in the middle age group with experience of dairy farming. Education is an another important factor influencing managerial ability. As evident from the table, educational score was 8.61 indicating that sample milk producers had better education. The better educational status enabled the dairy farmers to manage their units. The average size of the family was 7 persons. The size of the family affects milk production and consumption. The family size contributes to supply of family labour for management of dairy unit. Dairy enterprise was a subsidiary occupation along with agriculture as the main occupation by all the respondent farmers. It was

observed that the average landholding of farmers was 2.82 ha, 5.65 ha and 10.22 ha for small, medium and large farmer categories, respectively (Table 1).

### Distribution channels:

Distribution channels are the routes through which the milk moves from producers to consumers. The adopted marketing distribution channel was a) Milk producer → Dairy Co-operative society → Milk union → Consumer. Milk producer sells milk to dairy co-operative society. The producers are the members of the dairy co-operative and are under obligation to sell milk to co-operative society. The Co-operative milk societies are the voluntary organizations of dairy farmers for the purpose of collective milk marketing. The members derive benefits of assured market for milk in the village, training in dairy management, artificial insemination etc. from the dairy co-operatives. Hence, the dairy farmers prefer to sell their milk to co-operatives rather than to private parties.

The collected milk at the co-operative is transported to milk union in the vicinity for further processing and marketing. The processed and packaged milk thereafter moves to consumer through agencies. Since there is well organized marketing system for milk in the co-operative sector, all the dairy farmers of the study area preferred to sell their produce to dairy co-operatives. Establishment of dairy co-operatives in the villages have helped largely the small, marginal and agricultural labourers to possess and manage dairy units. There is a direct contract between the producers and the processors. This is beneficial from producers perspective. Hence, it may be concluded that the co-operative society in dairy is the best marketing channel for upliftment of the dairy farmers.

### Marketable surplus:

The factors affecting milk availability for final disposal were identified with the help of multiple liner regression and it has been observed that milk production ( $X_1$ ) and family size

**Table 1 : General information of selected milk producers**

Sr. No.	Particulars	Size groups			Overall
		Small	Medium	Large	
1.	Number of milk producers	38	32	20	90
2.	Age (Years)	43	48	34	42
3.	Educational score	7.71	8.13	10.00	8.61
4.	Family size				
	Male	3.13 (48.98)	3.15 (47.87)	3.50 (47.61)	3.22 (48.27)
	Female	3.26 (51.01)	3.43 (52.12)	3.85 (52.38)	3.45 (51.72)
	Total	6.39 (100)	6.58 (100)	7.35 (100)	6.67 (100)
5.	Occupation				
	Main agriculture	38	32	20	90
	Subsidiary dairy	38	32	20	--
6.	Landing holding (ha)	2.82	5.65	10.22	6.20

Figures in parenthesis are percentages to total

**Table 2 : Marketable surplus of milk**

Parameters/Size		Small	Medium	Large	Overall
Intercept		1.409	1.899	2.899	1.75
Milk production	X <sub>1</sub>	0.9983** (0.4554)	1.844** (0.6442)	1.9988** (0.9544)	0.0962 (0.0531)
Family size	X <sub>2</sub>	0.8894** (0.4432)	0.8893 (0.4452)	0.0995** (0.0445)	0.4062** (0.2023)
Number of milk animals	X <sub>3</sub>	0.3885 (0.3443)	0.7445** (0.3445)	0.6694 (0.3352)	0.0804** (0.0402)
R <sup>2</sup>		0.83140	0.84956	0.86753	0.88682

\*\* indicates significance of value at P=0.05

Figures in parentheses indicate standard error

(X<sub>2</sub>) were the two variables which had bearing on marketable surplus of milk. Apart from these two, number of milch animals had significantly affected the marketable surplus of milk. This has been testified by R<sup>2</sup> value of 83 per cent, 85 per cent and 87 per cent in case of small medium and large farmers, respectively explaining the percentage of variation in the dependent variable (marketable surplus of milk) by the independent variables included in MLR (Table 2).

### Price spread:

Price spread refers to difference between price received by the producer and the price paid by the consumer. It is an indicator of marketing efficiency. It may be observed that the producer received price of Rs.9.50/- litre of milk out of Rs.10/- paid by the consumer (Table 3). The producer's share in the consumer rupee thus was worked out to 95 per cent. This channel was found to be efficient in terms of ensuring maximum

share of consumer rupee to the producer and thereby protecting interests of dairy farmers as well as consumers.

### Constraints in dairy farming:

Livestock aimed to provide draught power in olden days. In the recent years, changing structure of economy and increased demand for milk and milk products, dairy farming has gained momentum. However, there seems to be many constraints in production and marketing of milk. The details regarding these are provided in Table 4. About 67 per cent of the sample dairy farmers expressed that cost of crossbred cows was too high. The cost of crossbred cows was too high and beyond the means of small and marginal farmers. The Government Department should establish breeding farms to produce sufficient number of cows to meet the demand. This would go a long way in reducing the cost of cows. High cost of such cross bred cows coupled with non-availability of

**Table 3 : Price spread in marketing of milk**

Sr. No.	Particulars	Channel-I
1.	Net price to the producer	9.5 (95)
2.	Cost incurred by the Milk Co-operative society	--
3.	Net margin of the Co-operative society	--
4.	Costs incurred by the milk plant	0.25 (2.5)
5.	Net margin of milk plant	0.25 (2.5)
6.	Price spread (2+3+4+5)	0.5 (5.0)
	Purchase price of the consumer	10.00 (100.00)

Figures in parenthesis indicate percentage to price paid by consumers

**Table 4 : Constraints in production and marketing of milk**

Sr. No.	Particulars	(n=90)	Percentage
1.	High cost of crossbred cow	60	66.66
2.	Inadequate loan facilities for purchase of milk animals	50	55.55
3.	Lack of quality feeds and non-availability of fodder at proper time	50	55.55
4.	High cost of concentrates	70	77.77
5.	Non-availability grazing land	65	72.22
6.	Low productivity of local cow and buffalo	30	33.33
	Marketing		
1.	Improper grading of milk	60	66.66
2.	Low price per litre of milk	90	100.00
3.	Malpractices at milk collection centres	60	66.66
4.	Delay in receipt from Co-operative society	60	66.66

adequate credit would discourage the young farmers both men and women to take up dairy farming on large scale.

The Government, the banking sector should evolve liberal credit policy to provide easy access to credit. This is especially needed for encouraging dairy farming among small and marginal farmers with meagre land resources. Nearly 78 per cent of the sample reported high cost of concentrates coming in the way of dairy farming. Inadequacy of credit was expressed by 55 per cent of the respondents. It may be observed that non-availability of fodder at right time (56%) and non-availability of sufficient grazing lands were other constraints in milk production. On marketing front too, the dairy farmers faced few problems such as low price for their produce. This was stated by 100 per cent of the sample farmers. About 67 per cent of the sample farmers expressed about malpractices at collection centres and delay in payment (Table 4). The malpractices at collection centres may be checked by periodical inspections. The authorities concerned should take steps to ensure prompt payment to dairy farmers. Devaraj (2001) also worked on channels and price spreads in milk marketing co-operative and private sectors of Karnataka and Arvind Kumar and Vasanth Kumar (2003) also worked on constraints faced by small and marginal dairy farmers of Kolar district of Karnataka. Biradar (1986) made some observations on channels and price spreads in milk marketing in Karnataka.

#### Conclusion:

From the foregoing discussion, the study revealed that dairy farming in Shimoga district has well developed marketing

system consisting network of dairy co-operatives. The dairy farmers could market their produce without any hassles. The producer's share was 95 per cent in the consumer rupee. It was further revealed that the marketable surplus of milk depends mainly on two variables / factors namely, the production level and family size of the dairy unit. However, dairy farming is not free from problems / constraints in day-to-day management of their units. The major constraints confronted by dairy farmers include lack of credit, high cost of crossbred cows, non-availability of grazing lands, malpractices in collection centres. In order to mitigate some of these problems, government's intervention in the form of establishment of cattle breeding stations and liberal credit policy is required.

#### LITERATURE CITED

- Arvind Kumar and Vasanth Kumar (2003). Constraints faced by small and marginal farmers in dairy farming as a subsidiary occupation-A case study in Kolar district of Karnataka state. *Rural India*, **66**(6-7): 118-119.
- Biradar, R.D. (1986). Disposal pattern of milk in Latur district of Maharashtra, *Dairy Guide*, **12**(8) : 41-44.
- Devaraj, T. S. (2001). Channels and price spreads in milk marketing co-operative and private sector of Karnataka. *Agric. Mktg. Co-Operative & Private Sectors of Karnataka*, **43**(4): 21-25.
- Sangu, K.P.S. (1997). Price spread of milk under different channels of marketing in western U.P. *Indian Dairymen*, **49** (12): 29-35.
- Shajjad Ahmed (2001). Marketing of fluid milk in Basti district of Uttar Pradesh. *Indian J. Dairy Sci.*, **59**(1): 252-254.

*Received : 22.09.2012; Revised: 15.10.2012; Accepted : 21.10.2012*