

QUALITY AND COST RELATIONSHIP OF MILK PRODUCTS IN D.I. KHAN AND THEIR IMPACT ON HUMAN BEINGS

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ABSTRACT

Objective: The objective of present study is to develop and maintain the quality and cost relationships in terms of economic and market value of milk products/ by-products of local Livestock breeds existing in District D.I.Khan.

Design: Community-based, cross sectional household study.

Place and Duration of Study: The study was conducted at five selected villages namely Chowdwan, Mat, Musa Zai, Daraban Kalan, Pezu of D.I.Khan District during the months of March, April and May, 2004.

Subjects and Methods: It is cross sectional study, interviewing 1500 samples with the help of structured questionnaire.

Statistical Analysis: Chi-square (non-parametric test).

Results: Research finding shows that growth performance of local milk and level of milk consumption in terms of quality A, B and C is recorded as 123%, 177% and 200% respectively. Result further indicates that economic value of milk in terms of high, medium and poor conditions is considered as 170%, 169% and 170% respectively. Moreover, results also show that standard, national and main local milk market in view of 6 P's and C's latest marketing techniques is recorded as 250%, 110% and 140% respectively.

Conclusion: Research findings suggest that existing socio-economic conditions of local community are required to be improved through campaign of community participation and involvement in productive and constructed activities, otherwise it results in low quality milk but at high cost trends.

Key words: Quality and cost relationship, Economic and market value of milk, marketing techniques.

INTRODUCTION

Buffaloes contribute about 70% of milk drunk in Pakistan from an estimated 4 million buffaloes in milk, and cattle 22% from 2.8 million cows in milk (6). About 13% of the total milk supply comes from peri-urban production units, but by far the greatest proportion comes from urban small holders. The peri-urban production system is largely a commercial venture with a market orientation. Dairy buffaloes are located around urban areas, often in dairy colonies. It is also a common practice for urban families to keep a buffalo in their back yard (6).

Nevertheless, the factors for enhancing the growth of quality milk of livestock's breed in D.I.Khan such as careful selection and collection on scientific lines and timely placement of clean and healthy animals into a herd, isolation of diseased animals. Moreover, the herd tested at least once a year for Brucellosis and Tuberculosis, disinfecting housing and equipment regularly, spraying and dusting for external parasites such as flies and eliminate manure piles and other filth accumulation where flies breed, hygienic care and housing, marginal nutritional grazing land, medication and treatment, watering, electrification and

sanitation but not least the accessibility of regulated and advanced market conveniently from where the owner can approach, market and sell his products or by-products profitably and regularly. Feed cost represents a greater percentage of the total cost of milk production than any other factor. Cows and buffaloes have the ability to consume the large quantity of feed and transform a large amount of it into milk nutrients. Milk and milk products are relished foods of our country, and provide us second the largest source of animal proteins, with 36 % total colonies of our diet (8). Cream, butter, yogurt, khoa, butter oil, ice cream, cheese, rabri, gulab jaman and different other sweets are the milk products which are preparing and using in our country. Some of the indigenous varieties of cheese are made in Pakistan called paneer (5) and Peshawari cheese (7) by traditional techniques which are quite different from well known popular cottage cheese.

A review of literature shows that no such local research work has been carried out on developing and maintaining quality and cost indicators, estimating the economic and market value of local milk and milk products of livestock breeds in terms of marketing techniques through cost-benefit analysis. This

study was designed to achieve such objectives. Data on various milk activities especially selling and marketing activities have accumulated at five selected villages of District D.I.Khan.

Analysis of data was done to estimate and evaluate the economic value of milk through 6 P's and 6C's concepts in view of high quality and low cost as:

6 P's	6 C's
➤ Product or by-product of milk if it is judged by high quality, but at low cost.	Customer choice to choose
➤ Price of milk and its by-products if it's cost is affordable for consumer.	Cost for customer to pay
➤ Placement of milk at door to door.	Convenience for milk owner and customer
➤ Promotion of milk at local, national and international level through promotional campaign i.e. means of communications etc.	Communication between milk Owner (for providing quality milk) and milk consumer (to accept at low cost)
➤ Public relation of Owner i.e. Social.	Contact is possible physically and mentally
➤ Politics & lobbying, planning and strategy of milk owner to capture milk market.	Control and management of the milk market.

The present study is thus planned with the following objectives:

- To develop and maintain quality and cost relationships of milk products/ by-products by checking and assessing the economic and market value of livestock's breed in D.I.Khan in the light of 6 P's and 6 C's marketing techniques.
- To work out economic analysis of milk collection, milk storages, milk processing, milk marketing, milk packaging, milk branding, milk pack's labeling and milk pack's sealing.
- To develop milk marketing system as a guideline for local milk owners of livestock breeds to increase quality milk market share.

MATERIAL AND METHODS

As it is cross sectional study, therefore, 1500 samples were interviewed with the help of structured questionnaire. The study was conducted at five selected villages namely Chowdwan, Mat, Musa Zai, Daraban Kalan, Pezu of D.I.Khan District to estimate growth performance (maximum quality but at reasonably low cost) of local livestock's milk, its market value at past, present and future in view of points of milk collection. The data pertaining to existing set up of milk selling and marketing and future prospects with detailed socio-economic background was collected with the help of designed structured questionnaire. The collected data was tabulated to arrange the data, then tabulated data was classified in groups of A, B, C, D, E and F representing each selected villages respectively and arranged data was analyzed with the application of Chi-square distribution to compare and evaluate the quality and cost relationships in view of economic and market value of local livestock milk with standard livestock milk along with existing and latest marketing techniques (6 P's and 6 C's concepts).

RESULTS AND DISCUSSION

The result in respect of growth performance (quality and cost parameters) of local livestock milk and its future market prospects with the application of milk marketing system have been shown in tables No. 2, 3 and 4.

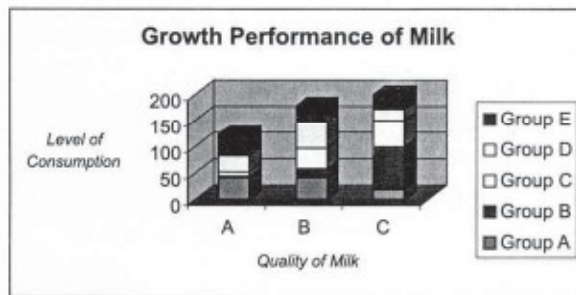
Table No. 1 Raw milk marketing system, 1986-87

Marketing system	% of total marketed milk
Rural milk trader-Rural vender/processor	10
Rural milk trader-Collector-Urban vender/processor	30
Rural milk trader-Collector-Dairy processor	01
Collection center-Dairy processor	01
Urban contractor/ wholesaler-vendor/processor	20
Producer-Rural/ urban consumer	38

The value of raw milk marketed in Pakistan (1986-87) is estimated at about 40% of total domestic milk production. The main marketing systems are summarized in Table No. 1 and the appropriate share of each in the total milk market is indicated.

Table No. 2 Growth performance of local Livestock's milk (quality of milk producer) and level of milk consumption (cost of milk consumer)

Growth Performance	Level of milk consumption					Total
	Group A (%)	Group B (%)	Group C (%)	Group D (%)	Group E(%)	
Quality A	40	03	10	30	40	123
Quality B	40	17	40	50	30	177
Quality C	20	80	50	20	30	200
Total	100	100	100	100	100	500



Source: Survey at D.I.Khan.

Since $X^2C = 130.71$ at 5% level of significance. $\{X^2 0.05 (8) = 15.507\}$, as $X^2C > X^2t$, which proves that there is significance relationship between above two variables.

Result of Table No. 2 indicates that without efficient marketing facilities and techniques the consumption of quality growth performance of milk remained comparatively low in almost all parts of selected villages of D.I.Khan. Milk products are required to be processed, packed, sealed and branded (3,4).

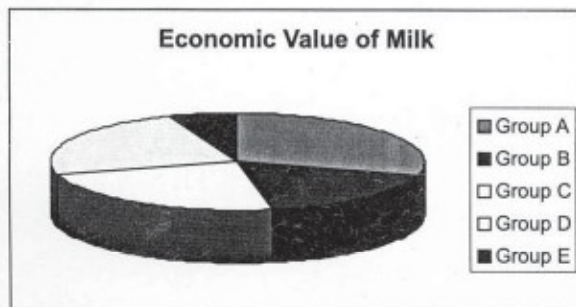
Since $X^2C = 79.64$ at 5% level of significance. $\{X^2 0.05 (8) = 15.507\}$, as $X^2C > X^2t$, which proves that there is significance relationship between above two variables.

Research findings suggests that socio-economic conditions of local community are the main obstacles in the adoption and utilization of advanced marketing techniques, which results in low milk's sell-

Table No. 3 Economic value of milk of local livestock milk and existing milk's selling and marketing trends

Economic value	Milk's selling and marketing trends					Total
	Group A (%)	Group B (%)	Group C (%)	Group D(%)	Group E(%)	
High	50	30	40	40	10	170
Medium	30	50	30	20	30	160
Poor	20	20	30	40	60	170
Total	100	100	100	100	100	500

Source: Survey at D.I.Khan.



ing and marketing trends. The dairy improvement is in practice in the localities of progressive farming (1,2).

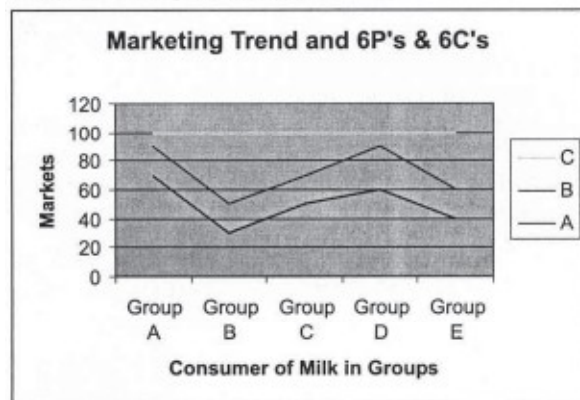
Since $X^2C = 69.32$ at 5% level of significance. $\{X^2 0.05 (8) = 15.507\}$, as $X^2C > X^2t$, which proves that there is significance relationship between the above two variables.

Present research findings indicates that due to application of latest marketing techniques (6 P's and 6 C's concepts), future milk market of local live-

Table No. 4 Future trend of market and latest marketing techniques.

Future milk's market	Latest marketing trends (6 P's and 6 P's Concepts)					Total
	Group A (%)	Group B (%)	Group C (%)	Group D(%)	Group E(%)	
Standard market	70	30	50	60	40	250
National market	20	20	20	30	20	110
Main local market	10	50	30	10	40	140
Total	100	100	100	100	100	500

Source: Survey at D.I.Khan.



stock breeds of D.I.Khan would be expected to develop.

CONCLUSION

Keeping in view the research findings, it is concluded that quality and cost relationship of milk in terms of economic and market value at five selected villages of D.I.Khan during the months of March, April and May, 2004 is important determinant which in turn influences growth performance of milk. It has been observed that socio-economic conditions shall be considerably improved due to application of latest marketing techniques and adoption of standard market throughout the D.I.Khan district. In future, marketing promotional techniques must be carried out as

campaign in order to create awareness through community participation and involvement.

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