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Research Paper

ECONOMICS OF BUFFALO MILK PRODUCTION – A CASE STUDY IN RURAL TAMIL NADU

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ABSTRACT **In this study an attempt was made to estimate the cost of milk production in buffaloes. A total sample size of 480 dairy farmers was selected for the present study from**

e present study from Kanchipuram, Erode, Nagapattinam and Erode district of Tamil Nadu. The cost components were classified into fixed cost and variable cost. Among the different cost components the variable cost engulfed a lion share of 92.32 per cent and the share of fixed cost was only 7.68 per cent. Among the components of vari- able cost, the labour cost was the highest (27.02 per cent). The expenditure on concentrate feeding (26.34 per cent) was slightly lower than the labour cost followed by cost of dry fodder (18.87 per cent) and green fodder (17.37 per cent). In the total cost of production the total feed cost was the major component (62.57 per cent). Among the different categories of farmers the cost of production per litre of milk was the lowest in landless farmers' category (Rs.7.83) and was the highest in small farmers' category (Rs.7.91) ***Key words: Buffalo – milk – cost of production.***

KEYWORDS :Buffalo Milk Production , A Case Study ,in Rural Tamil Nadu.

INTRODUCTION

INTRODUCTION

Dairying in India has emerged as an important subsector, accounting for nearly two-thirds of the total livestock contribution to GNP with an encouraging growth rate of five per cent over years. Through improved breeding, feeding and management programmes, there has been marked improvement in the country's milk production and productivity of milch animals. Tamil Nadu, the southern most state of India is one of the top ten milk producing states in the country. India ranks first in the world milk production which went up to 121.84 million tonnes in the year 2010-11 from 17 million tonnes in 1950-51. The per capita availability of milk has also increased from 112 grams per day in 1968-69 to 281 grams in 2010-11. The total milk production in Tamil Nadu in the year 2010-11 was 6.831 million tonnes, out of which cow milk contributed 88.41 per cent and the rest by buffalo milk. In the total milk production the country the contribution of buffaloes is immense. Though dairy sector had made significant achievements in production in the state, there are lacunae in the form of low productivity, differences in production potential and lack of scientific pricing policy based on cost of production so as to provide remunerative price to the dairy farmers. In this study attempt was made to estimate the cost of milk production in buffaloes.

DATA AND METHODOLOGY

By applying multidimensional scaling method, the state of Ta- mil Nadu was segmented into four homogenous milk zones based on the resource endowment of the districts favorable for dairy development. From the four zones, four districts viz., Kanchipuram, Erode, Nagapattinam and Thoothukudi were selected to represent each zone. From each district, 120 dairy farmers from 12 villages (10 farmers from each village) were selected by simple random sampling method. In all, a total sample size of 480 dairy farmers was selected for the present study Information relating to various aspects of diary farming was collected from selected farmers by survey method with a well-designed and pretested interview schedule. The data on value of animals and investment on cattle shed and equipments were col-lected from each farmer. Details of inputs used like green fodder, dry fodder, concentrates with their quantities and price, labour employed with wage particulars, veterinary and breeding expenses and miscellaneous expenses were collected from the sample buffalo farmers. The cost of milk production was estimated as done by Ganeshkumar and Pandian (2003) in their study.

Cost components

The cost components were classified into fixed cost and variable cost.

Fixed cost

It included interest on fixed capital, depreciation on buildings, depreciation on equipment and machinery and insurance cost.

Variable cost

Variable cost included cost of feed (green fodder, dry fodder, and concentrate), labour cost and cost of veterinary and medicine charges (breeding, vaccination, deworming). Feed cost was calculated taking into account the market rate and transport charges. Labour cost was calculated based on wages received by casual labourers and the same was used to impute the cost of family labour. The cost of veterinary expenses included expenditure incurred on medicines, vaccines, deworming charges and fees paid to veterinarians. Breeding cost included expenditure incurred on natural services or artificial inseminations.

RESULTS AND DISCUSSTION

Cost of milk production for buffaloes

Table 1. Cost of milk production for Buffaloes (Rs./Animal/Day)

Cost items	Category of farmers
Land less	Marginal
Fixed Cost	
1. Interest on fixed capital	1.58 (4.27)
2. Depreciation of building	0.20 (0.54)
3. Depreciation of equipment	0.10 (0.27)
4. Insurance cost	1.02 (2.75)
Total Fixed Cost	2.90 (7.83)

Variable Cost					
1 .Green fodder	5.76 (15.56)	6.32 (15.61)	6.93 (17.88)	8.02 (20.30)	6.77 (17.37)
2. Dry fodder	7.14 (19.28)	7.57 (18.70)	7.36 (18.99)	7.38 (18.68)	7.35 (18.87)
3. Concentrates	9.83 (26.55)	10.87 (26.84)	9.92 (25.59)	10.39 (26.30)	10.26 (26.34)
4. Labour cost	10.65 (28.76)	11.68 (28.85)	10.04 (25.90)	9.77 (24.73)	10.53 (27.02)
5. Veterinary expenses	0.42 (1.13)	0.72 (1.78)	0.63 (1.63)	0.52 (1.32)	0.58 (1.49)
6. Miscellaneous expenses	0.33 (0.89)	0.48 (1.18)	0.72 (1.86)	0.41 (1.04)	0.48 (1.23)
Total Variable Cost	34.13 (92.17)	37.64 (92.96)	35.60 (91.85)	36.49 (92.37)	35.98 (92.32)
Total Cost	37.03 (100.00)	40.49 (100.00)	38.75 (100.00)	39.50 (100.00)	38.97 (100.00)
Milk Yield (Litres)	4.73	5.14	4.90	5.02	4.94
Cost of milk production/Litre	7.83	7.88	7.91	7.87	7.89

Figures in parentheses indicate percentages to total costs

The result of the study on cost of milk production is given in table 1. From the results it could be noted that among the different cost components the variable cost engulfed a lion share of 92.32 per cent and the share of fixed cost was only 7.68 per cent. The total fixed cost in milk production (per animal per day) was the highest in small farmers' category both in monetary term (Rs.3.16) as well as its percentage contribution (8.15) to the to- tal cost of production and was the lowest for marginal farmers (7.04 per cent). Among the components of fixed cost, the interest on fixed capital formed a major proportion of 4.16 per cent followed by insurance cost (2.67 per cent). Among the components of variable cost the labour cost was the highest (27.02 percent). The expenditure on concentrate feed (26.34 per cent) was slightly lower than the labour cost followed by cost of dry fodder (18.87 per cent) and green fodder (17.37 per cent). The expenditure on veterinary care was the (1.46 per cent). From these results it could be inferred that in the cost of production, the total feed cost (62.57 per cent) was the dominant component in milk production. Shiyani and Singh (1995) found similar result in their study. Hence, reducing the cost incurred in feeding through utilizing the locally available feed resources and improving the feeding technology would ultimately reduce the cost of milk production.

The category wise comparison showed that the expenditure on green fodder (20.30 per cent) was the highest in large farmers' category, which might be due to the fact that most of the farmers in other categories were taking their animals for grazing in common property resources, but the large farmers have to purchase the green fodder to feed their dairy animals. Among the different categories of farmers the cost of production per litre of milk was the lowest in landless farmers' category (Rs.7.83) and was the highest in small farmers' category (Rs.7.91). In the overall category the cost of milk production was Rs.7.89 per litre.

SUMMARY

Thus the analysis of cost of milk production revealed that the cost of milk production was Rs.7.89 per litre. In the total cost of production the total feed cost was the major component (62.57 per cent) among different resources. Hence, reducing the cost incurred in feeding through utilizing the locally available feed resources and improving the feeding technology would ultimately reduce the cost of milk production.

CONCLUSION

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