

Economics of milk production in different dairy enterprises in Maharashtra

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Accepted : July, 2010

ABSTRACT

Investigation was carried out during the year 2007-08. Sixty dairy owners were selected with equal distribution in crossbred cow dairy, buffalo dairy and local cow dairy enterprises. Cross sectional data were collected with the help of pretested schedule by personal interview method. The cost concept of variable cost and fixed cost was used to analyse the data. The results revealed that per milch animal per annum expenditure in crossbred cow dairy enterprise was higher as Rs. 22401.88 followed by that of Rs. 17001.58 and Rs. 10257.05 in buffalo and local cow dairy enterprises, respectively. Net profit was also higher as Rs. 13569.12 in crossbred cow dairy enterprise than that of Rs. 7263.22 and Rs. 1550.48 in buffalo and local cow dairy enterprises, respectively. Per litre cost of milk production was higher as Rs. 15.12 in local cow dairy enterprise while that was Rs. 13.64 in buffalo dairy enterprise and Rs. 10.89 in crossbred cow dairy enterprise. Per litre net profit was lower as Rs. 2.87 in local cow dairy enterprise than that of Rs. 6.36 and Rs. 7.11 in buffalo and crossbred cow dairy enterprises, respectively. Thus, crossbred cow dairy enterprises was found to be more profitable than that of other dairy enterprises.

Key words : Dairy enterprises, Buffalo, Gross return, Net profit

Livestock is major source of income and employment for the rural population. Generally, income generated in rural area is 74 and 26 per cent from crop production and livestock, respectively. It is fact that commercial type of dairying can play vital role in rural economy. Dairy owners are running dairying by keeping either crossbred cow, buffalo or local cow. Badal and Dhaka (1998) studied cost of milk production in Gopalganj district of Bihar and showed that cost of milk production per litre was the highest for local cow followed by buffalo and crossbred cow. According to Sangu (1995), return per rupee of total cost was higher for crossbred cow followed by buffalo and local cow. Availability of regular cash from sale of milk does not only help in dairy production through purchase of feed and other inputs but also helps in improving crop production through purchase of farm inputs.

Manure from dairy animals provides a good source of organic material for improving soil fertility and crop yields. Dairy animals like crossbred cow, buffalo and local cow provide the male young stock which would be reared and used for drought power in crop husbandry. In Marathwada region of Maharashtra, milk production is done by farmers by keeping the herd of crossbred cow

(Holestrin Fregien and Jersey), buffalo (Marathwadi, Jafrabadi and Murah) and local cow (Deoni, Red-Kandhari and non-descript). Consumer's preference is higher for buffalo milk over crossbred cow and local cow milk and hence it is prepared to pay higher price for buffalo milk. Therefore, buffalo milk is directly sold to the consumers by the milk producers and only the cow milk is supplied to Government or cooperatives. Keeping in view the above aspects, the present study has been undertaken in order to know the socio-economic characteristics of dairy owner and to estimate the profitability of dairy enterprise in the Marathwada region of Maharashtra.

METHODOLOGY

Multistage sampling design was used in selection of district, Tehsils, villages and dairy owners. In the first stage, Parbhani district was purposely selected because of importance of dairy enterprise in farm economy of the district. In the second stage, Jintur and Manwat Tehsils were also selected purposely because of higher work of Krishi Vigyan Kendra, Parbhani in regard to economic development of dairy enterprises in the Tehsils. In third stage, cluster village Muda from Jintur Tehsil while cluster village Kolhawadi from Manwat Tehsil were selected because of adopted cluster villages of Farm Science Centre (KVK), Parbhani. In the fourth stage, separate lists of crossbred cow, buffalo and local cow dairy owners from two cluster villages were obtained. Then, from one cluster village, ten crossbred cow dairy owners, ten buffalo dairy owners and ten local cow dairy owners were

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randomly selected. Thus, from two cluster villages, sixty dairy owners were selected with equal distribution in each category of dairy enterprises. Cross sectional data were collected by personal interview method with the help of pretested schedule. Data were pertained for one year period from 1st April, 2007 to 31st March, 2008. The cost concept of variable cost and fixed cost was used to analyse the data in present investigation. In regard to evaluation of item of expenditure, dry fodder was evaluated at the rate of Rs. 200 per quintal while green fodder was evaluated at the rate of Rs. 100 per quintal. Rate of concentrate was Rs. 800 per quintal. The rate of labour wage was Rs. 60 per man day. In regard to output, market price for crossbred cow as well as local cow milk was Rs. 18 per liter. While rate of buffalo milk was Rs. 20 per litre. Market price at village level for manure was considered as Rs. 100 per quintal. Young calf number was less than one per milch animal due to mortality of calf in dairy in the year. Market value of calf upto suckling period was considered. Thus, sum of the values of milk, manure and calf was considered as annual gross return in each of the dairy enterprises.

FINDINGS AND DISCUSSION

The findings of the present study as well as relevant discussion have been summarized under following heads:

Socio-economic characteristics of dairy owner :

Socio-economic characteristics of different dairy owners were estimated and are presented in Table 1. The results revealed that age of dairy owner was higher as 49.20 years in local cow dairy enterprise followed by 42.16 and 37.60 years in buffalo and crossbred cow dairy enterprises, respectively. On the contrary, education level was higher as college standard in crossbred cow dairy enterprise followed by that of High School and Primary

School in buffalo and local cow dairy enterprises, respectively. It inferred that young age person with higher education were engaged in crossbred cow dairy as subsidiary occupation. Family size was also lower with 5.72 numbers in crossbred cow dairy enterprise than that of 6.20 and 6.80 numbers in buffalo and local cow dairy enterprises, respectively. Land holding was higher as 3.60 hectares in crossbred cow dairy enterprise while that was 2.82 and 2.19 hectares in buffalo and local cow dairy enterprises, respectively.

On the contrary, size of dairy herd was lower as 2.30 numbers of milch animals in crossbred cow dairy enterprise than that of 2.50 and 3.90 numbers of milch animals in buffalo and local cow dairy enterprises, respectively. Capital investment on dairy herd was Rs. 57514.00 in crossbred cow dairy enterprise followed by Rs. 45558.75 and Rs. 38992.20 in buffalo and local cow dairy enterprises, respectively. Similarly, capital investment on shed and equipment was also higher as Rs. 20904 and 2070 in crossbred cow dairy enterprise while that was Rs. 19096 and Rs. 900 in buffalo dairy enterprise and Rs. 19006 and Rs. 490 in local cow dairy enterprise, respectively.

Per animal inputs and outputs in dairy enterprises :

Per milch animal per annum physical inputs used and physical outputs obtained in different dairy enterprises were estimated and are presented in Table 2. The results revealed that use of dry fodder was higher as 10.29 quintals in crossbred cow dairy enterprise than that of 9.45 and 7.68 quintals in buffalo and local cow dairy enterprises, respectively. Use of green fodder was 28.13 quintals in crossbred cow dairy enterprise followed by 15.79 and 8.41 quintals in buffalo and local cow dairy enterprises, respectively. Use of concentrate was found to be 4.12 quintals in crossbred cow dairy enterprise while

Table 1 : Socio-economic characteristics of dairy enterprise owners

Sr. No.	Particulars	Crossbred cow dairy enterprise	Buffalo dairy enterprise	Local cow dairy enterprise
1.	Age of owner (years)	37.50	42.16	49.20
2.	Education level	College	High School	Primary School
3.	Family size (number)	5.72	6.20	6.80
4.	Main occupation level	Service	Industry	Agriculture
5.	Subsidiary occupation	Dairying	Dairying	Dairying
6.	Land holding (ha)	3.60	2.82	2.19
7.	Size of dairy herd (ha)	2.30	2.50	3.90
8.	Capital investment on dairy herd (Rs.)	57514.00	45558.75	38992.20
9.	Capital investment on shed (Rs.)	20904.00	19096.00	19006.00
10.	Capital investment on equipments (Rs.)	2070.00	900.00	490.00