Status of milk Production and economic profile of dairy farmers in the marathwada region of maharashtra

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Abstract

The investigation was conducted to review the situation of dairying in Marathwada with the objectives to study various trends of milk production and socio-economic status of the dairy farmers. The survey work was carried out for the milk pocket areas of eight districts of Marathwada region. About 59 per cent of the dairy farmers belong to general (unreserved) category, 25 per cent were backward class and only 8 per cent each of SC and S.T. The landless dairymen equally contributed with dairymen having (large) land; 13 landless dairymen reported comparable lactation yield with 08 dairymen holding 10 ha land. The significant differences among the means indicated that as the number of milch animals increased, the herd lactation performance decreased. The animals maintained by joint family were not properly cared for while they were cared properly by single family.

Keywords: Milk production, Economic, Dairy Cattle, Dairy Farmer.

Introduction

Livestock contributes about 9% of the total GDP which is over ¼ of the GDP from Agriculture sector. The dairy sector today provides some 70.0 million families the triple benefits of nutritious food, supplementary income and productive employment. The unique characteristic of Indian dairy industry is that the bulk of milk production in our country is handled by small milk producers who are illiterate and ignorant of economic aspects of milk production. Therefore, there is a need for poverty alleviation to be strengthened through dairying as enterprise. Dairying is important for India because it is a rural based, land saving industry. Dairying is a secure path and future of our rural development and became a commercial enterprise. It can contribute substantially to farmer's income. The dairy farmer of the Marathwada region maintains milch animals as a complimentary business to agriculture. His way of looking to the dairying has not been changed from subsidiary to commercial business. Looking to the prosperous future of the dairy industry, the economic status of the dairy farmers of this region will be enhanced if they could look at the dairying as a commercial enterprise.

The present research survey was undertaken to review the situation of dairying in the Marathwada with the objectives to study various trends of milk production and socio-economic status of the dairy farmers.

Materials and Methods

The survey work was carried out for 19 months from May, 2004 to December, 2005 covering the milk pocket areas of eight districts of Marathwada region. The village of the milk pocket, as identified by the District Animal husbandry officer from each district, was visited. The manager of the milk plant, village *Sarpanch* or Chairman of the milk collection society were contacted for getting information of milk producers in the selected villages. From these, 253 farmers were identified on the basis of their contribution in selling milk either to milk co-operative society or in the open market and preparing milk products at their homes. As such 50 dairy farmers from Aurangabad district, 24 farmers from Jalana, 33 farmers from Beed, 49 from Parbhani, 21 from Nanded District, 23 from Hingoli, 28 farmers from Ousmanabad and 25 farmers from Latur district were identified. They were then contacted individually, informed the purpose of visit and requested to react on the questionnaire as approved by the National Productivity Council, New Delhi. The data so collected were compiled, tabulated, classified and described through following heads.

Results and Discussion

1. Milk production as related to level of education:

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Table-1. Milk production as related to level of education

Education Level	Frequency	Mean lactation Milk Yield (Ltrs.)	Co-efficient variation C.V. %
E1	07	1857.42	56.10
E2	38	1951.08	40.10
E3	57	2509.33	55.16
E4	49	2487.37	45.16
E5	30	2484.37	43.09
E6	12	1806.25	38.77
E7	03	2477.67	30.50

F Value at 5% level 1.906 NS.

The data on the lactation milk yield of milch animals of 196 dairy farmers having varying levels of education were collected and the results are presented in Table-1.

Table-1 reveals non-significant differences among the values of mean lactation milk yield of the herds owned by the dairymen possessing various educational status. The number of observations for these categories varied drastically. Educational status of the dairy farmers is not the criteria to reflect the lactation milk yield. Sosamma *et.al* (1993), concluded that educational status did not influence the quantity of milk. Gunlu *et.al.* (2003) also revealed non-significant differences among the milk production cost at various educational status. Much variation for the values of lactational milk yield may be due to varying numbers of farmers under each category and probably unreliable information given by the farmers with the assumption that such data would be utilized by the author for some trouble-shooting problems. This can well be supported by the higher values of co-efficient of variation (CV) which ranged from a minimum of 30.5 to maximum 56.10%.

2.Milk production as related to caste of the dairy farmers: The data on 197 dairy farmers were compiled, tabulated and results are presented in Table-2.

It is interesting to note that about 59 per cent of the dairy farmers belonged to general (unreserved) category, 25 per cent backward class and only 8 per cent each of SC and ST. Kumar *et.al.* (1999) recorded the overwhelming majority of the dairy farmers (91.67%) of general category followed by backward and scheduled caste categories. The statistical analysis of the data showed significant difference amongst the mean lactation milk yield recorded for various categories of caste; the reason may be skill and education obtained by three categories or exposure to mass media, contact with extension agencies, level of adoption of animal husbandry practices and the financial constraints. Ashalatha *et.al.*(2004) recorded significant ($P < 0.01$) difference for milk production by forward and backward caste.

3. Milk production as related to land holding: The results on various land holdings possessed by the dairy farmers and its impact on the lactation milk yield are presented in Table-3.

Table-3 indicates non-significant differences among these means indicating possessing of land (landless or land-holder) for dairying has no effect on the lactation milk yield. The landless dairymen can equally contribute with dairymen having (large) land. In the present study 13 landless dairymen recorded comparable lactation yield (2314.54 liters) with 8 dairymen having 10 ha land (2326.50 liters); similarly 64 dairymen having 1-2 ha land got comparable lactation milk yield with 13 dairymen having 4-10 ha land. Madalia and Karan (1975), while working on maintenance of cows and buffaloes, also reported lowest cost of maintenance by landless group and highest for medium size group. Similar results were reported by Goswami and Rao (1992) Grover *et.al.* (1992), Rajendran and Prabhaharan (1993) and Sosamma *et.al* (1993).

4. Milk production as related to major occupation of the dairy farmer: The occupation details of the dairy farmers' families were surveyed, their main occupation as i) Farming or ii) Dairying were considered and accordingly the results of 202 dairy farmers revealed that the mean lactation yield of the dairy herds maintained by farmers having 'agriculture' as major occupation as 2304.79 ltrs., the corresponding value for 'dairying' was 2617.55 ltrs. There is no significant difference between these two means indicating comparable lactational milk yield for the 'dairy' farmers and farmers with 'agriculture' as main occupation. The rural set-up of the Marathwada regions is such that villagers having agriculture as major occupation maintain milch animals as a store for wealth and neglect their maintenance probably due to the fact that agriculture is the main source of their income. With 'dairying' as a sole business, the dairy farmer faces economic constraints in procuring feeds and fodders and try to care for their animals at optimum threshold

Table-2. Milk production as related to caste of the dairy farmers

Category	(*n*)	Mean lactation Milk Yield (Ltrs.)	C V%
I	16	2092.87 ± 231.89[b]	44.33
II	16	1725.31 ± 151.02[a]	35.01
III	48	2310.46 ± 157.30[b]	47.17
IV	115	2432.81 ± 110.68[b]	48.79

F value (calculated) = 2.15 C.D. at 5% = â

of expenditure. Singh and Andershana (1990) also concluded from their study on economics of mixed farming systems in Gujarat state that crop enterprise was the main source of income of all the farmers.

5. Milk production as related to number of animals: The data on 195 records were compiled and subjected to statistical analysis and results showed significant differences among the means indicating thereby that as the number of milch animals increased, the herd lactation performances decreased. A 1-2 animal-herd gave significantly highest milk yield in comparison to other categories while herd of 5-6 animals showed a significant lowest performance. The village situations of the region is such that owners possessing higher number of animals engage contractual labour to look after their animals and those having 1-2 milch animals take due care of individual animal as far as housing, grazing, feeding and milking operations are concerned. Mattigatti *et.al.* (1990) also opined that yield levels of buffaloes increased when they were maintained independently. Similar findings were reported by Hymajyothi *et.al.* (2003).

6. Milk production as related to family type: Individual in a family taking care of the milch animals is the only person who transforms the animal language in to practical use, knows the physiology and behavior of the animals he is handling. The present survey categorized families of the dairy farmers into two categories i.e. category-I (Joint Family) and Category-II (Single Family). The data collected on this trend were subjected to Student's *'t'* test and results revealed highly significant (P<0.01) difference between two means and indicated that animals maintained by joint family were not properly cared for. On the contrary, animals of single family were properly cared for. Secondly, 82% of the farmers belong to latter category; they realized the importance of 'dairying' more critically and therefore looked at their animals as a source of income; this resulted into significant increase in lactation milk yield than the former category.

7. Milk production as related to feeding status: Feeding the milch animals plays an important role in deciding the level of milk production. Survey study included the status on feeding green and dry roughages with and without concentrates. The data on 195 dairy farmers were divided in two categories. The results on the survey data of 105 dairy farmers under Category-II and 90 dairy farmers under Category-I are presented in Table 4.

A Bird's eye view on Table-4 revealed that the mean lactation milk yields of the milch animals fed with and without concentrate were 3337.06 and 1739.40 ltrs., respectively. Highly significant difference between these two means indicated an influencing role of concentrate feeding in increasing the milk yield of the dairy animals. Farmers who did not feed the concentrate got lactation yield at significantly reduced rate than those who practiced feeding of concentrate. Irrespective of 'type' of concentrate used, about 54% of the dairy farmers realized the importance of concentrate feeding to dairy animals. Asturkar *et.al.*(1980) concluded that feeding concentrates significantly increased milk production over sole roughage feeding. Telford and Jennings (1997)

Table-3. Milk production as related to land holding

Land Holding	(*n*)	Mean lactation Milk Yield (Ltrs)	C V(%)
Category-I Landless	13	2314.54 ± 351	54.70
Category-II Marginal	47	2267.51 ± 164	49.74
Category-III Small	64	2508.72 ± 146	46.63
Category-IV Semi Medium	51	2109.94 ± 140	47.50
Category-V Medium	13	2548.54 ± 282	40.02
Category-VI Large	08	2326.50 ± 574	69.86

F Value : 5, 190 = 0.082 CD : N.S.

Table-4. Milk production as related to feeding status

Category	(n)	Mean lactation milk yield (ltrs.)
Category-I (non concentrates)	90	1739.40
Category-II (concentrates)	105	3337.06

Table value of 't' at 1% level 2.576: 't' calculated 15.69

reported that increase in milk production was due to feeding grains and concentrate at almost half of the dairy farms studied.

Conclusion

Landless dairy farmers of Marathwada equally contributed for milk production with those having land. Increase in the herd size decreased the productivity; the members of single family maintained the dairy animals more carefully than those of joint family.

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