ADVANCE RESEARCH JOURNAL OF SOCIAL SCIENCE (December, 2010); 1 (2) : 66-68

RESEARCH ARTICLE

Received : June, 2010; Revised : July, 2010; Accepted, August, 2010

Effect of socio-economic characteristics of woman on buffalo milk production and profitability of buffalo dairy in women's SHG

B.R. PAWAR, S.S. BANKAR AND A.D. KAKADE

ABSTRACT

In rural areas, woman are running buffalo dairy in SHG. Thus, five buffalo dairy SHGs which were having 10 women as members were selected. Data were collected from 50 women members for the year 2009-10. The results revealed that the coefficient of multiple determination was 0.715 which indicated 71.50 per cent of variation in buffalo milk production due to variation in independent variables together. Investment on equipment, shed and buffalo showed positive effect on buffalo milk production per annum. It inferred that there was scope to increase these variables in buffalo dairy. Similarly, land holding also showed positive effect on buffalo milk production. Age of woman, occupation level and social category showed negative effect on buffalo milk production. In buffalo dairy enterprise, total cost was Rs. 29055.84 and gross return was Rs. 45280.02. Thus, net profit was Rs. 16224.18 per buffalo per annum in women's SHG. Output-input ratio was 1.56.

KEY WORDS : Buffalo milk, Dairy enterprise, Profitability, Socio-economic woman

Pawar, B.R., Bankar, S.S. and Kakade, A.D. (2010). Effect of socio-economic characteristics of woman on buffalo milk production and profitability of buffalo dairy in women's SHG, *Adv. Res. J. Soc. Sci.,* **1** (2) : 66-68.

INTRODUCTION

India has achieved self-sufficiency in food production and now launching towards self-sufficiency in white revolution *i.e.* milk production. According to India's National Dairy Development Board (NDDB), the county's milk production was 104.8 million tonnes in 2007-08. It has 57 per cent of the world's buffalo population. Our country ranks first in respect of buffalo population in the world. Nowadays economically homogenous group of rural women can be voluntarily coming together and forming women's self-help groups. In rural area, many self-help groups are related to agricultural and livestock enterprises. Similarly, buffalo dairy SHGs are fast emerging as powerful tool of socio-economic empowerment of the women in rural areas. Women are victims of multiple socio-economic and cultural factors. Therefore, there is need for improving their status by enhancing income opportunities. In Ahmednagar district of Maharashtra, women's SHG are running many buffalo dairy enterprises. Thus, present study has been undertaken in order to know the effect of women characteristics on buffalo milk production as well as profitability of the enterprise in SHG.

METHODOLOGY

Ahmednagar district was purposely selected for present study on the basis of highest number of self-help groups in the district. Jamkhed Tehsil was selected purposively on the basis of highest number of agricultural base women's SHGs in the district. For the study, five buffalo dairy SHGs which were having 10 women members were randomly selected. The cross sectional data were collected from 50 women members with the help of pretested schedule by personal interview during the year 2008-09. Effect of socio-economic characteristics of woman's in self-help group was achieved by application of linear functional analysis. Fitted linear function was of the following form:

$$Y = A + B_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_8 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11}$$

where, Y = Milk production / per household, a = Intercept of production function, b_i = Partial regression coefficient of production function, X_1 = Age in year, X_2 = Education level in five quantum score, X_3 = Family size in number, X_4 = Social category in five quantum score, X_5 = Occupation level in three quantum score, X_6 = Land holding in hectare, X_7 = Promoting agency in five quantum

Correspondence to:
B.R. PAWAR, Department of Agricultural Economics and Statistics, College of Agriculture, LATUR (M.S.) INDIA

Authors' affiliations:
S.S. BANKAR AND A.D. KAKADE, Department of Agricultural Economics and Statistics, College of Agriculture, LATUR (M.S.) INDIA

score, X_8 = Amount of insurance paid in Rs., X_9 = Investment on animals in Rs., X_{10} = Investment on shed in Rs., X_{11} = Investment on equipment in Rs. Costs and returns of woman's of buffalo dairy in self-help group was achieved by application of cost concept of variable cost and fixed cost.

OBSERVATIONS AND DISCUSSION

The findings obtained from the present study are presented under following heads.

Effect of socio-economic characteristics of woman on buffalo milk production:

Estimates of socio-economic characteristics with respect to buffalo milk production was calculated in linear function and are presented in Table 1. In regression analysis, coefficient of multiple determination was 0.715, it indicated that, there was 71.50 per cent of effect of all socio-economic characteristics on buffalo milk production together. F-value was highly significant (36.95). In regards to regression coefficient of individual socioeconomic characteristics, coefficient with respect to investment on equipments was significant and positive that was 0.403. It implied that due to addition of 1 rupee, there would be the additional production of 0.403 litre. Similarly, the coefficients with respect to investment on buffalo and investment on equipments were significant and positive which were 0.047 and 0.008, respectively. It implied that due to addition of 1 rupee there would be the additional production of 0.047 and 0.008 litre of milk. In similar manner coefficient with respect to land holding was 44.165. It implied that if women had additional one hectare of land over mean (1.39 ha), it would lead to increase the milk production by 44.165 litres per annum. Regression coefficient with respect to family size was 40.579. It implied that when one member increased in family size over mean (6.10 member), it would lead to increase the milk production by 40.579 litres per annum. On the contrary, the regression coefficient with respect to age of women was -13.183, it implied that if the age of woman increased by one year over mean (35.70 years), it would lead to reduce the milk production by 13.183 litres per annum. Coefficient with respect to social category was negatively significant which was -16.839. It implied that if social category would increase by one score over mean (3.74), it would lead to reduce the milk production by 16.839 litres per annum. Similarly, coefficient with respect to occupation level was negatively significant which was -81.846. It inferred that if occupation level would increase by one score over mean (2.04), it would lead to reduce the milk production by 81.846 litres per annum. The results are in conformity to those obtained by Singh and Khattra (1998), Vedanmurthy and Chauhan (2005) and Suresh *et al.* (2008).

Cost of buffalo dairy enterprise in women's SHG:

Per annum per buffalo cost of buffalo dairy enterprise in SHG was calculated and is presented in Table 2. Use of dry fodder, green fodder, concentrate and human labour was 622.60 kg, 954.40 bundles, 521.70 kg and 87.56 man

Table 1: Effect of socio-economic characteristics of women on buffalo milk production in women's SHG

Sr. No.	Variable	Regression coefficient	Standard error	't' value	Arithmetic mean
1.	Age of woman (year)	-13.183	1.863	-7.127**	35.70
2.	Education level (five quantum score)	7.611	4.800	1.571^{NS}	2.74
3.	Family size (no.)	40.579	10.670	3.803*	6.10
4.	Social category (five quantum score)	-16.839	7.715	-2.182*	3.74
5.	Occupation level (three quantum score)	-81.846	20.022	-4.087*	2.04
6.	Land holding (ha)	44.165	21.799	2.026*	1.39
7.	Promoting level (five quantum score)	5.370	15.637	0.343^{NS}	4.01
8.	Insurance amount (Rs.)	-0.352	0.455	-0.773^{NS}	580.40
9.	Investment on livestock (Rs.)	0.047	0.013	3.615*	28500.00
10.	Investment on shed (Rs.)	0.008	0.004	2.00*	1340.00
11.	Investment on equipments (Rs.)	0.403	0.054	7.462**	1368.40

Intercept ('a') = 1072.91
R^2 = 0.715
F - value = 36.959**
n = 50
$\overline{Y}$ = 1954.420

* and ** indicate significance of values at P=0.05 and 0.01, respectively NS=Non-significant

Table 2 : Per annum per buffalo costs and returns in buffalo dairy of women's SHG

Sr. No.	Particulars	Unit	Qnty.	Amount (Rs./ buffalo)	Per cent
Costs					
1.	Dry fodder	kg	622.60	6226.00	21.42
2.	Green fodder	bundle	954.40	1908.80	6.57
3.	Concentrate	kg	521.70	5616.60	19.33
4.	Human labour	man day	87.56	6129.20	21.09
5.	Medicine	–	–	440.90	1.52
6.	Electricity charge	–	–	180.00	0.62
7.	Miscellaneous expenditure	–	–	51.80	0.18
8.	Interest on working capital @ 11 %	–	–	2260.86	7.78
9.	Variable cost (Σ item 1 to 8)	–	–	22814.16	78.52
10.	Depreciation on milch animal @ 10%	–	–	2850.00	9.81
11.	Depreciation on shed @ 10%	–	–	134.00	0.46
12.	Depreciation on equipment @ 10%	–	–	136.84	0.47
13.	Interest on fixed capital @ 10 %	–	–	3120.84	10.74
14.	Fixed cost (Σ item 10 to 13)	–	–	6241.68	13.09
15.	Total cost (Σ item 9 and 14)	–	–	29055.84	100.00
Returns					
16.	Production of milk	lit	1954.42	41648.69	91.98
17.	Young stock	No	1.00	1280.60	2.83
18.	F. Y. M.	q	19.60	2350.73	5.19
19.	Gross return (Σ item 16 to 18)	–	–	45280.02	100.00
20.	Net profit (Item 19 minus 15)	–	–	16224.18	–
21.	Output Input Ratio (item 19 / 15)	–	–	1.56	–

days, respectively. Expenditure on human labour was Rs. 6129.20 followed by that of dry fodder (Rs. 6226.00), concentrate (Rs. 5616.60), green fodder (Rs. 1908.80). Interest on working capital was Rs.2260.86. Ultimately, variable cost was Rs. 22814.16. Depreciation on milch animal was Rs. 2850.00 followed by shed (Rs. 134.00) and equipments (Rs. 136.84). Interest on fixed capital was Rs. 3120.84 and fixed cost was 6241.68. Hence, total cost was Rs. 29055.84, in which proportion of dry fodder was 21.42 per cent followed by human labour (21.09 per cent), concentrate (19.33 per cent) and green fodder (6.57 per cent) and so on.

Gross return of buffalo dairy enterprise in women's SHG:

Gross return from buffalo dairy enterprise was Rs. 45280.02 which was received from milk production, FYM and one suckling calf (Table 2). In total gross return, the share of milk production was the highest as 91.98 per cent. Net profit was Rs. 16224.18. Output input ratio was 1.56. Results are in conformity to the results obtained by Rasane *et al.* (1996) and Singh *et al.* (2001) with respect to total cost, gross return, net profit, output input ratio and so on.

LITERATURE CITED

Rasane, V. S., Raut, R. C. and Kasar, D. V. (1996). Marketing of buffaloes and crossbred cow in Dhule market (Maharashtra). *Indian J. agric. Mktg.*, **10** (1) : 63 - 68.

Singh, P. and Khattra, P. S. (1998). Factors affecting milk marketed surplus and marketing channels for milk in Faridakot district in Punjab. *Indian J. agric. Mktg.,* **12** (1 and 2) : 80-87.

Singh, S., Gill, G. S and Chahal, S. S. (2001). Marketing of buffaloes in organized markets of Punjab. *Encyclopedia of agric. Mktg.*, **7** (1) : 37 - 45.

Suresh, A., Gupta, D.C, Mann, J.S. and Singh, V.K. (2008). Effect of socio-economic and agro-ecological factors on structure and ownership of livestock: evidence from Rajasthan. *Indian J. agric. Econ.,* **63** (2) : 244 - 261.

Vendamurthy, K.B. and Chauhan, A.K. (2005). Economic analysis of milk marketing in milk, Shimoga district of Karnataka. *Indian J. agric. Mktg.,* **19** (3) : 39 - 51.

****