

Effect of socio-economic characteristics of women on crossbred cow milk and young goats production in women's SHGs

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

ABSTRACT

Study was conducted for the estimation of socio economic characteristics of women on production of crossbred cow milk and young goat. The results revealed in regression analysis, coefficient of multiple determination was 0.735 which indicated that there was 73.50 per cent of variation in production of crossbred cow milk. Coefficient of multiple determination was 0.865 which indicated that, there was 86.50 per cent effect of all socio-economic characteristics on production of young goats. In regards to regression coefficient of individual socio-economic characteristics, coefficient with respect to age of the crossbred cow dairy women was positive and significant that was 40.124. Regression coefficient with respect to investment on crossbred cow was positive and significant that was 5.021. While, coefficient with respect to investment on equipments was significant and positive that was 0.009 for goat rearing enterprise Regression coefficient with respect to investment on goat was significant and positive that was 0.008. Coefficient with respect to promoting level was positively significant (0.378).

KEY WORDS : Young goat, Crossbred cow, Production, Socio-economic, Category

Bankar, S.S., Pawar, B.R. and Kakade, A.D. (2010). Effect of socio-economic characteristics of women on crossbred cow milk and young goats production in women's SHGs, *Adv. Res. J. Soc. Sci.*, 1 (2) : 118-121.

INTRODUCTION

India has vast resource of livestock, which plays a vital role in improving the socio-economic conditions of the rural masses. Rural women are running crossbred cow dairy business. Group of women can form crossbred cow dairy SHG in order to solve the problem of production and marketing of milk. The country also ranks first in goat production with 790 million goats. The importance of goat in rural economy is evidenced by its unparalleled economic traits, ability to thrive under diversified forages, high fertility and short generation interval, practically no religious restrictions for goats and its products among the diversified religious people in rural area.

Economically, goat is ideally suited for poorer folk especially for marginal and landless labourers by its low cost of maintenance, short term return on capital with low risk capital investment. There is no involvement of extra labour as such the entire rural family members, especially women folk and children are brought into the gamut activity. Goat thrives at any climatic condition but cows are sensitive to adverse climate. By goat keeping the health status of society is bound to improve with availability of

cheap and good quality protein through goat milk and mutton. Goats thrive and add to rural economy in area where it is economically not viable to raise cow and buffaloes. Perhaps this is the only farm livestock which fits well for effective utilization in diverse socio-economic conditions of rural India. Thus, socio-economic characteristics of women are important in relation to run the livestock enterprises. By keeping in view such aspects, the present study has been undertaken.

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 purposely on the basis of highest number of agricultural base women's enterprises in the district. For the study, 5 crossbred cow dairy and 5 goat rearing enterprises of SHGs which were having 10 women members were randomly selected. The cross sectional data were collected from 100 women members with the help of pretested schedule by personal interview during the year 2008-09. Effect of socio-economic characteristics of woman in self help

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

group was achieved by application of linear functional analysis. Fitted linear function was 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 / young goats per household, a = Intercept of production function, b_1 = 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 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.

OBSERVATIONS AND DISCUSSION

The findings of the present study as well as relevant discussion have been presented under following heads.

Effect of socio-economic characteristics of women on crossbred cow milk production :

Regression coefficient with respect to socio-economic characteristics regarding crossbred cow milk was calculated in linear function and is presented in Table 1. Coefficient of multiple determination (R^2) was 0.735 which indicated that there was 73.50 per cent of variation in production of crossbred cow milk. F-value was highly significant (95.82). In regards to regression coefficient of individual socio-economic characteristics, coefficient with respect to age of the crossbred cow dairy women was

positive and significant that was 40.124. It implied that if the age of woman increased by one year over mean (36 years), it would lead to increase the milk production by 40.124 litres per annum. In next order, regression coefficient with respect to education of woman was 15.280 which was also positive and significant. It implied that if education of woman increased by one score, it would lead to increase the milk production by 15.280 litres. Similarly, regression coefficient with respect to investment on crossbred cow was positive and significant that was 5.021. It implied that due to addition of one rupee, there would be the additional production of 5.021 litres. Coefficient with respect to investment on shed was positively significant that was 1.389. It implied that due to addition of one rupee, there would be the additional production of 1.389 litres. On the contrary, the regression coefficient with respect to occupation level was negatively significant which was -50.911. It implied that if occupation level of woman increased by one score over mean (1.66), it would lead to reduce the milk production by 50.911 litres per annum. Coefficient with respect to family size was -7.607. Due to addition of one member over mean (6.70 members), it would lead to reduce the milk production by 7.607 litres per annum. Similarly, coefficient with respect to social category was negative and significant (-16.760). It implied that if social category will increases by one score over mean (3.82), it would lead to reduce the milk production by 16.760 litres per annum. The results are in conformity to those obtained by Datta and Raman (2001), Nedumuran *et al.* (2001), Singh *et al.* (2001), Vatta and Singh (2001), Rao and Bharat Kumar (2004), Mahendra

Table 1: Effect of socio-economic characteristics on crossbred cow milk production

Sr. No.	Variable	Regression coefficient	Standard error	't' value	Arithmetic mean
1.	Age of woman (year)	40.124	18.419	2.1781	36.00
2.	Education level (five quantum score)	15.280	6.570	2.3252	2.10
3.	Family size (no.)	-7.607	29.969	-0.253 ^{NS}	6.70
4.	Social category (five quantum score)	-16.760	4.729	-3.5443	3.82
5.	Occupation level (three quantum score)	-50.911	8.238	-6.1804	1.66
6.	Land holding (ha)	-77.759	84.190	-0.923 ^{NS}	0.98
7.	Promoting level (five quantum score)	-61.219	37.992	-1.611 ^{NS}	3.40
8.	Insurance amount (Rs.)	-0.015	0.101	-0.148 ^{NS}	370.20
9.	Investment on livestock (Rs.)	5.021	2.094	2.3975	18516.00
10.	Investment on shed (Rs.)	1.389	0.408	3.4046	1718.00
11.	Investment on equipments (Rs.)	-0.026	0.212	-0.122 ^{NS}	1235.00

Intercept ('a') = 130.767

R^2 = 0.735

F - value = 9.582**

n = 50

Y = 3915.70

* and ** indicate significance of values at P=0.05 and 0.01, respectively

NS=Non-significant

Table 2 : Effect of socio-economic characteristics on production of young goats

Sr. No.	Variable	Regression coefficient	Standard error	't' value	Arithmetic mean
1.	Age of woman (year)	0.002	0.020	0.100	34.90
2.	Education level (five quantum score)	0.037	0.156	0.237	2.32
3.	Family size (no.)	0.046	0.079	0.582	6.44
4.	Social category (five quantum score)	0.472	0.136	3.470	2.24
5.	Occupation level (three quantum score)	-0.089	0.172	-0.517	1.80
6.	Land holding (ha)	0.401	0.170	2.331*	0.69
7.	Promoting level (five quantum score)	0.378	0.133	2.842*	3.44
8.	Insurance amount (Rs.)	0.0003	0.0001	-3.00*	575.18
9.	Investment on livestock (Rs.)	0.008	0.003	2.66*	28758.00
10.	Investment on shed (Rs.)	-0.004	0.001	-4.00*	953.00
11.	Investment on equipments (Rs.)	0.009	0.001	9.00**	744.20

Intercept ('a') = 13.450
 R^2 = 0.865
 F - value = 94.253**
 n = 50
 Y = 22.18

* and ** indicate significance of values at P=0.05 and 0.01, respectively

NS=Non-significant

(2005), Vendamurthy and Chauhan (2005), Vengatesan and Govind (2007), with respect to age, education level, family size, per capita income and so on.

Effect of socio-economic characteristics of women on young goats production :

Effect of socio-economic characteristics with respect to young goats production was calculated in linear function and are presented in Table 2. In regression analysis, coefficient of multiple determination was 0.865, which indicated that, there was 86.50 per cent effect of all the socio-economic characteristics on production of young goat. F-value of was highly significant (94.253). In regards to regression coefficient of individual socio-economic characteristics, coefficient with respect to investment on equipments was significant and positive that was 0.009. It implied that due to addition of 1 rupee, there would be the additional production of 0.009 young goat. Similarly, coefficient with respect to social category was positive and significant (0.472). It implied that if social category would increase by one score over mean (2.24), it would lead to increase the young goat production by 0.472 in number. Coefficient with respect to land holding was 0.401. It implied that if women had additional one hectare of land over mean (0.69 ha), it would lead to increase the goat production by 0.472 in number. Coefficient with respect to promoting level was 0.378. It implied that if promoting level will increase by one score over mean (3.44), it would lead to increase the goat production by 3.378 in number. Regression coefficient with respect

investment on goat was significant and positive that was 0.008. It implied that due to addition of 1 rupee there would be the additional production of 0.008 young goat. On the contrary, the regression coefficient with respect to amount of insurance was -0.0003 which was negatively significant. It inferred that due to addition of 1 rupee over mean (575.18) there would be reduction in the goat production by 0.0003 in number. Similarly, regression coefficient with respect investment on shed was also negatively significant which was -0.004. It implied that due to addition of 1 rupee there would be the reduction in production by 0.004 in number. Results are in conformity to the results obtained by Dahiya *et al.* (2001), Manimekalai and Rajeswari (2001). Gopiset and Venkateshwarlu (2008) and Gawande *et al.* (2008) with respect to age, family size, education level, social category and so on.

Distribution of caste category of women in livestock enterprise of SHG :

Caste categories of women in crossbred cow dairy SHG and goat rearing SHG were calculated and are presented in Table 3. The results revealed that open category of women was the highest as 36 per cent in crossbred cow dairy SHG followed by OBC (30 per cent), NT (24 per cent), ST (6 per cent) and SC (4 per cent). On the contrary, SC category of women was highest as 36 per cent in goat rearing SHG followed by that of ST (30 per cent), NT (16 per cent), OBC (12 per cent) and Open (6 per cent). Fig. 1 reveals that the percentage distribution of women in crossbred cow dairy SHG was

Table 3 : Frequency distribution of caste categories of women in livestock enterprises of SHG

Sr. No.	Category	Crossbred cow dairy SHG		Goat rearing SHG	
		Frequency (n=50)	Per cent	Frequency (n=50)	Per cent
1.	SC	2	4	18	36
2.	ST	3	6	15	30
3.	NT	12	24	8	16
4.	OBC	15	30	6	12
5.	OPEN	18	36	3	6

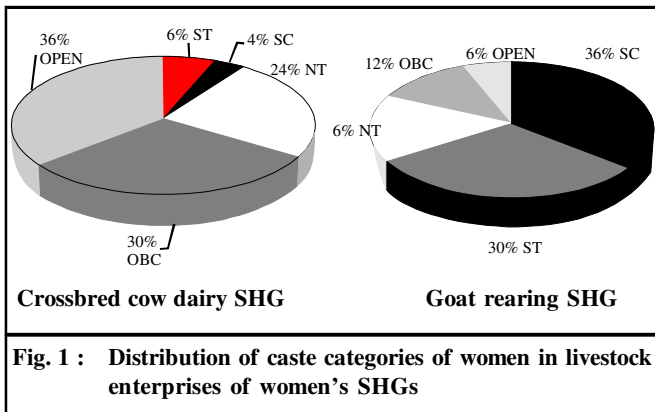


Fig. 1 : Distribution of caste categories of women in livestock enterprises of women's SHGs

increasing while that of goat rearing SHG was decreasing with an increase in category level. Thus, higher category of women were largely engaged in crossbred cow dairy SHG while lower category of women were largely engaged in goat rearing SHG.

LITERATURE CITED

Dahiya, P. S., Pandey, N. K. and Karol, A. (2001). Socio - economic evaluation of self-help groups in Solan district of Himachal Pradesh. *Indian J. Agric. Econ.*, **56** (3) : 486 -487.

Datta, S. K. and Raman, M. (2001). Can heterogeneity and social cohesion coexist in SHGs? : Evidence from group leading in Andhra Pradesh, India. *Indian J. agric. Econ.*, **56** (3) : 387-400.

Gawande, S. H., Shaikh, A. A., Nikam, T. R. and Hatey, A. A. (2008). Personal and socioeconomic attributes of goat keepers. *Indian J. Soc. Res.*, **49** (3) : 285-289.

Gopiset, R and Venkateshwarlu, H. (2008). Product management of self help groups in Andhra Pradesh - a study. *Indian J. agric. Mktg.*, **38** (3) : 40 - 41.

Mahendra, V.P. (2005). Impact of self-help groups on formal banking habits. *Economic & Political Weekly*, **40** (27) : 1705 - 1713.

Manimekalai, M. and Rajeswari, G. (2001). Nature and performance of self-help groups- a case from Tamil Nadu. *Indian J. agric. Econ.*, **56** (3) : 453 - 454.

Nedumuran, S., Palanisami, K. and Swaminathan, L.P. (2001). Performance and impact of self help groups in Tamil Nadu. *Indian J. agric. Econ.*, **56** (3) : 471 - 472.

Rao, B. D. and Bharat Kumar, K. A. (2004). Predominant livestock-crop production systems and socio-economic conditions of the farmers in different agro-climatic regions of Andhra Pradesh. *Agric. Situ. India*, **4** (4) : 403 - 408.

Singh, U. B., Singh, H. and Singh, G. (2001). Role of self help groups in the Shiwalik foothills of Haryana. *Indian J. agric. Econ.*, **56** (3) : 441 - 472.

Vatta, K. and Singh, P. (2001). The performance of self - help groups in Punjab : A study of Hoshiarpur district. *Indian J. Agric. Econ.*, **56** (3) : 452.

Vengatesan, D. and Govind, S. (2007). Psychological profile of women self-help group members. *Mysore J.agric. Sci.*, **41** (3) : 375 - 378.

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.
