

CONSTRAINT ANALYSIS OF TRIBAL LIVESTOCK FARMING IN TAMIL NADU

**N. Meganathan¹, K.N. Selvakumar², M. Prabu¹,
A. Serma Saravan Pandian³ and G. Senthil Kumar³**

Department of Animal Husbandry Economics
Madras Veterinary College, Chennai – 600 007

ABSTRACT

A study was conducted to identify the constraints in tribal livestock farming by collecting data from 900 sample tribal farmers in six hilly areas of Tamil Nadu, viz., Kolli hill in Namakkal district, Yercaud hill in Salem district, Ooty hill in The Nilgiris district, Kodaikanal in Dindigul district, Yelagiri hill in Vellore district and Sitheri hill in Dharmapuri district. The data were analysed by Garrett's ranking technique. Lack of sufficient pasture land, lack of marketing facilities, lack of adequate credit facilities, unremunerative price for the livestock products and lack of scientific knowledge on livestock farming were observed to be the major constraints perceived by the tribal farmers. Establishment of more milk co-operative societies, enhancing fodder cultivation, provision of loans to needy tribal livestock farmers at reasonable interest rate and conducting awareness programmes among tribal farmers on various scientific livestock management practices will lessen the prevailing constraints in tribal livestock farming, which in turn improve the tribal livestock production.

Key words : Tribal farmers – Livestock farming – Constraints - Hills

INTRODUCTION

The tribal population of India is the second largest in the World with 250 tribal groups which contributed 8.2 per cent (8.4 crores) of the total population (102.8 crores) in the year 2001. The tribals are predominantly rural (92.60 percent), poorest social group and also overwhelmingly illiterate. In Tamil Nadu, the tribal population accounted for 1.04 per cent of total population of the state and 84.62 per cent of tribals are rural (Census of India 2001). The tribals are the weakest among the weaker sections of the society because of the long periods of isolation and economic deprivation. The crop enterprise could not help the tribal farmers

to increase their income and employment because of poor productivity, low availability of per capita arable land and also lack of other income generating avenues. Hence, there is heavy dependence of tribal households on animal husbandry activities. Thus, livestock keeping generates a continuous stream of income and employment, makes it an inevitable component of tribal development. However, there are area specific and species specific constraints in carrying out the animal husbandry activities by the tribal community. Hence, the present study was carried out to identify the constraints in livestock farming of tribal areas and to suggest suitable policy measures to overcome the hurdles faced by tribal livestock farmers.

¹Associate Professor, ²Professor and Head, ³Assistant Professor

MATERIALS AND METHODS

The study was conducted by collecting data from the sample tribal farmers of six hilly areas of Tamil Nadu. The ten villages from each hilly areas namely Kolli hill in Namakkal district, Yercaud hill in Salem district, Ooty hill in The Nilgiris district, Kodaikanal in Dindigul district, Yelagiri hill in Vellore district and Sitheri hill in Dharmapuri district which were having high tribal population engaged in livestock farming activities were chosen for the study. Finally 150 tribal farmers were selected from ten villages of each hill through proportionate random sampling method to yield the total sample of 900 tribal farmers in the study area. The data were collected by the personal interview method with the use of pre-tested interview schedule. The reference years of this study were 2004-05 and 2005-06.

Garett's ranking technique was followed to analyse the constraints perceived by the tribal farmers in livestock farming. The farmers were asked to rank the factors that were limiting the livestock production. These orders of merit were transformed into units of scores by using the following formula

$$\text{Per cent position} = \frac{100 (R_{ij} - 0.50)}{N_j}$$

Where,

R_{ij} - Rank given for the i^{th} factor by the j^{th} individual

N_j - Number of factor ranked by the j^{th} individual.

The percent position is converted into scores by referring to the Table given by Garrett and Woodworth (1969). Then for each factor the scores of the individual respondents were added together

and divided by the total number of respondents for whom scores were added. These mean scores for all the factors were arranged in descending order and the most influencing factors were identified through the ranks assigned.

RESULTS AND DISCUSSION

Constraints in livestock farming

In this study, an attempt was made to assess the constraints in livestock farming in the tribal areas. A list of commonly occurring constraints were enlisted and the tribal farmers in the study area were asked to rank the constraints which affect livestock farming (for different livestock species) and the same was analysed by using Garrett ranking technique, the results of which are presented in Tables 1 to 3.

Constraints in cattle farming

The details of ranks for various constraints in cattle farming and their scores in various hills are given in Table 1. The overall analysis of the tribal area revealed that, the first and foremost constraint in cattle rearing was lack of sufficient pasture land with a mean score of 52.55, since, cattle requires large quantity of green fodder which could not be easily cultivated in the hilly areas as that of plains. The second important problem was lack of marketing infrastructure facilities with a mean score of 48.90, since in hills, the road and other marketing facilities were limited, the farmers have little incentive to produce more milk than needed for their family consumption. The farmers also ranked that non-remunerative prices for the milk, huge capital investment, delay in disbursement of loans and high cost of feed as the third, fourth, fifth and sixth constraints in cattle rearing activity. Among the six hilly areas, in Kolli hills, the tribal farmers felt that the delay in the disbursement of loan as the major constraint with a mean score 76.96, since, the

tribal farmers could not afford to invest huge amount which is needed in cattle rearing, made the tribal farmers to approach the financial institutions for animal loans which were not disbursed in time. In Yercaud hills, lack of proper marketing infrastructure facilities for sale of milk, huge capital requirement and lack of sufficient pasture lands occupied the first three ranks, with the mean score of 71.15, 69.44 and 59.07 respectively, while, in Ooty hills, the farmers perceived that the shelter requirement/unhygienic living conditions for maintaining the cattle as the first major constraint with a mean score of 72.05, since, majority of the sample tribal farmers reared high valued crossbred cattle and Toda buffaloes without properly constructed cattle shed (which require huge amount of money).

In the case of Kodaikanal hills, the huge capital requirement for rearing cattle was observed as the major constraint with a mean score of 81.86, while, the farmers in Yelagiri hills ranked that, the high cost of balanced concentrate feed as the first major constraint (with a mean score of 42.14). Lack of sufficient pasture land for grazing the cattle was the first and foremost constraint (64.94) followed by delay in disbursement of loan (54.01) and lack of marketing infrastructural facilities among the tribal farmers in Sitheri hills.

The results of the study concur with the previous studies undertaken by Kokate et al. (1988), Yadav et al (1995) and Jithendran et al (1998) and Jha (2002).

Constraints in small ruminants farming

The overall analysis of the Table 2, revealed that the sample tribal farmers have expressed that lack of capital / adequate credit facilities for sheep and goat rearing as the first major constraint (with a mean score of 53.65), since, a minimum amount

of Rs. 25000 is required as investment for rearing a unit (20+1) of sheep / goat in the hilly areas and this amount could not be managed by the tribal farmers with out the loan assistance from financial institutions viz., nationalised and co-operative banks. The sample farmers also ranked that the non-availability of required fodder in hills and exploitation by middlemen as the second and third major constraint (with the mean score of 48.17 and 47.89 respectively). Since in hills, the marketing facilities for sheep / goat were limited, the farmers were depending only on the middlemen to sell their animals (which lead to more exploitation by them). The farmers also perceived that, transportation difficulties in the hills, poor bargaining power, lack of labour etc. were the other major constraints in small ruminants farming.

In Kolli hills, poor bargaining power by the sample tribal farmers was considered as the major constraint with a mean score of 69.09 followed by exploitation by middlemen with a mean score of 68.47. The farmers of Yercaud hills and Kodaikanal hills opined that, lack of capital / adequate credit facilities for rearing small ruminants was the major constraint with a mean score of 80.62 and 79.16 whereas, in Ooty hills, the tribal farmers have expressed, lack of support by the Government in terms of subsidies as the major constraint with a mean score of 73.67. The tribal farmers in Yelagiri hills considered the non-availability of required fodder as the major constraint (with a mean score of 41.63) while, the difficulties involved in transportation of sheep / goat to the marketing area was the first major constraint (with a mean score of 61.11) for the tribal farmers in Sitheri hills.

The present study concurs with the previous findings of Mishra (1999).

Constraints in piggery farming

Out of six hilly areas, the piggery farming activity (with desi type of pigs) was carried out only

in two hills viz., Kolli and Yelagiri hills and the constraints perceived by the tribal farmers of these two hills in piggery farming are presented in Table 3. From the table, it could be noted that, in overall, the tribal farmers considered exploitation by middlemen as the major constraint with a mean score of 63.60 followed by un-remunerative price (57.81) and poor encouragement from the government (51.00) as the second and third major constraints in rearing pigs. The tribal farmers of Kolli hills ranked, exploitation by the middlemen (with a mean score of 71.61) as the first major constraint while, in Yelagiri hills, poor encouragement from the government (with a mean score of 59.93) was the major constraint in rearing pigs, which concurs with the studies of Mishra (1999). However, Singh (2000) identified that the breeding was the foremost constraints for the tribal pig farming.

The present study concluded that the major constraints in livestock farming were lack of sufficient pasture land, lack of marketing facilities, lack of adequate credit facilities and Unremunerative price for the livestock products were the major problems faced by tribal farmers. Lack of scientific knowledge about the livestock farming was also observed to be an important constraint among the tribal farmers especially among the pig farmers. Suitable policy implications that are more appropriate for making improvement in the backward condition of the tribal groups are as follows;

Since, lack of marketing facilities was felt as the main constraint by the tribal livestock farmers in the study area, the concerned authorities may be suggested to establish more milk co-operative societies for procuring the milk produced by tribal farmers.

In order to augment fodder production in the tribal area, tribal farmers should be encouraged to allocate adequate land for fodder cultivation, besides initiating concerted efforts to improve the

productivity of such lands.

Lack of adequate credit facilities may be overcome by taking concerted efforts by financial institutions to provide loans at reasonable interest rate to the needy farmers.

Since, inadequate knowledge about the improved techniques of livestock farming was also the problem in tribal households, it is important to make them aware and motivate them about scientific feeding of concentrates effectively through intensive extension programmes on animal husbandry such as method demonstration, fields trips, *etc.*

In order to ameliorate the productivity level of the existing livestock resources of the tribal people, steps should be initiated to provide the facilities such as health care, provision of technical help and facilities for improving the breed of the animals at the reasonable cost.

ACKNOWLEDGEMENT

The authors thank the Indian Council of Agricultural Research, New Delhi for the financial assistance and Tamil Nadu Veterinary and Animal Sciences University, Chennai for having permitted to carry out the research project.

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Table 1

Constraints in Cattle farming

S.No.	Particulars	Name of the hill										Overall			
		Kolli		Yercaud		Ooty		Kodaikanal		Yelagiri		Sitheri		Score	Rank
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank		
1	Huge capital requirement	45.01	VI	69.44	II	54.97	V	81.86	I	20.15	V	15.52	IX	43.29	IV
2	High cost of balanced feed concentrates	40.35	VII	46.57	VII	56.23	III	57.54	III	42.14	I	16.04	VIII	40.69	VI
3	Shelter requirement / Unhygienic living conditions	35.89	XI	55.00	IV	72.05	I	71.81	II	37.07	III	12.53	XI	38.74	VII
4	High cost of animal care and treatment	37.89	IX	45.44	VIII	40.55	VIII	53.49	V	13.10	X	16.17	VII	31.40	X
5	Unavailability of insurance cover	36.73	X	28.53	XI	35.07	X	48.06	IX	17.04	VI	13.59	X	30.14	XI
6	Non-remunerative price for milk	51.70	V	37.76	IX	51.35	VI	50.25	VI	22.83	IV	23.54	V	47.43	III
7	Lack of sufficient pasture lands	39.27	VIII	59.07	III	40.33	IX	49.63	VIII	37.20	II	64.94	I	52.55	I
8	Delay in disbursement of loan	76.96	I	33.82	X	27.93	XI	49.90	VII	16.28	VII	54.01	II	42.44	V
9	Lack of marketing infrastructure facilities	70.34	II	71.15	I	63.13	II	56.51	IV	15.33	VIII	51.60	III	48.90	II
10	Inadequate knowledge about improved scientific practices	60.72	III	49.69	V	45.83	VII	32.95	XI	13.23	IX	27.69	IV	36.95	VIII
11	Poor productivity of native animals	55.30	IV	48.15	VI	55.00	IV	35.03	X	11.00	XI	21.50	VI	34.59	IX

Table 2
Constraints in small ruminants farming

S.No.	Particulars	Name of the hill										Overall			
		Kolli		Yercaud		Ooty		Kodaikanal		Yelagiri		Sitheri		Score	Rank
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank		
1	Non-availability of required fodder	45.12	VI	61.32	III	28.51	VIII	58.85	II	41.63	I	22.69	X	48.17	II
2	Lack of labour	38.87	VIII	62.11	II	28.30	IX	47.23	VI	40.40	II	23.55	IX	44.53	VI
3	Lack of capital / adequate credit facilities	39.09	VII	80.62	I	25.57	X	79.16	I	20.79	V	26.38	VII	53.65	I
4	Higher veterinary charges	30.16	X	41.43	VII	31.02	VII	46.70	VII	20.75	VI	24.08	VIII	33.17	X
5	Frequent reproductive disorders	30.90	IX	32.92	IX	46.32	VI	45.91	VIII	16.13	VII	18.55	XI	36.13	IX
6	Exploitation by middlemen	68.47	II	33.30	VIII	48.55	V	56.87	III	34.22	III	44.60	V	47.89	III
7	Poor bargaining power	69.09	I	25.73	X	58.00	II	40.09	IX	22.54	IV	55.01	II	44.93	V
8	Transportation difficulties	65.43	III	46.49	VI	50.33	IV	50.30	V	12.54	IX	61.11	I	46.99	IV
9	Lack of organized market	60.14	IV	48.34	V	50.66	III	50.96	IV	14.62	VIII	53.60	III	44.32	VII
10	Lack of support by the Government	53.06	V	54.91	IV	73.67	I	31.87	X	11.90	X	42.64	VI	41.31	VIII

Table 3
Constraints in Piggery farming

S.No.	Particulars	Name of the hill					
		Kolli		Yelagiri		Overall	
		Score	Rank	Score	Rank	Score	Rank
1	High investment	35.14	XI	7.14	XI	28.92	X
2	High feed cost	37.31	IX	9.43	X	27.30	XI
3	Distant market	60.37	III	14.86	VII	50.25	V
4	Exploitation by middlemen	71.61	I	35.57	II	63.60	I
5	Unremunerative price	66.86	II	26.57	IV	57.81	II
6	High labour requirement	35.92	X	20.93	V	44.46	VI
7	High disease susceptibility	44.08	VII	18.86	VI	38.48	VII
8	Higher veterinary charges	47.10	V	12.64	VIII	34.52	IX
9	High transportation cost	42.02	VIII	10.64	IX	35.05	VIII
10	Lack of knowledge about scientific management	54.80	IV	34.64	III	50.32	IV
11	Poor encouragement from the Government	44.41	VI	59.93	I	51.00	III

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