Biological Forum – An International Journal **7**(2): 1108-1110(2015)

ISSN No. (Print): 0975-1130
ISSN No. (Online): 2249-3239

Attributes of Goat Farmers in Odisha and Economics of Goat Farming System in Odisha

Mahamaya P. Nayak*, Sanat Mishra and Susanta K. Dash
Joint Director (Information), Directorate of Extension Education
Orissa University of Agriculture and Technology, Bhubaneswar (Odisha), India.

(Corresponding author: Mahamaya P. Nayak)*
(Received 10 October, 2015, Accepted 05 December, 2015)
(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: Farm families rearing goats across eight districts of Odisha were analysed during 2013-14. These are the high ranked districts with large goat population. Data were obtained with structured schedule quesionnaire with different variables on socio-economic attributes *viz.* age, sex, education, livestock holding, and income source of goat owners. Larger flock size of > 25 heads of goats were found in 65% of all the flocks with respect to Ganjam goats. Small flock size with less than 10 animals were recorded in 67 and 68% of flocks in Bengal type and local goat variety, respectively. Involvement of females in goat farming system was estimated to be 44.8% in the present study. Average annual income obtained from one doe of Ganjam, Bengal and local goat types were calculated at Rs.3887/-, Rs.5442/- and Rs.4989/-, respectively. However, annual income from one female goat ranged from Rs.3606/- in Ganjam to Rs.6491/- in Bengal type goats.

Keywords: Attribute, Economics, Farming, Income, Management.

INTRODUCTION

Goats are integrated to the rural economy and do contribute immensely to both food security along with poverty reduction, particularly in rural Odisha. Goats in Odisha are raised on browsing on natural resources by mostly involving family labour contribution with less input and moderate output (Chauhan and Moorti, 1999). Large flock owners hire/share labour on grazing goats in quite few cases. Goat contributes immensely to the meat requirement of the country. The share in eastern India is quite high. The condition in Odisha is more pronounced. Goat productivity varies greatly on many components across different agro-climatic zones in India. With Ganjam, the only one registered native goat breed, Odisha possesses 65.1 lakh goat heads as per 19th livestock census, 2012 with 8.61% decrease from 18th census. Goat farming is mostly concentrated among rural resource poor section of the society and more precisely with tribes and exclusive community in Odisha. For improving production along with transfer of technology triggering livelihood empowerment, it is mandatory to assess the social and economic attributes of stakeholders involved in raising the animals. The productivity on production systems is dependent on the economic condition of the respective communities. Hence present study was undertaken to analyse the socio-economic profile of farmers and economics of goat production system.

MATERIALS AND METHOD

Present study was conducted during 2014-15 using primary data obtained from 1340 goat owners, using a structured schedule questionnaire on age, sex, education, livestock holding and source of income of goat owners spread over Khurda, Nayagarh, Ganjam, Keonjhar, Gajapati, Sundargarh, Kalahandi and Balasore districts in Odisha ranked high with respect to goat population. The flock size was grouped into small (5 to 9 does), medium (10 to 25 does) and large (≥ 25 does) with average of 7, 12 and 30 does, respectively. The data, thus collected were analyzed statistically (Snedecor and Cochran, 1989).

RESULTS AND DISCUSSION

Average family component depicts 3.08 males and 2.59 females across goat farmers in the state of Odisha. The overall share of literate goat farmers was estimates as only 13.4 against 86.6% having under matric qualification. However, in Gola community, the custodians of Ganjam goat breed, the corresponding estimate was the lowest (7.9%). Further, more number of farmers at the tune of 85% in Ganjam and 46% in total were recorded as Gola farmers, revealing that, Gola community is the major player rearing Ganjam goat breed. Besides, the tribes and OBC famers were detected as the major goat rearers of native goats in Odisha. This is at par with the findings of Rao *et al.* (2002). As low as little more than 5% of goat farmers were found to be in general caste (Table 1), corroborating the results of Riyazuddinn *et al.* (2001), studied among sheep farmers in Rajasthan state.

The average possession of land among the farmers in the study ranged from 0.3 ac in Kalahandi to one ac in Ganjam with pooled average of 0.8 ac. Though all sections of farmer rear goats, larger farmers share only 9.7% of them. In contrary 37.2% were found to be land less. None of the farmers grew fodder for rearing goat. Mostly they depended on natural vegetation as feed source of the goats through browsing for 7 to 9 hours. Average involvement of females in the goat husbandry was estimated to be 44.8% (Table 2).

Table 1: Socio-economic profile of goat farmer of Odisha across goat types.

Sr. No.	Particulars	Ganjam	Bengal Type	Non-descript	Overall
1	**Farm families**	726	264	350	1340
2	**Family size & literacy**				
i	Average male	3.2	3.4	2.6	3.08
ii	Average female	2.6	2.8	2.4	2.59
iii	Mean % of literacy	7.9	19.8	20.0	13.40
3	**Community goat raiser (%)**				
i	Gola	46.0	0	0	46.0
ii	OBC	8.1	15.8	10.0	33.9
iii	Tribe	0	3.5	11.0	14.5
iv	Others	0	0.4	5.1	5.5

Table 2: Land holding based classification of Goat rearers.

District	No. of household Surveyed	Average Land holding (acre)	Farmer (%)				Fodder grown	Share (%) of women
			Land less	Marginal	Small	Large		
Ganjam	603	1.0	8.6	32.3	39.5	19.6	-	42
Gajapati	111	0.8	19.8	38.7	38.7	2.7	-	40
Nayagarh	134	0.7	10.5	41.8	44.8	3.0	-	36
Khurda	77	0.8	20.8	36.4	40.3	2.6	-	48
Sundergarh	73	0.5	31.5	43.8	24.7	Nil	-	45
Kalahandi	180	0.3	42.2	42.8	14.4	0.6	-	52
Keonjhar	162	0.4	48.2	48.2	8.6	1.2	-	56
Overall	**1340**	**0.8**	**37.2**	**21.0**	**32.1**	**9.7**	**-**	**44.8**

Flock size of > 25 goats were found in 65% of the flocks under Ganjam goat type, whereas smaller flock size of < 10 heads were observed in 68%and 67.4 of native and Bengal variety flocks, respectively. This is in line with the findings of Mohanty *et al.* (2004) in the study on Kalahandi goats of southern Odisha. Present study revealed that, health expenses was ranging from 30 to 50 rupees/goat/year among three goats types. This expenses did not get affected with size of flock. Own labour, spent on browsing of animals was estimated on the basis of time spent. The mean flock size was computed as seven mother goats calculating annual profit/animal in a flock size of five to nine heads. Corresponding figure was 12 on herd size of 10-25 and 30 on herd size of >25. The mean yearly profit from one doe of Bengal type, Ganjam and local native goats were calculated as Rs.5442/-, Rs.3887/- and Rs.4989/-, respectively. But per animal annual income was figured at the lowest of Rs.3606/- on Ganjam and Rs.6491/- on Bengal goat type. Flock size and labour cost were detected as the factors triggering difference in total income and per animal income in the present study (Table 3). The income generated from goat rearing showed that large flocks yielded comparatively less income than small units, which corroborates with the results of study on Keonjhar goats (Bariah *et al*., 2008). This result may be attributed to the fact that, large units demanded expenses on either hired labour or the farmer must have utilised his own labour, which was computed as recurring expenses. Further, large flocks might have suffered from deficiency in optimum managememt starting from housing, feeding to health care including personal care, compared to small flocks. As the economics in goat rearing revolves around reproduction performance and twinning, small flocks with better management and personal care might have had an edge over large flocks (Mishra *et al.*, 2013). Besides, twinning in Bengal type and indigenous goats against Ganjam, the single kidders might have influenced positively in net income.

Table 3: Economics on different goat production systems.

Particulars	Size of flock								
	Ganjam			Bengal type			Local type		
Size of flock	5-10	10-25	>25	5-10	10-25	>25	5-10	10-25	>25
Farmer (%)	3.03	31.96	65.01	67.42	24.62	8.71	68.0	26.86	5.14
Labour pattern	Family	Family e)	Family/ Hire	Part time	Family	Family/ Hire	Part time	Family	Family/ Hire
Health expenses per animal (Rs)	20	30	40	30	30	40	30	30	40
Annual expenses on browsing per animal (Rs)	-	1000	1000	-	1000	1000	-	1000	1000
No. of animals sold per year	4.23	10.42	24.57	7.68	16.41	32.32	7.53	14.47	30.34
Animal sale proceed per year (Rs)	25380	62520	147420	38400	90255	161600	37650	79585	151700
Income (Rs)	25240	50160	116220	38190	77895	131400	37440	67225	120500
Profit per animal per year (Rs)	3606	4180	3874	5456	6491	4380	5349	5602	4017

CONCLUSION

Present studies on socio-economic profile of goat farmers in highly populated districts with respect to goat heads clearly reveal that, goat rearing is major subsidiary occupation of resource poor farmers in the ranked districts. Further, this enterprise is the primary assured income source for the tribes across the state. As the goats are being raised under very low or even no input extensive system and with minimum capital, it has been very popular among the resource poor farmers. Strategies triggering enhanced productivity of the goat genetic resources, possessed mostly by resource poor farming community of the state will contribute immensely towards sustainable development of the livelihood of the poor section associated with raising of this small ruminant since generations. The findings of this study help to conclude that the policy and programmes for strengthening goat farming systems in the state should focus on the tribal pockets and district in the state and more precisely the small and marginal farmers.

REFERENCES

Bariah, S. P. S., Rao, P. K., Patro, B. N., Dash, S. K. and Panda, P. (2008). Genetic analysis of indigenous goats of Keonjhar district of Odisha. *Indian Veterinary Journal*, **85**: 843-845.

Chauhan, S.K. and Moorti, T.V. (1999). Income and employment pattern, In; Economics of Sheep Farming, Mittal Pubilication, New Delhi.

Mishra, P., Ali, A. S., Dixit, S. P., Aggarwal, R. A. K., Dangi, P. S., Tyagi, N. and Dash, S. K. (2013). Microsatellite based genetic evaluation of Ghumusar goats of Orissa, India. *Animal Genetic Resources*, **52**: 59-64.

Mohanty, G. P., Mohapatra, A. K., Dash, S. K. and Sahoo, G. (2004). Study of management practices and performance of Kalahandi goats in Orissa. *Indian Journal of Animal Production and Management*, **20**(1-4): 92-95.

Rao, P.K., Dash, S.K., Patro, B.N. and Nayak, S. (2002). Studies on Ganjam, Black Bengal goats and their crosses found in Orissa. *Indian Journal of Animal Management*, **18**(3-4): 135-138.

Riyazuddin, K. A., Jaishanker, J. and Rawat, P. S. (2001). Development of small ruminant sector in India. Final report of the adhoc project, CSWRI, Avikanagar, Rajastan.

Snedecor, G.W. and Cochran, W.G. (1989). Statistical Methods. 8th Edn. Iowa State University Press, Ames, Iowa.