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Dr. Abinash Sahu

Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India

Dr. Bhabesh Chandra Das

Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India

Dr. Pitambar Swain

Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India

Dr. Kumari Shweta

Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India

Dr. Subhanshu Mohan Nanda

Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India

Corresponding Author

Dr. Bhabesh Chandra Das

Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India

Social impact of goat farming on livelihood of tribal goat farmers of Kandhamal district of Odisha, India

Dr. Abinash Sahu, Dr. Bhabesh Chandra Das, Dr. Pitambar Swain, Dr. Kumari Shweta and Dr. Subhanshu Mohan Nanda

Abstract

Goat rearing in the tribal areas provides income and nutritional security of the farmers besides improving social status. The present study was carried out to find out whether the social status of goat farmers has improved due to goat farming. For this study, Kandhamal District of Odisha was selected due to high concentration of goat population. Sixteen villages from four blocks of the district were selected randomly and from each village seven goat farmers were selected constituting the sample size of 112. Ex-post facto research design was used for this study and data were collected with the help of pre-tested interview schedule. The collected data were edited tabulated and analyzed using suitable statistical tools i.e. frequency, percentage, mean, standard deviation and Pearson's coefficient of correlation. The study revealed that 74.10% of the respondents had medium level of social impact due to goat farming followed by 13.4% and 12.5% respondents were having high and low level of social impact, respectively. It was further found that the goat farmers' age was negatively and education was positively correlated with social impact of goat rearing whereas number of goat owned by the beneficiaries is positively and significantly correlated with social impact on farmers.

Keywords: Social impact, goat farming, correction, Odisha

Introduction

Goat farming is an important sub-sector of the livestock industry. It has been crucial in improving food and nutritional security, as well as poverty alleviation. Many farmers, especially rural farmers rear goats due to their low initial investment, minimal input requirements, higher prolific, early sexual maturation, and ease in marketing. The economic contribution of small ruminants to poor farm households and livelihood systems is high. Goats are one of the economically important livestock in world. They play an important role in the livelihood of resource poor farmers. They provide their owners with a vast range of products and services such as meat, milk, skin, hair, horns, bones, manure and urine for cash. Goat farming constitutes the means of livelihood of over 25 per cent of Odisha's rural population. Goats are reared predominantly by the landless and marginal farmers and to a lesser extent by the small farmers too as a means of livelihood. Odisha is also famous for the native germplasm like Ganjam, Black Bengal, Raighar, Badavihana. These breeds are unique in nature and adapt to the local situation very well. Studies by various authors indicate that the goat rearing enterprise made significant contribution to the economic welfare of poor people and creation of employment opportunities to rural people (Ahmad, 2015; Manzi, *et al.*, 2013; Soni, *et al.*, 2011, Mohanty, *et al.*, 2018) [1, 3, 6, 4]. Keeping these facts in mind, the present investigation was carried out to understand, besides economic benefit, the social impact of goat farming on the livelihood of goat farmers.

Materials and Methods

The present study was undertaken in the purposefully selected Kandhamal district of Odisha having large goat population. Out of 12 blocks of the district, four blocks - Phulbani, Khajuripada, K.Nuagaon and Baliguda blocks were selected randomly. Thereafter, from each block, two Gram Panchayats (GP) were selected randomly and from each GP, two villages were selected randomly for the study. For each village, a list of the goat farmers was prepared who were having minimum 10 numbers of goats and reared goats for more than 5 years, with the help of local people, para-veterinarian and veterinary doctor. Then, from the list of each village, seven goat farmers were selected randomly. Thus, from 16 villages, 112 farmers were selected which constituted sample size of the study.

Ex-post facto research approach was used for the present study. Social impact a component of overall livelihood impact was measured with the help of 10 statements validated by highly experienced experts of different departments of C.V.Sc. & AH and senior field officers of State Veterinary department of Government of Odisha. A five-point Likert type scale with points suitable for corresponding variable was incorporated in the interview schedule with scores on a continuum with 1 (strongly disagree) to 5 (strongly agree) for each of the 10 statements. The responses of the respondents were recorded in a five-point continuum scale and then summated. Before final data collection, the complete schedule was pretested with 10% non-sample neutral respondents to see what might be removed, added, or changed. Changes in the construction of items and their sequences were made in response to the results of the pre-testing. Personal interview technique was used with the help of pre-tested structured questionnaire for data collection. The questions were asked in local language (i.e. Odiya). Enough probing and explanation were done to ensure that the respondents had a thorough comprehension of the questions in order to receive an adequate response. Afterward, group talks with the responders were held in certain cases to confirm the individual replies. The data collected from tribal goat farmers were edited tabulated and analyzed using suitable statistical tools i.e. frequency, percentage, mean, standard deviation and Pearson's coefficient of correlation to draw the inferences.

Results and Discussion

Social impact of goat keeping is the effects on people that

happen as a result of that occupation which has great bearing on sustainability of livelihood. The impact may be positive or negative, and can be intended or unintended, or a combination of all of these. In measuring the social impact on beneficiaries, their presence or importance in the society is taken into account. So their identity in society, participation in various social celebrations, getting good marriage proposals for their relatives are taken into account. Besides these criteria, their influence in mobilizing and guiding the other goat farmers of the village to take decision is also taken into account for their social empowerment. Since they are the beneficiaries of a government scheme, their importance in government offices at village and block level is also taken into account. The impact was assessed in terms of the recipient farmer's social relevance, recognition, and motivational strength. In this study, ten sentences were carefully crafted based on the goat farmer's social approval. The 112 recipients were presented these 10 questions, and their replies were tallied on a five-point scale (5 to 1).

Social Impact on livelihood of goat farmers

The response of the tribal goat farmers to the 10 social impact statements are analysed and presented in table 1. Analysis of data relating to social impact on the farmers revealed that 41.96% of the respondent agreed to the statement that their association with various social organization has increased whereas only 7.14% of the respondents disagreed to the statement, When asked to them whether they are contacted by the villagers for various activities, 39.09% agreed to the statement while 3.62% disagreed to the statement.

Table 1: Social Impact on livelihood of goat farmers

Sl. No.	Statement	Responds					Mean
		SA	A	UD	DA	SD	
1	I am associated with various social organisation	21	47	19	17	8	3.50
		18.75	41.96	16.96	15.17	7.14	
2	I am contacted by the people for various activities in the village	16	43	34	13	4	3.41
		14.54	39.09	30.90	1.81	3.62	
3	I am participating in different celebrations of my village without any inhibition	16	43	34	13	4	3.42
		14.54	39.09	30.90	11.81	3.63	
4	During various social functions, I have been contacted for mutton supply with an invitation to attend the function	19	38	34	14	6	3.45
		17.11	34.23	30.63	12.61	5.40	
5	Now I am able to mobilise some of my community members to take up goat rearing as a means of social security.	11	34	35	22	9	3.20
		9.90	30.63	31.53	19.81	8.10	
6	Villagers consulting me about goat farming and other social issues.	10	35	38	19	9	3.17
		9.00	31.53	33.23	17.11	8.10	
7	Government functionaries at the village and block level are paying attentions towards me.	10	36	31	27	6	3.10
		9.09	32.72	28.18	24.54	5.45	
8	I get marriage proposals for me/my brothers/ sisters/son/daughter from families higher to my level	8	26	34	25	16	2.91
		7.33	23.85	31.19	22.93	14.67	
9	Goat rearing is no more barrier for me in mixing with higher caste people	10	33	41	20	4	3.11
		9.25	30.55	37.96	18.51	3.70	
10	Villagers take my opinion while deciding on important issues	12	33	47	13	6	3.28
		10.81	29.72	42.34	11.71	5.40	
Mean score		32.28					
The figures in upper row are frequency and lower is percentage							

When asked about your participation in different celebrations of village without any inhibition, 39.09% agreed to the statement whereas 3.63% disagreed. Similarly, to a question on whether you supply mutton to the villagers for various social functions, 34.23% of the farmers agreed that they received invitation to the function. Only 5.40% of the farmers disagreed to the statement. 31.53% of farmers were undecided that they could mobilize some of the community members to

take up the goat rearing for social security. Majority of farmers (33.23%) were undecided that the villagers consult them about goat farming and other social issues whereas 8.10% farmers disagree to the statement. When the respondents were asked whether they are getting attention of village and block level government functionaries for various programmes, 32.72% agreed to the statement whereas 50.45% respondents disagreed. To a question, due to goat farming, are

you getting marriage proposals for your family from higher level of income family, 31.19% remain undecided to the statement and only 7.33% agreed to the statement. Around 37.96% of the goat farmers were undecided that goat farming is no more a barrier for them to mix with different classes of the people in the society. When a question was asked on

whether the villagers take your views on important issues, a majority (42.34%) of respondents agreed to the statement that the villagers take their opinions while deciding on important issues whereas only 5.40% did not agree. The overall mean score for social impact comes to 32.28.

Table 2: Distribution of beneficiaries as per Social Impact

Social impact				Remarks
Sl. No	Impact range	Frequency	Percent	
				Maximum score=50
1	High level impact (Mean+1S.D) (>37.47)	15	13.4	Minimum score=10
2	(Mean+1S.D) to (Mean-1S. D) (37.47-27.09)	83	74.10	Mean=32.28 S.D.=5.19
3	Low level impact (Mean-1S. D) (<27.09)	14	12.5	

The distribution of the respondents on the basis of social impact due to goat rearing is presented in the table 2. The table above revealed that 74.10% of the respondents had medium level of impact due to goat farming followed by 13.4% and 12.5% respondents were having high and low level of social impact, respectively.

variables. The data of selected socio-economic variables with social impacts were subjected to zero order Pearson's correlation coefficient and findings are presented in the table 3.

Table 3: Correlation analysis of selected socio-economic variables of respondent with social impacts on respondent

	Age	Education	No of Goats owned	Social Impact
Age	1			
Education	-0.160*	1		
No of Goats Owned	-0.010	0.828**	1	
Social Impact	-0.079	0.082	0.150*	1

(* 5% level of significance, ** 1% level of significance)

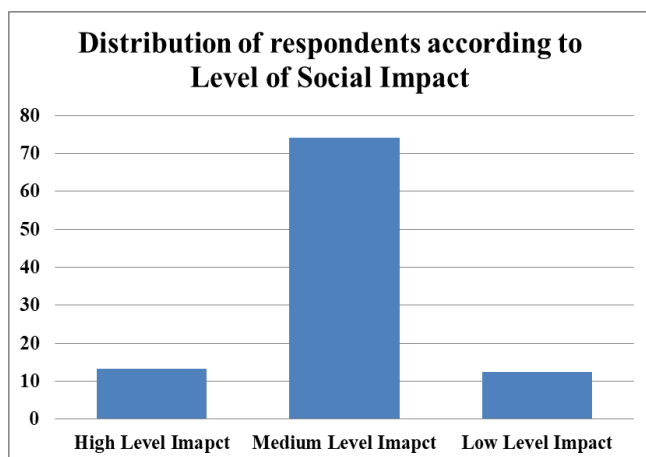


Fig 1: Distribution of respondents according to Level of Social Impact

Small ruminants, according to Kosgey (2004) [2], provide not only economic advantages but also intangible benefits (e.g., savings, emergency insurance, cultural and ceremonial purposes). Goats, according to Rai *et al.* (2013) [5], provide socio-cultural links and risk insurance in fragile and hostile situations, particularly in rural populations. The study done by Sarangi and Swain (2017) [6] and Mohanty and Das (2018) [4] in the state of Odisha showed similar findings. The goat farmers are consulted by other farmers in the community and acknowledged by government officials, but they are not welcomed and recognized socially as progressive people, according to the overall study of social effect.

Correlation analysis of selected socio-economic variables of respondents with Social impacts

Correlation analysis of various selected socio-economic variables of respondents with social impacts gives an indication of positive and negative association between

The analysis of above data reveal that age is negatively and education of the respondent are positively correlated with social impact of goat rearing whereas no. of goat owned by the beneficiaries is positively and significantly correlated with social impact on farmers. Similar findings were reported in the studies of Mohanty and Das (2018) and Sarangi and Swain (2017) in their studies on small ruminants in Odisha.

Conclusion

Goats are one of the world's most economically important livestock. They are critical to the survival of resource-scarce farmers. Small ruminants make a significant economic contribution to disadvantaged farm households and livelihood systems. Individual families raise indigenous species in relatively small numbers or small flocks as part of the traditional goat husbandry method. The financial investment required for such a business is almost nil, and as a result, production is low in this traditional small-holder system. According to the findings of this study, there has been a significant improvement in the social status of the tribal goat farmers. This may be due to increase in their income level form the occupation. Most of the tribal farmers rear goat in the study area as a supplementary source of income. The developmental agencies may establish forward and backward linkages in the study district to encourage the tribal farmers for commercial goat rearing to earn more income.

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