

Research Article

KNOWLEDGE LEVEL OF GOAT FARMERS OF MAYURBHANJ DISTRICT OF ODISHA, INDIA ON HEALTH CARE AND GENERAL MANAGEMENT

Ramanuj Panda, Bhabesh Chandra Das*, Pitambar Swain, Komal Chandrakar

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ABSTRACT: The present investigation was carried out with 240 goat farmers financed under Public Sector Bank (PSB) and Microfinance Institution (MFI) in Mayurbhanj district of Odisha, India, to find out their knowledge on health care and general management. The study revealed that 46.25 %, 37.50 % and 16.25 % of the respondents were having low, medium and high level of knowledge on health care and general management respectively. The socio-economic variables in case of the respondents of the PSB like age, education, livestock possession, land holding and income are positively correlated with knowledge on health care and general management. Only Family size variable was found significantly associated with knowledge on health care and general management. In case of the respondents of the MFI, age, family size, livestock possession and land holding are positively correlated with knowledge on health care and general management. Whereas, the variables like education and income are negatively correlated. No variable was found significantly associated with knowledge on health care and general management in case of MFI respondents.

Key words: Public Sector Bank, Microfinance Institution, Knowledge, Health Care.

INTRODUCTION

Goat farming provides much needed livelihood support to the landless and weaker sections of the society. Approximately 20 million small and marginal farmers depend on goat farming and this enterprise contributes around 8 % of total livestock GDP and generate 4% employment directly and indirectly in the country (Annual Report of Government of India 2012). They are not only important source of employment and income for the weaker sections but also a vital source for animal protein for their family. They also provide readily financial support to weaker sections of the society in distress. In spite of having potential of good economic returns from goat rearing, goat farmers have very poor income levels. There may be a number of reasons responsible for such a situation.

The productivity of goats under the prevailing traditional extensive production system is low (Singh and Kumar 2007) mainly because of feed scarcity and lack of adoption of improved technologies and management practices. This sector is highly effected due to high incidence of different diseases (Roy *et al.* 2015) and losses in a year due to the diseases is Rs. 945 per goat (Thambore and Sinha 2009). Morbidity and mortality losses due to

Peste des Petits Ruminants (PPR) only were calculated to be about Rs. 301 and Rs. 2,558 per goat respectively (Roy *et al.* 2015). It has been further observed that the main limitations to effective livestock health management are inadequate focus on preventive measures, lack of medicines and equipment in rural veterinary clinics and ignorance among the farmers. The main cause of less return from the goat farming is the lack of knowledge of goat farmers on modern goat keeping. NSSO (2005) had revealed that only 5.1% of the farmer households in India are able to access information on animal husbandry against 40.4% of the Indian households accessing information on modern technologies for crop farming. Therefore, the present investigation was carried out to know the knowledge level of goat farmers on health care and general management.

MATERIALS AND METHODS

The Mayurbhanj district of the State was selected purposively as it possesses large number of goats in comparison to the other districts of the state. Six blocks of the district were selected randomly from 31 blocks and from these each block, 20 goat farmers taken loan from the Public Sector Bank (PSB) and 20 goat farmers

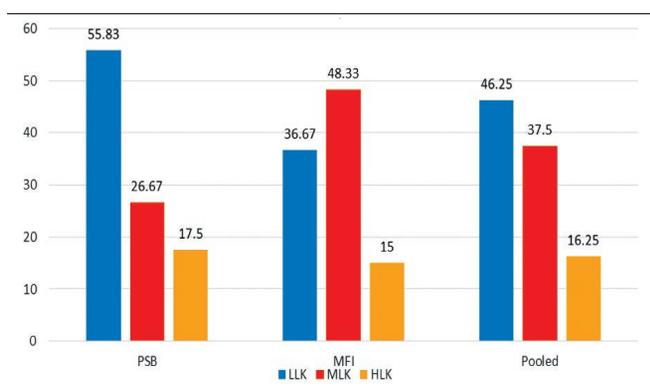


Fig. 1. Distribution of the Respondents on the basis of their Knowledge related to Health Care and General Management.

taken loan form the Microfinance Institutions (MFI) were selected randomly from the existing list of data available at lead bank office located in district Head Quarter, Baripada. Therefore, in total 240 respondents (120 PSB and 120 MFI) constituted the sample size of the study. To measure the health care and general management knowledge of the respondents, 10 questions related to various aspects of goat health care and management were developed and they were validated by highly experienced experts of different Departments of Veterinary College and Animal Husbandry Department of Government of Odisha. Each question was having multiple choices for the respondent to answer. On the basis of the response, the respondents were awarded a score to each question. For 10 questions, the scores of the respondent were totalled and that was considered as total score of the respondent on health care and general management knowledge. On the basis of knowledge scores, all the respondents were categorised into 3 groups that is low, medium and high. The data from the respondents were collected during January, 2017 to May, 2017. The information was collected personally by the investigator from the respondents with the help of the pretested interview schedule. The information collected were then classified and analysed statistically to draw meaningful conclusions.

RESULTS AND DISCUSSION

Knowledge level of the goat farmers on health care and general management

The Goat farmers were tested for their knowledge regarding health care and general management and the findings are presented in Table 1. 53.34 % of goat farmers under PSB could tell one disease, 35 per cent 7.5 % and 4.16 % of the goat farmers could able to enumerate two diseases, three diseases no disease respectively. Under MFI, 45 per cent goat farmers enumerated two diseases,

30 per cent and 21.67 per cent enumerated one and three diseases respectively.

In PSB, only 10 per cent goat farmers knew about the herd vaccination whereas 36.67 % of MFI goat farmers knew about the herd vaccination. Among the PSB goat farmers, deworming of age of the kid was correctly identified by 16.67 per cent of farmers whereas in MFI, 35.83 per cent goat farmers were able identified the correct deworming age of kid. Three months as the interval at which the adult animal is to be dewormed is correctly stated by 35 per cent and 10 per cent by MFI and PSB beneficiaries respectively. 45 per cent of the goat farmers of MFI correctly said that more than three weeks is the duration of colostrum's feeding in kids in contrast to 13.34 per cent of PSB goat farmers. 30 per cent of the goat farmers in PSB and 44.17 per cent of goat farmers in MFI knows that colostrum provides both immunity and nutrition and 30.8 per cent of goat farmers in PSB and 14.17 per cent farmers in MFI does not know the importance of the colostrum feeding. The castration timing of kids is 3 months was correctly said by 25 per cent of the PSB goat farmers and 50 per cent of MFI goat farmers and 35.83 per cent of goat farmers of PSB and 13.34 per cent of goat farmers have knowledge that castration is done above 6 months. 19.17 per cent of goat farmers in PSB and 45.83 per cent of goat farmers in MFI knew that the open and closed method of castration. Orientation of goat house in East- West direction was correctly mentioned by 28.34 per cent of goat farmers of PSB and 51.67 per cent of goat farmers in MFI. 36 per cent of goat farmers in PSB and 55 per cent of goat farmers in MFI knew that height of the goat farm is above the ground level.

Distribution of the respondents on the basis of their knowledge related to health care and general management

The distribution of the respondents according to their knowledge level on health care and general management is presented in Table 2 and Fig. 1. The table reveals that the majority of the respondents in PSB (55.83%) were having low level of knowledge on health care and general management, whereas 26.67 % of the respondents were found having medium level of knowledge on health care and general management and 17.50 % of the respondents were found in the category of high level. In case of MFI, majority of the respondents (48.33%) were having medium level of knowledge on health care and general management, whereas 36.67 % of the respondents were found having low level of knowledge on health care and general management and 15% of the respondents were found in the category of high level. The pooled data

Table 1. Knowledge level of the goat farmers on health care and general management.

Statements	PSB			MFI	
	Score	No. of respondents	%	No. of respondents	%
Name the disease against which vaccination should be done?					
Enumeration of 3 or more diseases	3	9	7.5	26	21.67
Enumeration of 2 diseases	2	42	35	54	45
Enumeration of 1 disease	1	64	53.33	36	30
Enumeration of no diseases	0	5	4.16	4	3.34
What is according to you as herd vaccination?					
Above 80% of animal vaccinated	2	12	10	44	36.67
70% to 80% of total animal	1	72	60	60	50
Less than 70% of the total animal	0	36	30	16	13.34
Name the deworming age of the kid?					
Within one week	2	29	24.16	11	9.16
Within two weeks	1	71	59.16	66	55
Within three weeks	0	20	16.67	43	35.83
At what interval the adult animal is dewormed?					
3 months	2	10	8.34	42	35
6 months	1	70	58.33	62	51.67
1 year	0	40	33.34	15	12.5
What is the duration of the colostrum feeding in kids?					
Correctly said more than three weeks	2	16	13.34	54	45
Correctly said more than one and less than three weeks	1	59	49.16	56	46.67
No response/wrongly answered	0	45	37.5	10	8.33
Why the new born kids should be feed colostrum?					
Increase immunity + nutrition	2	36	30	53	44.17
Only act as a source of nutrition	1	47	39.16	52	43.34
No answer	0	37	30.83	17	14.17
Name the castration timing of kids?					
3 months	2	30	25	60	50
3-6 month	1	47	39.17	44	3.67
6 months above	0	43	35.83	16	13.34
Name the method of castration?					
Correctly named 2	2	23	19.17	55	45.83
Correctly named 1	1	64	53.34	53	44.17
Cannot able to name any	0	33	27.5	12	10
Orientation of goat house?					
E-W direction	1	35	28.33	62	51.67
N-S direction	0	85	70.83	58	48.34
Height of the goat farm?					
Correctly said	1	36	30	66	55
Not correctly said	0	64	70	34	45

Table 2. Distribution of the respondents on the basis of their knowledge related to health care and general management.

Category	PSB		MFI		Pooled		Remarks
	Freq.	(%)	Freq.	(%)	Freq.	(%)	
Low Level Knowledge <(Mean- S.D) PSB=(<6.73) MFI=(<9.75)	67	55.83	44	36.67	111	46.25	PSB Maximum Score = 14 Mean=9.15 S.D = 2.42
Medium Level Knowledge (Mean- S.D) to (Mean + S.D) PSB=(6.73 to 11.57) MFI=(9.75 to 13.25)	32	26.67	58	48.33	90	37.50	MFI
High Level Knowledge >(Mean+ S.D) PSB=(>11.57) MFI=(>13.25)	21	17.5	18	15	39	16.25	Maximum Score = 15 Mean=11.50 S.D =1.75
Total	120	100	120	100	240	100	

Table 3. Relational analysis of selected traits of the respondents with their knowledge related to health care and general management.

Sl. No.	Variable	Correlation Coefficient (r)	
		PSB	MFI
1	Age	0.1254	0.1434
2	Education	0.2198	-0.2849
3	Family size	0.2677*	0.1825
4	Livestock possession	0.1456	0.0196
5	Land holding	0.0850	0.2148
6	Occupation	0.0422	0.0214
7	Income	0.2436	-0.1502

* Significant at the 5% level

showed that 46.25 %, 37.50 % and 16.25 % of the respondents were having low, medium and high level of knowledge on health care and general management. The almost similar types of findings were reported by various authors in their studies (Roy *et al.* 2017, Sagar *et al.* 2013, Dey *et al.* 2007).

Relational analysis of selected traits of the respondents with their knowledge related to health care and general management

The data of selected socio-economic variables were subjected to zero order correlation with knowledge on

health care and general management. The result presented in the Table 3 reveals that variables in case of the respondents of the PSB like age, education, livestock possession, livestock possession, land holding and income are positively correlated with knowledge on health care and general management. Family size variable was found significantly associated with knowledge on health care and general management. However, the study of Ray and Tiwari (2017) reported that the family size is not significant with the adoption of improved goat husbandry practices. In case of the respondents of the MFI, age, family size, livestock possession and land holding are positively correlated with knowledge on health care and general management. Whereas the variables like education and income are negatively correlated. No variable was found significantly associated with knowledge on health care and general management in case of MFI respondents.

CONCLUSION

The present study shows that the borrowers of Microfinance Institution possesses moderately better knowledge on various aspects of healthcare and general management of goat husbandry than the borrowers of Public Sector Banks. This was due to the frequent visit of the MFI officials to the houses of goat farmers and giving them various information related to goat farming. As most of the goat farmers of the study areas are from underprivileged section of the society, they must be

regularly trained to adopt improved goat rearing practices to get more benefit from the occupation.

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REFERENCES

Dey A, Barari SK, Yadav BPS (2007) Goat production scenario in Bihar, India. *Livest Res Rural Dev* 19: 123.

Government of India (GOI) (2012) 19th Livestock Census-2012. All India Report. Ministry of Agriculture, Department of Animal Husbandry, Dairy and Fisheries, Krishi Bhawan, New Delhi.

NSSO (2005) Access to modern technology for farming, situation assessment survey of farmers, 59th Round, Report No. 499(59/33/2), National Sample Survey Organisation (NSSO), Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

Roy R, Tiwari R (2017) Farmers' knowledge and adoption level on goat healthcare management practices in selected areas of India. *Bang. J Anim Sci* 46(2): 95-101.

Roy R, Tiwari R, Dutt T (2015) Incidence of important goat diseases and economic losses under field condition. *Indian J Anim Sci* 85(10): 1084-1086.

Roy R, Tiwari R, Bharti PK, Dutt T (2017) Knowledge level and adoption of scientific kid health management among goat owners under field conditions. *Indian J Anim Sci* 87(1): 78-79

Sagar CV, Tiwari R, Sharma MC, Roy R (2013) Livestock healthcare management practices in dry land areas of Tamil Nadu. *Indian J Vet Medic* 33(1): 58-60.

Singh NP, Kumar S (2007) An alternative approach to research for harnessing production potential of goats, in proceedings of fourth National Extension Congress, JKVV, Jabalpur, March 9-11. 5-9.

Thambore NN, Sinha MK (2009) Economic implication of Peste des Petits Ruminants (PPR) disease in sheep and goats: A sample analysis of district Pune, Maharashtra. *Agril Economics Res Rev* 22: 319-322.

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