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Knowledge of Gujjar and Bakarwals Regarding Improved Livestock Management Practices

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ABSTRACT

Gujjar and Bakarwal constitute the two major nomadic tribal groups of Jammu and Kashmir. Both these tribal groups have livestock rearing as the prime vocation. Whereas, Gujjars possess large herds of buffaloes, Bakarwals are associated with goat and sheep rearing. Both these tribal group play a crucial role in meeting the requirement of milk and meat for the cities and towns and hence contribute significantly to the livestock sector of the state. Traditionally both these tribes are nomadic in nature. They have seasonal migration from the plains of Jammu region to the upper reaches of Kashmir valley. The study has revealed that fropal population lack knowledge regarding various aspects like identification of discase, clean milk production improved breed of cattle, importance of mineral supplementation *etc.*

Key words : Tribal communities, seasonal migration, snowfall

INTRODUCTION

Number of tribal communities are found in Jammu and Kashmir, who have settled down in every nook and corner of this hilly countryside. In Jammu and Kashmir, numerically they are the third largest ethnic group and are spread throughout Jammu and Kashmir. The migratory grazier, who forms significant proportion of the Gujjar population of the area, still practice the age old migration to subalpine and alpine pastures during summer. During winter they stay in the Shiwaliks, i.e., the lower most hills adjoining plains and do not go beyond the boundaries of the state as their ancestors used to do. The migration starts from Jammu by the middle of February and the flocks reach Udhampur by end of February when the Gujjars of Udhampur also start upward migration. The migratory route is almost parallel to the Jammu-Srinagar national highway. The grazing continues up to middle of September when the downward movement starts. Bakarwal tribal community of Jammu and Kashmir is found in every hilly nook of the region. Also known as Bakharwal, they are special nomadic tribes, mainly found in the Pir Panjal range of mountains located between the two states of Jammu and Kashmir and Himachal Pradesh. Bakarwal mainly are goatherds and shepherds by profession. The lifestyle of Bakarwal tribes also throws some light on their culture and societal set up. Through out the year they lead a secluded and lonely life, due to the vagaries of climate that they face while living in such rugged terrains. Once in every year they take the pain of accompanying their herds of sheep to the steep high mountain regions for grazing them in the green fields.

Out of the total nomadic Gujjar and Bakerwals, 66 per cent population of nomad Gujjar-Bakerwals who fall under scheduled tribe groups in the state of Jammu & Kashmir are living below poverty line, revealed by a survey conducted by Tribal Research and Cultural Foundation (Rahi 2009).

Tribes are facing the problems of poverty and under nutrition and there is more need to pay attention on them (Amaresh Dubey 2009). The study was carried out with the objective to know the knowledge of Gujjar and Bakarwals towards different aspects of livestock rearing.

METHODOLOGY

Present investigation was carried out in Jammu division of Jammu and Kashmir state. Jammu division comprises of 10 districts of out of which Jammu and Kathua were purposively selected for the present investigation as these contain majority of the nomadic tribes involved in livestock rearing. From these two districts 6 *kurus* (group of nomadic tribes) each of Gujjar and Bakarwal tribe were randomly selected. From each selected *kuru* of Gujjars, 5 Gujjar families were randomly selected thereby constituting 30 Gujjar families. The head of the family was selected as the respondent for the purpose of study. Likewise from the *kurus* of Bakarwals, 5 Bakarwal families were randomly selected constituting 30 Bakarwal families. Similarly head of the family was selected as respondent for the study. Thus the study sample consisted of 30 Gujjars and 30 Bakarwals making

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a total sample size of 60 respondents. Data for the purpose of study was collected by using a comprehensively designed interview schedule specifically designed and pre-tested for the purpose of the present investigation. The data so collected were subjected to suitable statistical analysis and collated accordingly.

RESULTS AND DISCUSSION

Knowledge of the nomadic tribes about lives fact mx practice (Gujjars and Bakarwals) has been detailed under the different heads *i.e.* knowledge of care and management, breeding aspects, feeding aspects of livestock.

Knowledge of nomadic tribes about care and management aspects of livestock:

A perusal of data presented in table 1 revealed that both the categories of the respondents had an excellent degree of knowledge about vaccination of the deadly diseases for animals (MPS 100) and was accordingly ranked Ist. It was followed by the knowledge of the respondents about bathing and cleaning of cattle (MPS 95) and precautions for preventing diseases in animals (MPS 78.33) which obtained II and III ranks in the hierarchy of the knowledge regarding care and management practices. It is interesting to note that both the categories of the respondents i.e. Gujjars and Bakarwals had almost equal magnitude of the knowledge regarding the aforementioned practices and were ranked equally.

Further deep glance at the data incorporated in table 1 corroborate that overall the respondents possessed a fair degree of knowledge about hygienic living conditions for animals (MPS 70), care and management of animals during parturition (MPS 66.67), first aid treatment of animals (MPS 56.67) and segregation of sick and diseased animals (MPS 50) and were assigned IV, V, VI and VII ranks respectively by the total respondents. They have been found to possess low level knowledge regarding diseases of newly born animals (MPS 46.67), Deworming in cattle (MPS 43.33), diseases of lactating animals (MPS 40), deadly diseases of pregnant animals (MPS 31.67) and clean milk production (MPS 20) and were ranked VIII, IX, X, XI and XII respectively by the respondents. It is alarming indeed that both the Gujjars and Bakarwals have been found to possess very poor knowledge regarding record keeping about income and expenditure (MPS 6.66) and modern housing structures of cattle (MPS 5).

Table 1: Knowledge possessed by the nomadic tribes in care and management aspects of lives

Care and Management Practices	Gujjar tribe		Bakarwal tribe		Total	
	MPS	Rank	MPS	Rank	MPS	Rank
Deworming in cattle	46.67	VIII	40.00	IX	43.33	IX
Bathing and cleaning of cattle	93.33	II	96.67	II	95.00	II
Modern housing structures of cattle	6.67	XIII	3.33	XIV	5.00	XIV
Deadly diseases of newly born animals	40.00	X	53.34	VI	46.67	VIII
Deadly diseases of pregnant animals	36.67	XI	26.67	XI	31.67	XI
Diseases of lactating animals	46.66	IX	33.34	X	40.00	X
Clean milk production \ meat \wool production from animals	16.67	XII	23.33	XII	20.00	XII
Record keeping about expenditures and income	3.33	XIV	10.00	XIII	6.66	XIII
First aid treatment of cattle	63.34	V	50.00	VII	56.67	VI
Precautions for preventing animal diseases	80.00	III	76.66	III	78.33	III
Hygienic living conditions for cattle	73.33	IV	66.67	V	70.00	IV
Segregation of disea sed and sick animals	56.67	VII	43.33	VIII	50.00	VII
Vaccination for deadly diseases	100.00	I	100.00	I	100.00	I
Care and management of animals during parturition	60.00	VI	73.34	IV	66.67	V

Comparative analysis of the knowledge of the Gujjar and Bakarwal tribes about care and management of animals reveal that Gujjar and Bakarwal tribes differed in respect of their knowledge about diseases of animals. In all other aspects they possessed almost a similar magnitude of knowledge in respect of care and management practices of animals.

Knowledge of nomadic tribes about breeding aspects of livestock: Data incorporated in table 2 vividly corroborate that the Gujjar and Bakarwal tribes had cent per cent knowledge of the gestation period of the animals they rear. Gujjars had excellent knowledge about the gestation period of buffalo and Bakarwals had excellent knowledge of the gestation period of goats and sheep and this aspect of the breeding practices under study got the first rank by both the categories of the respondents. Overall this aspect also got first rank. Besides, Gujjar had the knowledge of the identifying symptoms to an extent of 96.67 per cent which was ranked second. The same aspect was ranked third in case of Bakarwals with the MPS 83.34. Excellent degree of knowledge was possessed by both the categories of respondents with regard to the age at which the animals attain breeding age which was ranked third in case of Gujjars (MPS 93.34) and second in case of Bakarwals (MPS 96.67). A fairly high degree of knowledge was also experienced among Gujjar as well as Bakarwal tribes about pregnancy diagnosis with MPS 83.34 and 70.00 respectively. It was assigned fourth and sixth ranks respectively by Gujjars and Bakarwals. The respondents were also found to possess fairly very high degree of knowledge about breeding related ailments in animals with MPS 80 and 73.34 respectively. However

this aspect got the same rank *i.e.* fifth by both the categories of respondents.

Table 2: Knowledge possessed by the nomadic tribes in breeding aspects of livestock

Breeding Practices	Gujjar tribe		Bakarwal tribe		Total	
	MPS	Rank	MPS	Rank	MPS	Rank
Selection and purchase of quality animals	16.67	IX	43.34	VIII	38.34	VIII
Attainment of breeding age	93.34	III	96.67	II	94.99	II
Breeding related ailments	80.00	V	73.34	V	76.67	V
Improved method of breeding	56.67	VII	76.67	IV	66.67	VI
Grading for selection	23.34	VIII	26.67	IX	24.99	IX
Gestation period of animals	100.00	I	100.00	I	100.00	I
Identification of heat symptoms in animals	96.67	II	83.34	III	89.99	III
Pregnancy diagnosis	83.34	IV	70.00	VI	76.67	IV
Identification of fertility problems	63.34	VI	56.67	VII	59.99	VII
Improved breeds of cattle	16.66	X	10.00	X	13.33	X

MPS: Mean Percent Score

A further glance at the data incorporated in the table make it vivid that both the categories of the respondents had fair knowledge of the improved methods of breeding to be followed for the improvement of the animals to an extent of 66.67 per cent. The Bakarwal tribes edged over the Gujjars in respect of this aspect of the breeding related knowledge with an MPS of 76.67 over 56.67 for the Gujjars. However the respondents had poor knowledge regarding selection and purchase of quality animals, grading for selection and improved breeds of the respective cattle and animals reared by them with an overall MPS of 24.99, 38.34 and 13.33.

Knowledge of nomadic tribes about feeding aspects of livestock: An overview of the data contained in Table 3 reveals that both the categories of the respondents possessed an excellent knowledge of the feeding practices to be followed for the feeding of the newly born animals which was ranked first with MPS 96.67. However, all the Gujjar respondents had the knowledge of the colostrum feeding in animals which was ranked first by the Gujjar tribes with MPS 100. Second in the rank hierarchy came the knowledge of the Gujjars about feeding of newly born animals (MPS 96.67) followed by period of grazing to be followed in cattle (MPS 90), importance of colostrum for newly born animals (MPS 86.67), starter diet for newly born animals (MPS 80), feeding of lactating animals (MPS 70) and feeding of pregnant animals (MPS 66.67) which were assigned II, III, IV, V and VII ranks respectively by the Gujjar tribes. It has also been found that the Gujjars had low knowledge about weaning practice in cattle (MPS 46.67), importance of mineral supplementation (MPS 23.33) and importance of green fodder for animals which were assigned VIII, IX and X ranks by the Gujjar tribes.

Table 3: Knowledge possessed by the nomadic tribes in feeding aspects of livestock

Feeding Practices	Gujjar tribe		Bakarwal tribe		Total	
	MPS	Rank	MPS	Rank	MPS	Rank
Colostrum feeding	100.00	I	56.67	V	78.33	IV
Weaning in cattle	46.67	VIII	26.67	VIII	36.67	VIII
Importance of colostrums	86.67	IV	73.34	III	79.99	III
Period of grazing	90.00	III	93.34	II	91.67	II
Importance of green fodder	13.34	X	10.00	IX	11.67	X
Importance of mineral supplementation	23.33	IX	6.67	X	15.00	IX
Starter diet for newly born animals	80.00	V	60.00	IV	70.00	V
Feeding of pregnant animals	66.67	VII	40.00	VII	53.33	VII
Feeding of newly born animals	96.67	II	96.67	I	96.67	I
Feeding of lactating animals	70.00	VI	46.67	VI	58.33	VI

MPS: Mean Percent Score

In case of Bakarwal tribes, an excellent degree of knowledge has been observed regarding feeding of newly born animals which was ranked first with MPS 96.67. It was followed by knowledge regarding, period of grazing for animals (MPS 93.34), feeding of colostrum for animals (MPS 73.34), starter diet for newly born animals (MPS 60) and colostrum feeding in animals (MPS 56.67) which were assigned II, III, IV and V ranks respectively by the Bakarwal tribes. However, they have been found too posses poor knowledge about feeding of lactating animals (MPS 46.67) and feeding of pregnant animals (MPS 40) and were assigned VI and VII ranks respectively by the Bakarwal tribes. Bakarwals have also been found to possess very poor knowledge regarding weaning in cattle (MPS 26.67), importance of green fodder for animals (MPS 10) and importance of mineral supplementation for animals (MPS 6.67) which obtained VIII, IX and X ranks by the Bakarwal tribes.

Overall knowledge possessed by Gujjar and Bakarwal in different aspects of livestock production: A perusal of data incorporated in Table 4 reveals that the both the categories of the respondents had knowledge of the breeding aspects to the maximum level amongst the other aspects of the knowledge with MPS 62.16 followed by the knowledge of the feeding aspects (MPS 55.11) and knowledge regarding care and management of the cattle with MPS 50.71. It is interesting to note that identical ranks were assigned to the aspects of the knowledge of the livestock production under study by both the categories of the respondents *i.e.* Gujjars and Bakarwals with slight variations in the MPS obtained.

Table 4: Overall knowledge possessed by Gujjar and Bakarwal in different aspects of livestock production

Knowledge aspects	Gujjar tribe		Bakarwal tribe		Total	
	MPS	Rank	MPS	Rank	MPS	Rank
Breeding aspects	60.66	I	63.67	I	62.16	I
Feeding aspects	59.23	II	51.00	II	55.11	II
Care and management of cattle	51.66	III	49.76	III	50.71	III

MPS: Mean Percent Score

CONCLUSION

The study reflects that tribal population lacks knowledge regarding various aspects i.e identification of diseases, clean milk production, improved breeds of cattle, importance of mineral supplementation.

Thus it is recommended that veterinary clinical camps and awareness camps should be organized on regular basis for these tribes to enhance their technical knowledge about modern livestock management practices. The training cum awareness programmes should be tailored in such a way that tribal population comprises of Gujjar and Bakarwal get maximum out of it, further credit facility should be made available at ease for them. Migratory schooling facilities should be more strengthen for the children of the tribes so that education is not discontinued during the time of migration. It is also further suggested that self help groups of these tribes should be made to enhance their livelihood.

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