

Original Research Article

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## A Field Survey on Buffalo Management Practices of Gujjars at Indo-Pakistan Border of Jammu

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### ABSTRACT

#### Keywords

Buffaloes, Feeding, Breeding, Housing, Gujjars

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A field survey was conducted in and around R.S. Pura tehsil of Jammu district of Jammu and Kashmir, India and data was collected from 120 respondents belonging to Gujjar community through specially designed questionnaire by random sampling method. The study revealed that majority of farmers fed concentrate and roughages to their animals and depend on bore wells as a source of drinking water to their buffaloes. About 63.34% respondents fed colostrum within 1h of birth of calves followed by 25.83% fed between 1-3h and 13% fed after 3h of birth of calves. Most of them did not provide mineral mixture to their buffaloes. 42.5% of farmers always observed heat signs in buffaloes followed by 37.5% who never observed heat signs and 20% of the respondents sometimes observed them. Conventional type of housing was practiced by majority of respondents with kuccha flooring (100%), improper ventilation and drainage system. Sanitary condition of majority of mangers was found clean. Majority of farmers were poor in certain aspects of scientific feeding, breeding and housing of animals and need to be educated.

### Introduction

The dairy farming plays an important role in the economic development of rural India. Almost every household of India owns livestock. The livestock population of India is 512.05 million (19<sup>th</sup> livestock census). Buffaloes are the mainstay of dairy industry in India. They contribute 51% of the total milk production. India ranks 1<sup>st</sup> in buffalo population in the world with 51.05 million animals. The Jammu & Kashmir state is blessed with rich population of buffaloes (738.99 thousands, 19<sup>th</sup> livestock census). These animals are mainly reared by Gujjars

(8.6%). It is a pastoral ethnic group with population in India, Pakistan and a small number in north eastern Afghanistan. They are numerically third largest community of Jammu and Kashmir after Kashmiri Muslims and Dogras.

The life of Gujjars revolves around buffaloes which play a crucial role in their economy and social status. Keeping in view, a comprehensive study was conducted to find out various management practices followed by Gujjar community in aspect of feeding, housing and breeding.

## Materials and Methods

A field survey was conducted in and around R.S.Pura tehsil of Jammu district of Jammu and Kashmir, India and data was collected from randomly selected 120 respondents belonging to Gujjar community. The selected buffalo owners were interviewed and desired information was collected regarding feeding housing and breeding management practices for buffaloes with the help of pre-designed questionnaire. The family members of the owners were also involved in collection of data so as to get accurate information as far as possible. The data thus collected were subjected to appropriate statistical analysis.

## Results and Discussion

### Feeding management practices

The study regarding feeding management practices followed by buffalo owners (Gujjars) are presented in Table 1 and revealed that majority of farmers fed concentrate and roughages to their animals. The animals are fed in groups thrice a day by almost all the respondents. About 67.5% were aware of supplementary feeding to animals and 32.5% were not aware of it. It might be due to non awareness of dairy farmers about the benefits of supplementary feeding and unwillingness to use due of additional cost of supplements they have to incur for feeding.

The study revealed that all the respondents provided water to their buffaloes ad libitum and animals were provided water in groups. It was observed that majority of respondents depend on bore wells (100%) followed by tanks(80.83%) and river(39.16%) as a source of drinking water to their buffaloes. The present findings are comparable with the results of Malik *et al.*, (2005) and Sabapara *et al.*, (2016). The clean equipments for watering of animals were used by 81.67% and unclean

equipments were used by 18.34% of respondents. According to Sekhar *et al.*, (2017), majority of farmers provided clean drinking water to buffaloes.

About 63.34% respondents fed colostrum within 1h of birth of calves followed by 25.83% fed between 1-3h and 13% fed after 3h of birth of calves. The findings are similar to Sekhar *et al.*, (2017), who found that majority of dairy farmers were feeding colostrum to newly born calves 1-2h of birth in urban and peri-urban areas. 42% of dairy farmers were feeding colostrums to newly born calves immediately after birth in study area. In contrast Sridhar and Sreenivas (2015) observed only 16.67% of farmers fed colostrums to calves within 1h after birth in Andhra Pradesh. Rupendra *et al.*, (2013) and Vivek *et al.*, (2015) reported that majority of dairy farmers fed colostrums to their calves after expulsion of placenta.

It was observed that majority of respondents did not provided mineral mixture to their buffaloes. It is essential for animals but it was not yet accepted in study area. It might be due to additional cost of mineral mixture incurred in feeding. Similar findings were reported by Sabapara *et al.*, (2016), Aulakh (2012) and Tiwari (2009).Majority of respondents in study area didn't knew about hay and silage making. Rathore and Katchwala (2009), Manohar *et al.*,(2014)and Sekhar *et al.*,(2017) reported that none of the farmers practiced hay and silage making in their study areas.

### Breeding practices

The results regarding various breeding practices followed by buffalo farmers are presented in Table 2. It was observed that 42.5% of farmers always observed heat signs in buffaloes followed by 37.5% who never observed heat signs and 20% of the respondents sometimes observed them.

**Table.1** Feeding management practices followed by selected respondents (n=120)

SNo.	Practices	Frequency	Percentage	
1	Type of feed	Concentrate	120	100
		Roughage	120	100
2	Quantity of feed	Scientific	0	0
		Underfed	120	100
3	Method of feeding	Individual	0	0
		Group	120	100
4	Condition of feed	Clean	120	100
		Unclean	0	0
5	Time of feeding	Twice a day	0	0
		Thrice a day	120	100
6	Supplements	Yes	81	67.5
		No	39	32.5
7	Condition of water	Clean	98	84.16
		Unclean	22	19
8	Equipments	Clean	98	81.67
		Unclean	22	18.34
9	Drinking water(source)	River	47	39.16
		Lake	0	0
		Tank	97	80.83
		Tap water	120	100
10	Watering	Individual	0	0
		Group	120	100
11	Calcium	True	48	40
		False	82	68.34
12	Time of colostrum feeding	1h	76	63.34
		1-3h	31	25.83
		After 3h	13	13
13	Feed concentrate	Yes	120	100
		No	0	0
14	Feed mineral mixture	Yes	0	0
		No	120	100
15	Common salt	Yes	120	100
		No	0	0
16	Preservation of fodder	Hay/Silage	0	0
		Don't know	120	100
17	Milk fever	Yes	61	50.83
		No	59	49.16

**Table.2** Breeding practices followed by selected respondents (n=120)

S No.	Practices		Frequency	Percentage
1	Observe heat signs	Always	51	42.5
		Sometimes	24	20
		Never	45	37.5
2	A.I.	Always	0	0
		Sometimes	29	24.16
		Never	91	75.83
3	Covered within 12-18 h	Always	106	88.34
		Sometimes	14	11.66
		Never	0	0
4	Veterinary help	Always	11	9.16
		Sometimes	109	90.83
		Never	0	0

**Table.3** Housing practices followed by respondents (n=120)

SNo.	Practices		Frequency	Percentage
1	Type of housing	Conventional	120	100
		Modern	0	0
2	Type of floor	Kuchha	120	100
		Pucca	0	0
3	Ventilation	Well ventilated	0	0
		Improper	120	100
4	Drainage system	Proper	0	0
		Improper	120	100
5	Condition of Manger	Clean	0	0
		Unclean	120	100
6	Lightening	Natural	120	100
		Artificial	0	0

Similar observations were observed by Dhaka *et al.*, (2017), Sabapara (2016) and Vishwakarma *et al.*, (2018) who found that 43% of the dairy farmers practiced heat detection procedures. Almost 75.83% never used A.I. technique in animals and 24.16% respondents sometimes used it in animals. It might be because farmers have quality breeding bulls, the distance to A.I. centres, lack of faith in A.I. and non availability of veterinary staff etc. Similar findings were

observed by Sekhar *et al.*, (2017). Time of insemination after heat is very crucial aspect in conception, the farmers of the study area were inseminating their animals mainly within 12-18h (88.34%) of heat manifestation. However, 11.66% sometimes covered their animals within 12-18h. The results are in agreement with Dhaka *et al.*, (2017) and Patel *et al.*, (2014) who reported that natural service or A.I. was performed within 12-24h of heat detection by majority of respondents.

Almost 90.83% of farmers sometimes took their animals to the veterinarian in case of reproductive disorder followed by 9.16% who always treat their animals with the help of veterinarian. The present findings are encouraging than results of Sabapara *et al.*, (2016).

### **Housing practices**

The results regarding various housing practices followed by respondents are presented in Table 3. Conventional type of housing was practiced by majority of respondents with kuccha flooring (100%), improper ventilation and drainage system. Sanitary condition of majority of mangers was found clean. The findings are in contrary to Srivastva *et al.*, (2000) who reported that 99.5% of farmers kept their animals in well ventilated houses. It is mainly because respondents belonged to tribal community known as Gujjars who followed traditional method of housing of animals which included kuccha animal houses made of mud and thatched roofs with improper ventilation.

In conclusion, majority of respondents were feeding concentrates and roughages to their animals. They were using tank and tap water as a source of water for their animals. Most of them were unaware of hay and silage making and mineral mixture. 42.5% of respondents were observing heat signs and most of them were using natural service. It was also observed that 90.83% of were sometimes treating their sick animals by veterinary doctor. Almost all of them were houses their animals in traditional animal houses made of mud and thatched roof with improper ventilation and poor drainage system. Hence majority of buffalo owners were not aware of scientific rearing of buffalo particularly feeding, breeding and housing management. The overall picture about existing management practices was not satisfactory.

Thus government should support and focus by educating farmers on improved management practices.

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