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## A study on buffalo management practices followed by Gujjar tribe of Jammu\*

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**Abstract**

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 respondents preferred semi loose system of housing in the area and were not maintaining any records. It was observed that most of them were not disinfecting animal sheds. Regarding summer and winter management in buffaloes, majority of farmers practiced management practices to protect buffaloes from extreme heat and cold. About 14.16% of the respondents sometimes washed milking utensils before milking and 83.33% always washed their utensils followed by 2.5% who never washed them. About 94.16% and 100% of respondents adopted vaccination against Foot and mouth disease and Hemorrhagic septicemia for their animals respectively. Majority of farmers were poor in certain aspects of scientific management of animals and overall picture was not satisfactory.

**Keywords:** Buffaloes, management, health care, milking practices, Gujjars

**Introduction**

Livestock plays an important role in the economy of India. The livestock population of India is 512.05 million. Buffaloes are the backbone of Indian rural communities. India ranks 1st in buffalo population in the world with 51.05 million animals (19<sup>th</sup> livestock census). The Jammu and Kashmir state is blessed with rich population of buffaloes (738.99 thousands, 19<sup>th</sup> livestock census). These are mainly reared by tribes known as Gujjars. 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. They are mainly dependent on buffaloes which play an important role in their economy and social status. Keeping in view, present study was conducted to access various management practices followed by Gujjar community.

**Material 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 management practices of 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****General observations**

It was observed that animal husbandry was main occupation among 79.16% of the farmers followed by 20.83% who were practicing animal husbandry and agriculture. Prasad *et al.*, (2001) [1] reported that dairying was the main occupation among 64% of the milk producers and subsidiary occupation for 36% in urban areas of Andhra Pradesh. Similarly 75% farmers had dairying as secondary occupation in north east zone of Tamil Nadu (Balusami *et al.*, 2004) [2]. The present study indicated that majority of farmers depended on animal husbandry as main source of livelihood and maintained livestock especially buffaloes as these enterprises. Most of the respondents were illiterate (69.16%) followed by 12.5% who can only read, 10% who can read and write.

The education level of Gujjars is too low as compared to other inhabitants of state (Abaas *et al.*, 2015) <sup>[1]</sup>. Some of the challenges in the provision of educational services to transhumant areas are similar to those faced by other rural and marginalized households in the region, although often more severe. These included nomadism, militancy, lack of teachers willing to work in the conflict situations found in these areas, poor infrastructure and poorly motivated teachers, a household economy dependent on livestock with children

spending longer periods away from their homes and schools and transhumant mobility (Suri., 2014) <sup>[10]</sup> In many Gujjars and Bakarwal areas, there is no school available at all and in other areas, enrolment is 20-30% (Abaas *et al.*, 2015) <sup>[1]</sup>.

Education is a myth to sedentarisation or the permanent settlement of nomads, their education problem is due to the transhumance practice and these problems will disappear in near future when they will be settled permanently, (Tufail, 2014) <sup>[11]</sup>

**Table 1:** General observations

S. No.	Practices	Frequency	Percentage
1	Main occupation		
	Animal Husbandry	95	79.16
	Animal Husbandry and Agriculture	25	20.83
2	Education		
	Illiterate	12	10
	Can read only	15	12.5
	Can read and write	4	3.33
	Primary	6	5
	Middle	0	0
	High and 10+2	83	69.16
Graduation and above	0	0	

### General management practices

The study data revealed that in table 2 that majority of respondents preferred semiloose system of housing in the area and were not maintaining any records. It was observed that majority of them were not disinfecting animal sheds. Similarly, low use of disinfectants were used by Lal (1999) <sup>[4]</sup> and Kishore *et al.*, (2013) <sup>[3]</sup>. The reason for disinfectants were not used might have been lack of awareness among farmers, a high disinfectant cost and an additional burden which did not give any immediate return to the farmer. Regarding summer and winter management in buffaloes, majority of farmers practiced management practices to protect buffaloes from extreme heat and cold. The findings are similar to Viswakarma *et al.*, 2018 <sup>[13]</sup>.

Almost all of the respondents practiced water bath, shady places and provision of cool drinking water as a part of

summer management. Hot and dry climatic conditions and heat intolerance of buffaloes requires summer management like wallowing, sprinkling and splashing of water etc. to improve the performance of buffaloes during the summer season. Similarly as a part of winter management, about 80% of the respondents closed windows of sheds by gunny bags or polythene and majority of them kept their animals under cover especially at night. About 48.33% didn't knew about age of dehorning and 51.67% practiced dehorning within 3-10 days of birth of calf. Majority of them didn't insured their animals and didn't maintained nay records of their animals. About 68.34% used dung for making dung cakes and 80% of the respondents collected it for making farm yard manure. Similar findings were reported by Kishore *et al.* (2013) <sup>[3]</sup> who found that farmers dumped solid manure in pits which was further used for agricultural purposes.

**Table 2:** General management practices

S. No.	Practices	Frequency	Percentage	
1	Preferred housing system	Semi loose	120	100
		Loose	0	0
2	Maintain Records	Yes	0	0
		No	120	100
3	Disinfection of sheds	Yes	0	0
		No	120	100
4	Summer management	Cool water	120	100
		Shady places	120	100
		Water bath	120	100
5	Winter management	Extra feed	0	0
		Gunny bags	96	80
		Cover	120	100
6	Chemical used on belly of calf	Tincture iodine	0	0
		Don't know	120	100
7	Dehorning	3-10 days	62	51.67
		Don't know	58	48.33
8	Castrate male calves	Yes	0	0
		No	120	100
9	Disposal of dung	Biogas Plant	0	0
		FYM	96	80
		Dung cakes	82	68.34
		Drain the dung	0	0
10	Records	Yes	0	0
		No	120	100

### Milking practices

In the present study, all the farmers milked their animals in separate shed. About 14.16% of the respondents sometimes washed milking utensils before milking and 83.33% always washed their utensils followed by 2.5% who never washed them. Almost all of them washed their hands before milking. Majority of respondents milked their animals twice a day. Similar findings were observed by Malik and Nagpaul, 1999 and Kishore *et al.*, 2013 [3]. Almost all of them didn't wash entire body of their animals before milking. The findings are similar to Verma and Shastri, 1994 [12]. About 18% of them did not wash the udder of animals before milking and 85% of them washed it. 33.34% of respondents massaged the udder of animals before milking and 66.67% did not follow this practice. Majority of them followed intermittent method of drying milking animals and common vessel for milking.

**Table 3:** Milking practices followed by respondents

S. No.	Practices	Frequency	Percentage	
1	Milking in separate shed	Always	120	100
		Sometimes	0	0
		Never	0	0
2	Wash utensils	Always	100	83.33
		Sometimes	17	14.16
		Never	3	2.5
3	Wash hands	Always	120	100
		Sometimes	0	0
		Never	0	0
4	Time of milking	Morning	0	0
		Evening	0	0
		Both	120	100
5	Frequency of milking	Once	0	0
		Twice	120	100
		Thrice	0	0
6	Wash animals	Yes	0	0
		No	120	100
7	Wash udder	Yes	102	85
		No	18	18
8	Massage udder	Yes	40	33.34
		No	80	66.67
9	Feed animals while milking	Yes	120	100
		No	0	0
10	Vessel used for milking	Separate	0	0
		Common	120	100
11	Method for Drying animal	Abrupt	0	0
		Intermittent	120	100
		Incomplete	0	0

### Health care practices

The data related to health care practices followed by buffalo owners are revealed in table 4. Almost 87.5% of the respondents sometimes isolated sick animals from rest of the herd followed by 12.5% who always isolated sick animals. About 94.16% and 100% of respondents adopted vaccination against Foot and mouth disease and Hemorrhagic septicemia for their animals respectively. The present findings are encouraging than Sabapara *et al.*, 2010 [9] and Vishkarma *et al.*, 2018 [13]. This practice was widely accepted by farmers due to high level of awareness regarding protection of animals from diseases by vaccination. Regular deworming of animals was practiced by 18.33% occasionally followed by 81.67% who didn't practiced it. These findings are comparable to Pawar *et al.*, 2006 [7], Sabapara *et al.*, 2010 [9] and Vishkarma *et al.*, 2018 [13]. About 74.17% of respondents sometimes practiced timely treatment of the sick animals by consultation of veterinary doctor and 25.83% always practiced it. It is

mainly because the respondents mainly belonged to tribal community, Gujjars who still follow traditional method of treating their animals.

**Table 4:** Health care practices followed by respondents

S. No.	Practices	Frequency	Percentage	
1	Isolate sick animal	Always	15	12.5
		Sometimes	105	87.5
		Never	0	0
2	Veterinary Doctor	Always	31	25.83
		Sometimes	89	74.17
		Never	0	0
3	Clean water	Always	101	84.17
		Sometimes	19	15.83
		Never	0	0
4	Foot and Mouth Disease	Always	113	94.16
		Sometimes	7	5.84
		Never	0	0
5	Haemorrhagic Septicaemia	Always	120	100
		Sometimes	0	0
		Never	0	0
6	Deworming	Always	0	0
		Sometimes	22	18.33
		Never	98	81.67

### Conclusion

The present study indicated that majority of farmers depended on animal husbandry as main source of livelihood and maintained livestock especially buffaloes as these enterprises. Most of them preferred semi loose system of housing in the area and were not maintaining any records. Regarding summer and winter management in buffaloes, most of the respondents practiced management practices to protect buffaloes from extreme heat and cold. The overall picture about existing management practices was not satisfactory. The government should support and focus on educating farmers on improved management practices for overall welfare of Gujjars as this community is lacking behind in many aspects.

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