



Feeding Management Practices Adopted by Goat Keepers in Pratapgarh District of Rajasthan

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Abstract

The present study was conducted in Pratapgarh district of Rajasthan, to find out the feeding management practices followed by goat keepers. For this, 120 respondents were selected from four tehsils of Pratapgarh district. Data were collected through pre structured interview schedule. The results revealed that maximum goat rearers (44.16%) adopted semi stall feeding system and grazing was done mostly on community land (65.00%). The maximum goat keepers (59.16%) were sent their goats for grazing in the pasture for more than 5 hours daily. Majority of goat rearers (74.16%) not practiced to protect pasture land. The results indicated that overall 42 per cent goat rearers fed concentrate with supplements to their goats. The results show that majority of goat rearers (45.83%) provide green fodder to whole flock. Majority of (65.00%) goat rearers did not preserve tree leaves and remaining (35.00%) are adopted this practice. Major source of drinking water was ponds.

Keywords: Concentrate, Feeding, Green Fodder, Goat Keepers, Management



Introduction

Goats play an important role in income generation, capital storage, employment generation and improving household nutrition. The goat rearing is the backbone of the economy of small and landless farmers in India. It is an insurance against crop failure and provides alternate source of livelihood to the farmers all year round. Goat husbandry in India is essentially an endeavour of millions of small and marginal families, who rear animals on “Crop Residues” and Common Property Resources”. The farmers rear goat mainly in extensive management system using traditional management practices relying on community land for grazing. Adoption of improved management practices is expected to increase the income of farmers. Although the economic contribution of livestock is substantial in the agriculture as well as in the national economy. The goat keepers are yet ignorant of scientific management practices. If improved feeding, breeding and other management practices are followed, it would be possible to achieve the desired level of goat production (Dudi and Meena, 2013). Keeping in view, above a study was conducted to find out the existing feeding management practices followed by goat keepers of Pratapgarh district of Rajasthan.

Materials and Methods

The study was conducted in Pratapgarh district of Rajasthan. The Pratapgarh district has been selected purposively on the basis of maximum number of respondents who were goat keepers. There are total five tehsils in Pratapgarh district of Rajasthan out of which four tehsils were selected randomly. Three villages from each tehsil were selected on the basis of highest covering goat population. Thus, total twelve villages were selected for survey. A list of goat keepers of the selected villages was prepared with the help of village Sarpanch and Patwari. Total 120 goat keepers were selected from twelve villages of four tehsils. The required data were collected keeping in view the objectives of the study, using well-structured interview schedule. The following information was incorporated in the survey schedule pertaining to feeding practices regarding mode of feeding, grazing site, grazing hours, protection of pasture land, green fodder provided, preservation of tree leaves, type of fodder used, concentrate feeding, etc. The collected data regarding different aspects of feeding were compiled and analyzed tehsil wise, category wise and in overall by using simple tabular analysis, averages, percentage, chi- square and ratios as and where ever necessary.

Formula of Chi square test

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

O_i = Observed frequency

E_i = Expected frequency

Results and Discussion

Data pertaining to existing feeding management practices followed by goat keepers are presented in Table 1. The results of present study revealed that maximum goat rearers (44.16 %) adopted semi stall feeding system followed by (39.16%) complete grazing and only 16.66 per cent goat keepers followed complete stall feeding. Findings are in agreement with those reported by Sorathiya *et al.* (2016), Warale *et al.* (2017) and Khadda, *et al.* (2018). The majority of (65.00%) goat keepers used community land for grazing. On the other hand only (35.00%) goat keepers used their own land for grazing of the goats. Findings are in agreement with those reported by Lavania *et al.* (2014). Majority of the goat keepers (59.16%) grazed their goats for more than 5 hours daily and those who grazed for less than 5 hours was 40.83 per cent. Findings are in agreement with Jana *et al.* (2014) who reported that almost half of the respondents (51.33%) maintained their goats by allowing grazing for 4–6 hours per day. Majority of goat keepers (74.16%) did not protect the pasture land whereas; small number of goat keepers (25.83%) protected their pasture land by boundary or fencing. These findings are in agreement with Kumar *et al.* (2016) who observed that majority of goat rearers 97.50 per cent did not protects the pasture land whereas, very few number of goat rearers 2.50 per cent protects their pasture land by fencing and boundary wall. The result indicates that 45.83 per cent goat rearers provide green fodder to whole flock, 33.33 per cent to milking doe and 20.83 per cent only to kids. Present findings are in agreement with those reported by Sabapara *et al.* (2014). The result shows that 35 per cent goat rearers followed practice of preservation of tree leaves in different forms and 65 per cent goat keepers did not practice to preserve the tree leaves. Findings are in agreement with Kumar *et al.* (2016) who reported that majority of goat keepers 92.50 per cent did not preserve the tree leaves while, only 7.50 per cent of goat keepers

were found to be adopted this type of practice.

Table 1: Feeding management practices followed by goat keepers tehsil wise

Particulars	Pratapgarh (N=30)	Pipalkhunt (N=30)	Dhariawad (N=30)	Chotisadri (N=30)	Overall (N=120)	χ^2 value
Mode of feeding						
Stall	5(16.66)	4(13.33)	5(16.66)	6(20.00)	20(16.66)	
Semi Stall	15(50.00)	14(46.66)	11(36.66)	13(43.33)	53(44.16)	
Grazing	10(33.33)	12(40.00)	14(46.66)	11(36.66)	47(39.16)	
Grazing site						
Own land	8(26.66)	11(36.66)	12(40.00)	11(36.66)	42(35.00)	
Community land	22(73.33)	19(63.33)	18(60.00)	19(63.33)	78(65.00)	
Grazing hrs						
<5 hours	12(40.00)	14(46.66)	12(40.00)	11(36.66)	49(40.83)	
>5 hours	18(60.00)	16(53.33)	16(60.00)	19(63.33)	71(59.16)	
Protection of pasture land						
Yes	6(20.00)	10(33.33)	9(30.00)	6(20.00)	31(25.83)	
No	24(80.00)	20(66.66)	21(70.00)	24(80.00)	89(74.16)	
Green fodder provide						
Whole flock	15(50.00)	13(43.33)	13(43.33)	14(46.67)	55(45.83)	
Only milking doe	9(30.00)	9(30.00)	11(36.66)	11(36.66)	40(33.33)	
Only kids	6(20.00)	8(26.67)	6(20.00)	5(16.67)	25(20.83)	
Preservation of tree leaves						
Yes	10(33.33)	14(46.66)	10(33.33)	8(26.66)	42(35.00)	8.725
No	20(66.66)	16(53.33)	20(66.66)	22(73.33)	78(65.00)	
Type of fodder used						
Berseem	3(10.00)	9(30.00)	8(26.66)	6(20.00)	26(21.66)	12.469
Lucerne	9(30.00)	6(20.00)	4(13.33)	9(30.00)	28(23.33)	
Weed	6(20.00)	7(23.33)	8(26.66)	9(30.00)	30(25.00)	
Grasses	8(26.66)	2(6.66)	6(20.00)	4(13.33)	20(16.66)	
Others	4(13.33)	6(20.00)	4(13.33)	2(6.66)	16(13.33)	
Use of Concentrate						
With supplement	13(43.33)	12(40.00)	13(43.33)	14(46.66)	52(42.00)	0.271
Without supplement	17(56.66)	18(60.00)	17(56.66)	16(53.33)	68(68.00)	
Source of drinking water						
Ponds	20(66.66)	18(60.00)	14(46.66)	19(63.33)	71(59.16)	
Bore wells	10(33.33)	12(40.00)	16(53.33)	11(36.66)	49(40.83)	
Frequency of watering						
Once in 24 hours	7(23.33)	9 (30.00)	6(20.00)	10(33.33)	32(26.66)	
Twice in 24 hours	14(46.66)	11(36.66)	13(43.33)	12(40.00)	50(41.66)	
Thrice in 24 hours	9(30.00)	10(33.33)	11(36.66)	8(26.66)	38(31.66)	

Figure in parenthesis indicate percentage

The chi-square value was more than tabulated value at 5 percent level of significance. Hence, the difference is significant between the tehsils with preservation of tree leaves. The result shows that maximum 25 per cent goat keepers offered weed followed by 23.33, 21.66 and 16.66 per cent lucerne, berseem and grasses, respectively. The chi-square value was less than tabulated value at 5 per cent level of significance. Hence the difference is non-significant between the tehsils with regards to type of fodder used for feeding. Findings are in agreement with Sandhu *et al.* (2018). The results indicated that overall, 42 per cent goat rearers fed concentrate with supplements to their goats, while majority of them (68.00%) provide concentrate without supplements to their goats. Among the goat keepers of different tehsil providing concentrate without supplements to their goats are maximum (60.00%) in Pipalkhunt tehsil. The chi-square value was less than tabulated value at 5 per cent level of significance. Hence, the difference was non-significant between the tehsils with regards to concentrate feed offered to the goats. Finding are in agreement with Dar *et al.* (2016) who revealed that very few respondents (11.67%) fed concentrate to their goats, while majority of them (88.33%) did not supply concentrate to their animals. Data indicated that the ponds were the most common source of water followed by bore wells or tube wells. Percentage of farmers using ponds and tube

wells was 59.16 and 40.16 respectively. Findings are in line with Singh *et al.* (2014) who reported that major sources of drinking water were ponds and bore well followed by canal and hand pumps. The result shows that 41.66 per cent goat keepers provided drinking water to their goats twice in a day (24 hrs), 31.66 per cent goat owners provided drinking water thrice in a day and 26.66 per cent goat keepers provided water once in a day.

Conclusion

The study revealed that majority of goat keepers fed the green fodder to whole flock. Major source of drinking water was found to be ponds in the study area. The maximum farmers adopted semi stall feeding. The lack of green fodder availability remains throughout the year except in rainy season. Majority of goat rearers provided concentrate mixture without supplements to the goats. Based on results of present study it was concluded that the goat keepers of the region were not fully aware about improved feeding management practices

Conflict of Interests

There is no conflict of interest.

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