



Assessment of Knowledge Level of Goat Farmers about Feeding Practices in Punjab

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Abstract

The present study was conducted from January to October 2019 among randomly selected 240 goat farmers belonging to six different agro-climatic zones of Punjab state (40 farmers from each zone) to assess their knowledge level about feeding practices. Knowledge about stall feeding of goat, types of feed, feeding schedule, mineral mixture, ration formulation, additional feed supplement, silage & hay making, cleaning of utensils and provision of fresh & clean water was possessed by 40.00 per cent, 40.42 per cent, 30.42 per cent, 35.83 per cent, 29.17 per cent, 28.75 per cent, 37.08 per cent, 57.50 per cent and 47.08 per cent respectively. The mean knowledge of goat farmers about feeding practices in Punjab was 38.47 per cent. There were significant differences between feeding knowledge scores ($P < 0.01$) of goat farmers in different agro-climatic zones of Punjab. The knowledge level about feeding practices in different zones was low to medium. The present study highlights the importance of assessing knowledge level of goat farmer belonging to a particular area before organizing extension activity in that area. In addition, there is need to strengthen extension activities for goat farmers especially for feeding practices by reframing them according to knowledge level of goat farmer.

Keywords: Agro-climatic zones, Assessment, Farmer, Feeding, Goat, Knowledge, Punjab

Introduction

Over 75 percent livestock resources in India were with smallholders and landless farmers together (Birthal and Taneja 2006). Households cultivating less than 2.0 hectare of land (marginal and small) are the custodian of more than 76 per cent of the total goats in the country (Singh *et al* 2018). Goat farming has huge opportunity in rural development as goat has potential for export of products, capital storage, house-hold income, employment and nutrition. Goat farming is also suitable for women and could be used for rural women empowerment. However, poor productivity and lack of scientific knowledge about goat farming prove to be the lacunae behind goat production in rural India (Mohan *et al* 2009). Feeding alone account for 60-70 percent expenditure in goat farming. Proper feeding regimen in goats helps to get optimum production and enhance reproduction. Although, the total goat population in Punjab is 3.48 lakhs. However, still there is no comprehensive study for assessing the feeding knowledge level of goat farmers. Therefore, present study was undertaken to assess knowledge level goat farmers about feeding practices in Punjab.

Materials and Methods

The Punjab state is divided into six agro climatic zones (Kingra *et al* 2001), namely Sub mountain undulating zone (Zone I), Undulating plain zone (Zone II), Central plain zone (Zone III), Western plain zone (Zone IV), Western zone (Zone V), and Flood plain zone (Zone VI). From each agro-climatic zone, 40 goat farmers with more than 5 goats were randomly selected, thereby making the total sample size as 240 goat farmers representing all the six agro-climatic zones. After scrutinizing relevant literature / research articles, discussion with field extension personnel and consulting concerned subject matter specialists total nine items/questions were compiled in the interview schedule. The goat farmers were personally interviewed by visiting their farm at field level. The data were collected through personal interview and observation at goat farm from January to October 2019. Goat farmers possessing knowledge about a particular feeding practice were assigned one score and those which do not possess knowledge about that particular practice were assigned zero score. The goat farmers having knowledge score 0-3, 4 - 6 and more than 6 were categorized in to low, medium and high Knowledge categories. For analysis, simple tabular techniques and appropriate statistical methods were employed by using SPSS version 20.0.

Results and Discussion

It is clear from Table 1 that in Punjab, only 40.00 percent goat farmers had knowledge about stall feeding of goat. Data analysis also revealed that, in Punjab, 157 goat farmers (65.42%) were rearing goats by grazing/extensive method, while 83 goat farmers (34.58%) were rearing goats by intensive/stall feeding method. It suggest that a lot of extension activities (in the form of campaigns/field days and creating awareness via. printed articles in local language) at the door step of goat farmer are still needed to popularize stall feeding in goats, since there is decrease in grazing land in Punjab due to urbanization. About 40.42 per cent had knowledge about types of feed and 30.42 per cent had knowledge about feeding schedule. 35.83 per cent and 29.17 per cent had knowledge about mineral mixture and ration formulation respectively. This indicates the dire need of educating goat farmer about right nutritional regimen. Knowledge about additional feed supplement was with 28.75 per cent farmers and Silage & hay making was known to 37.08 per cent farmers. Therefore, for uplifting goat farmers, knowledge enrichment strategies/demonstrations about conservation of green fodder in the form of hay and silage should be organized. Knowledge about cleaning of utensils and provision of fresh & clean water was possessed respectively by 57.50 per cent and 47.08 per cent goat farmers. The farmers should be educated about provision of clean and potable drinking water to goats, so as to protect them from diseases. Tanwar *et al* (2008) reported that in the tribal area of Udaipur district of Rajasthan, floors of the shed were dusty; no provision was made in the shed for drinking water. Animals got contaminated water from village pond, when they were out for grazing. Nandi *et al* (2011) noted that ponds water was the major source for drinking water (58.14%) of goats. The mean knowledge percentage of goat farmers about feeding practices in Punjab was 38.47 per cent. The extension policies for enhancing knowledge of goat farmer should be made in context of indigenous technical know-how possessed by the farmer. This indigenous Technical Knowledge evolved from the experiences of farmers possess practical utility in solving some of the farmer's problems under their own conditions (Ponnusamy *et al* 2009). Fig. 1 depicts mean knowledge percentage of goat farmers about feeding practices in different agro-climatic zones of Punjab.

Table 1: Knowledge percentage of farmers about feeding practices in different agro-climatic zones of Punjab

Knowledge about	Agro-climatic zone						Over all (n=240)
	I (n=40)	II (n=40)	III (n=40)	IV (n=40)	V (n=40)	VI (n=40)	
Stall feeding of goat	35.00	42.50	27.50	47.50	50.00	37.50	40.00
Types of feed	40.00	35.00	17.50	47.50	57.50	45.00	40.42
Knowledge about feeding schedule	32.50	50.00	42.50	22.50	27.50	7.50	30.42
Mineral mixture	32.50	25.00	30.00	50.00	57.50	20.00	35.83
Ration formulation	22.50	45.00	62.50	30.00	12.50	2.50	29.17
Additional feed supplement	32.50	30.00	45.00	30.00	30.00	5.00	28.75
Silage & hay making	27.50	35.00	50.00	45.00	47.50	17.50	37.08
Cleaning of utensils	55.00	22.50	40.00	75.00	87.50	65.00	57.50
Provision of fresh & clean water	40.00	15.00	32.50	60.00	87.50	47.50	47.08
Mean percentage	35.28	33.33	38.61	45.28	51.83	27.50	38.47

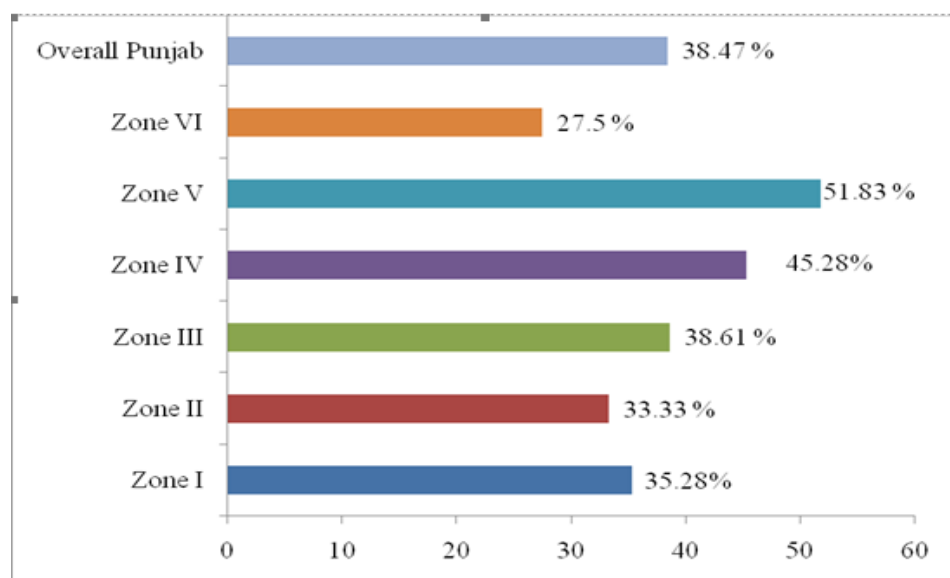
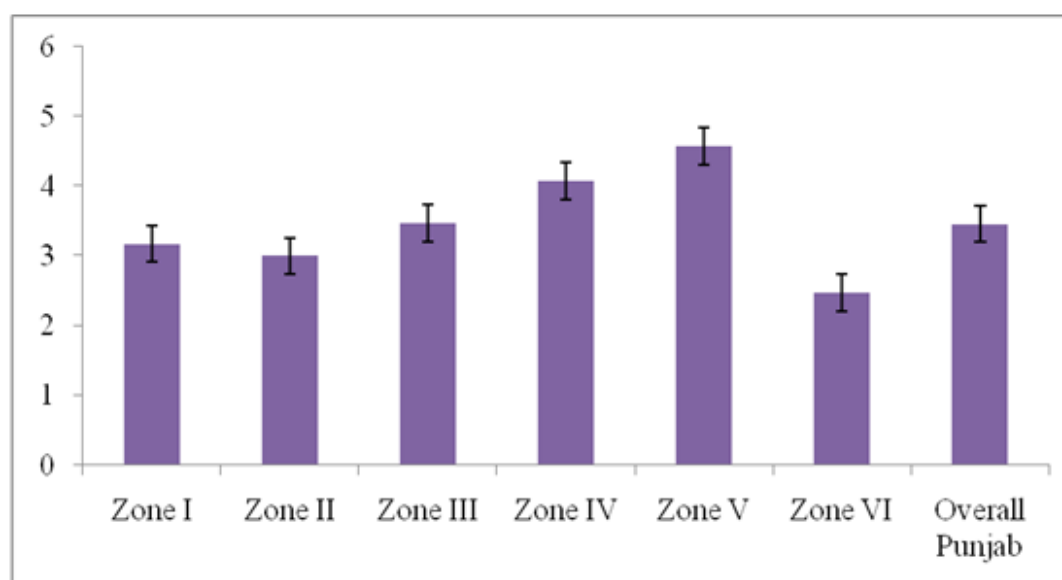
**Figure 1:** Mean knowledge percentage of goat farmers about feeding practices in different agro-climatic zones of Punjab**Figure 2:** Feeding Knowledge score (Mean ± S.E.) of goat farmers in different agro-climatic zones of Punjab

Table 2 and Fig. 2 describe feeding knowledge score of goat farmers in different agro-climatic zones of Punjab. There was significant difference between feeding knowledge score ($P < 0.01$) of goat farmers in different agro-

climatic zones of Punjab. It indicates that knowledge level of farmers about feeding practices vary from Zone (area/region) to Zone, thereby highlighting the importance of assessment of knowledge level of Punjab goat farmers about feeding practices first before organizing any extension activity.

Table 2: Knowledge score of goat farmers about feeding practices in different agro-climatic zones of Punjab

Agroclimatic zone	Knowledge score (Mean \pm S.E.)	Knowledge level
Submountain undulating (n=40)	3.17 ^{bc} \pm 0.39	Medium
Undulating plain (n=40)	3.00 ^{bc} \pm 0.32	Low
Central plain (n=40)	3.47 ^{bc} \pm 0.35	Medium
Western plain (n=40)	4.07 ^{ab} \pm 0.41	Medium
Western (n=40)	4.57 ^a \pm 0.39	Medium
Flood plain (n=40)	2.47 ^c \pm 0.26	Low
Over all (n=240)	3.46 \pm 0.15	Medium

(values with different superscript differ significantly at $P < 0.01$)

Also, the feeding knowledge level about goat feeding in different zones was low to medium. For overall Punjab, the mean feeding knowledge level was medium. It suggests that there is tremendous scope for improving the knowledge level of goat farmers about feeding practices. Innovative extension strategies such as Pasu Sakhi (Ponnusamy *et al* 2017) can play a vital role in knowledge enrichment of goat farmers. Also, there is a need to strengthen existing extension activities for goat farmers by incorporating more knowledge enrichment material related to feeding practices. More extension activities by Veterinary institutes and State animal husbandry department should be organized at the doorstep of the goat farmer.

Conclusion

The knowledge level about feeding practices in different zones was low to medium. The present study highlights the importance of assessing knowledge level of goat farmer belonging to a particular area before organizing extension activity in that area. In addition, there is need to strengthen extension activities for goat farmers especially for feeding practices by reframing them according to knowledge level of goat farmer.

Conflict of Interests

There is no conflict of interest.

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