CONSTRAINTS BEING PERCEIVED BY SHEEP REARERS IN ARID AND SEMIARID REGION OF RAJASTHAN

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The data were collected from 120 sheep rearers selected from 8 villages of two tehsils of Bikaner district. The information was collected from respondents on breeding practices of sheep by an interview schedule. On the basis of Rank based quotient (RBQ) value the main constraints identified were lack of grazing area and non-availability of green fodder with the RBQ values of 64.08 and 62.50 respectively. Lack of veterinary services was the third most serious constraint perceived by respondents obtaining RBQ value at 58.42%. Similarly, other constraints identified by respondents were ranked on the basis of the RBQ values.

Key words: Arid and semi arid region, Constraints, Respondents, Sheep rearers

The sheep in India are mostly reared by the landless laborers and marginal farmers, who are considered as the socially and economically disadvantaged sections in the rural society. It provides gainful employment and income to the weaker sections especially to the rural poor. They contribute about 4.5 million tons of meat and 43.1 million kg of wool in India (BAHS, 2017).

In the last decade, small ruminants in developing countries were less productive than those in developed countries (Winrock International, 1983). However, the total product from small ruminants increased in developing countries because their numbers increased. This indicates that if developing countries could increase herd productivity, they could increase production. However, to increase production in developing countries, existing constraints must be surmounted. The objective of present study

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was to identify the constraints being perceived by the respondents in adoption of improved sheep management practices in arid and semi arid region of Rajasthan.

MATERIALS AND METHODS

The study was conducted in Bikaner district of Rajasthan. The data were collected from randomly selected 120 sheep rearers, from 8 villages of two tehsils of Bikaner district. Total 120 sheep rearers were categorized in to three categories on the basis of flock size:

   i)   Small holding (1-20 sheep)
   ii) Medium holding (21-40 sheep)
   iii) Large holding (Above 40 sheep)

The information was collected on various management practices adopted by sheep rearers through an interview schedule.

Analysis of data and statistical test applied: The data were analyzed by using collected information, several statistical tools and methods. The following statistical treatments were used for interpretation of data:

Rank based quotient (RBQ): On the basis of ranks provided by the farmers, rank based quotient (RBQ) for each constraint was calculated at village level on basis of the formula (Sabarathnarn and Venila, 1996).

$$RBQ = \sum_{i-1}^{n} \frac{fi(n+1-i)}{Nn} \times 100$$

Where, F_i = the frequency of farmers for the ith rank of the constraint
   N   = the numbers of farmers
   n   = the number of ranks

Similarly, the RBQ values at tehsil level and the pooled RBQ values of the two tehsils were calculated using weighted average of village and tehsil level values.

RESULTS

Constraints being perceived by the respondents: On Rank-based quotient (RBQ) values, the researcher easily identified the most serious constraint at tehsil level. The constraints having higher RBQ value may be indicated as more serious constraints. Pooled and tehsil wise RBQ value for two tehsil are presented in Table 1.

The results indicated that the lack of grazing area was most serious constraints faced by sheep rearers on pooled RBQ basis. The RBQ value of this constraint was 64.08. The constraint of lack of grazing area was ranked second in Bikaner tehsil and first in Lunkarnsar tehsil with RBQ value 66.50 and 61.67 respectively. Second most serious constraint was non-availability of green fodder with a RBQ value of 62.50 on pooled RBQ basis. Based on distribution of RBQ values, this constraint was ranked first in Bikaner tehsil and second in Lunkarnsar tehsil (RBQ value 67.33 and 57.67 respectively). Lack of veterinary services was the third most serious constraint in the area surveyed and it had the RBQ value of 58.42. This constraint ranked third in Bikaner tehsil and fourth in Lunkarnsar tehsil. (RBQ value 59.67 and 57.17 respectively).

Table 1. Pooled and Tehsil wise RBQ values of different constraints

Constraints	Constraint code	Values	Rank	Tehsil			
				Bikaner		Lunkarnsar	
				Constraints	RBQ	Constraints	RBQ
Non-availability of green fodder	1	62.50	2	1	67.33	2	57.67
Lack of grazing area	2	64.08	1	2	66.50	1	61.67
Lack of veterinary services	3	58.42	3	3	59.67	4	57.17
Lack of credit facility	4	57.50	4	4	57.50	3	57.50
Lack of improved breeding ram	5	53.67	5	5	53.00	6	54.33
Illiteracy	6	52.00	7	6	50.67	7	53.33
Inadequate price for the animals	7	53.17	6	7	50.17	5	56.17
High cost of concentrate feeding	8	48.92	9	8	49.83	10	48.00
Lack of knowledge about scientific sheep rearing	9	51.08	8	9	49.17	8	53.00
Higher lamb mortality	10	48.67	10	10	46.17	9	51.17

Lack of credit facility was the fourth serious constraint identified (Pooled RBQ value, 57.50) in the study area. Based on tehsil wise RBQ values, the constraint was ranked fourth in Bikaner tehsil and third Lunkarnsar with RBQ value 57.50 and 57.50 respectively.

Lack of improved breeding ram was the fifth rank constraint in the surveyed area. Based on tehsil wise RBQ values the constraint was ranked fifth in Bikaner tehsil and sixth in Lunkarnsar tehsil with RBQ value 53.00 and 54.33 respectively.

Inadequate price for the animals ranked sixth with pooled RBQ value 53.17. This constraint ranked fifth in Lunkarnsar and seventh in Bikaner with RBQ value 56.17 and 50.17 respectively.

The pooled RBQ values for the constraint

Illiteracy was obtained at 52.00 and ranked at seventh. This constraint ranked seventh in Lunkarnsar while, sixth in Bikaner tehsil.

For lack of knowledge of scientific sheep rearing, pooled RBQ value was 51.08 and ranked at eighth. On the basis of tehsil wise RBQ values, ranked as eighth in Lunkarnsar while, ninth in Bikaner with RBQ value 53.00 and 49.17 respectively.

High cost of concentrate feeding ranked ninth with pooled RBQ value 48.92. This constraint ranked eighth in Bikaner while, tenth in Lunkarnsar with RBQ value 49.83 and 48.00 respectively.

DISCUSSION

Constraints being perceived by sheep rearers in arid and semi-arid region of Rajasthan. The major constraints were non-availability of green fodder, lack of grazing area, lack of veterinary services, lack of credit facility, lack of improved breeding ram, inadequate price for the animals, illiteracy and poor knowledge of scientific sheep rearing. These findings are almost similar to that recorded by Nitharwal (1999), Kulkarni and Jawahar (2000), Kumar (2003), Mohan and Singh (2004), Meganathan *et al*. (2004), Senthil and Meganathan (2005), Singh and Chauhan (2006), Porwal *et al*. (2006), Gurjar and Pathodia (2008), Suresh *et al*. (2008) but are contradictory with findings of Eswara and Radha (1996), Misra *et al*. (2000), Kumaravel and Krishnaraj (2007), Swarnkar and Singh (2010).

On the basis of RBQ values lack of grazing area (64.08) was most serious constraint perceived by the farmers followed by non-availability of green fodder, lack of veterinary services, lack of credit facility and lack of improved breeding ram.

ACKNOWLEDGEMENT

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