

Constraints in Livestock Management Practices Perceived by Tribal Livestock Owners of Banswara District of Rajasthan

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ABSTRACT

The present study is highlighted different constraints perceived by tribal livestock owners under different livestock management practices. The study was conducted in purposively selected Banswara district of Rajasthan. A total of 120 tribal families were selected from 8 selected villages of 2 tehsils namely Bagidora and Kushalgarh. The quantitative and qualitative data were collected through interview schedule, discussion, observation and available secondary sources. A list of constraints was prepared and divided in five main categories i.e. socio-economic, feeding, breeding, management and health care constraints. The respondents were asked to assign rank to each of listed constraint according to perceived intensity. On the basis of rank assigned by all of the respondents to each constraint, Rank Based Quotient for individual constraint was calculated. Lack of grazing pasture land, poor production status of livestock, repeat breeding problem, poor economic condition of family and high cost of treatment for diseased animal were considered as major constraints reported by tribals having RBQ values 98.34, 96.83, 96.67, 94.17 and 93.67 respectively.

Key words: Constraints, Livestock management, Tribals and RBQ;

Livestock is important source of income and employment in rural sector. Seventy per cent of livestock of country is owned by 67 per cent of small, marginal farmers and landless labourers. Forty per cent of the people living below poverty line are largely dependent on livestock for their precarious existence (Rao, 2004). Livestock help to meet the equity objective in rural development through their contribution to the cash income of small and marginal farmers and landless labourers. The rural poor have little access to land and thus there are limited opportunities for them in crop production. On the other hand, livestock wealth is more equitably distributed compared to land and the expanding demand for animal food products generates significant opportunities for the poor to escape poverty through diversifying and intensifying livestock production. The route to poverty reduction through livestock, however, is not free from threats. Poor livestock producers face numerous constraints in production and marketing. They are constrained by a lack of access to capital, quality inputs, improved technology and support services. They have small marketable surpluses, while local rural

markets are thin, and sales to distant urban markets result in very high transaction costs. Marketing and transaction costs of livestock products are high taking 15-20 per cent of the sale price (Birtal, 2008). The productive potential of animals depends crucially on the quality of nutrition, genetic makeup and the animal health system (Ahuja et al. 2003). Basically milk production (productivity) depends on four dimensions of animal husbandry practices i.e. breeding, feeding, health-care and management practices. Initially low genetic potential and low plane of nutrition due to lack of concentrate, feed and fodder both in quantity and quality particularly green fodder are considered major cause of low productivity. Feed and fodder scarcity is identified as the most limiting constraint accounting for half of the total loss followed by problems in reproduction and health (Anonymous, 2011). The tribals are the weakest among the weaker sections of the society because of the long periods of isolation and economic deprivation. The crop enterprise could not help the tribal farmers to increase their income and employment because of poor productivity, low availability of per capita arable land

and also lack of other income generating avenues. Hence, there is heavy dependence of tribal households on animal husbandry activities. Thus, livestock keeping generates a continuous stream of income and employment, makes it an inevitable component of tribal development. However, there are area specific and species specific constraints in carrying out the livestock management practices by the tribal community. Hence, the present study was carried out to identify the constraints in livestock farming of tribal areas and to suggest suitable policy measures to overcome the hurdles faced by tribal livestock farmers.

METHODOLOGY

The present study was conducted in Banswara districts of Rajasthan. District was selected purposively on the basis of highest tribal population in the state. Out of total five tehsils in the district, Bagidora and Kushalgarh were selected purposively due to the existence of large number of tribal families. The district is predominantly inhabited by tribals mainly Bhils, Bhil Meenas, Damor, Charpotas, Ninamas etc. A village wise comprehensive list of number of tribal families residing in different villages was prepared with help of panchayat samities, village patwari and local tribals. Four villages selected from Bagidora tehsil and another four villages from Kushalgarh tehsil. Thus a total of eight villages have been selected from these two tehsils of district. Total fifteen tribal families residing in selected village, owning large number of livestock and depended significantly on them as contributory family source of income were selected randomly from each village. Thus, a total of 120 tribal families were selected randomly from eight selected villages of two tehsils for present study. A personal interview schedule was developed keeping in view the objective and variables of study. Background information of the study area was obtained through personal observation, consultation with officials and available reports. Quantitative and qualitative data were collected through observation, interaction dialogue, detailed discussion with key informants, aged persons and housewives. Departmental documents, records, reports, books, newspaper reports and other available literature were also consulted to collect secondary data on different parameters. The data were collected, compiled, tabulated and analyzed using rank based quotient (RBQ).

RBQ-rank based quotient: For calculating RBQ value,

a list of constraints was prepared after informal discussion with respondents. Once the constraints were identified, each respondent was asked separately to assign a rank against each of listed constraints according to its perceived severity. Rank Based Quotient (RBQ) was calculated on the basis of rank assigned by each respondent to each constraint. The problem having highest RBQ value emerged as most serious constraint reported by the respondents. Thus, each respondent had his own independent opinion regarding the seriousness of the problem faced by him. On the basis of ranks provided by the respondents, rank based quotient (RBQ) for each problem was calculated by using following formula:

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

Where,

f_i = the frequency of respondents for the i th rank of the problem

N = the total number of respondents

n = the number of ranks

RESULTS AND DISCUSSION

Socio-economic constraints: Major constraints faced by the tribal livestock owners in their socio-economic category are grouped in Table with their RBQ as well as ranks. The analysis revealed that first and foremost socio-economic constraint was poor economic condition of family having RBQ value 94.17. Small land holding and lack of marketing facility in village were considered as moderately severe constraints having RBQ value above 55, while less transportation and communication facility in village and low education level were considered as less severe problems having RBQ value below 50. According to tribals, lack of transport facilities in village was big hindrance to carry diseased animal to hospital. Thus, lack of transport facility discouraged them to utilize veterinary services timely. *Rajput and Tripathi (2010)* reported that lack of transport facilities in village was considered as second most serious constraints with RBQ value of 92.18.

Feeding constraints : The results indicated that lack of grazing pasture land was most severe constraint having RBQ value 98.34, while high cost and non-availability of cattle feed and feed supplement/mineral mixture in village considered as less severe problems having RBQ value 32.67. Lack of knowledge about balance feeding of livestock, high cost of feed/fodder and lack of knowledge about preservation of feed and fodder were considered

as moderately serious problems having RBQ values 78.33, 61.34 and 45.33, respectively. *Narian and Kar (2005)* also reported that shrinkage of grazing land and scarcity of fodder, feed and water were the problems facing by pastoral nomads communities of Western Rajasthan. Continued reduction of grazing area emerged as most serious problem in Ajmer and Jaipur districts of Rajasthan, reported by *Kumar (2007)* for sheep farmers, having RBQ values of 89.07 and 80.36, respectively. *Singh et al. (2004)* also found that in Almora district of Uttaranchal, serious problems were shortage of feeds and fodders during dry season, traditional method of feeding. *Tanwar (2011)* reported that the main constraints were lack of knowledge about balanced feeding, high cost of feeds and fodder in feeding management in semi arid region of Rajasthan. *Taylor et al. (2012)* reported that in Udaipur district of Rajasthan, major problems were non-availability of green fodder throughout the year and inadequate knowledge about scientific feeding of dairy animals faced by tribal farmers. *Varaprasad et al. (2013)* observed that high cost and non availability of feed ingredients and lack of sufficient grazing land were the major problems in Chittoor district of Andhra Pradesh.

Breeding constraints : A major constraint in animal breeding practices was repeat breeding problem in animals having RBQ value 96.67. This might be due to lack of balanced feeding to the milch animals. High cost of breeding bull/buck and lack of knowledge about cross breeding were found to be the second and third major constraints having RBQ values 79 and 58.84, respectively. Whereas, non-availability of improved sire/breeding bull in village and distant location of A.I. centre in village were found to be less severe constraints having RBQ values 42.17 and 32, respectively. *Patel et al. (2013)* found that repeat breeding in cows was major constraint followed by low conception rate through artificial insemination in Narmada valley of Gujarat. *Meena and Fulzele (2006)* observed that in Banswara and Udaipur, lack of good breed-able bulls, ill equipped A.I. centres and distant location of veterinary hospital were repeated complaints of tribal farmers. *Kumar et al. (2011)* found major constraints were ill equipped A.I. services, repeat breeding and lack of pedigree bull for natural services in Madhuni district of Bihar. *Tanwar (2011)* reported that main constraints were inadequate availability of breeding buck, lack of knowledge about breeding practices and indiscriminate breeding practices

Table 1: Distribution of respondents according to RBQ of different constraints perceived by them N=120

Constraints	RBQ	Rank
<i>Socio-economic constraints</i>		
Low education level	32.66	V
Poor economic condition of family	94.17	I
Small land holding size	80.50	II
Less transportation and communication facility	45.34	IV
Lack of marketing facilities in village	56.66	III
<i>Feeding constraints</i>		
Lack of grazing pasture land	98.34	I
High cost of feed/fodder	61.34	III
Lack of knowledge about balance feeding	78.33	II
Lack of knowledge about preservation of feed and fodder	45.33	IV
High cost and non-availability of cattle feed and feed supplement/mineral mixture in village	32.67	V
<i>Breeding constraints</i>		
Non-availability of improved sire/breeding bull in village	42.17	IV
High cost of breeding bull/buck	79.00	II
Distant location of A.I. centre	32.00	V
Lack of knowledge about cross breeding	58.84	III
Repeat breeding problem in animals	96.67	I
<i>Management constraints</i>		
High cost of construction of animal shed	61.83	III
Lack knowledge about scientific management of livestock	79.84	II
Poor production status of livestock	96.83	I
Lack of dairy cooperative society in village	46.99	IV
Management require more family labour	33.83	V
<i>Health care constraints</i>		
High incidence of diseases among livestock	35.99	V
Distant location of veterinary health centre	44.33	IV
High cost of animal disease treatment	93.67	I
Lack of knowledge about animal diseases	77.66	II
Lack of door step service provider	59.83	III

faced by goat farmers in semi arid part of Rajasthan. According to *Taylor et al. (2012)* repeated breeding of animals and lack of pedigree bulls for natural services were major breeding problems of the tribal milk producers in Udaipur district of Rajasthan. *Varaprasad et al. (2013)* reported that high incidence of repeat breeding were the major problems in Chittoor district of Andhra Pradesh.

Management constraints: Poor production status of

livestock was considered as more severe constraint among management constraints having RBQ value 96.83. This might be due to local breeds and unproductive animals maintained by tribal farmers. While, lack of knowledge about scientific management of livestock and high cost of construction of animal shed considered as moderately severe problems having RBQ value 79.84 and 61.83, respectively. Lack of dairy cooperative society in village and animal management require more family labour were considered as less severe constraints having RBQ value 46.99 and 33.83, respectively. Thus, lack of dairy cooperative society in village, discouraged them to rear costly and improved breeds of livestock. *Meganathan et al. (2010)* found that in hilly areas of Tamil Nadu, lack of scientific knowledge on livestock farming was the major constraint perceived by the tribal livestock farmers.

Health care constraints : High cost of treatment of diseased animal was found major health care constraint having RBQ value 93.67. This might be due to veterinary officers charge high fees for doorstep service. Lack of knowledge about animal diseases and their control and non-availability of animal health service provider in village were considered as moderately serious constraints among tribal livestock owners of study area having RBQ value 77.66 and 59.83, respectively. Distant location of veterinary health centre and high incidence of diseases among livestock were found to be less serious constraints having RBQ value below 45. *Patel et al. (2013)* observed that lack of knowledge about disease control and high cost of veterinary treatment was the major problems in dairying in the tribal households of

Narmada valley of Gujarat. *Meena and Fulzele (2006)* found that distant location of veterinary dispensary and cost of veterinary medicines and vaccines is very high were major constraints faced by tribal farmers in Banswara and Udaipur districts.

CONCLUSION

Thus, it can be concluded that the major constraints faced by tribal livestock owners were poor economic condition of family, lack of grazing pasture land, repeat breeding problem in animals, poor production status of livestock and high cost of treatment of diseased animal in the study area. Suitable policy implications that are more appropriate for making improvement in the backward condition of the tribal groups are as follows; Poor economic condition of family may be overcome by formulating the plan and livestock development programmes in tribal specific area by the policy makers. In order to augment fodder production in the tribal area, tribal farmers should be encouraged to allocate adequate land for fodder cultivation, besides initiating concerted efforts to improve the productivity of such lands. Since, repeat breeding problem in animals was felt as the main constraint by the tribal livestock farmers in the study area, the concerned authorities may be suggested to establish breeding centers in the study area. In order to ameliorate the productivity level of the existing livestock resources of the tribal people, steps should be initiated to provide the facilities such as health care, provision of technical help and facilities for improving the breed of the animals at the reasonable cost.

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