



ISSN (E): 2277- 7695  
ISSN (P): 2349-8242  
NAAS Rating: 5.23  
TPI 2022; SP-11(4): 838-840  
© 2022 TPI  
[www.thepharmajournal.com](http://www.thepharmajournal.com)  
Received: 16-02-2022  
Accepted: 18-03-2022

**Shridhar,**  
PG Scholar, Department of  
LPM, Veterinary College Bidar,  
KVAFSU, Bidar, Karnataka,  
India

**Vivek M Patil,**  
Associate Professor & Head,  
Department of LPM, Veterinary  
College Bengaluru, KVAFSU,  
Bengaluru, Karnataka, India

**Prashant G Waghmare,**  
Associate Professor, Department  
of LFC, Veterinary College  
Bidar, KVAFSU, Bidar,  
Karnataka, India

**Satish Chandra Biradar,**  
Associate Professor & Head,  
Department of LPM, Veterinary  
College Bidar, KVAFSU, Bidar,  
Karnataka, India

**Channappagouda Biradar**  
Assistant Professor & Head,  
BRIC, KVAFSU, Bidar,  
Karnataka, India

**Prakashkumar Rathod**  
Assistant Professor & Head,  
LRIC (Deoni), KVAFSU,  
Bidar, Karnataka, India

**Corresponding Author**  
**Vivek M Patil,**  
Associate Professor & Head,  
Department of LPM, Veterinary  
College Bengaluru, KVAFSU,  
Bengaluru, Karnataka, India

## Constraints to sheep production in Karnataka

**Shridhar, Vivek M Patil, Prashant G Waghmare, Satish Chandra Biradar, Channappagouda Biradar and Prakashkumar Rathod**

### Abstract

The study was undertaken to identify the constraints perceived by sheep farmers in Bidar district of North Karnataka, India. The constraints were recorded by means of personal interview using a structured schedule and a multistage stratified sampling procedure. A total of 150 respondents from Bidar district formed the study group. Data from the schedules was compiled and analysed using the Garrett's ranking technique for major constraints and the Likert's Scale technique for minor constraints to identify the most important constraints which influence the rearing of sheep. The major constraints faced by sheep farmers was marketing and it ranked top in the constraints with a mean score of 69.98, followed by health care issues with a mean score of 61.68, production related with mean score 51.30, general constraints with a mean score of 36.42 and lastly feeding constraints with a mean score of 33.06. Among the minor constraints, susceptibility to disease (99.33), non-availability of good quality rams (91.33) and lamb mortality (79.33), acute fodder shortage during drought (88.00), poor community grazing lands (86.00), high cost of treatment (100.00), spread of infectious disease (99.33), low sale price (100.00), inaccurate pricing (94.00), difficulty in obtaining finances (100.00) and inadequate training (95.33) were perceived to be the most important.

**Keywords:** Sheep production, constraints, Karnataka

### Introduction

Livestock play a vital role in the Indian economy. About 20.5 million people depend upon livestock for their livelihood. Livestock contribute 16% to the income of small farm households as against an average of 14% for all rural households. Livestock sector provides livelihood to two-thirds of the rural community. It also employs about 8.8% of the population in India. Sheep provide livelihood to landless and marginal farmers, and the impoverished shepherds have considerable room for economic progress. It is an essential component of the dry land farming system. They are very well adapted to the harsh climate, long migration, resistance against tropical diseases, poor nutrition, poor water quality and shortage of drinking water. Sheep can be reared as free-range or under housing inside a shed. Penning sheep in the harvested field enhances soil fertility by the richness of nutrients in the dung and brings additional income to the flock owners. So, with low investments, it can be made into a profitable venture.

India is rich in livestock resources and ranks third in the world in sheep population. Sheep provide livelihood to landless and marginal farmers, and the impoverished shepherds have considerable room for economic progress. It is an essential component of the dry land farming system. They are very well adapted to the harsh climate, long migration, resistance against tropical diseases, poor nutrition, poor water quality and shortage of drinking water.

According to 20<sup>th</sup> Livestock Census 2019 <sup>[1]</sup>, India has 74.26 million sheep, which accounts for 13.8% of total farm animals. Total sheep population has increased by 14.13% over previous Livestock Census 2012. The indigenous/non-descript sheep are 70.17 million, an increase of 14.5 per cent over the previous Census.

With this background, a detailed study of sheep husbandry practices associated with profitable sheep rearing in Bidar district of Karnataka State was taken up. Sheep rearing is an important animal husbandry activity in Bidar district which contributes substantially to the income of farmers, particularly the landless labourers and the marginal farmers. Their close grazing nature, ability to utilize very low set vegetation which no other livestock species can utilize, and also the capacity to cover long distance in search of feed and water, makes the sheep one of the ideal livestock species of this region. The study aimed to identify the constraints perceived by sheep farmers.

## Materials and Methods

The present study was conducted in Bidar district situated in Karnataka State. Geographically, it resembles the crown of the state occupying its north-eastern corner, and lies between 17°35' and 18°25' North latitude and 76°42' and 77°39' East longitude. Bidar district has an area of 5448 square kilometres and is bounded by Maharashtra on the north-west, Telangana on the east, and Gulbarga of Karnataka on the south. The sheep population of district is 85,948, comprising five talukas-Bidar 12,174, Humnabad 8,970, Basavakalyan 11,818, Aurad 40,928 and Bhalki 12,058.

The district experiences semi-arid climate with extreme summer; the dust storms and severe heat waves are common in the district between April and May. Coldest months are December and January. The temperature varies between 20 °C and 42 °C. The summer season in Bidar starts in the first week of March and lasts until mid-June. This is followed by southwest monsoon which continues till late September and from September to end of January is winter.

**Sampling design:** A multistage stratified random sampling was adopted to select the talukas, villages and respondents for the present study. The first stage of selection involved choosing all the five major talukas viz. Bidar, Aurad, Bhalki, Basavakalyan and Humnabad based on larger sheep population as per 2019 Livestock Census and consultations with officials of the Department of Animal Husbandry and Veterinary Services. In the second stage of selection, three representative hoblis were selected from each taluka. In the next stage, two villages were selected from each hobli after consultation with field staff of the Animal Husbandry department. In the final stage of selection, sheep farmers were selected at random from each village for collection of information regarding the existing management practices and identification of the constraints faced in sheep rearing. Five sheep farmers from each village were identified based on their sheep stock position with help of Veterinary officers of Department of Animal Husbandry and Veterinary Services. Detailed information on production system and husbandry practices were collected using structured pretested interview schedule. A total of 150 respondents from Bidar district formed the study group.

**Data collection and analysis:** Relevant variables to study the constraints to sheep production were selected based on the pilot survey conducted in a non-sampling area and discussion with experts. This formed the basis for developing the schedule of enquiry. The schedule of enquiry was pre-tested and appropriate modifications in the construction and sequence of questions were made. The structured and pre-tested interview schedule were filled on the spot by personal observations and face-to-face interview with sheep owners. Parameters studied included major constraints viz. production-related, feeding, health care, marketing and

general management, with minor constraints within each sub-heading. Data from the schedules was compiled and analysed using the Garrett's ranking technique (Garrett and Woodworth, 1971) for major constraints and the Likert's Scale technique (Likert, 1932) for minor constraints to identify the most important constraints which influence the rearing of sheep.

## Results and Discussion

**Garret's ranking of major constraints:** The mean Garret's score and ranks of the major categories of constraints in sheep production are presented in Table 1. The major constraints faced by sheep farmers was marketing and it ranked top in the constraints with a mean score of 69.98, followed by health care issues with a mean score of 61.68, production related with mean score 51.30, general constraints with a mean score of 36.42 and lastly feeding constraints with a mean score of 33.06. Marketing problems were ranked as the most important constraint in all the talukas also.

**Likert's Scale technique for minor constraints:** The distribution of responses and modal values of the constraints in sheep production are presented in Table 2. In the category of production related constraints, majority of the respondents identified susceptibility to disease (99.33), followed by non-availability of good quality rams (91.33) and lamb mortality (79.33) as major constraints; difficulty in detecting oestrus and reproductive problems (68.67) as a moderate constraint; and delayed maturity (33.33) as minor constraint.

Among feeding acute fodder shortage during drought (88.00) and poor community grazing lands (86.00) were major constraints, followed by shortage of green fodder (76.00) and high cost of crop residues which were moderate; and high cost of fodder production (72.00) and crop residues (45.33) as minor constraints. As none of the respondents in the study area fed their flock with concentrates, there is no constraint with respect to feeding concentrates.

With respect to health care, high cost of treatment (100.00), followed by spread of infectious disease (99.33) were major constraints, while inadequate vaccination (67.33) and distant veterinary facilities (62.00) were moderate constraints perceived by sheep farmers.

In the marketing practices low sale price (100.00) and inaccurate pricing (94.00) were major constraints, whereas cheating in livestock markets (63.33) was a moderate constraint.

Difficulty in obtaining finances (100.00) and inadequate training (95.33) were other major constraints, followed by high labour costs (60.67) and disinterest in livestock rearing (58.67) which were perceived by the shepherds as moderate constraints.

These findings are in accordance with the findings of [2, 5, 6, 7, 8, 9, 10].

**Table 1:** Mean Garrett's scores and ranks of the major categories of constraints in sheep production practices in different talukas of Bidar district

Constraint	Bidar	Bhalki		Aurad		Humnabad			Basavakalyan		Overall	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Production	57.06	2	52.00	3	48.6	3	50.46	3	48.36	3	51.30	3
Feeding	28.00	5	33.16	5	32.83	5	35.83	4	35.50	4	33.06	5
Health care	52.46	3	55.56	2	66.03	2	66.20	2	68.10	2	61.68	2
Marketing	71.63	1	73.00	1	68.50	1	68.30	1	68.50	1	69.98	1
General	43.93	4	39.46	4	36.03	4	31.20	5	31.50	5	36.42	4

**Table 2:** Distribution of responses, modal values and ranks of the constraints in sheep production practices in different talukas of Bidar district (as per Likert's Scale technique)

Constraint	Responses (%)				Rank
	Major	Moderate	Minor	Nil	
<b>Production related</b>					
Lamb mortality	79.33	20.67	0	0	3
Delayed maturity	2.00	64.67	33.33	0	6
Reproductive problems	0.67	68.67	30.67	0	5
Non-availability of good quality rams	91.33	8.67	0	0	2
Difficulty in detecting estrous	2.67	71.33	26.00	0	4
Susceptibility to disease	<b>99.33</b>	0.67	0	0	1
<b>Feeding</b>					
Poor community grazing lands	86.00	14.00	0	0	2
High cost of fodder production	0	8.00	72.00	20.00	5
Shortage of green fodder	0	76.00	23.33	0.67	3
High cost of crop residues	0.67	45.33	42.00	12.00	4
Acute fodder shortage during drought	88.00	12.00	0	0	1
<b>Health care</b>					
Distant veterinary facilities	25.33	62.00	12.67	0	4
High cost of treatment	100.00	0	0	0	1
Inadequate vaccination	67.33	32.67	0	0	3
Spread of infectious diseases	99.33	0.67	0	0	2
<b>Marketing</b>					
Low sale price	100.00	0	0	0	1
Inaccurate pricing	94.00	6.00	0	0	2
Cheating in livestock markets	63.33	36.67	0	0	3
<b>General</b>					
Disinterest in livestock rearing	3.33	38.00	58.67	0	4
High labour costs	12.67	25.33	60.67	1.33	3
Inadequate training	95.33	4.67	0	0	2
Difficulty in obtaining finance	100.00	0	0	0	1

**Note:** Modal values are in bold font

## Conclusion

The top most constraints in sheep farming in the present study was marketing practices. This is due to the unscientific and unorganized marketing facilities and lack of marketing knowledge of the farmers. The second major constraint was found to be inadequate health care facility which includes high cost of treatment and losses due to spread of infectious diseases. Non-availability of quality rams, susceptibility to diseases and high lamb mortality were the other major production related constraints. Efforts must be made to subsidise the veterinary care requirements of small sheep farmers, especially regular deworming costs. Other major general constraints include difficulty in obtaining finance and inadequate training. These can be addressed by way of appropriate Government schemes which can help small farmers expand their flock size. Feeding issues were the least important among the constraints studied as most of the farmers followed the traditional practice of grazing being the only source of nutrition for the sheep. However, fodder scarcity during drought periods and poor quality of community grazing lands are challenges that need to be solved.

## References

1. BAHS (Basic Animal Husbandry Statistics) Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Food and Food Processing Industries, Government of India, New Delhi, 2019.
2. Dineshkumar, Gurmej Singh, Anand Jain. Characterization and evaluation of 142 Muzaffarnagari sheep. *Indian J Small Ruminants*. 2006;12:48- 55.
3. Garrett HE, Woodworth RS. *Statistics in Psychology and Education*. Vakils, Feffer and Simons, Bombay, 1971.
4. Likert R. A technique for the measurement of attitudes. *Archives of Psychology*. 1932;140:1-55
5. Rao KA, Rao KS, Rao SJ, Ravi A, Anitha A. Analysis of sheep production systems: North coastal zone of Andhra Pradesh. *International J Agri Sci Vet Med*. 2013;1(3):131-144.
6. Sagar RL, Biswas A. Constraints in Garole sheep rearing in Sunderbans: Farmer's perception. *Indian J. Small Ruminants*. 2008;14:89-92.
7. Sankhyan V, Pradeep Kumar Dogra, Thakur YP. Attributes of migratory goat and sheep farming and impact of some improved management strategies enroute migration in adopted flocks of Western-Himalayan region of India. *Indian Journal of Animal Sciences*. 2016;86(9):1079-1084.
8. Saravanakumar AK. A study on the migratory pattern of Nellore sheep and their performance. M.V.Sc Thesis submitted to Acharya N G Ranga Agricultural University Hyderabad Andhra Pradesh, 2003.
9. Shiva Kumara C, Reddy BS and Suresh S Patil. Small ruminant production in Karnataka State of India - An overview. *Euro J Zool Res*. 2017;5(1):28-35.
10. Sreekanth T. A study on migratory aspects of sheep rearing in Anantapur district. M.V.Sc, thesis, Sri Venkateswara Veterinary University Tirupati, Andhra Pradesh, India, 2016.