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Socio-economic status and constraints faced by shepherds in Telangana

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Abstract
A study on socio-economic status and constraints faced by the shepherds of native sheep prevalent in Nagarjuna sagar area of Nalgonda, Nagarkurnool and Suryapet districts of Telangana was carried out by collecting information from 89 farmers in a total of 30 villages of 10 mandals under field conditions. In the present study, most of the farmers interviewed were of the middle age (74.16%) and having medium family size (68.54%). Majority (60.67%) of the shepherds were illiterates with sheep rearing as primary occupation (95.51%) and annual income ranged from Rs. 50,000 to Rs. 75,000. The average land holding capacity was 2.96 acres and most of them (43.82%) were small farmers. The average annual income of the shepherds was Rs.77, 921. It was noted that availability of veterinary services was not a constraint but lack of organized meat markets & scientific knowledge of the farmers, non-availability of concentrate feed, transport facility, grazing lands, water facilities, middle men hindrance were found to be major constraints faced by shepherds in the study area.

Keywords: Socio-economic status, Telangana, sheep rearing, annual income, constraints

1. Introduction
Sheep is one of the important small ruminant species of livestock in India that contributes greatly to the agrarian economy. Sheep rearing offers dietary protection and insurance to the farmer at the time of crisis because of natural calamities & crop failure and sheep is considered as the "finance elevator" of the poor farmer (Rather *et al*., 2020) [6]. According to 20th livestock census (2019), India has about 74.26 million sheep population with 44 registered breeds and ranks 3rd in the world sheep population. About 13.8% of total livestock is contributed by sheep in the country. Telangana ranks first in sheep population (19.1 million) in the country (BAHS, 2019) [1] and is having highly productive sheep breeds like Deccani and Nellore. In certain pockets of Telangana especially in Nagarjuna sagar area of Nalgonda, Nagarkurnool and Suryapet districts, farmers prefer and rear a particular type of native sheep referred to as "Chukkajaala gorre" that were probably evolved over decades. The physical features are very distinct and don't resemble either completely Deccani or Nellore. The farmers in these areas prefer this native sheep due to their heat tolerance, ability to thrive on scarce feeding, disease resistance & hardiness. Thus, the present study is conducted to document the socio-economic status and constraints faced by the shepherds rearing these native sheep in Telangana.

2. Materials and Methods
The data was collected from 89 shepherds belonging to 30 villages of 10 mandals in Nalgonda, Nagarkurnool and Suryapet districts of Telangana. Five mandals in Nalgonda district, three mandals in Nagarkurnool district and two mandals in Suryapet district were chosen for the present study. Two to four villages from each of the specified mandals were picked from each district. From each village 3 to 4 sheep farmers were taken to record the data. Information on socio- economic status and constraints faced by the shepherds was collected with the help of a structured questionnaire by oral interaction with the farmers maintaining sheep flocks in the breeding tract.

3. Results and Discussion
3.1 Socio-economic status of farmers
Socio-economic status of farmers was presented in Table 1. The present investigation on shepherds rearing these native sheep revealed that the majority (74.16%) of the shepherds belonged to middle age group followed by old age (15.73%) and young age group (10.11%).

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This shows that most of the young people from the study area were preferring new vocations and alternative occupations rather than sheep farming. These observations concur well with the findings of Rafiqul et al. (2019) [8], Shaik and Sharma (2019) [13] and Srinivasan & Roopa (2021) [15] who also reported that most of the shepherds were in middle age group.

The overall mean family size of the shepherds was found to be 5.20 members per family in the present study. Reddy et al. (2020) [10] and Rajanna et al. (2012) [7] while studying socio-economic status of sheep farmers of Andhra Pradesh also reported a similar average family size of 5.44 and 5.69 respectively. Among the farmers surveyed 68.54% shepherds were having medium sized family (4 to 6 members) followed by large family with members above 6 (19.10%) and small family having up to 3 members (12.36%). Similar findings of majority of medium sized family were found in the reports of Choudary et al. (2015) [2] and Reddy et al. (2020) [10] in Macherla brown sheep, Rafiqul et al. (2019) [8] in sheep farmers of Assam.

Majority of the shepherds (60.67%) were illiterates, while 28.09% were with primary education, 8.99% with secondary school education and 2.25% with a higher education of inter and above. Similar level of education among shepherds was reported by Sireesha et al. (2015) [12], Rafiqul et al. (2019) [8], Shaik and Sharma (2019) [13] and Sundaramoorthy et al. (2021) [16] in Pattanam adu sheep. The higher rate of illiteracy among farmers in the present study could be attributable to a lack of awareness and poverty and they entered the sheep rearing by tradition. As a result, adopting scientific ways of rearing and accepting new practices became a big impediment for farmers.

For majority of the farmers (95.51%) sheep rearing was the primary occupation and for only 4.49% of the farmers it was subsidiary, with agriculture as main occupation. The landless laborers and marginal farmers adopted sheep rearing as main source of income generation. Similar observations were made in the reports of Choudary et al. (2015) [2] in Macherla brown sheep farmers, Sireesha et al. (2015) [12], Shaik and Sharma (2019) [13] in Andhra Pradesh, Sundaramoorthy et al. (2021) [16] in Pattanam adu sheep farmers.

In the present survey it was noted that most (43.82%) of the farmers surveyed were small farmers holding 2.5 to 5 acres of land followed by 22.47% marginal farmers having 0 to 2.5 acres, 13.48% medium farmers who possessed 5 to 10 acres of land and 20.22% were landless. The average land holding capacity was 2.96 acres. The results were close to the findings of Shashikant (2014) [14] in Mouli sheep farmers, Reddy et al. (2020) [10] in Macherla sheep farmers, Sundaramoorthy et al. (2021) [6] in Pattanam adu sheep farmers who also reported that majority were small farmers. On contrary to these results majority of the farmers were landless in the reports of Rajanna et al. (2012) [7], Sireesha et al. (2015) [12] and Rafiqul et al. (2019) [8].

Among the farmers chosen, the major source of income was either from only sheep rearing (57.30%) or from both sheep rearing and agriculture (42.70%). The average annual income of the shepherds was Rs.77, 921. It was observed that 52.81% farmers generated an annual income ranging from Rs. 50,000 to Rs. 75,000. The low income might be due to not adopting to improved managemental practices and may be due to flock size. The results were similar to the reports of Shashikant (2014) [14], Choudary et al. (2015) [2], Rafiqul et al. (2019) [8], Shaik and Sharma (2019) [13] reported a lower annual income than in the present study.

3.2 Constraints faced by shepherds
The results related to constraints faced by shepherds were presented in Table 2. In the present study, it was observed that availability of veterinary services was not a constraint but the shepherds were found to be constrained by lack of organized markets. Selvam and Safiullah (2002) [11], Rauniyar et al. (2000) [9], Hari et al. (2014) [3] and Choudary et al. (2015) [2] also reported that the lack of organised markets was a constraint faced by the shepherds.

Non-availability of affordable concentrate feed, proper transportation, grazing lands and water facilities were found to be the major constraints to the sheep rearing in the current study. The results in the present study were almost similar to the reports of Kumar (2003) [4], Misra et al. (2007) [5] and Choudary et al. (2015) [2] where, shrinkage of grazing lands, unavailability of green fodder was the major constraint s faced by shepherds in their respective study areas.

It was also observed that lack of scientific knowledge of the shepherds and middle men hindrance in marketing sheep were the other major constraints in the present study. These findings were in agreement with Misra et al. (2007) [5], Hari et al. (2014) [3] and Choudary et al. (2015) [2].

4. Conclusion
From the study it can be concluded that socio- economic status of farmers was characterized by small land holdings, medium family size, middle age group, higher rate of illiteracy and poor annual income. The higher rate of illiteracy among the shepherds could be attributed to a lack of awareness about the importance of education and poverty and they entered the sheep rearing by tradition. As a result, adopting scientific ways of rearing and accepting new practices became a big impediment for farmers. Lack of organized meat markets & scientific knowledge of the farmers, non-availability of concentrate feed, transport facility, grazing lands, water facilities, middle men hindrance were found to be the major constraints faced by shepherds. Improving the educational status enables easier adoption of scientific methods in sheep management that would reduce the mortality percentage in sheep. By organizing the markets and preventing the middle men exploitation in marketing the sheep helps in increasing the economic status of the shepherds.

Table 1: Socio-economic attributes of sheep farmers rearing the native sheep of Telangana (n=89)

S. No	Socio-economic attribute	Category	N	%
1.	Age	Young (<30)	9	10.11
		Middle (31-50)	66	74.16
		Old (>50)	14	15.73
2.	Family size	Small (up to 3 members)	11	12.36
		Medium (4 to 6)	61	68.54
		Large (above 6)	17	19.10
		Overall mean (family size)	5.20	
3.	Education	Illiterate	54	60.67
		Primary	25	28.09
		Secondary	8	8.99
		Inter & above	2	2.25
4.	Main occupation	Agriculture	4	4.49
		Sheep rearing	85	95.5
5.	Land holding (acres)	Landless	18	20.22
		Marginal farmers (0-2.5)	20	22.47
		Small farmers (2.5-5)	39	43.82
		Medium farmers (5-10)	12	13.48
		Large farmers (above 10)	Nil	0
		Overall mean (land holding in acres)	2.96	
6.	Cultivation of fodder crops (n = 74)	Yes	26	29.21
		No	63	70.79
7.	Source of income	Sheep rearing	51	57.30
		Sheep rearing & Agriculture	38	42.70
8.	Annual income (Rs)	50,000 to 75,000	47	52.81
		76,000 to 1,00,000	36	40.45
		More than 1,00,000	6	6.74

n= no. of farmers

Table 2: Constraints in sheep rearing faced by shepherds (n = 89)

S. No	Observation		n	%
1.	Veterinary services	Available	89	100
		Not available	0	0
2.	Organised meat markets	Available	0	0
		Not available	89	100
3.	Concentrate feed	Available	9	10.11
		Not available	80	89.88
4.	Transport facility	Available	10	11.24
		Not available	79	88.76
5.	Grazing land	Available	6	6.74
		Not available	83	93.25
6.	Water facility	Available	9	10.11
		Not available	80	89.88
7.	Scientific knowledge	Present	25	28.08
		Lacking	64	71.91
8.	Middle men hindrance	Present	81	91.01
		Absent	8	8.98

n= no. of farmers

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