www.ThePharmaJournal.com

The Pharma Innovation

Kanakaraja MG
Farm Supervisor,
Animal Husbandry Polytechnic,
Doranahalli, Yadgir, KVAFSU,
Karnataka, India

Mahadevappa D Gouri
Assistant Professor, Department
of LPM, Veterinary College,
KVAFSU, Karnataka, India

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

Channappagouda Biradar
Assistant Professor & Head,
Department of Buffalo Research
& Information Centre,
KVAFSU, Karnataka, India

Kotresh Prasad
Assistant Professor, University
of Agricultural Sciences,
Raichur, Karnataka, India

Prasanna SB
Associate Professor & Head,
Department of LFC, Veterinary
College, KVAFSU, Karnataka,
India

Basavarajaiah DM
Associate Professor& Head (i/c),
Department of Statistics &
Computer Science, Dairy Science
College, KVAFSU, Karnataka,
India

Jagjiwan Ram
Professor & Head, Department
of Animal Science, College of
Agriculture, University of
Agricultural Sciences, Raichur,
Karnataka, India

Corresponding Author
Mahadevappa D Gouri
Assistant Professor, Department
of LPM, Veterinary College,
KVAFSU, Karnataka, India

Socio- economic profile of Kenguri sheep farmers under extensive rearing system in Yadgir district of Karnataka

Kanakaraja MG, Mahadevappa D Gouri, Vivek M Patil, Channappagouda Biradar, Kotresh Prasad, Prasanna SB, Basavarajaiah DM and Jagjiwan Ram

Abstract
The socio-economic profile study of Kenguri sheep farmers was made by assessing 50shepherds and 2153 sheep in Yadgir district of Karnataka state. The majority of shepherds were rearing Kenguri sheep were old aged (55%) followed by middle (25%) and young aged (20%). The literacy level of shepherds was little poor as most of them were illiterates (55%). Sheep rearing was the main occupation (65%) of shepherds along with agriculture and allied activities as their sub occupation. Most of the shepherd's family was joint type (55%) followed by nuclear type (45%) as majority of them were having large family (40%) ranging between 12-16 and others were having medium (35%) and small family (25%). Both overall farming experience (65%) and sheep rearing experience (65%) were having equal majority among the shepherds. As only few of the shepherds were land lords by having large lands (5%) for agriculture and livestock activities and other majority of them were marginal land holders (80%) followed by small land holders (15%). The level of social participation was poor among the shepherds as most of them were not participated (60%) in any social activities and other percent of them were having one organization participation (20%), two or more organizations involvement (15%) and very few public representing shepherds (5%).

Keywords: Socio-economic profile, Kenguri sheep, literacy level, occupation, farming experience, land holding, social participation

Introduction
Livestock has a crucial role in India's economy. A total of 20.5 million people survive only on livestock. Livestock provided 16 percent of revenue for small farm households, compared to 14 percent for all rural households. Livestock provides a living for two-thirds of rural areas. It also employs around 8.8% of India's population. India has a surplus livestock. In terms of sheep population, India is now ranked third in the world. The total number of sheep in India is currently 74.26 million, gaining 14.1 percent from the previous census (20th Livestock census, BAHS, 2019) [5]. As per the recent reports 2020, the total population of Kenguri sheep in southern parts of India that is Karnataka (Raichur, Koppal, Yadgir) is 6.7 lakhs (Gowane *et al*., 2020) [7].
Kenguri is a popular indigenous mutton breed found inRaichur, Koppal and Yadgir districts (north eastern region) of Karnataka state (Appannavar *et al*., 2010) [3]. In the district, Kenguri sheep are mostly reared under an extensive system of rearing. In low-rainfall locations, extensive rearing is commonly practiced. The animals are used to graze in free range fields and pastures with no supplements in extensive rearing system. The animals are grazed in adverse climatic circumstances, reducing productivity and death rates in adult and young stocks of Kenguri sheep are 10-15% and 10-20%, respectively (Acharya, 1982) [1].

Materials and Methods
The study was carried out in Yadgir district of Karnataka state (Fig. 1), to characterise the Kenguri sheep well known for mutton production. The information was collected through 20 flocks, gathered from 50 shepherds by using structured schedule (questionnaire) developed for the study (Channappagouda, 2019) [6].
The present study area Yadgir district in Karnataka, which is primarily an agricultural district, is separated into two agro-climatic zones: eastern transition and north eastern dry zone.

The zones show where in rain-fed dry land agriculture is most prevalent. The district's average rainfall is 636 mm.

Age group, literacy level, occupation, family type and size, farming and sheep rearing experiences, land holding and social participation of shepherds are all included in the questionnaire. A total of 2153 Kenguri sheep were investigated for socio-economic traits.
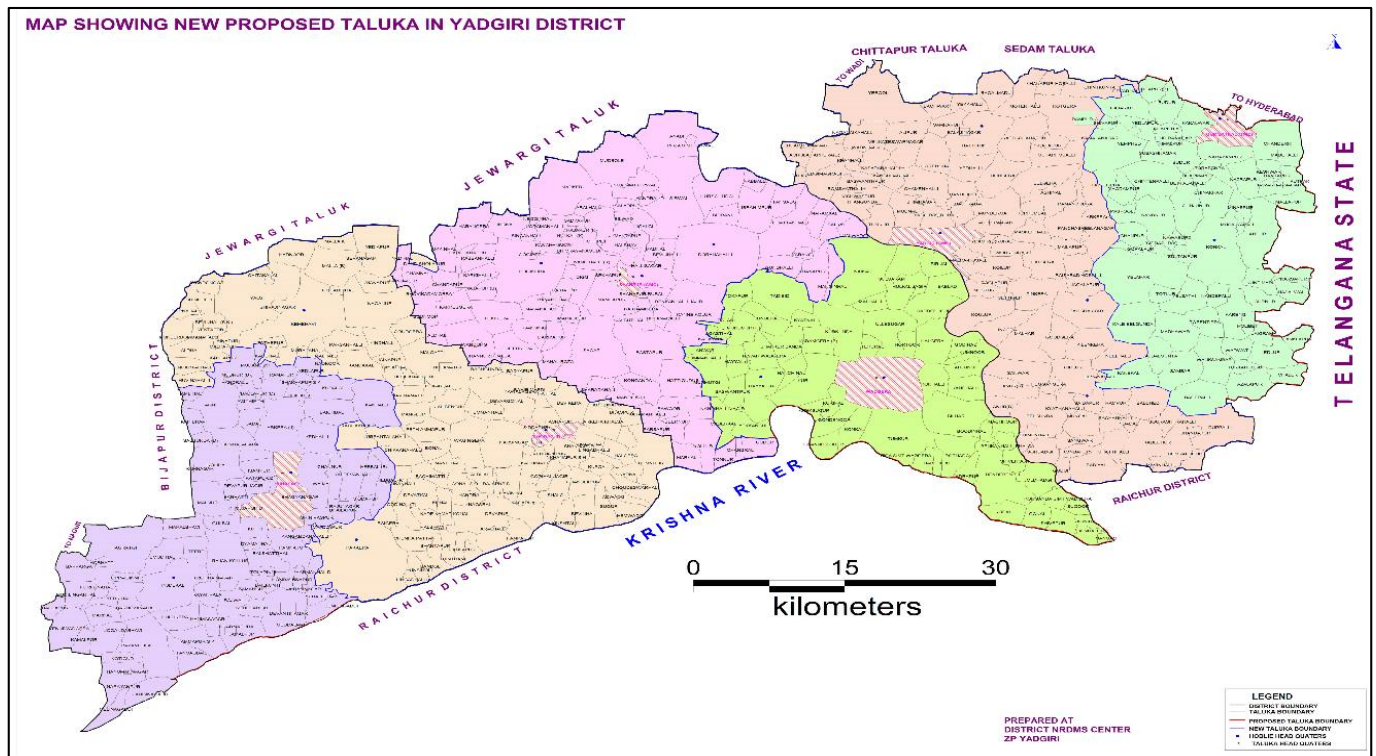

Fig 1: Geographical map of Yadgir district (study area)

Statistical analysis
The data collected was scrutinized and analysed from the statistical tools which are- Mean (average), standard error, percentage by using SPSS version 16.0 software developed by International Business Machines (IBM).

Results and Discussion
Age group
The Table 1 revealed that majority of shepherds in extensive system of rearing were old-aged (55%) followed by middle-aged (25%) and young aged groups (20%).By attracting more youth towards sheep rearing necessitates need for taking up the sheep farming on a commercial scale under modern farming systems. These findings were partly in concurrence with Baluswamy (2004) [4], Mishra *et al*. (2004) [12], Ramesh *et al*. (2012) [16] and Rajanna *et al*. (2012) [14] results.

Education
Most of the shepherds were primary educated (44.44%) followed by secondary (33.33%) and pre-university (22.22%). The level of education was primary schooling and below in extensive system of rearing due to lack of awareness about the importance of education to rural farmers. Similar results were also reported by Suresh *et al*. (2008) [17], Rajanna *et al*. (2012) [14].

Occupation
The shepherds were having sheep rearing as their main occupation (65%) majorly followed by agriculture (20%) and integrated farming (15%). In case of sub-occupation, most of the respondents possessed agriculture and allied activities (60%) as their sub-occupation followed by sheep rearing (35%) and business (5%) inextensive rearing systems. These findings were partly in accordance with the results of Thiruvenkadan *et al*. (2004) [19], Kuldeep *et al*. (2006) [9], and Thilakar and Krishnaraj (2010) [18].

Family type and size
Majority were having joint family (55%) followed by nuclear family (45%) types. Most of them had large family (40%) followed by medium (35%) and small (25%) sizes. This trend was due to increasing individual literacy and job occupation factor leading to establishment of nuclear families for more comfort due to urbanization. These results were in contrast to Thilakar and Krishnaraj (2010) [18] and Mastanbi (2015) [10] findings.

Farming experience
The shepherds had high (65%) farming experienceas a majority followed by medium (20%) and low (15%) overall farming experience. Most of them had high (65%) and medium (20%) and low (15%) experience of sheep rearing. There was huge lag in making poor farmers get the benefits from sheep rearing in rural areas, as the overall percentage of experience in sheep farming was less compared to other farming experience. These findings were in accordance with results of Anandarao (2010) [2] and Rajanna *et al*. (2012) [14].

Land holding
The shepherds having marginal (80%) land holding has a majority followed by small (15%) and large (5%) land holdings. This might be due to joblessness and poverty which was led to family disputes in farmers' community. These results were partly comparable with the findings of Rajapandi

(2005) [15], Kandasamy *et al*. (2006) [8], Thilakar and Krishnaraj (2010) [18] and Mastanbi *et al*. (2017) [11] who reported that majority of the sheep farmers were landless and marginal farmers.

Social participation

The shepherds majorly were not associated with any organization (60%) followed by association with one organization (20%), two or more organization (20%) and as public representative (5%). This trend is due to lack of communication among the farmers and social workers and organizations. These observations are partly in agreement with findings of Thilakar and Krishnaraj (2010) [18] and Praveen Kumar *et al*. (2012) [13].

Table 1: Distribution of shepherds depending on socio-personal characters in extensive system of rearing

Particulars	Extensive (n=20)	
	F	%
Age group in years		
Young (18-33)	4	20.00
Middle (34-49)	5	25.00
Old (50-65)	11	55.00
Education		
Illiterate	11	55.00
Literate	9	45.00
Level of education		
a) Primary	4	44.44
b) Secondary	3	33.33
c) Pre-university	2	22.22
d) Graduation and above	0	00.00
Main occupation		
Agriculture	4	20.00
Sheep rearing	13	65.00
Business	0	00.00
Integrated farmer	3	15.00
Subsidiary occupation		
Agriculture and allied activities	12	60.00
Sheep rearing	7	35.00
Business	1	5.00
Family type		
Nuclear	7	45.00
Joint	8	55.00
Family size group		
Small (2-6)	5	25.00
Medium (7-11)	7	35.00
Large (12-16)	8	40.00
Farming experience in years		
a) Overall farming		
Low (2-18)	2	10.00
Medium (19-35)	5	25.00
High (36-52)	13	65.00
b) Sheep rearing		
Low (0.5-2)	3	15.00
Medium (2-3.5)	4	20.00
High (3.5-5)	13	65.00
Land holding in acres		
Marginal (0-2.5)	16	80.00
Small (2.5-5)	3	15.00
Large (>5)	1	05.00
Social participation		
Nil	12	60.00
One Organization	4	20.00
Two or more organizations	3	15.00
Office bearer	0	0.00
Public representative	1	5.00

- n- Number of shepherds, F- Frequencies.

a

b

Fig 2: Kenguri sheep rearing in open fence (a) and Kenguri sheep sheltered under tree (b) after grazing in extensive rearing system

Conclusion

By the present study it can be concluded that, due to rising demand for mutton, which necessitates need for improvisation in sheep rearing by adopting latest technology which assures the necessity to encourage more and more educated youths to participate in sheep farming ventures. Through assessing the socio-economic domains like- age groups, literacy level, occupation, family type and size, farming experience, land holding and social participation it was evident that adopting scientific methods in sheep management and following veterinarians' advice on health treatment would minimise the percentage of sheep mortality, so improving the shepherds' economic status.

References
1. Acharya RM. Sheep and Goat breeds of India. FAO Animal Production and Health Paper 30, Food and Agriculture Organisation of United Nations, Rome Italy, 1982, 121p.
2. Anandarao K. Analysis of Sheep production systems of North Coastal Zone of Andhra Pradesh. Ph.D. Thesis, Sri Venkateshwara Veterinary University, Tirupati, 2010.
3. Appannavar MM, Ashok Pawar, Ramachandra B, Tandle MK, Naveen Kumar GS. Study on growth potential and body measurements of Kenguri breed of sheep. Indian Vet. J. 2010;87:83-84.
4. Baluswamy C. productive and reproductive performance of buffaloes in north-eastern zone of Tamil Nadu. Ph.D.

Thesis, Tamil Nadu Veterinary and Animal Sciences University, Chennai. India, 2004.

5. Basic Animal Husbandry Statistics (BAHS), Annual Report 2019. Basic Animal Husbandry Statistics. Government of India, Ministry of Agriculture and Farmers Welfare, Department of Animal Husbandry, Dairying and fisheries Krishi Bhawan, New Delhi, 2019, 5.

6. Channappagouda, Biradar. Dynamics of small ruminant production in Karnataka: A multistakeholder analysis. Ph.D thesis. Sri Venkateswara Veterinary University, Tirupati, 2019.

7. Gowane GR, Akram N, Misra SS, Chopra A, Sharma RC, Kumar A. The breeding structure for the small ruminant resources in India. Tropical Animal Health and Production. 2020;52(4):1717-1724.

8. Kandasamy N, Pannerselvam S, Devenran P, Thiruvenkadan. Final report on survey, evaluation and characterization of Coimbatore sheep breed, Department of Animal Genetics and Breeding, VC&RI, Namakkal, 2006.

9. Kuldeep P, Karim SA, Sisodia SL, Singh VK. Socio economic survey of sheep farmers in Western Rajasthan. Indian Journal of Small Ruminants. 2006;12(1):74-81.

10. Mastanbi S. Farmers preparedness towards sheep health care with specific reference to vaccination in Andhra Pradesh. M.V.Sc thesis. College of Veterinary Science, SVVU, Tirupati, India, 2015.

11. Mastanbi Shaik, Subrahmanyeswari B, Sharma GRK, Analysing the socio-personal, economic profile and preparedness of sheep farmers. International J. Sci, Environ. Tech. 2017;6(3):1641-1649.

12. Mishra PK, Barik N, Pateo BN, Nayak S. Production potentiality of Ganjam sheep under extensive management. Indian Journal of Small Ruminants. 2004;1:1-7.

13. Praveen Kumar, Kher SK, Sudhakar, Dwivedi. An analytical study of livestock in Jammu and Kashmir. International Journal of Plant, Animal and Environmental Sciences. 2012;2(3):169-177.

14. Rajanna N, Mahender M, Thammiraju D, Nagalakshmi D, Srinivasa Rao D. Socio-Economic Status and Flock management practices of sheep farmers in Telangana region of AP. Vet. Research. 2012;5(2):37-40.

15. Rajapandi S. Distribution and management practices of Coimbatore sheep. M.V.Sc. thesis, Veterinary College and Research Institute, Namakkal, Tamil Nadu, 2005.

16. Ramesh D, Meena HR Meena KL. Analysis of Small ruminant market system in different agro-climatic zones of Southern India. Vet. World. 2012;5:288-293.

17. Suresh A, Gupta DC, Mann JS. Returns and economic efficiency of sheep farming in semi-arid region of Rajasthan. Agric. Econ. Res. Rev 2008;21:227-234.

18. Thilakar P, Krishnaraj R. Profile characteristics of sheep farmers- A survey in Kanchepuram district of Tamil Nadu. The Indian Journal of Field Veterinarians. 2010;5(3):35- 36.

19. Thiruvenkadan AK, Karunanithi K, Purushothaman MR. Socio-economic status of the Mecheri sheep farmers and economics of rearing under farmer's management. The Indian Journal of Small Ruminants. 2004;10(2):117-122.