SHORT COMMUNICATION

Comparative Analysis of Kenguri Sheep Farmers Market Orientation under Intensive and Extensive Rearing Systems in Yadgir District of Karnataka

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Abstract

Total of 20 each intensive and extensive Kenguri sheep farmers, having the flock size ranging from 35 to 300 and 25 to 1480, respectively, of Yadgir district of Karnataka were selected and the sheep market orientation criteria were analyzed. The most farmers were dependent on body conformation (45.00%) followed by body weight (40.00%) and age (15.00%) in intensive system for price fixation. In extensive system, price fixing was equally dependent on age as well as body conformation (40.00%) followed by body weight (20.00%). Market availability (90.00 and 75.00%), market plan information (80.00 and 50.00%), market price information (60.00 and 45.00%) and satisfaction about market (65.00 and 40.00%) were having major and minor roles in intensive and extensive systems, respectively. The average market age (month) and body weight (kg) at sale of sheep (7.43 ± 0.26 and 33.93 ± 1.13) in intensive system were more as compared to extensive system (4.60 ± 0.19 and 20.00 ± 1.69). The average selling price per culled adult in intensive system was more compared to extensive system (Rs. 9059 ± 41.75 vs. 7998 ± 49.98), however, the average selling price per excess stock was more paralleled in intensive (Rs. 11247 ± 30.32) and extensive (Rs. 11099 ± 31.15) system. The average selling price per marketable stock in intensive system was less compared to extensive system (Rs. 313 ± 9.86 vs. 427 ± 12.89). Overall, the market orientation patterns of Kenguri sheep farmers under intensive rearing system were better when compared with extensive rearing system.

Key words: Distribution of sheep, Kenguri sheep, Market information, Market orientation, Price fixing criteria.

Ind J Vet Sci and Biotech (2024): 10.48165/ijvsbt.20.3.36

Introduction

There were 195 One Time Grant Sanctioned Sheep and Wool Producer's Co-operative Societies during the year 2015-16 (Karnataka Sheep and Wool Development Corporation Ltd., GOK,2015). In the marketplaces surveyed, the general price range was Rs 180-200 per kg live weight (Sireesha, 2011). Biradar (2016) investigated market demand for sheep, quality features and management practices aimed at enhancing the market value and livelihood of shepherds, finding that body condition scoring influenced the selling price of sheep in marketplaces.

Appannavar *et al*. (2010) described the Kenguri as a popular native mutton breed of sheep that is found in the districts of Raichur, Koppal, and Yadgir in the northeastern Karnataka. The total sheep population of India is 74.26 million according to Livestock Census 2019 and is ranked third in the world. Total sheep population has increased by 14.13% over previous Livestock Census 2012 (BAHS, 2023). As per the recent report 2020, the total population of Kenguri sheep in Karnataka is 6.7 lakhs (Gowane *et al*., 2020). There is huge demand for mutton due to globalization of its nutritive values and for the fulfilment of the demand it becomes essential to improve the mutton quality of sheep (Kulkarni *et al*., 2008).

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How to cite this article: Kanakarajam, M. G., Sagar, M., Sai Kiran, J., & Jeevan Kumar, K.S. (2024). Comparative Analysis of Kenguri Sheep Farmers Market Orientation under Intensive and Extensive Rearing Systems in Yadgir District of Karnataka. Ind J Vet Sci Biotech, 20(3), 180-182.

Source of support: Nil

Conflict of interest: None

Submitted 14/12/2023 **Accepted** 16/02/2024 **Published** 10/05/2024

The total meat production in India is 9.77 million tonnes and is ranked 8th to the world. The per capita availability of meat is 7.10 kg/annum. Meat production has increased by 5.13 % compared to previous year (BAHS, 2023). Small ruminant

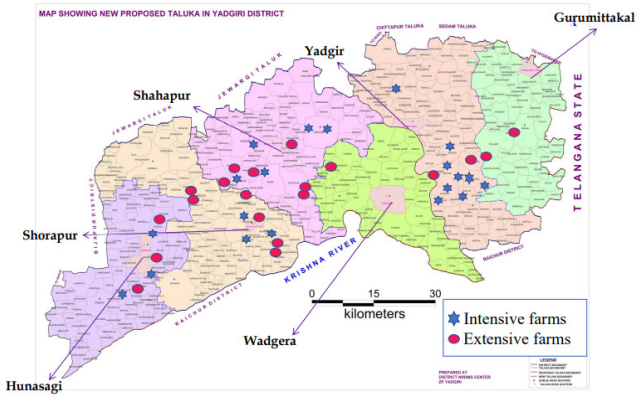
marketing patterns have been studied in Rajasthan (Pankaj and Singh, 2008), Karnataka (Pradeep, 2018; Karthik *et al*., 2017) and Tamil Nadu (Senthilkumar *et al*., 2012) by different researchers. This study dealing with the market orientation of Kenguri sheep among farmers in Yadgir district of Karnataka was aimed to give better idea to the farmers while tackling the selling price of sheep in the diversified markets.

Materials and Methods

The randomly selected 20 intensive and 20 extensive sheep farms from six talukas of Yadgir district of Karnataka (Fig. 1) were analyzed during the market time. The average flock size of intensive farms ranged from 35 to 300 and that of extensive farms from 25 to 1480. All the sheep farms were visited during market time by pre-informing the farmers through tele-communication.

The sheep market orientation criteria such as fixing of price based on body conformation, age and weight were interpreted by frequency percentages; information about market for farmers was depicted by percentage descriptive values and average market age, average body weight at sale and selling prices of culled adult, excess stock and marketable stock during market were assessed by average descriptive values.

All the results were derived from the statistical tests/ tools such as mean (average), standard deviation, frequency and percentage values, by using SPSS version 16.0 software developed by International Business Machines (IBM).



Talukas: Yadgir, Gurumittkal, Wadgera, Shahapur, Hunasagi, Shorapur

Fig. 1: Geographical map of Yadgir district (study area) and locations of farms selected for the experiment

Results and Discussion

Table 1 disclosed that in intensive rearing system the price fixing in majority cases was dependent on body conformation (45.00%) followed by body weight (40.00%) and age (15.00%), whereas, in case of extensive rearing, price fixing was equally dependent on age as well as body conformation (40.00%) followed by using body weight (20.00%) criteria.

Table 1: Market orientation of sheep farmers

Price fixation Criteria	Intensive (n=20)		Extensive (n=20)	
	Frequencies	%	Frequencies	%
Body conformation	9	45.00	8	40.00
Age	3	15.00	8	40.00
Weight	8	40.00	4	20.00

Table 2 showed that, market availability (90.00% and 75.00%), market plan information (80.00% and 50.00%), market price information (60.00% and 45.00%) and satisfaction about market (65.00% and 40.00%) were having major and minor roles in intensive and extensive rearing systems, respectively.

Table 2: Information about market for sheep farmers

Particulars	Intensive (n=20)				Extensive (n=20)			
	Yes	%	No	%	Yes	%	No	%
Market availability	18	90	2	10	15	75	5	25
Market plan information	16	80	4	20	10	50	10	50
Market price information	12	60	8	40	9	45	11	55
Satisfaction about market	13	65	7	35	8	40	12	60

From the Table 3 it was noticed that, the average market age (7.43 ± 0.26 months) in intensive system was more compared to extensive system (4.60 ± 0.19 months). The mean body weight at sale in intensive system (33.93 ± 1.13 kg) was more compared to extensive system (20.00 ± 1.69 kg). The average selling price per culled adult in intensive system (Rs. 9059 ± 41.75) was more compared to extensive rearing (Rs. 7998 ± 49.98). The average selling price per excess stock in intensive system (Rs. 11247 ± 30.32) was paralleled to extensive system (Rs. 11099 ± 31.15). The average selling price per marketable stock in intensive system (Rs.313 ± 9.86) was less compared to extensive system (Rs. 427 ± 12.89).

Table 3: Distribution of sheep farmers based on their marketing criteria

Particulars	Intensive (n=20)	Extensive (n=20)	P value
Avg. market age (months)	7.43^{a} ± 0.26	4.60^{b} ± 0.19	< 0.001
Avg. body weight at sale (kg)	33.93^{a} ± 1.13	20.00^{b} ± 1.69	< 0.001
Avg. selling price of culled adults (Rs.)/animal	9059^{a} ± 41.75	7998^{b} ± 49.98	< 0.001
Avg. selling price of excess stock (Rs.)/animal	11247^{a} ± 30.32	11099^{b} ± 31.15	< 0.001
Avg. selling price of marketable stock (Rs)/ kg b.wt.	313^{a} ± 9.86	427^{b} ± 12.89	< 0.001

Mean values with different superscripts (a, b) within the row differ significantly ($p < 0.05$)

The results indicated that in intensive system, the price fixing criteria was mainly based on body conformation followed by weight and age. Whereas, in case of extensive system price fixing criteria was mostly depended on body conformation and age with very less per cent of farmers fixing the prices based on body weight, as most of the farmers preferred to sell their sheep in their villages to take advantage of the benefits of negotiation (Senthilkumar *et al*., 2012). The market availability, market plan and price information and satisfaction about market were playing major and minor roles in both the rearing systems.

The results with regard to the average age at market, average body weight at sale, average selling price per culled adult and excess stock were having higher values in intensive system when compared to extensive system. But the average price of marketable stock per kg body weight was more in extensive when compared to intensive system. These results were in line with the outcomes of research conducted by Pankaj and Singh (2008), Chandran *et al*. (2009), Sireesha (2011) and Pradeep (2018) and were partly in line with findings of Karthik *et al*. (2017).

In general, considering the market orientation of Kenguri sheep farmers, the price fixation criteria based on body conformation and body weight was better in intensive rearing system when compared to extensive rearing system, except age factor. With respect to market information, idea regarding market availability, market plan and price information and satisfaction about market was better observed in intensive rearing system than that of extensive rearing system. In case of distribution of sheep based on marketing criteria all the domains like average market age, average body weight at sale and selling prices of culled adult, excess stock and marketable stock during market were better seen in intensive rearing system when tallied to extensive rearing system.

Acknowledgement

The authors would like to thank all the sheep farmers of Yadgir district of Karnataka state and the faculty and staff of KVK- Kawadimatti, Yadgir and Department of Animal science, College of Agriculture, UAS Raichur and special thanks to all the faculty and staff of LPM Department, Veterinary college Hebbal, Bengaluru, for their immense support during the research work.

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