

Full Length Research Article

Socio-economic and Psychological Characteristics of Livestock Farmers Owning Khillar Cattle of Karnataka

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Abstract

India has a rich source of cattle and buffalo genetic resources which help in creating the livelihood security to the resource poor farmers. The present study was conducted to assess socio economic and psychological characteristics of livestock farmers owning Khillar cattle of Karnataka. A total of 240 Khillar cattle owners from 16 villages comprising 80 small farmers, 80 medium farmers and 80 large farmers were considered for the study and interviewed with the help of structured interview schedule. The results indicated that among the overall respondents, large number of the respondents belongs to middle age (43.34%) and majority of the respondents were men. Among the total respondents, 29.58 per cent had middle schooling and belong to OBC category. Among the overall respondents, majority had medium family size (62.50%) and majorities were living in nuclear family (92.08%). Among the overall respondents, animal husbandry with agriculture was found to be their main occupation (78.75%) followed by animal husbandry, agriculture with business (21.25%) as the major occupation. Among the overall respondents, majority had medium level of Khillar cattle rearing experience (53.33%) and majority had medium level of extension contact (56.26%). Majority among the overall farmers had low annual income (56.66%) and medium land holders. Among the overall farmers, majority had medium level of decision-making ability (65.84%) and majority had medium (60.00%) level of risk orientation. The findings would help the policy makers to take necessary steps to provide subsidized loan and insurance policies for the draught animals.

Key words: Socio-economic, Psychological, Livestock farmers, Khillar

Livestock rearing is one of the most important economic activities in the rural areas of India which contributes 4.11 per cent to the national GDP and 25.6 per cent to total agriculture GDP [1] by providing protein rich products such as milk, meat and eggs for human consumption. India has a rich source of cattle and buffalo genetic resources comprising of 50 breeds of cattle and 19 breeds of buffaloes [2] which help in creating the livelihood security to the resource poor farmers and these are well known for their robust nature, draught power, disease resistance, feed conversion efficiency, drought resistance and ability to thrive on poor quality feed and fodder. Among different indigenous cattle in Karnataka, Khillar is a predominant indigenous cattle breed in the region. Although, milk production of these indigenous cattle breed is low as compared to crossbreds, these animals are reared for their sturdy nature, sustainability to draught, heat tolerance, disease resistance, adaptability to harsh climatic conditions and ability to survive and perform under scarce feed and fodder conditions [3]. The Khillar cattle breed is a member of the *Bos-indicus* sub-

species, native to Satara, Kolhapur and Sangli districts in Maharashtra and Bijapur, Dharwad and Belagavi districts of Karnataka in India. There are four sub types of Khillari breed such as; i) Atapadi Khillar; ii) Mhaswad Khillar; iii) Tapi Khillar and iv) Nakali Khillar. 'Khillari' means a herd of cattle and the herd man is known as 'Khillar' or 'Thillari'. The Khillar breed is well adapted to the area's tropical and drought-prone conditions which are preferred by the local farming community due to their ability to handle the hardships of farming. The breed population is declining mostly due to low milk yield, which offers an alternate income stream. Besides their extensive use in their home tracts, they are also distributed in Haveri, Kalaburagi, Gadag, Uttara Kannada and Bagalakote districts of Karnataka. The total population of Khillar breed in Karnataka is 7,20,360. The highest population of Khillar breed is distributed in Belagavi, Kalaburagi, Vijayapur and Haveri [4]. In this context, the present study was conducted to assess socio economic and psychological characteristics of livestock farmers owning Khillar cattle of Karnataka.

Received: 15 Oct 2022; Revised accepted: 05 Jan 2023; Published online: 19 Jan 2023

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Citation: Rajashekhar K, Jagadeeswary V, Shree JS. 2023. Socio-economic and psychological characteristics of livestock farmers owning Khillar cattle of Karnataka. *Res. Jr. Agril Sci.* 14(1): 156-159.

MATERIALS AND METHODS

The present study was carried out purposively in the state of Karnataka as the state has six indigenous cattle breeds in the state, namely; Amritmahal, Deoni, Hallikar, Khillar, Krishna Valley and Malnad Gidda as per National Bureau of Animal Genetics Resources. For the present study Khillar indigenous cattle breed, was selected purposively based on the presence of highest number of Khillar cattle population in its home/breeding tract [4]. In the present study, four districts were selected purposively possessing highest Khillar breed population in the state of Karnataka i.e., Belagavi, Kalaburagi, Vijayapur and Haveri, from each district, two taluks were selected based on highest Khillar cattle density, later Two villages from each taluk From each district, 60 farmers possessing Khillar breed of cattle were randomly selected, arriving at the final sample of 240 farmers with 80 small, 80 medium and 80 large farmers from four districts. Farmers were interviewed with the help of structured interview schedule keeping in view the objectives of the study. From each selected village, five small farmers, five medium farmers and five large farmers were selected for the study comprising a total of 15 respondents. Thus, 15 Khillar cattle owners from each village

panchayat, making a total of 240 Khillar cattle owners from 16 villages comprising 80 small farmers, 80 medium farmers and 80 large farmers were considered for the study. Respondents were selected based on Khillar cattle possession [5] and they were categorized as Small farmer (1-3), Medium farmer (4-6) and Large farmer (7-9).

RESULTS AND DISCUSSION

Among the overall respondents, large number of the respondents were middle aged (43.34%) followed by young (29.16%) and old aged (27.50%). This indicated that majority of the Khillar animal owners were middle aged and it might be due to the labour and skill involved in the utilization of draught bullocks. Further, it also might be due to involvement of younger generation into farming realizing its cultural value and its importance in livelihood security [6-7]. Majority of the respondents among all the small (87.50%), medium (97.50%) and large (90%) farmers were men, forming 91.66 per cent of the total respondents. This could be due to the fact that, men were more involved in livestock farming, more easily handle native breeds and were more likely to work for their family income and women looked after the household works [8].

Table 1 Personal and social characteristics of Khillar farmers

S. No.	Category	Small (N=80)		Medium (N=80)		Large (N=80)		Total (N=240)	
		F	%	F	%	F	%	F	%
1.	Age								
	Young age (up to 30 years)	28	35.00	24	30.00	18	22.50	70	29.16
	Middle age (31 to 50 years)	31	38.75	34	42.50	39	48.75	104	43.34
	Old age (above 50 years)	21	26.25	22	27.50	23	28.75	66	27.50
2.	Gender								
	Men	70	87.50	78	97.50	72	90.00	220	91.66
	Women	10	12.50	2	2.50	8	10.00	20	8.34
3.	Education								
	Illiterate	1	1.25	2	2.50	3	3.75	6	2.50
	Primary school	20	25.00	20	25.00	18	22.50	58	24.16
	Middle school	29	36.25	30	37.50	12	15.00	71	29.58
	High school	11	13.75	18	22.50	24	30.00	53	22.08
	PUC	10	12.5	5	6.25	18	22.50	33	13.75
	Graduation (degree & above)	9	11.25	5	6.25	5	6.25	19	7.93
4.	Caste								
	General	15	18.75	12	15.00	10	12.50	38	15.83
	SC	15	18.75	5	6.25	3	3.75	22	9.16
	ST	1	1.25	2	2.50	1	1.25	4	1.68
	OBC	49	61.25	61	76.25	66	82.50	176	73.33
5.	Family size								
	Small (<3)	24	30	21	26.25	26	32.50	71	29.58
	Medium (4 – 6)	50	62.50	54	67.50	46	57.50	150	62.50
	Large (7 – 9)	6	7.50	5	6.25	8	10.00	19	7.92
6.	Family type								
	Joint	4	5.00	8	10.00	7	8.75	19	7.92
	Nuclear	76	95.00	72	90.00	73	91.25	221	92.08
7.	Occupation								
	Agriculture +Animal husbandry	70	87.50	66	82.50	53	66.25	189	78.75
	Agriculture + Animal husbandry + Business	10	12.50	14	17.50	27	33.75	51	21.25
8.	Experience in Khillar cattle rearing								
	Low (≤ 10)	15	18.75	10	12.50	12	15.00	37	15.42
	Medium (11 - 22)	34	42.50	46	57.50	48	60.00	128	53.33
	High (≥ 22)	31	38.75	24	30.00	20	25.00	75	31.25
9.	Extension contacts								
	Low (11-17)	15	18.75	11	13.75	9	11.25	35	14.58
	Medium (18 - 25)	42	52.50	47	58.75	46	57.50	135	56.26
	High (26-33)	23	28.75	22	27.50	25	31.25	70	29.16

Among the total respondents, 29.58 per cent had middle school followed by primary school (24.16%), high school (22.08%), PUC education (13.75%), graduation (7.93%) and illiterates (2.50%) [9-10]. This might be due to the fact that the literacy rates of Karnataka are better in the present days and hence, the literacy rates are higher in the study area. However, Kauthale *et al.* [11] revealed that majority of the farmers were literate in their study area. Among the overall caste of the respondents, 73.33 per cent belonged to OBC category followed by General (15.83%), SC (9.16%) and ST category (1.68%). Khillar cattle rearing is a traditional occupation in a particular tract might be the reason for all the community rearing the breed [12-13]. In a similar study, Kuralkar *et al.* [8] reported that most of the cattle owners belonged to OBC category followed by scheduled tribes. Among the overall respondents, majority had medium family size (62.50%) followed by small (29.58%) and large family size (7.92%). Since the joint families are getting fragmented into smaller units and also because of the advantages of small family, the above trend was observed [14]. Majority of the small (95.00%), medium (90.00%) and large farmers (91.25%) lived in nuclear family and small percentage of the small (5.00%) medium (10.00%), large (8.75%) farmers lived in joint family. Among the total respondents, majority lived in nuclear family (92.08%) and only 7.92 per cent lived in joint family system [15].

Among the overall respondents, animal husbandry with agriculture was found to be their main occupation (78.75%) followed by animal husbandry and agriculture with business (21.25%). Since animal husbandry and agriculture are interdependent and integrated farming system is practiced since generations [16]. Among the overall respondents, majority had medium experience in rearing Khillar cattle (53.33%) followed by high (31.25%) and low (15.42%). This indicated that there was medium to high experience in rearing Khillar cattle and Khillar cattle plays an important role in daily agricultural operations. Similar findings were also observed by Akila [6] in

their study area, where most of the respondents had medium number of years of experience in rearing Khillar cattle. Among the overall respondents, majority had medium level of extension contact (56.26%) followed by high (29.16%) and low (14.58%). Though the results of the study appeared to be fairly satisfactory with majority of the Khillar rearing farmers in medium category as most respondents had often contact with informal sources like friends, relatives, neighbours and progressive farmers but not all farmers had availed the opportunity of contacting various formal sources like veterinary/agriculture college, KVKs and Research Institutes for obtaining information on improved management practices of their animals. It was also observed that majority of the institutions were not much involved in delivering need based and demand driven information about indigenous cattle.

Economic characteristics of Khillar cattle farmers

Majority among the overall farmers had low annual income (56.66%) followed by medium (30.00%) and high income (13.34%). This might be due to the fact that majority of the farmers had small acres of rain fed land holding due to which the annual income was very low. Further, seasonality of agricultural work and low agricultural production also added to their low annual income category [17]. Among all the respondents, higher percentage (28.34%) of the farmers were medium land holders followed by small (27.08%), large (20.00%), marginal land holders (14.45%) and landless farmers (12.22%). The land holding size is on decreasing trend due might be due to fragmentation of land holding along the generations in rural India [18]. (Table 2) indicated that 47.5 per cent of the overall farmers were availing the farm power by using Khillar bullocks and tractors followed by Khillar bullocks only (46.25%), and other machinery like power tillers (6.25%). However, Kuralkar *et al.* [8] reported that that some agricultural operations still depend on draught power bullocks despite having great farm mechanization.

Table 2 Economic characteristics of Khillar cattle farmers

S. No.	Category	Small (N=80)		Medium (N=80)		Large (N=80)		Total (N=240)	
		F	%	F	%	F	%	F	%
1.	Annual income								
	Low (Rs 40,000-1,60,000)	59	73.75	57	71.25	20	25.00	136	56.66
	Medium (Rs 1,60,001– 2,80,000)	21	26.25	11	13.75	30	37.50	72	30.00
	High (Rs 2,80,001– 4,00,000)	0	0	12	15.00	20	25.00	32	13.34
2.	Land holding								
	Landless	18	22.50	6	7.50	0	00	24	10.00
	Marginal (<1 hectare)	21	26.25	8	10.00	6	7.50	35	14.58
	Small (1 to 2 hectare)	30	37.50	19	23.75	16	20.00	65	27.08
	Medium (2 to 3 hectare)	6	7.500	37	46.25	25	31.25	68	28.34
	Large (>4 hectare)	5	6.25	10	12.50	33	41.25	48	20.00
3.	Sources of farm power								
	Khillar bullock	51	63.75	42	52.50	18	22.50	111	46.25
	Tractor + Khillar bullock	24	30.00	31	38.75	59	73.75	114	47.50
	Others (Power tiller)	5	6.25	7	8.75	3	3.75	15	6.25

Psychological characters of Khillar cattle farmers

Distribution of respondents according to different components of decision making in Khillar cattle rearing is presented in (Table 3). Among the overall farmers majority had medium level of decision-making ability (65.84%) followed by high (24.16%) and low level of decision-making ability (10.00%). As agriculture or livestock farming involves investment, risk and demands time, the respondents discussed with other family members about farming activities or rearing of cattle. This clearly indicated that the respondents took the

farming related decisions in consultation with their family members placing them in the medium level of decision-making ability. Among the overall respondents, majority had medium level of risk orientation (60.00%) followed by high (26.25%) and low (13.75%). As majority of the respondents had medium decision-making ability and low family income, they were wary of taking any risk in farming activities [19]. However, very few farmers were interested to take risk in cattle rearing and hence, the farming related decisions were taken in consultation with their family members.

Table 3 Distribution of respondents based on psychological characters

S. No.	Category	Small (N=80)		Medium (N=80)		Large (N=80)		Total (N=240)	
		F	%	F	%	F	%	F	%
1.		Decision making ability							
	Low (8-13)	8	10.00	11	13.75	5	6.25	24	10.00
	Medium (14-19)	58	72.50	57	71.25	43	53.75	158	65.84
	High (20-24)	14	17.50	12	15.00	32	40.00	58	24.16
2.		Risk orientation							
	Low (8-13)	9	11.25	15	18.75	9	11.25	33	13.75
	Medium (14-19)	55	68.75	47	58.75	42	52.50	144	60.00
	High (20-24)	16	20.00	18	22.50	29	36.25	63	26.25

CONCLUSION

The present study conducted to assess socio economic and psychological characteristics of livestock farmers owning Khillar cattle of Karnataka was revealed that majority of the respondents were middle aged, middle school, medium family size, majority lived in nuclear family, animal husbandry with

agriculture was found to be their main occupation, medium level of extension contact, had low annual income, medium land holders, medium level of decision making ability, medium level of risk orientation. The findings would help the policy makers to take necessary steps to provide subsidized loan and insurance policies for the draught animals and also help the policy makers to provide basic amenities in the cattle markets.

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