J Krishi Vigyan 2023, 11 (2) : 50-56 DOI : 10.5958/2349-4433.2023.00008.9

Determinants of Scientific Knowledge Gain on Goat farming among Schedule Caste

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ABSTRACT

Goat farming forms a vital enterprise among rural socio-economic weaker section. Training on goat farming imparts knowledge on improved practices and also aid in building new entrepreneurs. The study was conducted at department of Veterinary Extension Education in connection with the training organized under ICAR-SC sub-plan in the year 2021-2022 at Department of Animal Nutrition, College of Veterinary and Animal Sciences, Pookode, for the goat farmers and aspirant entrepreneur among scheduled caste people of Wayanad. The objective of the study was to find out the determinants of scientific knowledge gain on goat farming among schedule castes of Wayanad district. An ex-post facto research design was adopted for the study and altogether, 123 respondents who undergone training were selected for the study. The overall knowledge score were identified by using teacher-made knowledge test with specific questions on breeds, housing, breeding, common disease, health, feed and nutrition of goats. The findings were, more than one half of the respondents (53.66%) were in between the age of 36 yr to 50 yr, more than 60 per cent of the respondents were women, most of the respondents (42.28 %) were educated up to high school and majority (63.41%) of the respondents belonged to agricultural labourer category having up to 0.04 ha. of land. Large majority (94.31%) of the respondents were not attended any training so far and among them majority (76.42) of the respondents were inexperienced in goat farming. Among various socio-economic variables, age, education, flock size, experience, mass media exposure and cosmopolites were found to be significantly correlated with knowledge gain. These identified determinants must be given due consideration while conducting trainings for goat farmers in future.

Key Words: Entrepreneur, Farming, Goat, Knowledge, Schedule Caste, Training.

INTRODUCTION

The demand for meat, milk and fiber is increasing progressively and expected to further rise in future in view of sizable increase in per capita income and health consciousness of people. Goats contribute milk, meat, fiber, skins and manure to the subsistence of small holders and landless rural poor. Importance of goats lies in the fact that human population is increasing very rapidly creating increasing demands for animal protein foods on the one hand and the feed resources for large ruminants are decreasing due to shrinkage of grazing lands on the other. This demand can, therefore, be met with by increasing population of goats. Moreover, goat rearing in India are mainly done by the economic weaker and rural poor.

The goat population in India according to 2019 livestock census were 148.88 million, showed an increase of 10.10 per cent over the previous census.

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The goat populations in Kerala according to 2019 livestock census were 1.36 million, of which District of Wayanad holds 45,365 goats which is about 3.33 per cent of the goat in the state. The best way for empowering rural poor and weak factors are by encouraging goat husbandry. The present study was conducted at Wayanad district of Kerala.

Scheduled castes are sub-communities that have traditionally endured adversity, persecution, and considerable social isolation in India due to their perceived 'poor status'. According to the 2011 census, scheduled castes account for 16.6 per cent of the total population in India. Whereas, scheduled caste account for 9.1 per cent of the total population of Kerala. In case of Wayanad district, 3.99 per cent of the population in the district is of scheduled caste (SC). A study has been mentioned that among the goat keeping farmers of northern Kerala (Kannur, Malappuram and Kozhikode) only 6.90 per cent were belongs to Scheduled caste (Bashir and Venkatachalapathy, 2017). Hence, introducing goat rearing practice among scheduled caste of the region was suggested for economic empowerment in the region.

The training is systematized tailor made programme to suit the needs of a particular group for developing certain knowledge, attitudes, actions, skills and abilities in individuals irrespective of their functional level (Shelly, 2020). For introducing goat rearing among scheduled caste, need based training programmes were very essential at field conditions (Bashir *et al,* 2017c and Bashir *et al,* 2019). Since training programme should start from knowledge level of the farmers, the first step would be to understand where the farmers stand with respect to any concerned enterprise or practice. Moreover, scientific knowledge gain on goat farming among the trainees needs to be assessed and the determinants which influence the knowledge gain need to be identified. Identifying the determinant of knowledge gain also will help the training organizers in improving quality of future trainings, setting criteria for selection of trainees and also to predict possible impact of training. Keeping this in view, a study was conducted to find the determinants of scientific knowledge gain on goat farming among Schedule Caste of Wayanad District of Kerala.

MATERIALS AND METHODS

An ex-post facto research design was adopted for the current study. During the financial year 2021-2022, Department of Animal Nutrition, College of Veterinary and Animal Sciences, Pookode, Kerala Veterinary and Animal Sciences University organized 5 training programmes for the scheduled caste people of Wayanad who engaged actively in goat farming and budding entrepreneurs. All the beneficiaries (participants) were selected purposively for the present study which makes a total of 123 (N=123) respondents. It was pretested among non-sampling population and necessary modifications were made before actual data collection. The data were collected by the researcher through personal interview from the beneficiaries of the training programme.

Profile of the trainees including family details and possession of land were collected and descriptive statistical analysis was done to describe the socio-personal profile. The overall knowledge score were identified by using teacher-made knowledge test. The test was developed to measure the knowledge level on various aspects like breeds, housing, breeding, common diseases, health, feed and nutrition of goats. Questions on knowledge about goat rearing practices were formulated based on the package of practices published by Kerala Veterinary and Animal Sciences University, Kerala and considering the training curriculum. The knowledge statements were pre-tested in a non-sampling area and finalized based on the experience gained in pre-testing. One mark was given for every correct answer. Score obtained from each area of expertise were summed up to the total knowledge score of the participants. The pre and post training knowledge scores were utilised to analyse the overall knowledge gain. On the basis of score obtained, the trainees were categorised as highly

Table 1. Distribution of respondents according to the selected characteristics (N=123).

Variable	Category	F	Percentage
Gender	Male	49	39.84
	Female	74	60.16
Age	Old (50 and above yr)	38	30.89
	Middle (between 35 to 50 yr)	66	53.66
	Young (below 35 yr)	19	15.45
Educational qualification	Illiterate	17	13.82
	Primary	33	26.83
	High school	52	42.28
	College	21	17.07
Experience in years	Least (No experience)	94	76.42
	Less (1 to 5 yr)	26	21.14
	Experienced (5 to 10 yr)	2	1.63
	Highly experienced (above 10 yr)	1	0.81
Occupation	Agricultural labourer	83	67.48
	Agriculture and AH	7	5.69
	Employed in organized Sector	6	4.88
	Employed in unorganized sector	5	4.07
	Unemployed	22	17.89
Family type	Nuclear family	84	68.29
	Joint family	39	31.71
Family size	Below 5	84	68.29
	Above 5	39	31.71
Whether rearing goat?	Yes	29	23.58
	No	94	76.42
Land holding	Landless	2	1.63
	Agricultural labourer (Up to 0.04 ha)	78	63.41
	Marginal (0.04 ha – 0.40 ha)	34	27.64
	Small (0.40 ha– 0.81 ha)	2	1.63
	Large (above 0.81 acres)	7	5.69
Organisation participation	Cooperative Society	7	5.69
	Gram Panchayath	8	6.50
	Swayam Sahakarana Sangam	6	4.88
	Women self-help group	9	7.32
	Youvaganasahgam Member	1	0.81
	Nil	92	74.80

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Use of media for knowledge gain*	Radio	19	15.45
	Tv	85	69.11
	Magazine	12	9.76
	Newspaper	43	34.96
	Internet	22	17.89
	Nil	32	26.02
Cosmopolite	Whether consulting Veterinary Doctor for treating animals?	34	27.64
	Nil	89	72.36
Marketing of goats	By own	7	5.69
	Middle man	19	15.45
	Nil	97	78.86
Financial source for business	Commercial bank	33	26.83
	cooperative bank	12	9.76
	money lenders	1	0.81
	Nil	77	62.60
No of trainings attended	0	116	94.31
	1	5	4.07
	>1	2	1.63
From where you came to know about the programme	Block SC/ST officer, Kalpetta	1	0.81
	Peers	19	15.45
	Veterinary doctor	6	4.88
	Veterinary college	56	45.53
	Promotor	41	33.33

*Multiple responses not to total

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knowledgeable, moderately knowledgeable and less knowledgeable applying Dalenius and Hodges Cumulative Square root Frequency (DH-CSRF) method. The relationship between knowledge gain and profile characteristics of respondents was analysed by using Karl Pearson's correlation coefficient (r).

RESULTS AND DISCUSSION

Trainee characteristics

The data depicted the personal and socio-economic characteristics of the trainees. It was evident that more than one half of the respondents (53.66%) were in between the age of 36 yr to 50 yr followed by the age group of above 51 yr (30.89%) and belonged 21 to 35 yr of age group (15.45%). Involvement of more farmers between 36 to 50 yrs of age in training programme is due to the fact that majority of the respondent had their occupation as farming and willing to establish or extend the goat farm. More than 60 per cent of the respondents were women. It may due to the fact that the small scale goat farming activities carried out by rural women for the additional income. Present findings were conformity with Shelly (2020) found that among the trainees majority (55.83 %) of them were under the age group of 31 – 45 yr.

It was found that most of the respondents were educated up to a considerable level as 42.28 per cent of them were high school passed, followed by primary (26.83%) and graduate (17.07%) while only 13.82 per cent of the respondents were found

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to be illiterate. More than two-thirds (68.29%) of them belonged to nuclear family and had less than five members in the family. In terms of land holding, majority (63.41%) of the respondents belonged to agricultural labourer category having up to 0.04 ha followed by marginal farmer having 0.04 ha to 0.40 ha (27.64%) and only 7.32 per cent of the farmers were having more than 0.40 ha land. About three-fourths of the respondents had no organizational participation. Ravi *et al* (2022) reported similar findings that majority of goat farmers who attended training were female (86.10%), and had completed high school education (75.00%), their family size was below 5 (44.4%) and possess land holding less than 10 cents (58.30%). In contrast to present study women participation was very merger (9.68%) at state level on-campus training, simultaneously the same study had documented more women participation (66.39%) in off-campus training Bashir *et al* (2017a).

Majority (76.42%) of the respondents were inexperienced in goat farming followed by less experienced (up to 5 yrs). Since the training is organized for budding entrepreneurs most of them were new to this enterprise. Most (67.48%) of the respondents were agricultural labourer and nearly five per cent of the respondents were employed in organized sector. Television was most commonly used media for knowledge gain followed by newspaper but nearly one-fourths of the respondents were not used any media for knowledge gain in livestock field. Nearly one-thirds of the respondents were contacted either commercial or co-operative bank for financial assistance. Large majority (94.31%) of the respondents were not attended any training so far. It was their first training programme.

Knowledge Gain

Regarding the effectiveness of the training programme and the knowledge gained in the training programme, it was found to be medium. More than one half of the respondents had medium level of knowledge gain followed by low and high. This finding is in the line with the findings of Dubey *et al* (2008) who reported that majority, 75.34 per cent respondents had medium level of knowledge gained about the KVK training programme and Sangma *et al* (2022) who found that the effectiveness of training in the terms of overall knowledge gained was medium. A study conducted by Arya (2021) and Bashir *et al* (2017) revealed that among trainees of goat farming, and found that training had impacted highly significant gain in knowledge. Another study findings of Saravanan *et al* (2021) mentioned that majority of goat farmers (85.04%) had a medium to low level of knowledge about climate change in southern region of Tamil Nadu. Gadekar and Kalal, 2022 reported that 95.00 per cent of men and women sheep farmers possessed medium level of knowledge.

Table 2. Distribution of respondents according to their gained knowledge through training (N=123)

Sr. No.	Level of Knowledge gain	frequency	Percentage
1	Low	32	26.02
2	Medium	69	56.10
3	High	22	17.89

Table 3. Correlation of socio-personal characteristics with Knowledge gain (N=123)

Independent variable	r value
Age	-0.204*
Education	0.321**
Family members	0.037NS
Flock size	0.274**
Experience in goat rearing	0.210*
Land holding	-0.022NS
Mass media exposure	0.370**
Cosmopolitan	0.246**

* significant at 5 % level; ** significant at 1 % level
NS Not significant

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Factors contributing to knowledge gain

The relationship between knowledge gain and socio-personal characteristics of respondents are indicated in Table 3. Eight independent variables were selected for correlation analysis with dependent variables viz., knowledge gain. Among various socio-economic variables, Age, education, flock size, experience, mass media exposure and cosmopolites were found to be significantly correlated with knowledge gain (Table 3). Other variables viz., family members and land holding were found to be not correlated with the perceived knowledge.

Out of 8 variables studied 4 important variables namely, education, flock size, mass media exposure and cosmopolites were highly significant ($P<0.01$) with knowledge gain while a significant relationship ($P<0.05$) was observed with age, experience. The highly significant positive correlation coefficient of education, flock size, mass media exposure, cosmopolites and only significant positive correlation of experience in goat farming and negative significant correlation of age with knowledge gain of trainees may lead to conclusion that these socio-economic independent variables influencing the knowledge gain in the training. The results were in agreement with Sangma *et al* (2022) and Bashir *et al* (2017b) who found that there was a significant association between the knowledge gained with age, education, extension agency contact, education, flock size and mass media contacts. The current finding was in conformity with Shelly (2020) who found that starting goat farming venture and its adoption had direct relationship with educational qualification among the trainees. Another study (Gadekar and Kalal, 2022) revealed that among the socio-economic variables age and flock size had positively and significantly correlated with knowledge level.

CONCLUSION

As trainings are being used as a method of educating the farmers, the effectiveness of the training imparted should be assessed in terms of knowledge gained. Such assessment helps us to identify the determinants of knowledge gain and it will help us to formulate the training method for different category of farmers and thus provides the training to be more effective and meaningful. Among the trainees more than one half of the respondents had medium level of knowledge gain. Socio-economic variables such as age, education, flock size, experience, mass media exposure and cosmopolites were found to be significantly correlated with knowledge gain. This gives a clear indication regarding the determinants which influence training outcome and these aspect must be kept in mind while designing and formulating training programmes in future.

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Received on 27/10/2022 *Accepted on 15/3/2023*

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