



Knowledge Level and its Sectorial Classification on Scientific Goat Management Practices

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ABSTRACT

A study was conducted on scientific goat rearing knowledge level, among webinar (training) participants during 2021 COVID- 19 pandemic period, organised by Department of Veterinary Extension, CVAS, Pookode, and Directorate of Entrepreneurship, KVASU, Kerala. It was observed that majority of respondents were males (81.0%), belong to the middle age group (33.0%), educated up to graduate level (63.0%), had agriculture (35.0%) as primary occupation, possessed one to five numbers of goats (32.0%) and grouped under both less and high experienced (32.0% each). About 43.4% of participants possessed medium level of knowledge, whereas among non-rearing farmers 35.3 % possessed low and medium knowledge level. Knowledge level on different domains of scientific rearing revealed both goat rearing and non-rearing farmers possessed higher level of knowledge on goat housing with Mean Correct Response (MCR) 0.722 and 0.705 respectively, whereas low level of knowledge was observed among both groups in health and diseases of goats with MCR 0.329 and 0.313 respectively. Some lacunae in knowledge level was observed in feeding & other management aspects.

Key Words: Goat Farming, Knowledge, Management, Scientific, Training.

INTRODUCTION

The total livestock population of Kerala increased from 27,35,170 in 2012 to 29,08,657 in 2019 with a growth rate of 6.34 per cent (DAHD, 2021). The goat population registered an increase of 9.08 per cent during this period and now it stands at 13,59,161. Higher population growth rates of this sector indicate the expansion of this sector into major livelihood options for various stakeholders. To make goat farming more commercially viable option, there is a need to educate the farmers about modern and scientific methods of goat rearing through trainings (Hundal *et al*, 2016). Training and capacity building have had a major role to play in livestock sector and aim at improving knowledge, attitude, skills and

information exchange so that improved techniques can be learned and implemented by eliminating doubts on technical know-how (Shelly, 2020). Webinars are important, adaptive and promising tool to educate farmers, aspired entrepreneurs and vocational students, which was most realised during COVID-19 pandemic. Webinars depicts the importance of the agricultural information and communication technologies (ICTs) in agro-livestock farming systems sustainability during the period of COVID-19 pandemic (Hashem *et al*, 2021).

Adequate knowledge in any enterprise will be instrumental in developing a positive attitude, problem solving skill and positive value orientation

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toward it. Knowledge test aids in recognising the knowledge gap, and accordingly can plan present and future training programmes for better adoption of scientific practices. Hence present study was undertaken to understand the socio-demographic profile of goat farmers and budding entrepreneurs from this sector, knowledge level among the webinar participants, and also to understand knowledge gap among various categories of scientific management

various domains of scientific management, those managerial domains and number of questions pertain to it, is mentioned in parenthesis viz., breeding (6), selection of animals (6), animal housing (3), health & common diseases (6), feeding and other management of goats (4). Based on mean correct responses on individual management domains, knowledge level of participants has been further categorised on above mentioned scientific management domains.

MATERIALS AND METHODS

A study was conducted among webinar training participants during 2021 COVID-19 pandemic period. Department of Veterinary Extension, College of Veterinary and Animal Sciences, Pookode, and Directorate of Entrepreneurship, Kerala Veterinary and Animal Sciences University organized a training programme for the voluntary participants. A semi-structured schedule was pretested among non-sampling population and necessary modifications were made before actual data collection. The data were collected through Google form from the participants of the training programme. For the present study, webinar participants responses were randomly selected which makes a total of 100 (N=100) samples.

Socio-demographic profile of the respondents was studied including family, livestock and goat possession, experience in goat farming, land holding, and training exposure for goat rearing. The knowledge level of participants was analysed, using teacher-made knowledge test. While measuring the knowledge level, 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. On the basis of score obtained by the trainees they were categorised as high knowledgeable, medium knowledgeable and low knowledgeable applying Dalenius and Hodges Cumulative Square Root Frequency (DH-CSR) method

The test which comprised of 25 questions was developed to measure the knowledge level on

RESULTS AND DISCUSSION

Socio-demographic Profile

The data (Table 1) presented the socio-demographic characters of the webinar training participants. It could be observed that majority of respondents were males (81.00%) followed by females (19.00%), nearly one third of the respondents were from the middle age group of 30-40 years (33.00%) followed by upper middle (30.00%) young (23.00%) and old (14.00%) age group, inconsistent to present study, it was reported by Bhikya *et al* (2021) that majority of goat farmers under their study were from the old age group. In the present study, 63.0% were educated up to graduate level followed by high school (35.0%) and few were illiterate (2.0%). The results were in contradictory with the results of Muatip *et al* (2021), Bhikya *et al* (2021) and Arya *et al* (2021) who reported that majority of the goat keepers were illiterate (83.20%), graduated from elementary school (70.51%) and higher Secondary school (53.33%). It could also be observed that more number of farmers from graduate level and remarkable number of participants (23.0%) were from young age group; this might be due to conduction of training in virtual mode.

Majority of the respondents were hailing from nuclear family with the family size of below 5 (71.00%), whereas respondents from joint family with family size of above 5 were 29.0 per cent. The occupational statuses of respondents revealed that 35.0% had agriculture as primary occupation

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Table 1. Socio-demographic profile of respondents.

(N=100)

Socio- demographic profile	Categories	F	Percentage
Gender	Male	81	81.0
	Female	19	19.0
Age	Young (below 30 yr)	23	23.0
	Middle (between 30 to 40 yr)	33	33.0
	Upper Middle (between 40 to 50 yr)	30	30.0
	Old (50 and above yr)	14	14.0
Educational qualification	Illiterate	2	2.0
	Primary	0	0.0
	Secondary	0	0.0
	High school	35	35.0
	Higher Secondary	0	0.0
	Graduate	63	63.0
Family type	Nuclear family	71	71.0
	Joint family	29	29.00
Family size	Below 5	71	71.0
	Above 5	29	29.0
Primary Occupation	Agriculture	35	35.0
	Agricultural labourer	8	8.0
	Goat farming	1	1.0
	Employed in Organized Sector	4	4.0
	Employed in unorganized sector	14	14.0
	Self employed	12	12.0
	Non-residential Indians	7	7.00
	Student	6	6.0
	Unemployed	13	13.0
Secondary Occupation	Agriculture	20	20.0
	Animal husbandry	14	14.0
	Goat farming	14	14.0
	Employed in unorganized sector	5	5.0
	Self employed	1	1.0
	No secondary occupation	46	46.0
Whether rearing goat?	Yes	83	83.0
	No	17	17.0
No. of Goats rearing	1-5	32	32.0
	6-10	20	20.0
	11-15	12	12.0
	16-20	10	10.0
	Above 20	10	10.0
Goat farming experience in years	Least (No experience)	17	17.0
	Less (0 to 5 Years)	32	32.0
	Moderate (5 to 10 Years)	19	19.0
	High (above 10 Years)	32	32.0
Land holding	Landless	12	12.0
	Up to 10 cents	12	12.0
	11 cents – 1 acre	58	58.0
	1.1 acre – 2 acres	6	6.0
	Above 2.1 acres	12	12.0
No of trainings attended	Never	37	37.0
	One	38	38.0
	More than one	25	25.0

Table 2. Distribution of respondents according to their knowledge level in goat rearing**(N=100)**

Sr. No.	Level of Knowledge gain	Goat Rearing Farmers N=83		Non - Rearing Farmers N=17	
		frequency	Percentage	frequency	Percentage
1	Low	23	27.71	6	35.29
2	Medium	36	43.37	6	35.29
3	High	24	28.92	5	29.41

followed by employed in unorganized sector (14.0%) self-employed (12.0%) and agricultural labourer (8.0%). It could be observed that more than one-fourth of participants were from diverse class; it includes non-residential Indians (7.0%), students (6.0%), employed in organized sector (4.0%) and unemployed (13.0%), which suggests the potential of goat farming as a livelihood option across various strata of the society. Participants who considered goat rearing as primary occupation were only 1.0 per cent. Respondents secondary occupation profile were agriculture (20.0%), animal husbandry (14.0%), goat farming (14.0%), employed in unorganized sector (5.0%) and self-employed (1.0%). Respondents who don't have secondary occupation were 46.0 per cent.

Among the respondents goat rearing was done by 83.00 per cent whereas it was never taken up as an enterprise by 17.00 per cent of respondents. Majority of respondents possessed one to five numbers of goats (32.00%), followed by 6-10 (20.00%), 11-15 (12.00%) 16-20 (10.00%) and

above 20 (10.00%) in numbers. With respect to experience in goat farming, each 32.00 per cent of respondents were grouped under less and high experienced equally, followed by moderate experienced (19.00%), whereas 17.00 per cent of respondents were least experienced in goat rearing.

Land holding of participants

It was noted that majority (58.00%) of the respondents possessed 11 cents to one acre followed by Up to 10 cents and Above 2.1 acres (12.00 % each), participants who possessed land 1.1 acre – 2 acres were 6.00 per cent only. Bashir and Venkatachalapathy (2017) reported that around 96% of the goat farmers in the study area were having land holding less than 1 acre, whereas Ravi *et al* (2022) reported that all the studied goat farmers were possessed land less than 50 cents.

Knowledge Level

The knowledge level of participants about goat farming was presented in Table 2. It was found that 43.37% of participants had possessed medium

Table 3. Knowledge level of respondents on different domains of Goat management**(N=100)**

S No.	Domains of Knowledge test	Goat Rearing Farmers N=83		Non - Rearing Farmers N=17	
		Sum of Correct responses	Mean correct responses	Sum of Correct responses	Mean correct responses
1	Breeding of Goats	290	0.582	61	0.598
2	Selection of Goats	293	0.588	57	0.558
3	Goat Housing	180	0.722	36	0.705
4	Health and diseases	164	0.329	32	0.313
5	Feeding & other management	164	0.493	31	0.455
	Total	1091	0.525	217	0.510

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level of knowledge, followed by high (28.92%) and low (27.71%) knowledge level. With respect to non-rearing farmers equally (35.29 %) participants had possessed low and medium knowledge level followed by high (29.00%) knowledge level about goat rearing. The results were in commemorating with the results of Bhikya *et al* (2021) and Muatip *et al* (2021) who reported that the majority of the goat keepers had medium level of knowledge followed by high level of knowledge in goat rearing practices.

Classification of respondent's knowledge level on the different domains of scientific management has been mentioned in Table 3. It could be observed that both goat rearing and non-rearing farmers possessed higher level of knowledge on goat housing (0.722 and 0.705 respectively). It could also be observed that both goat rearing and non-rearing farmers possessed low level of knowledge on health and diseases of goats (0.329 and 0.313), followed by low knowledge level on feeding and other management aspects (0.493 and 0.455). Hence, significant difference was not observed among goat rearing and non-rearing farmers on individual domains knowledge level. Similar observation was reported by Hundal *et al* (2016) and mentioned that knowledge level of goat farmers was low regarding health and diseases of goats viz., disease that can cause abortion in goats, vaccination schedule and zoonotic diseases in goats, its mean correct responses were 0.032, 0.032 and 0.056, respectively during pre-training, where as its post training mean correct responses were also comparatively lower viz., 0.576, 0.736 and 0.728, respectively. Similarly Bhikya *et al* (2021) reported that knowledge level of goat farmers was comparatively lower on feeding and health management of goats when compared to goat rearing management practices. Jena *et al* (2018) reported that zoonotic diseases control and their transmission (65%), deworming (54.17%), vaccination (60%) and common diseases and their preventive measures (52.5%) are most needed training for the farmers.

CONCLUSION

The trend of knowledge level was medium to high among goat rearing farmers, whereas it was low to medium among non-rearing farmers. By classification of knowledge level on different domains of scientific management, it was found that knowledge on goat housing was domain with higher level of knowledge among both the group participants, whereas health and diseases of goats and feeding and other management aspects of goat rearing were the domains with lower level of knowledge among both the group. It was also witnessed that there was no significant difference among goat rearing and non-rearing farmers on individual domains knowledge level.

REFERENCES

- Arya V, Poonma, Yadav S C, Yadav M P, Khandelwal S and Mali H R (2021). Impact analysis of trainings on goat production technology. *J Krishi Vigyan* **10**(1): 142-145.
- Bashir B P, R T Venkatachalapathy (2017). Study on supply chains of goats in northern kerala. *Adv Anim Vet Sci* **5**(10): 395-399.
- Bhikya B, Kumar R P, Rathod S and Venkateswarlu M (2021). Socio-economic profile and knowledge on management practices of goat rearing farmers in the Mahaboobnagar district of Telangana. *The Pharma Innov J* **SP-10**(10): 392-397.
- DAHD (2021). *Provisional Key Results of 20th Livestock Census*. Government of India. Ministry of Fisheries, Animal Husbandry & Dairying. Department of Animal Husbandry and Dairying. Krishi bhawan, New Delhi 56p.
- Hundal J S, Singh U, Singh N, Kansal S K and Bhatti J S (2016). Impact of training on knowledge level of goat farmers in Punjab. *Haryana Vet* **55**(1): 47-49.
- Hashem N M; Hassanein E M, Hocquette J F, Gonzalez B A, Ahmed F A, Attia Y A and Asiry K (2021). Agro-Livestock Farming System Sustainability during the COVID-19 Era: A Cross-Sectional Study on the Role of Information and Communication Technologies. *Sustainability* **13**: 6521.
- Jena A, Mishra P K K and Ojh S (2018). Training needs of goat farmers: An analysis. *The Pharma Innov J* **7**(7): 844-847.
- Muatip K, Purwaningsih H, Safitri L and Pamungkas A D (2021). Social Factors Influencing the Goat Farmers

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Knowledge of Waste Processing in Banyumas Regency, Central Java, Indonesia. International Conference on Tropical Agrifood, Feed and Fuel (ICTAFF 2021). *Adv Biolog Sci Res* **17**: 93-97.

Ravi S, Muralidharan P and arathy J (2022). Impact of adoption of climatic resilient practices in goat farming in Kuttanad

region of Kerala. *J Krishi Vigyan* **10**(1): 198-203.

Shelly M (2020). Effectiveness of training programme on the adoption behaviour of goat farmers in Punjab. *J Krishi Vigyan* **9**(1): 109-113.

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