

ASSESSMENT OF TRAINING IMPACT ON ADOPTION OF SCIENTIFIC GOAT FARMING PRACTICES

Priyanka¹ and Nilima Makwana²

1&2 Training Officer, Kisan Kaushal Vikas Kendra, Agriculture University, Jodhpur -342304

Email- priyajhahhariya77@gmail.com

ABSTRACT

The present study was undertaken to evaluate the effectiveness of on-campus goat farming training on the adoption of scientific goat rearing practices and technologies in the arid region of Rajasthan. The sample consisted of 120 goat farmers from the Jodhpur, Phalodi and Jaisalmer districts of Rajasthan, who had participated in a seven-days training programme organised by Kisan Kaushal Vikas Kendra, Agriculture University, Jodhpur during the year 2024-25. The data were collected one year after the completion of training through personal interviews using a well-structured and pre-tested interview schedule. The results of the study revealed that 67.50% of respondents had a medium level of adoption of recommended goat farming practices, followed by low (18.33%) and high (14.17%) levels of adoption. Among the different management practices, feeding management recorded the highest adoption index (52.29%) followed by healthcare management (47.80%), marketing (47.25%), breeding management (44.17%) and general management practices (29.49%). The overall adoption index of recommended goat farming practices among the farmers was found to be 43.46 per cent. Correlation analysis revealed that independent variables i.e. age, caste, education, family type, annual income, no. of goats possessed, land holding, experience in goat farming, innovativeness and extension participation were positively and significantly associated with adoption of improved goat farming practices, whereas occupation showed no significant relationship. It can therefore be concluded that the participants effectively gained knowledge through the training exposure and subsequently implemented scientific techniques in their goat rearing practices.

Keywords: Adoption index, adoption level, goat farmers, on-campus training and scientific goat rearing practices.

INTRODUCTION

Livestock plays a pivotal role in India's rural economy by ensuring income stability and livelihood security. Among livestock species, goats are particularly important for landless and economically weaker farmers due to their adaptability, low investment requirement and income-generating potential. In the arid regions of Rajasthan, characterized by erratic rainfall, poor soils and recurrent droughts, goat farming provides a reliable and climate-resilient livelihood option. Goats efficiently utilize low-quality forage (Assan, 2014) and contribute to household nutrition and income through meat, milk and fibre production (Morales-Jerrett *et al.*, 2020; Shrestha *et al.*, 2020). Goats also serve as a readily available financial asset during times of crisis (Lebbie, 2010). Their increasing commercial demand has encouraged rural youth, women and progressive farmers to adopt scientific goat farming practices on a larger scale.

However, despite its considerable potential, goat production in rural India faces several challenges, particularly the lack of scientific knowledge and improved management

practices among farmers, leading to low productivity (Mohan *et al.*, 2009). Studies have shown that training significantly improves farmer's knowledge and adoption of better management practices. According to Bihari and Singh (2016), majority of goat farmers adopted improved practices such as vaccination, deworming, ecto-parasiticides, mineral mixture as well as concentrate and green fodder feeding after training intervention. Similarly, Shingade *et al.* (2025) reported that higher adoption of breeding, healthcare and management technologies significantly improved productivity and profitability. These findings highlight the importance of training, improved management practices and scientific interventions in strengthening the commercial goat farming sector.

The Kisan Kaushal Vikas Kendra (KKVK) at Agriculture University, Jodhpur provides need-based, skill-oriented training in agriculture and allied sectors for rural youth. These programmes aim to build practical and entrepreneurial skills. Assessing participant's knowledge, technical competencies and adoption of improved practices is

essential to evaluate outcomes and enhance the effectiveness and design of such self-employment-oriented initiatives.

Training and capacity-building initiatives are vital for strengthening the livestock sector by improving farmer's knowledge, attitudes and skills (KAS) and enabling effective information dissemination. These initiatives help farmers understand and apply improved technologies by addressing technical gaps. Adoption of innovations depends on changes in farmer's perceptions and behaviour, which are influenced by enhanced knowledge and practical skills (Shelly, 2020). However, mere exposure to new technologies does not guarantee adoption, as contextual factors also play a role. Therefore, this study assesses the adoption of scientific goat farming practices among farmers trained at KKVJ, Jodhpur, to identify gaps and improve future training programmes.

OBJECTIVES

- (1) To assess the effectiveness of training programme on the adoption behaviour of goat farmers regarding scientific goat farming practices in the study area.
- (2) To find out the association between selected independent variables with adoption.

METHODOLOGY

The present study was carried out in three districts *i.e.* Jodhpur, Phalodi and Jaisalmer of Rajasthan. A total of 120 trainees, who had participated in goat farming training programmes organized by Kisan Kaushal Vikas Kendra, Agriculture University Jodhpur during the year 2024–25, were selected for the study. The data were collected one year after the completion of training using a well-structured and pre-tested interview schedule. The respondents were asked to indicate their level of adoption on a three-point continuum, namely *i.e.* 'complete', 'partial' and 'never' adopted, which were assigned scores of '2', '1' and '0', respectively. The overall adoption score for each respondent was computed by dividing the total score obtained by the respondent by the maximum possible score, thereby deriving the adoption index for each sub-area. The adoption index was calculated following the methodology proposed by Karthikeyan (1994).

Depending upon the extent of adoption of improved technologies, the respondents were categorized as low, medium and high adopters by calculating mean and standard deviation and the adoption level towards improved technologies was analyzed using frequency and percentage. Correlation analysis was employed to examine

the relationship between independent variables and adoption of improved goat farming practices among the respondents.

RESULTS AND DISCUSSION

Extent of adoption of goat farming practices by goat farmers

An examination of the data reveals that a majority of the respondents (67.50%) exhibited a medium level of adoption of improved goat farming practices. This was followed by 18.33 per cent of respondents in the low adoption category, while only 14.17 per cent demonstrated a high level of adoption (Table 1 & Fig. 1).

Table 1 : Distribution of respondents according to adoption level of goat farming practices

(n=120)

Variable	Category	Respondents	
		Frequency	Percentage
Adoption	Low (<22.50)	22	18.33
	Medium (22.50-64.58)	81	67.50
	High (>64.58)	17	14.17
Mean = 43.54, S.D. = 21.04			

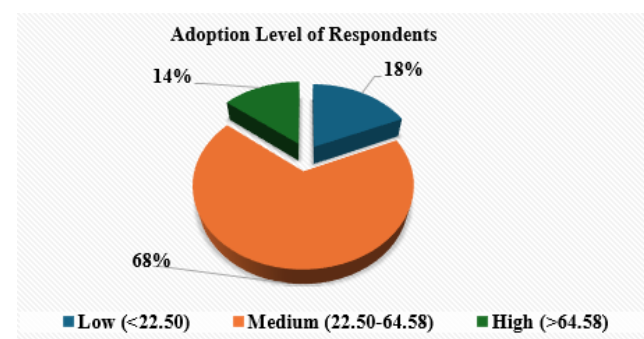


Fig. 1 : Distribution of respondents according to adoption level

The observed pattern suggests that most trainees have partially integrated recommended goat farming technologies into their practices, but have not yet reached a level of full adoption. This moderate level of adoption may be attributed to several influencing factors, including the extent of knowledge gained through training, availability of resources, access to veterinary and extension services and the size of the goat flock maintained by the farmers. Additionally, exposure to practical training, demonstrations of improved

technologies and the perceived economic benefits or felt needs of commercial goat farming appear to play a crucial role in shaping adoption behaviour. However, the presence of a considerable proportion of respondents in the medium category reflects a positive inclination towards improved practices and highlights the potential for further enhancement

Adoption index of breeding management practices

Table 2. Adoption index of various recommended breeding practices by goat farmers

(n=120)

Sr. No.	Breeding Management Practices	Adoption			Total Score	Adoption Index	Rank order
		CA	PA	NA			
1	Selection and purchase of quality animals	77	33	10	187	77.92	II
2	Identify the does in heat	63	40	17	166	69.17	III
3	Verification of pregnancy	12	52	56	76	31.67	V
4	Breed your does first time at the age of one year	59	39	22	157	65.42	IV
5	Allow mating of doe at 18 hours after heat	89	25	6	203	84.58	I
6	Castration of male	18	9	93	45	18.75	VI
7	Artificial insemination	0	0	120	0	0.00	VIII
8	Flushing prior to breeding	3	8	109	14	5.83	VII

CA- Complete Adoption, PA- Partial Adoption, NA- Never Adoption

Breeding management is a key aspect in goat farming, as the profitability of goat enterprises largely depends on reproductive efficiency. The data presented in Table 2 indicate considerable variation in the adoption of different breeding management practices among respondents. Among the practices studied, allow mating of does at 18 hours after the onset of heat showed the highest adoption index (84.58%) followed by selection and purchase of quality animals (77.92%), identify the does in heat (69.17%) and breed your does first time at the age of one year (65.42%). The higher adoption of these practices may be attributed to their simplicity and reliance on easily observable traits such as mounting behaviour of buck and doe, bleating and mucous discharge from the vulva to detect heat. Similarly, the emphasis on selecting quality animals based on traits like body weight, dam's milk yield and physical appearance

through continuous extension efforts. These results are consistent with the findings of Bihari and Singh (2016), Gunaseelan *et al.* (2018), Kakraliya *et al.* (2022), Choudhary *et al.* (2025) and Shingade *et al.* (2025) who also reported a predominance of medium adoption among farmers.

reflects farmer's preference for simple and experience-based selection criteria that are perceived to enhance productivity. In contrast, comparatively lower adoption was observed for practices such as verification of pregnancy (31.67%), castration of male (18.75%) and flushing prior to breeding (5.83%). However, none of the respondents adopted artificial insemination. This could be due to inadequate veterinary infrastructure, limited availability of skilled professionals and restricted access to such services, which are often confined to research institutions. Additionally, farmers may prefer natural mating due to familiarity, convenience and lower perceived risk. This is in agreement with the findings of Narmatha *et al.* (2013), Singh *et al.* (2017), Gunaseelan *et al.* (2018), Luthra *et al.* (2018), Eyazhini *et al.* (2021) and Shingade *et al.* (2025).

Adoption index of feeding management practices

Table 3 : Adoption index of various recommended feeding practices by goat farmers

(n=120)

Sr. No.	Feeding Management Practices	Adoption			Total Score	Adoption Index	Rank order
		CA	PA	NA			
1	Colostrum feeding to kids within one hour after birth	109	3	8	221	92.08	I
2	Feeding of milk to kids about 10% of its body weight up to the age of 15 days	104	5	11	213	88.75	II
3	Feeding of 150 gm concentrates to the kids of 3-6 months of age	5	41	74	51	21.25	VII
4	Feeding of 3-5 kg green fodder per day for adult goats	24	61	35	109	45.42	V
5	Feeding of 200-250 gm concentrates per day per doe	2	12	106	16	6.67	VIII
6	Steaming up	38	58	24	134	55.83	IV
7	Feeding mineral supplements	10	41	69	61	25.42	VI
8	Grazing of animals	88	23	9	199	82.92	III

CA- Complete Adoption, PA- Partial Adoption, NA- Never Adoption

The adoption index of various recommended feeding management practices in goat farming is presented in Table 3. The findings indicate that colostrum feeding to kids within one hour after birth recorded the highest adoption rate (92.08%) followed by feeding of milk to kids about 10% of its body weight up to the age of 15 days (88.75%), grazing of animals (82.92%). Moderate adoption index was observed for practices such as steaming up (55.83%) and feeding of 3-5 kg green fodder per day for adult goats (45.42%). Whereas, lower adoption was found for feeding mineral supplements (25.42%), feeding of 150 gm concentrates to the kids of 3-6 months of age (21.25%) and feeding of 200-250 gm concentrates per day per doe (6.67%) among the goat farmers. The high adoption of early colostrum feeding

can be attributed to farmers awareness of its importance for enhancing immunity and survival of newborn kids. Similarly, the practice of feeding milk based on body weight is widely followed due to its direct impact on early growth and development. Grazing also showed high adoption because its economic feasibility and compatibility with traditional systems. However, lower adoption of concentrate feeding and mineral supplementation may be due to cost constraints and limited resources availability despite awareness created during training. Findings are in consonance with the findings of Thombre *et al.* (2010), Narmatha *et al.* (2013), Mandavkar *et al.* (2015), Sabapara and Kharadi (2015), Singh *et al.* (2017), Eyazhini *et al.* (2021) and Thapa *et al.* (2025).

Adoption index of healthcare management practices

Table 4 : Adoption index of various recommended health care practices by goat farmers

(n=120)

Sr. No.	Healthcare Management Practices	Adoption			Total Score	Adoption Index	Rank order
		CA	PA	NA			
1	Deworming	55	45	20	155	64.58	I
2	Control of ectoparasites	20	40	60	80	33.33	VII
3	Isolation of sick animals from healthy animals	20	49	51	89	37.08	VI
4	Vaccination of animals against contagious disease	31	69	20	131	54.58	III
5	Treatment of sick animals by veterinarian	18	69	33	105	43.75	IV
6	Disinfection of naval cord after birth	20	50	50	90	37.50	V
7	Follow sanitary practices of your shelter	54	45	21	153	63.75	II

CA- Complete Adoption, PA- Partial Adoption, NA- Never Adoption

Data from Table 4 indicates that among all health care practices, deworming recorded highest adoption index (64.58%) and rank first in the ranked order. This was followed by follow sanitary practices of your shelter (63.75%), vaccination of animals against contagious disease (54.58%), treatment of sick animals by veterinarian (43.75%), disinfection of naval cord after birth (37.50%), isolation of sick animals from healthy animals (37.08%) and control of ectoparasites (33.33%). The results clearly demonstrate that

training had a significant positive influence on the adoption of key animal health care practices, particularly those that are simple, preventive and easy to implement, thereby contributes to better animal health and productivity. These results are consistent with the findings of Bihari and Singh (2016), Singh *et al.* (2017), Gunaseelan *et al.* (2018), Luthra *et al.* (2018), Shelly (2020), Eyazhini *et al.* (2021), Thapa *et al.* (2025) and Shingade *et al.* (2025).

Adoption index of general management practices

Table 5. Adoption index of various recommended general practices by goat farmers

(n=120)

Sr. No.	General Management Practices	Adoption			Total Score	Adoption Index	Rank order
		CA	PA	NA			
1	Flushing	2	19	99	23	9.58	VII
2	Culling	34	43	43	111	46.25	III
3	Provide adequate rest to doe after the parturition	16	39	65	71	29.58	IV
4	Dehorning and disbudding	41	42	37	124	51.67	I
5	Weaning	6	40	74	52	21.67	VI
6	Trimming	2	10	108	14	5.83	VIII
7	Weighing of animals	17	34	69	68	28.33	V
8	Farm record maintenance	23	7	90	53	22.08	VI
9	Provide appropriate housing facilities	27	67	26	121	50.42	II

CA- Complete Adoption, PA- Partial Adoption, NA- Never Adoption

Adoption index of different general management practices by respondents can be observed from the Table 5. The presented data reveals that higher adoption index was possessed by dehorning and disbudding (51.67%) which was followed by provide appropriate housing facilities (50.42%), culling (46.25%), provide adequate rest to doe after the parturition (29.58%), weighing of animals (28.33%), farm record maintenance (22.08%), weaning (21.67%), flushing (9.58%) and trimming (5.83%). The relatively higher adoption of dehorning and disbudding may be attributed to preventing injuries among animals and handlers as well

as ease of management in confined system. Provision of appropriate housing facilities was the second most adopted practices indicate that respondents recognize the importance of shelter in protecting animals from adverse climatic condition and improving overall productivity. Similarly, culling showed widely adoption because of economic benefits of removing unproductive or diseased animals from the herd. These findings are in line with the studies conducted by Singh *et al.* (2017), Gunaseelan *et al.* (2018) and Luthra *et al.* (2018).

Adoption index of marketing practices

Table 6. Adoption index of various recommended marketing practices by goat farmers

(n=120)

Sr. No.	Marketing Practices	Adoption			Total Score	Adoption Index	Rank order
		CA	PA	NA			
1	Marketing of buck kids at 6-8 months of age	59	45	16	163	67.92	III
2	Consideration of body weight and physical appearance at the time of selling	76	31	13	183	76.25	I
3	Selling of animals in organized market	2	10	108	14	5.83	V
4	Selling of animals direct to butchers	59	46	15	164	68.33	II
5	Selling of animals at local market	7	29	84	43	17.92	IV

CA- Complete Adoption, PA- Partial Adoption, NA- Never Adoption

The results presented in Table 6 reveal varying levels of adoption of marketing practices among the respondents. The study observed that consideration of body weight and physical appearance at the time of selling recorded higher adoption index (76.25%). This can be attributed to training interventions were effective in enhancing farmer's awareness regarding quality-based pricing and market preferences. This reflects a shift from distress or unplanned selling toward more informed decision-making aimed at maximizing returns. Moderate adoption index was observed for practices such as selling of animals direct to butchers (68.33%), marketing of buck kids at 6-8 months of age (67.92%). These findings imply that training helped farmers understand the economic advantages of selecting appropriate marketing

channels and optimal age for sale. Direct sale to butchers may reduce intermediary involvement thereby increasing profit margins, while timely marketing of animals ensures better price realization and efficient resource utilization. However, lower adoption was observed for selling of animals at local market (17.92%) and least adoption was found for selling of animals in organized market (5.83%). The least adoption for organized market indicates that respondents faced significant barriers in accessing formal marketing systems *i.e.*, inadequate infrastructure, limited market information, distance to organized markets and procedural complexities. These findings are supported by the findings of Singh *et al.* (2017), Luthra *et al.* (2018), Kakraliya *et al.* (2022), Shingade *et al.* (2025) and Thapa *et al.* (2025).

Overall adoption index of goat farming practices by goat farmers

Table 7. Overall adoption index of various recommended goat farming practices by goat farmers

(n=120)

Sr. No.	Goat farming practices	Maximum Possible Score	Obtained Score	Adoption Index
1	Breeding management	1920	848	44.17
2	Feeding management	1920	1004	52.29
3	Healthcare management	1680	803	47.80
4	General management	2160	637	29.49
5	Marketing	1200	567	47.25
	Overall Adoption	8880	3859	43.46

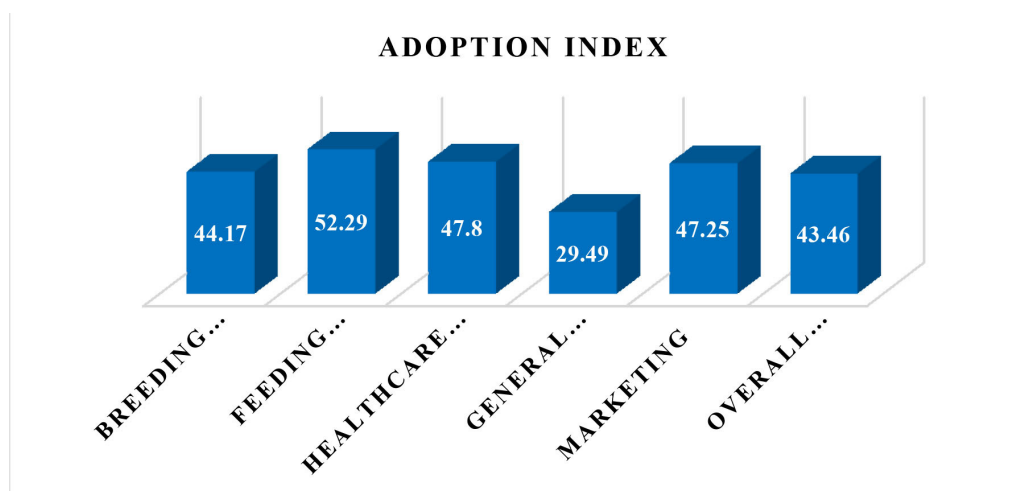


Fig. 2 : Overall adoption index of various recommended goat farming practices by goat farmers

The overall adoption index of recommended goat farming practices by respondents presented in Table 7 & Fig. 2 reveals that feeding management practices obtained highest adoption index (52.29%) followed by healthcare management (47.80%), marketing practices (47.25%), breeding management (44.17%) and least was observed for general management practices (29.49%). It is also evident that the cumulative overall adoption index of 43.46 per cent observed in the study signifies a moderate level of adoption across all recommended practices. This moderate level of adoption suggests that the training interventions were successful in creating awareness about scientific management practices and motivating farmers to incorporate them into their routine activities. The exposure to improved technologies, combined with practical demonstrations and interactive learning,

likely contributed to better understanding and retention of knowledge, which ultimately translated into higher adoption.

Furthermore, the increase in adoption levels reflects that respondents were able to recognize the economic and productive benefits associated with these practices. Training not only strengthened their technical competence but also reduced uncertainties and misconceptions related to improved goat farming methods. However, variations in adoption across different practices indicate that training had a strong positive impact, certain areas may still require continuous follow-up support, resource availability and reinforcement through extension services. These findings are in accordance with the results of Roy and Tiwari (2017), Gunaseelan *et al.* (2018) and Eyazhini *et al.* (2021).

Correlation analysis between independent variables and adoption of scientific goat farming practices

Table 8: Correlation analysis between independent variables and adoption of scientific goat farming practices

(n=120)

Sr. No.	Independent Variables	Correlation coefficient ('r' value)	t-value
X ₁	Age	0.6905**	10.37
X ₂	Caste	0.2419**	2.71
X ₃	Education	0.8073**	14.86
X ₄	Family Type	0.3950**	4.67
X ₅	Occupation	0.1587 ^{NS}	1.75
X ₆	Annual Income	0.7181**	11.21
X ₇	No. of goats possessed	0.5341**	6.86
X ₈	Land holding	0.5985**	8.11
X ₉	Experience in goat farming	0.7407**	11.97
X ₁₀	Innovativeness	0.8809**	20.21
X ₁₁	Extension Participation	0.9108**	23.96

**= Significant at 0.01 level of probability, NS = Non-Significant

Relationship between independent variables and dependent variable adoption of scientific goat farming practices correlation of coefficient (r) and its tests of significance were worked out for testing null hypothesis and the results of the correlation are presented in Table 8. Based on the analysis, it was observed that independent variables *i.e.* age, caste, education, family type, annual income, no. of goats possessed, land holding, experience in goat farming, innovativeness and extension participation were positively and significantly related with adoption of improved goat farming practices at a probability level of 0.01%. whereas occupation had non-significant correlation with adoption. This finding was supported by Chandraker and Pandey (2023) and Butani *et al.* (2024); Chaturvedani & Roy (2025); Choudhary *et al.* (2024); Butani *et al.* (2023); Vinaya *et al.* (2017).

CONCLUSION

The findings of the present study conclude that majority of farmers exhibited a medium level of adoption with an overall adoption index of 43.46 per cent reflecting a moderate yet progressive shift towards improved management practices. Among different domains, feeding management showed the highest adoption, while general management practices lagged behind. The independent variables such as age, caste, education, family type, annual income, no. of goats possessed, land holding, experience in goat farming, innovativeness and extension participation were found to have a positive and highly significant relationship with adoption whereas occupation showed non-significant correlation. The findings demonstrate that training enhanced farmer's technical knowledge, skills and decision-making ability. However, variations in adoption levels highlight the need for continuous follow-up, improved access to inputs and veterinary services and strengthened extension support. Therefore, sustained and need-based training interventions are essential to further enhance adoption level and ensure sustainable productivity and livelihood improvement among goat farmers.

ACKNOWLEDGEMENT

The authors gratefully acknowledge the support and facilities provided by Kisan Kaushal Vikas Kendra, Agriculture University, Jodhpur, which greatly contributed to smoothly and successful organization of the training programme. They also extend their appreciation to all the participants for their enthusiastic involvement and valuable contribution to the survey conducted during the study.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

REFERENCES

- Assan, N. (2014). Goat production as a mitigation strategy to climate change vulnerability in semi-arid tropics. *Sixth International Conference on Climate Change, University of Iceland, Reykjavik, Iceland*, 27- 28.
- Bihari, S. and Singh, N. (2016). Adoption of goat farming technologies by the farmers in Udaipur district of Rajasthan. *Research Journal of Animal Husbandry and Dairy Science*, 7(2): 75-79.
- Butani, J. B., Dhodia, A. J. and Pandya, C. D. (2023) Adoption of health care management practices in goat by tribal goat keepers. *Gujarat Journal of Extension Education*, 36(1):61-64. <https://doi.org/10.56572/gjoe.2023.36.1.0011>.
- Butani, J.B., Dhodia, A.J. and Rana, K.N. (2024). Adoption of scientific breeding management practices by tribal goat keepers. *Gujarat Journal of Extension Education*, 38(1): 59-62.
- Chandraker, K. and Pandey, A.K. (2023). Factors affecting adoption of improved goat rearing practices in Jharkhand & Chhattisgarh. *The Pharma Innovation Journal*, 12(7): 2681-2683.
- Chaturvedani, A. K. and Roy, D. (2025) Effectiveness of the goat guru mobile app among farmers. *Gujarat Journal of Extension Education*, 40(2): 74–80. <https://doi.org/10.56572/gjoe.2025.40.2.0012>
- Choudhary, D., Verma, R.K. and Choudhary, K. (2025). Adoption level of sheep farmers about improved sheep management practices. *Gujarat Journal of Extension Education*, 39(1): 100-108.
- Choudhary, Kamlesh, Gupta, Shobhana and Dadheech, Vishal (2024) Assess the knowledge level and relationship between profile of trained youth of the ARYA project about goat farming. *Gujarat Journal of Extension Education*, 37(2):106-109. <https://doi.org/10.56572/gjoe.2024.37.2.0017>.
- Eyazhini, P., Vimalraj Kumar, N., Elamaram, A. and Sangamitra, R.K.R. (2021). Adoption of improved scientific goat rearing practices and constraints perceived by goat farmers. *Indian Journal of Veterinary & Animal Science Research*, 50(5): 70-75.
- Gunaseelan, M., Singh, B.P., Verma, M.R. and Pachaiyappan, K. (2018). Adoption level of improved goat farming technologies by commercial goat farmers in Tamil

- Nadu, India. *International Journal of Current Microbiology and Applied Sciences*, 7(5): 3293-3300.
- Kakraliya, A.L., Pandey, R., Chopra, G., Tatarwal, J.M. and Serawat R. (2022). Adoption of management practices of goat farming in Sirohi tehsil of Sirohi district, Rajasthan, India. *Asian Journal of Agricultural Extension, Economics & Sociology*, 40(2): 71-75.
- Karthikeyan, C. (1994). Sugar factory registered growers: an analysis of their involvement and impact. M.Sc thesis submitted to Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India.
- Lebbie, P. R., Ranganathan, T. T., Simon, S. and Pradeep, C.A. (2010). Knowledge of farm women on Wayanad district, Kerala about goat rearing practices. *Indian Journal of Animal Science*, 44(1): 61-63.
- Luthra, P., Singh, S.P., Sangwan, S.S., Gautam, Malik, A. and Rachna. (2018). Adoption of recommended goat rearing practices in Haryana. *Haryana Veterinary*, 57(1): 62-66.
- Mandavkar, P.M., Hanmante, A.A. and Talathi, M.S. (2015). Status of goat farming practices, knowledge and adoption status of technologies in North Konkan coastal zone of Maharashtra. *Journal of Krishi Vigyan*, 3(2): 93-96.
- Mohan, B., Sagar, R.L. and Singh, K. (2009). Factors related to promotion of scientific goat farming. *Indian Research Journal of Extension Education*, 13(2): 67-71.
- Morales-Jerrett, E., Mancilla-Leyton, J.M., Delgado-Pertinez, M. and Mena, Y. (2020). The contribution of traditional meat goat farming systems to human well-being and its importance for the sustainability of this livestock subsector. *Sustainability*, 12: 1181.
- Narmatha, N., Sakthivel, K.M., Uma, V. and Akila, N. (2013). Adoption and constraints in improved goat rearing practices. *Indian Journal of Animal Research*, 47(6): 547-550.
- Roy, R. and Tiwari, R. (2017). Farmer's knowledge and adoption level on goat healthcare management practices in selected areas of India. *Bangladesh Journal of Animal Science*, 46(2): 95-101.
- Sabapara, S.P. and Kharadi, V.B. (2015). Adoption of improved goat rearing practices in Southern Gujarat. *The Indian Journal of Small Ruminants*, 21(2): 367-369.
- Shelly, M. (2020). Effectiveness of training programme on the adoption behaviour of goat farmers in Panjab. *Journal of Krishi Vigyan*, 9(1): 109-113.
- Shingade, S.V., Korade, R.S., Bagul, S.M., Sutar, S.B., Bansode, P.S. and Nigude, H.P. (2025). Technology adoption level and profitability of goat production among Sangamneri goat keepers in Rahuri cluster. *International Journal of Veterinary Sciences and Animal Husbandry*, 10(11): 98-104.
- Shrestha, R., Ghimire, R. and Bhattarai, N. (2020). Study of farmer's attitude and consent towards consumption of goat milk and milk product in eastern Chitwan, Nepal. *International Journal of Veterinary Sciences and Animal Husbandry*, 5(3): 17-20.
- Singh, S.K., Singh, R., Kushram, P. and Viswkarma, R. (2017). Adoption level of scientific goat farming practices among goat farmers. *Asian Journal of Agricultural Extension, Economics & Sociology*, 21(4): 1-6.
- Thapa, P., Magar, S.R. and Aidi, B. (2025). Study of goat production and management practices adopted by farmers in Bajura district, Nepal. *International Journal of Applied Science and Biotechnology*, 13(2): 74-80.
- Thombre, B.M., Suradkar, D.D. and Mande, J.V. (2010). Adoption of improved goat rearing practices in Osmanabad district. *Indian Journal of Animal Research*, 44(4): 260-264.
- Vinaya Kumar H. M., Shivamurthy M., and Lunagaria M.M. (2017). Impact of rainfall variability and trend on rice yield in Coastal Karnataka. *Journal of Agrometeorology*, 19 (3): 286-287