



E-ISSN: 2320-7078

P-ISSN: 2349-6800

www.entomoljournal.com

JEZS 2020; 8(3): 806-810

© 2020 JEZS

Received: 04-03-2020

Accepted: 06-04-2020

DK Yadav

Ph.D. Scholar, Department of
Veterinary Medicine, C.V.Sc. & A.H.,
Acharya Narendra Deva University
of Agriculture & Technology,
Kumarganj, Ayodhya,
Uttar Pradesh, India

SV Singh

Ph.D. Scholar, Department of
Veterinary Medicine, C.V.Sc. & A.H.,
Acharya Narendra Deva University
of Agriculture & Technology,
Kumarganj, Ayodhya,
Uttar Pradesh, India

Ramakant

Assistant Professor Department of
Veterinary Medicine, C.V.Sc. & A.H.,
Acharya Narendra Deva University
of Agriculture & Technology,
Kumarganj, Ayodhya,
Uttar Pradesh, India

JP Singh

Assistant Professor Department of
Veterinary Preventive Medicine,
Acharya Narendra Deva University
of Agriculture & Technology,
Kumarganj, Ayodhya,
Uttar Pradesh, India

NK Singh

Assistant Professor Department of
Veterinary Clinical Practice, C.V.Sc.
& A.H., Acharya Narendra Deva
University of Agriculture &
Technology, Kumarganj, Ayodhya,
Uttar Pradesh, India

HC Verma

Assistant Professor, Department of
Veterinary Extension and A.H.,
C.V.Sc. & A.H., Acharya Narendra
Deva University of Agriculture &
Technology, Kumarganj, Ayodhya,
Uttar Pradesh, India

RP Diwakar

Assistant Professor, Department of
Veterinary Microbiology, C.V.Sc. &
A.H., Acharya Narendra Deva
University of Agriculture &
Technology, Kumarganj, Ayodhya,
Uttar Pradesh, India

Corresponding Author:**RP Diwakar**

Assistant Professor, Department of
Veterinary Microbiology, C.V.Sc. &
A.H., Acharya Narendra Deva
University of Agriculture &
Technology, Kumarganj, Ayodhya,
Uttar Pradesh, India

Health attribute profile of goat of Vindhyan zone of Eastern Uttar Pradesh, India

DK Yadav, SV Singh, Ramakant, JP Singh, NK Singh, HC Verma and RP Diwakar

Abstract

The present study was conducted to study health status of goat of Vindhyan Zone. The study revealed that kidding was normal in all uses as recorded by all the 120 respondents. None reported dystocia. None of the respondents gave any special medicine after kidding to their goats. Outbreak of disease was maximum in winter season. Maximum respondents were not aware of vaccinations in goats, advantage of cold chain and deworming. EVM is the use of medicinal plants, surgical techniques and traditional management practices to prevent and treat spectrum of livestock diseases. Conventional medicine is a remedy or drug used for diagnosis, treatment of disease and for maintenance of health of an animal. Deworming was mainly performed by Veterinary doctor and annually.

Keywords: Goats, health status, vaccination, Vindhyan zone

Introduction

Considering the high economic values of goat among livestock farming systems, it is important to perform clinical and paraclinical exams in order to guarantee sanitary strategies control, prevention or treatment of diseases and to assure good management practices. It is well recognized that hematological parameters in healthy goats show several variations in relation to breed [1], age [2], reproductive status, housing, starvation, environmental factors, stress and transportation [3]. Dewormers, or anthelmintic drugs, are incredible tools in preventing losses from internal parasites. They should be used as a treatment and not a preventative. Overuse of dewormers quickly builds drug-resistant populations of internal parasites, while losses and costs will increase with continued heavy use [4]. Scientist [5] reported that flock size, availability of critical inputs, education, occupation, annual income from goat and goat products, total annual income, housing of goats, milk yield index, extension participation of goat farmers and awareness of a goat cooperative society were positively and significantly correlated with the adoption of health care in goats by all four categories of farmer. Scientist [6] reported that among all the managerial practices, breeding practices for goat obtained more adoption index (66.89) followed by feeding practices for new born kid (51.81), feeding practices for goat (45.48) and health care practices (32.55). The overall adoption index was 47.92. Ethnoveterinary medicine (EVM) is the use of medicinal plants, surgical techniques and traditional management practices to prevent and treat spectrum of livestock diseases [7]. Conventional medicine is a remedy or drug used for diagnosis, treatment of disease and for maintenance of health of an animal [8].

Materials and Methods**Locale of the study**

The present study was conducted in the Vindhyan zone of Uttar Pradesh that comprises of three districts namely Sant Ravidas Nagar, Mirzapur and Sonbhadra. Two blocks of each district were selected on the basis of highest goat population. From each block two villages were selected in consultation with veterinary officer of the block on high goat population and accessibility. Further, from each village twenty respondents having five or more goats were selected to make a total sample size was of 120 respondents (40 from each district). The name of the selected blocks and the villages are given in Table-1. Based on the theoretical orientation, available literature and opinion of experts in the field of extension education, the following variables were selected for the study (Table-1&2):

List of tables**Table 1:** Name of the selected blocks and the villages

S. No.	District	Block	Village
1.	Santravidas Nagar	Abholi	Abholi,
			Makanpur
		Deegh	Semradh,
			Ibrahimpur
2.	Mirzapur	Vijaypur	Jhilwarbizar,
			Dugraha
		Kone	Husenipur,
			Mahangipur
3.	Sonebhadra	Robertsganj	Lodhi,
			Surkrit
		Chopan	Patwadh,
			Kanchh

Table 2: Selected variables

S. No	Variable	Measurements
1.	Kidding status	Direct questioning
2.	Any special medicine provided after kidding	Direct questioning
3.	In case of disease treated by	Direct questioning
4.	Distance of village and hospital(km)	Direct questioning
5.	Any disease outbreak in last five years	Direct questioning
6.	Season of outbreak	Direct questioning
7.	Adult goat died in last year	Direct questioning
8.	Purchase of medicine	Direct questioning
9.	Distance of nearest medical store	Direct questioning
10.	Vaccination Status	Direct questioning
11.	Vaccinated by	Direct questioning
12.	Cold Chain	Direct questioning
13.	Deworming performed	Direct questioning
14.	Recommendation for deworming	Direct questioning
15.	Frequency of deworming	Direct questioning
16.	Use of ethno/herbal medicine	Direct questioning
17.	Milking Method	Direct questioning
18.	Milk Yield of Goat per household	Direct questioning
19.	Consumption of goat milk	Direct questioning
20.	Occurrence of mastitis	Direct questioning
21.	Awareness of health benefits of goat milk	Direct questioning

Tools used for data collection

Data was collected from a primary field survey of the selected households by personally interviewing the household heads with the help of a comprehensive questionnaire specifically designed for the study. A semi structured interview schedule was developed in consultation with the experts in the field of Extension and Goat Husbandry. Keeping in mind the objectives of the present study, appropriate tools, techniques, scales etc., were incorporated in interview schedule for measurement of different variables. Before finalizing, the schedule was pre-tested under similar conditions. Based on the experience gained in pre-testing, the schedule was modified, wherever necessary and then, finally administered for data collection from the selected respondents.

Methods of data collection: As far as data collection is concerned, each selected respondent was personally interviewed by the researcher, using the developed structured interview schedule during the survey period.

GPS enabled android App Epicollect 5 was used to collect data. Data from secondary sources and through observations were also collected.

Statistical Methods

After collecting data, it was compiled, tabulated and analyzed keeping in view the objectives of the study. Statistical analysis of data was done by using SPSS 20 software. The statistical methods like frequency, percentage, mean, standard deviation, standard error, t test and Analysis of variance (ANOVA) and Duncan's multiple range test (DMRT). Mean values at different intervals were compared with their base values using the paired t-test. The subjective data generated from the scoring of various parameters were analyzed using the Kruskal-Wallis test. In each analysis, the differences were considered significant at a value of $P < 0.05$.

Results and Discussions

Kidding was normal in all uses as recorded by all the 120 respondents. None reported dystocia. None of the respondents gave any special medicine after kidding to their goats. In case of disease, 23.33% cases were treated by veterinary doctors, 21.67% were treated by Para vets, 55% respondents believed in self treatment while none went for quack (Table 3). The distance of village and hospital was 0-5 for 47.5% respondents, 5-10 km for 19.17% respondents and 10-15 km for 33.33% respondents. The distance was not more than 15 km for any of the respondents. 22.5% respondents experienced

disease outbreak in last five years where as 77.5% respondents didn't faced any disease outbreak in last 5 years (Table 3). Disease outbreak was reported mainly in winter season (57.5%) cases, where as 42.5% respondents reported disease outbreak in rainy season (Table 3). Goats of 27.5% respondents, died in past one year, while 72.5% goat rearers didn't report any dead last one year (Table 3). Distance of nearest medical store that sold veterinary medicines was recorded. The percent respondents with respective distance of medical store from village were 30.83% (<500m), 27.5% (500m to 1km) and 32.5% (1-5km). In maximum cases the distance was between 1-5km limiting the purchase of medicine by otherwise landless goat farmers. Only 46.67% respondents were able to buy medicines for their goats and 53.33% couldn't afford it.

The majority of respondents (74.17%) didn't vaccinate their animals while only 25.83% respondents vaccinated their goats. Their animals were majorly vaccinated by veterinary doctor (64.51%), and Paravets (35.48%). None of them self vaccinated their animals (Table 3). In case of only 31.67%, deworming was performed while 68.33% respondents didn't performed. Majority of respondents dewormed their goat by veterinary doctors in 55.26% cases, 10.52% respondents their animals by Para vets, while 23.33% went to medical store for their animals. The frequency of deworming was recorded nearly seventy seven percent (76.67%) respondents dewormed their goat annually, while 15% dewormed their goat twice a year, and remaining 8.33% respondents dewormed their goat thrice a year (Table 3)^[9].

Table 3: Health attributes profile of goats in different districts of Vindhyan zone

Attributes	Category	Frequency	Percentage
Kidding status	Normal	120	100%
	Dystocia	0	0%
Any special medicine provided after kidding	Yes	0	0%
	No	120	100%
In case of Disease treated by	Veterinary Doctor	28	23.33%
	Para vet	26	21.67%
	Self	66	55%
	Quack	0	0%
Distance of Village and Hospital (Km)	0-5	57	47.5
	5-10	40	19.17
	10-15	23	33.33
	15-20	0	0
	>20	0	0
Any disease outbreak in last five years	Yes	27	22.5
	No	93	77.5
Season of Outbreak	Rainy	51	42.5
	Winter	69	57.5
Adult Goat died in last year	Yes	33	27.5
	No	87	72.5
Purchase of Medicine	Yes	56	46.67
	No	64	53.33
Distance of nearest medical store	<500m	37	30.83
	500-1km	33	27.5
	1-5km	39	32.5
	5 10 km	0	0
	>10 km	0	0
Vaccination Status	Yes	33	27.5
	No	87	72.5
Vaccinated by	Veterinary doctor	23	16.67
	Para vet	11	9.16
	Self	0	0
	None	89	74.17
Cold Chain	Yes	15	12.5
	No	105	87.5
Deworming performed	Yes	38	31.67
	No	82	68.33
Recommendation for deworming	Veterinary doctor	21	17.5

	Para vet	4	3.33
	Self	4	3.33
	Medical Store	9	7.5
	None	82	68.33
Frequency of deworming			
	Annually	92	76.67
	Bi annually	18	15
	3 month	10	8.33
Use of ethno/herbal medicine			
	Yes	94	78.33
	No	26	21.66

Distribution of the respondents according to usage of full hand milking

Category	Frequency	Percentage
Not using full hand milking	0	0
Using full hand milking	120	100
Milk Yield of Goat per household		
Category	Frequency	percentage
Low (<217ml)	16	13.33
Medium (217ml to 361ml)	54	45.00
High(>361ml)	50	41.67
Mean=361.76 ml/household		
Consumption of goat milk		
Yes	95	79.16
No	25	20.83
Occurrence of mastitis		
Yes	11	9.16
No	109	90.83
Awareness of health benefits of goat milk		
Yes	84	70
No	36	30

The health attributes recorded are in close agreement with the same findings ^[9, 10], also reported that vaccination was performed mainly for PPR and FMD by 14.0 to 12.0 per cent and deworming by 19.6% goats keepers. Goat keepers followed self-treatment (61.4%) of their sick goats followed by veterinary assistant (20.4%) and neighbour (18.2%) (Table 3). Contrary to above findings a report of ^[11] suggested that deworming of goats was practiced regularly by 44.58 per cent farmers. Only 23 per cent of the farmers adopted vaccination against common infectious diseases. Majority of the farmers (68.33%) preferred village Gunni for treatment of the sick goats, however 57.63 per cent of large farmers approached veterinarian for treatment sick goats. Most of (92.08%) farmers sold their goats to the local traders in their own villages. Physical appearance of the animals was considered as the main criteria for selling (48.33%). Majority of male kids were sold within 7-12 months of age.

Scientist ^[12] also reported a higher vaccination percentage (49.0%) against H.S., F.M.D. and Enterotoxaemia diseases. Relatively lesser percent respondents performed deworming. Only 19.2% and 11.2% of the goat owners practiced deworming and ectoparasitic controls in goats. About 85.0% of the goat owners preferred livestock inspector for treatment of sick animals. Seventy eight percent (78.33%) respondents used ethno/herbal medicine while 21.66% didn't use it. All the respondents i.e. 100% were using full hand method of milking (Table 3), (13.33%) respondents recorded a low milk yield with less than 217ml/day, 45.0% respondent's goat gave medium amount of milk with production 217-361ml/day. Only 41.67% respondents goat have high production with more the 361ml/day. The mean production was 361.76/household (Table 3).

Only 79.16% respondents consumed the goat milk, while 20.83% respondents didn't consume their milk. 70.0%

respondents were aware of health benefit of goat milk, while 30.0% didn't have knowledge of it. There were only 9.16% cases of mastitis reported in goats where as 90.83% respondents animal didn't face cases of mastitis (Table 3). Goat farming has been age old practice in our country. People of Indus Valley civilization (3300-1300 BC) were familiar with goats in addition to other domestic and wild animals of today. In Rig-Veda goats were mentioned and kept by Aryans for milk. In the Arthashastra, goat has been described as an important animal for milk. This sector plays an important role in socio-economic development of rural households and rightly referred as poor man's cow owing to multi-dimensional use as meat, milch and wool/fibre animal. However, more than 90% of goats that are found in the developing countries including India remain the primary commodity for meat. Goat rearing in the country is mostly restricted to marginal and small farmers. The goat population in our country has declined by 3.82% over the 18th census of livestock and the total goat in the country is 135.17 million numbers in 2012. The possible causes of the current trend can be multiple, however important factors responsible includes health constrains in addition to factors like decreasing agriculture land, fellow land and grazing area; change in social dynamics; available choices in selection of animal protein food, etc. Many of these factors are beyond control at individual level or farm level. However health constraints can be targeted and controlled. Farmers face various hurdles in rearing goats which varies from production to marketing constraints. Production constraints include manage mental, socio-economical, infra structural and technological constraints. With regard to marketing of goats and chevon, the farmers are being exploited by middlemen and the margin of profit obtained is comparatively low.

Various studies highlight the importance of emphasizing small ruminant livestock production, (as opposed to large ruminant and non-ruminant production) not only for ensuring food security in rural regions, but also for helping to reduce poverty and overall household wellbeing^[14]. The emphasis is because sheep (*Ovis aries*) and goat (*Capra hircus*) are more efficient in converting non-grain feed into quality meat compared with beef, pork and poultry^[15]. In subsistent agricultural economies, competition for productive inputs is less for small ruminants than for another livestock (such as pigs, cattle and poultry)^[16]. Capital investment in housing and materials (such as iron sheets and wood) are lower for sheep and goat production compared with another livestock like cattle^[17]. The smaller size of small ruminants also makes them more suitable for home consumption among poor households, thereby helping to improve the nutrition and animal protein requirements and food security situation of rural households^[10, 11]. Studies^[17], suggest that information on socio-cultural, socioeconomic and farm characteristics of farm households is critical in designing effective and appropriate livestock programs that benefit local subsistent farmers.

Conclusion

The study however revealed that 74.17% respondents did not vaccinate their goats owing to ignorance or limited animal health services. In case of disease only (23.33%) respondents called the veterinarians, instead of the fact that, in 47.5% situation hospitals were located within 0-5 km of range in most of the villages. Medical stores were located at 1-5km distance. Outbreak of disease was witnessed by 22.5% respondents with maximum outbreaks (75.83%) in winter season. Deaths were reported by 27.5% of the respondents. The main reason for this was that maximum respondents (74.17%) were not aware of vaccinations in goats, advantage of cold chain (87.5%) and deworming (68.33%). Deworming was mainly performed by Veterinary doctor (55.26%) annually (76.67%). 78.33% respondents used Ethno-veterinary medicines. Deworming was followed but not on regular basis and that too on the recommendation of medical store people without identifying the real parasite.

References

1. Ayalew T, Duguma B, Tolemariam T. Socioeconomic and farm characteristics of smallholder cattle producers in Ilu Aba zone of Oromia regional state, South Western Ethiopia. *Global Veterinaria*. 2013; 10(5):607-613.
2. Devendra C. Prospects for developing small ruminant production in humid tropical Asia. Expert Consultation on Increasing Small Ruminant Production. Soria, 1985.
3. Dossa HL, Gauly M, Wollny C. Smallholder's perceptions of goat farming in Southern Benin and opportunities for improvement. *Tropical Animal Production*. 2007; 39:49-57.
4. Hale M. Managing internal parasites in sheep and goats. P. Driscoll. Butte, MT, National Center for Appropriate Technology, 2006, 8.
5. Nguyen TM, Van Binh D, Orskov ER. Effect of foliages containing condensed tannins and gastrointestinal parasites. *Anim. Feed Sci. Tech*. 2005; 121:77-87.
6. Oluwatayo IB, Oluwatayo TB. Small Ruminants as a Source of Financial Security, A Case Study of Women in Rural Southwest Nigeria. Institute for Money, Technology and Financial Inclusion (IMTFI). 2012; 2:1-

- 21.
7. Peacock C. Goats-A pathway out of poverty. *Small Ruminant Research*. 2005; 60(1):179-186.
8. Piccione G, Monteverde V, Rizzo M, Vazzana I, Assenza A, Zumbo A *et al*. Reference intervals of some electrophoretic and haematological parameters in Italian goats: comparison between Girgentana and Aspromontana breeds. *J Appl. Anim. Res*, 2014; 42:434-439.
9. Sabapara GP, Kharadi VB, Sorthiya LM, Patel DC. Housing, Health Care and Milking Management Practices Followed by Goat Owners in Navsari District of Gujarat. *Scholars Journal of Agriculture and Veterinary Sciences*. 2014; 1(4):164-167.
10. Sagar RL, Dohare RS. Adoption of health care in goats as related to some situational, socio-economic and extension characteristics of goat farmers. *Indian Journal of Small Ruminants*. 2000; 6(1):36-41.
11. Singh S. Farm mechanization in hills of Uttarakhand, India-A review. *Agriculture for Sustainable development*. 2014; 2(1):65-70.
12. Tanwar PS, Rohilla PP. Goat management practices adopted by farmers in Jaipur District of Rajasthan. *Indian Journal of small Ruminants*. 2012; 18(1):121-124.
13. Terril CE. Prospect for increasing small ruminant production. In: V.M., Timon, & J.P., Hanrahan, (Eds.), *Small ruminant production in the developing countries*. Proceedings of an expert consultation, Sofia, Bulgaria, 1985a.
14. Thombre BM, Suradkar DD, Mande JV. Adoption of improved goat rearing practices in Osmanabad district. *Indian J Animal Research*. 2010; 44(4):260-264.
15. Tyasi TL, Lv Zhi Chao, Gxasheka M, Nkohla MB. Effectiveness of elephantorrhiza elephantina as traditional plant used as the alternative for controlling coccidian infections in goats. *J Bio. Agric. Healthcare*. 2015; 5(8):163-167.
16. Waziri MA, Ribadu AY, Sivachelvan N. Changes in the serum proteins, hematological and some serum biochemical profiles in the gestation period in the Sahel goats. *Vet. Arhiv*. 2010; 80(2):215-224.
17. Zumbo A, Sciano S, Messina V, Casella S, Di Rosa AR, Piccione G. Haematological profile of Messinese goat kids and their dams during the first month post-partum. *Anim. Sci. Pap. Rep*. 2011; 29:223-230.