

Housing, Health Care and Milking Management Practices Followed by Goat Owners in Navsari District of Gujarat

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Abstract: A field survey was conducted to study the housing, health care and milking management practices of 250 goat owners in Navsari district of Gujarat. The survey revealed that majority (66%) of the goat owners preferred close house, katcha type (71.2%) which were constructed near their dwellings (54%) with locally available low cost materials. Floor of goat shed in most of the cases (84%) was katcha type and roof had traditionally thatched (59.2%). A very few (1.6%) goat owners provided manger to their animals in sheds. Nearly 49% of the goat owners adopted vaccination against H.S., F.M.D. and Enterotoxaemia diseases. Only 19.2 and 11.2% of the goat owners were practiced deworming and ectoparasitic controls in goats. About 85% of the goat owners preferred livestock inspector for treatment of sick animals. Majority (76%) of the goat owners milk their animals whereas 24% did not milk their goats they suckle the kids. Only 9.47% of the goat owners separated the buck at the time of milking. Majority (97.89%) of the goat owners washed teats and udder before milking with the habit of wet hand milking and 75.79% followed knuckling method of milking. Only 8.42% of the goat owners washed their milking utensils by hot water. None of the goat owners followed testing for mastitis in goats.

Keywords: Goat, Housing, Health care, Milking, Practices

INTRODUCTION

Livestock rearing is an integral part of agriculture. Among various species of livestock, goat plays a vital role by providing milk and meat for nutrition and manure for agriculture. Goat rearing is an important enterprise not only for livelihood of weaker section of society but it also helps in meeting nutritional requirement of farm families in tribal and backward areas of Gujarat. Goats are generally maintained on grazing/browsing and supplementary feeding of locally available crop residues and agro-industrial byproducts. Goat farming as low cost enterprises mainly because of the unique characteristic of goat like small size, clean habits, thrives on tree leaves, grasses etc. Goat rearing is well suited to rural weaker section of the society with small land or community based free grazing resources. Census data revealed that India accounts 140.5 millions goats whereas in Gujarat state and Navsari district had 45.82 lacs and 86.5 thousand goats, respectively. Most of the goat owners of Navsari districts belong to scheduled tribe and other backward class. Goat rearing has a tremendous potential for income and employment generation especially in rural areas. Housing, health care and other management practices play an important role in improving the production performance of goats. Understanding the management practices followed by

the goat owners is necessary to identify the strengths and weaknesses of system and to formulate suitable intervention policies. Therefore, the present study was undertaken to ascertain the goat rearing practices in Navsari district of Gujarat.

MATERIAL AND METHODS

The present study was conducted in Navsari district of South Gujarat during March-December, 2013 following ex-post facto research design. A total 250 goat owners from 25 villages spread over five talukas viz. Navsari, Jalalpore, Gandevi, Chikhali and Vansada were selected using multistage random sampling technique. The data were collected through personal interview with the help of well-structured interview schedule by personal contact method in which practices related to housing, health care and milking management. The data collected were tabulated and analyzed using standard statistical tools as described by Snedecor and Cochran [9] to draw meaningful inferences.

RESULT AND DISCUSSION

Housing management practices:

The results of housing management practices are presented in Table 1. It was observed that 34% of

the respondents maintained their animals under open system of housing while, 66% of the respondents prefer close housing system. Similar observations have also been reported by Ekambaram *et al.* [2]. Majority (71.2%) of the respondents had kachcha type houses while, 28.8% respondents had pucca type houses for their goats. Present results were similar to the reports of

Jana *et al.* [4]. About 54% of goat owners had goat sheds near their dwelling while, 46% had attached to human dwellings to safeguard the animals during night time. The housing the goats inside the residence might be due to small number of goat holding by Goat owners. Tanwar *et al.* [10] reported that 93.33 % goat keepers kept their animals nearby own dwelling.

Table-1. Housing management practices followed by goat owners

Particulars	Type	Frequency	Per cent
Type of Housing	Open	85	34.00
	Close	165	66.00
	<i>Pucca</i>	72	28.80
	<i>Kuchcha</i>	178	71.20
Location of shed/house	Attached to human dwelling	115	46.00
	Nearby their dwelling	135	54.00
Type of floor	<i>Kachcha</i>	210	84.00
	<i>pucca</i>	40	16.00
Type of roof	No roof	22	8.80
	Asbestos sheets roof	48	19.20
	Galvanized iron sheets roof	32	12.80
	Thatched roof	148	59.20
Type of pillar/ pole	Wooden	162	64.80
	Iron	08	3.20
	Cemented/brick	80	32.00
Provision of manger	Yes	04	1.60
	No	246	98.40
Provision & practice to protect animal from extreme weather	Yes	138	55.20
	No	112	44.80
Cleanliness of floor	Dirty	100	40.00
	Clean	150	60.00

It was observed that floor of the goat houses were kachcha type in 84% while, only 16% had pucca floor for easy washing and cleaning. The common feeling to provide much natural comfort and conditions to the animals by providing kachcha flooring among the goat keepers of Navsari district also strengthens the observation reported by Tanwar *et al.* [10] in Rajasthan. It was also observed that roof of the goat houses were thatched type in 59.2% while, 19.2 and 12.8% had asbestos sheet roof and galvanized iron sheet roof, respectively. Similar observations have also been reported by Ekambaram *et al.* [2], Jana *et al.* [4] and Lawar *et al.* [7]. It was observed that only 1.6% of the respondents provided manger to animal in the goat sheds. Similar observations have also been reported by Tanwar *et al.* [10].

It was observed that majority (64.8%) of goat sheds had wooden type pole followed by 32 and 3.2 % cemented and iron type pole, respectively. It was observed that majority (55.2%) of the respondents practices to provide and protect animals from extreme weather whereas, 44.8% of the respondents did not followed this practice. It was observed that majority (60%) of goat sheds had cleaned floor whereas, 40% sheds were found dirty floor.

It was also observed that during rainy season, the goat keepers keep their goats in a *Machan* type houses made up of wooden logs and bamboo sticks and goats are kept at least three to four feet above the ground level. This type of housing is helpful in controlling the foot rot complications in the goats. These houses are also provided with a small sloppy staircase made up to wooden logs. The adult males and females are housed separately. The young kids are kept along with their mothers. Similar observations have also been reported by Jayashree [5] in Malnad area of Karnataka which is also heavy rainfall zone of the state.

Healthcare management practices:

The results of healthcare management practices are presented in Table-2. The study revealed that majority (51.2%) of goat keepers do not vaccinate their animals while, 48.8% of goat keepers vaccinate their animals against Haemorrhagic Septicaemia, Enterotoxaemia and Foot and Mouth disease under the vaccination programme run by state animal husbandry department. Present findings were in agreement with reports of Gurjar *et al.* [3] and Sharma *et al.* [8] in Rajasthan. However, these findings were lower than that of Deshpande *et al.* [1] and Lavania *et al.* [6] but higher than that of Tanwar and Rohilla [11].

Table-2. Health care practices followed by goat owners

Particulars	Type	Frequency	Per cent
Vaccination	Yes	122	48.80
	No	128	51.20
Deworming	Yes	48	19.20
	No	202	80.80
Ecto-parasite control	Yes	28	11.20
	No	222	88.80
Ligation & disinfection of navel cord	Yes	00	00.00
	No	250	100.00
Treatment of sick goat	Qualified Veterinarian	26	10.40
	Livestock Inspector	212	84.80
	Quack	12	4.80
Separation of sick animal	Yes	14	5.60
	No	236	94.40

The data in Table 2 indicated that only 19.2% and 11.2% of the respondents were practiced deworming and ecto-parasitic controls in goats. Present findings were supported by the reports of Lavania *et al.* [6]. These findings are contradictory to those reported by Gurjar *et al.* [3] and Sharma *et al.* [8] in Rajasthan. The low adoption for deworming and ecto-parasite control measures in study area may be due to lack of awareness and high cost of medicines. It was observed that none of the respondents followed practice of ligation and navel disinfection of kid after birth. Present findings are in close agreement with Lavania *et al.* [6]. Majority of goat keepers (84.8%) preferred Livestock Inspector for treatment of sick animals as they are locally available. Maximum (94.4%) goat owners did not isolate their sick animals from healthy stock whereas, only 5.6% goat owners followed this practice.

This may be due to lack of facility for separate housing for the animals. Present finding were supported by the findings of Deshpande *et al.* [1], Gurjar *et al.* [3] and Tanwar and Rohilla [11].

Milking management practices:

The data in Table 3 pertaining to milking practices followed by goat owners revealed that majority (76%) of the respondents were done milking of goats while, 24% do not milked their goats. The observations related to milking practices were based on the actual numbers of milking done by owners not the total respondents. Majority (90.53%) of the respondents do not separate buck at the time of milking while, 9.47% followed separation of buck. Majority (70.53%) of the goats owners followed once a day milking while, 29.47% followed twice a day milking of goats.

Table-3. Milking management practices followed by goat owners

Particulars	Type	Frequency	Per cent
Milking done	Yes	190	76.00
	No	60	24.00
Separation of buck at milking	Yes	18	9.47
	No	172	90.53
Frequency of milking	Once	134	70.53
	Twice	56	29.47
Splashing of water on teat/udder before milking	Yes	186	97.89
	No	04	02.10
Milking habit	Dry hand	4	2.10
	Wet hand	186	97.89
Milking method	Full hand	38	20.00
	Knuckling	144	75.79
	Striping	08	4.21
Teat dipping followed	Yes	00	00.00
	No	190	100.00
Cleaning of milking utensils	Tap water	174	91.58
	Hot water	16	8.42
Testing for mastitis control	Yes	000	00.00
	No	250	100.00

Amongst milking practices followed, majority (97.89%) of the respondents washed teats along with udder of milking animal before milking which must be needed for clean milk production to remove dirt and faeces material adhered to them. It was observed that majority (97.89%) of the respondents had habit of wet hand milking and only 2.10% respondents had habit of dry hand milking.

The data in Table 3 revealed that amongst milking done, majority (75.79%) of the respondents followed knuckling method, whereas 20% respondents practiced full hand milking and 4.21% stripping method of milking. Tanwar *et al.* [10] reported that 93.33% respondents adopted knuckling and 6.66% adopted full hand milking method. It was also observed that none of the respondents followed teat dipping after milking.

The data in Table 3 indicated that all respondents washed and cleaned their milking utensils. Out of all, 91.58% of the respondents washed their milking utensils simply by water and 8.42% of the respondents washed their milking utensils by hot water. It was observed that none of the respondents followed testing for mastitis in their goats.

CONCLUSIONS

It was concluded from study that the majority (66%) of the goat owners preferred close house, katcha type (71.2%) which were constructed near their dwellings (54%) with locally available low cost materials. Floor of goat shed in most of the cases (84%) was katcha type and roof had traditionally thatched (59.2%). A very few (1.6%) goat owners provided manger to their animals in sheds. Nearly 49% of the goat owners adopted vaccination against H.S., F.M.D. and enterotoxaemia diseases. Only 19.2 and 11.2% of the goat owners were practiced deworming and ectoparasitic controls in goats. About 85% of the goat owners preferred livestock inspector for treatment of sick animals. Majority (76%) of the goat owners milk their animals whereas 24% did not milk their goats they suckle the kids. Only 9.47% of the goat owners separated the buck at the time of milking. Majority (97.89%) of the goat owners washed teats and udder before milking with the habit of wet hand milking and 75.79% followed knuckling method of milking. Only 8.42% of the goat owners washed their milking utensils by hot water. None of the goat owners followed testing for mastitis in goats.

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