

Housing and feeding managemental practices for goats followed in South Gujarat

G P SABAPARA ¹, S B DESHPANDE ², V B KHARADI ³ and P K MALIK⁴

Navsari Agricultural University, Navsari 396 450 India

Received: 3 July 2009; Accepted: 20 November 2009

Key words: Feeding management, Goats, Housing management

Goat husbandry is a popular enterprise among the artisan people and back word communities in South Gujarat region comprising seven districts, viz. Bharuch, Surat, Narmada, Navsari, Valsad, Tapi and Dangs, where goats mainly thrive well on zero or minimum inputs system with high prolificacy. The managemental practices for goat followed by their keepers are entirely different in various geographical regions and even it is somewhat different in the South Gujarat than

the followed in other region of Gujarat. Therefore, an attempt was made to study the housing and feeding pattern of goat followed by the owners in South Gujarat region. For the purpose, a field survey was conducted on 1243 goat keepers of 45 villages in three districts, viz. Navsari, Surat and Bharuch of South Gujarat region to study the prevailing housing and feeding practices followed by them. The data were analyzed and tabulated to draw the meaningful

Table 1. Housing management practices on caste basis

Particulars	Goats Keepers				
	SC (n =124)	ST (n =565)	OBC (n =164)	Other (n =390)	Overall (n =1243)
Type of housing					
Open	121(97.58)	129 (22.83)	91 (55.49)	226 (57.95)	567 (45.62)
Close	3 (2.42)	436 (77.17)	73 (44.51)	164 (42.05)	676 (54.38)
Kachcha	3 (100)	434 (99.54)	68 (93.15)	141 (85.98)	646 (95.56)
Pacca	0 (0)	2 (0.36)	5 (6.89)	23 (14.02)	30 (4.44)
Roof					
Kachcha	3 (100)	433 (99.31)	68 (93.15)	138 (84.15)	642 (94.97)
Pacca	0 (0)	3 (0.69)	5 (6.85)	26 (15.85)	34 (5.03)
Flooring					
Kachcha	3 (100)	433 (99.31)	68 (93.15)	138 (84.15)	642 (94.97)
Pacca	0 (0)	3 (0.69)	5 (6.85)	26 (15.85)	34 (5.03)
Manger					
Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
No	3 (100)	436 (100)	73 (100)	164 (100)	676 (100)
Watering					
Well	100 (80.65)	75 (13.28)	26 (15.85)	19 (4.87)	220 (17.70)
Pond	16 (12.90)	139 (24.60)	30 (18.29)	193 (49.49)	378 (30.41)
Others	8 (6.45)	351 (62.12)	108 (65.86)	178 (45.64)	645 (51.89)
Place of housing					
Near Residence	118 (95.16)	143 (25.31)	81 (49.39)	337 (86.41)	679 (54.63)
Inside Residence	5 (4.03)	350 (68.95)	56 (34.15)	19 (4.87)	430 (34.59)
Others	1 (0.81)	72 (12.74)	27 (16.46)	34 (8.72)	134 (10.78)

Figures in parenthesis indicate per cent.

Present address: ¹Assistant Professor, ²Associate Professor and Head, ³Professor and Head, Animal Genetics and Breeding, Veterinary College, ⁴Assistant Professor, Department of Animal Sciences (⁴email: malikndri@gmail.com).

inferences. Among the 1243 goat keepers surveyed, the caste-wise distribution indicated that maximum goats keeping was practised by scheduled tribes (45.45%) in the region followed by general category (31.39%) and OBC (13.19% and results

Table 2. Feeding practices followed by goat keepers.

Particulars	Goats Keepers				
	SC (n =124)	ST (n =565)	OBC (n =164)	Other (n =390)	Overall (n =1243)
<i>Grazing pattern</i>					
Semi-intensive	00 (00)	00 (00)	98 (59.76)	248 (63.59)	346 (27.84)
Extensive	124 (100)	565 (100)	66 (40.24)	142 (36.41)	897 (72.16)
<i>Grazing duration</i>					
0-4 hrs	00 (00)	00 (00)	98 (59.76)	248 (63.59)	346 (27.84)
4-8 hrs	124 (100)	565 (100)	66 (40.24)	142 (36.41)	897 (72.16)
<i>Green fodder feeding</i>					
Yes	124 (100)	560 (99.12)	152 (92.68)	376 (94.41)	1212 (97.51)
No	00 (00)	05 (0.88)	12 (7.32)	14 (3.59)	31 (2.49)
<i>Dry fodder feeding</i>					
Yes	00 (00)	00 (00)	32 (19.51)	92 (23.59)	124 (9.98)
No	124 (100)	565 (100)	132 (80.49)	298 (76.41)	1119 (90.02)
<i>Concentrate feeding</i>					
(A) Lactating does					
Yes	32 (25.81)	262 (46.37)	84 (51.22)	266 (68.21)	644 (51.81)
No	92 (74.19)	303 (53.63)	80 (48.78)	124 (31.79)	599 (48.19)
(B) During pregnancy					
Yes	04 (3.23)	32 (5.66)	12 (7.32)	28 (7.18)	76 (6.11)
No	120 (96.77)	533 (94.34)	152 (92.68)	362 (92.82)	1167 (93.89)
(C) Growing kids					
(I) male					
Yes	124 (100)	532 (94.16)	152 (92.68)	358 (91.79)	1166 (93.81)
No	00 (00)	33 (5.84)	12 (7.32)	32 (8.21)	77 (6.19)
(II) Female					
Yes	22 (17.74)	84 (14.87)	16 (9.76)	48 (12.31)	170 (13.68)
No	102 (82.26)	481 (85.13)	148 (90.24)	342 (87.69)	1073 (86.32)
<i>Type of concentrate</i>					
Home made	124 (100)	565 (100)	164 (100)	390 (100)	1243 (100)
Purchased	00 (00)	00 (00)	00 (00)	00 (00)	00 (00)
<i>Mineral mixture feeding</i>					
Yes	00 (00)	00 (00)	00 (00)	00 (00)	00 (00)
No	124 (100)	565 (100)	164 (100)	390 (100)	1243 (100)

Figures in parentheses indicate per cent.

of the study and least preferred by SC. The results of the study are well supported by the findings of Tanwar *et al.* (2008), reported that the goat keeping is most popular (90.83%) among tribes of Mavli and Jhadol talukas of Udaipur district.

Housing management: The animals 45.62% surveyed were kept under open housing system and rest of the animals were maintained under close housing system in the region and among this scheduled tribes were stood on the top (77.17%) for giving the shelter to their goats however, least shelter (2.42%) was provided to the goats by SC (Table 1), which indicated that the goats are the major source of livelihood for scheduled tribes in South.

Gujarat region: Similar to the findings, Tanwar *et al.* (2008) also reported same pattern tribes in the region. 95.56% of goat keepers built *kachcha* type house under close housing system and among the *pacca* housing system, 94.97% goat

keepers had *kachcha* type roof and floor. Only 5.03% of goat keepers provided *pacca* floor and roof to their goats in the category. Manger was not built in shed by any of the respondent in south Gujarat. The common feeling is to provide much natural comfort and conditions to the animals by providing *kachcha* flooring among the goat keepers of South Gujarat also strengthen the observation reported by Tanwar *et al.* (2008) in Rajasthan.

Majority of goat keepers use bore well/hand pump or tap water (51.89%) followed by Pond (30.41%) and well (17.70%) as source of drinking water however, Tanwar *et al.* (2008) reported that goat keepers provide pond water to the goats for drinking purpose in Rajasthan. This difference in the pattern of type of drinking water may be attributed to the availability of water, as plenty of fresh water is available in South Gujarat region. During the heavy rainfall, goat keepers kept their goats in a *Machan* type houses made up



Figs 1–2. Housing (*Machan* Type) of goats in Heavy Rainfall Zone of South Gujarat

of wooden logs and bamboo sticks to protect them from adversity of rain (Figs 1–2). The males and females housed separately in *machan* type system prevail in the south Gujarat region however, kids are kept along with mothers. Results of the study are corroborated with the findings of Jayashree (2009) in heavy rainfall zone (Malnad area) of Karnataka.

Feeding management: Majority of the goat keepers follow extensive grazing (72.16%) for 4 to 8 hrs in a day (Table 2). Dhuppe *et al.* (2008) reported similar pattern of the grazing in Sangamner *Tahsil* of Maharashtra. Singh and Rai (2006) also reported same kind of the grazing pattern in the home tract of Barbari goat. The feeding of green fodder as tree lopping from Neem (*Azadirachta indica*), Tamarind (*Tamarindus indica*), Goras Amli (*Pithecellobium dulce*), Babul (*Acacia nilotica*), Subabul (*Leucaena leucocephala*), Samadi (*Prosopis cineraria*), Banyan tree leaves (*Ficus benghalensis* L), Peepal (*Ficus religiosa* L), Ber (*Zizyphus rotundifolia*), Kavathi (*Limonoa acidissima* L.) etc. is very common and practised by 97.51% goat keepers. Similar observations have been reported by Dixit *et al.* (2007) in the breeding tract of Marwari goat of Rajasthan and Singh *et al.* (2009) in the breeding tract of Zalawadi goats in Surendranagar district of Gujarat. The feeding of dry fodder to the goats is uncommon in the region and practised only by 9.98% goat keepers. The concentrate mixture comprising of *bajra*, *jowar*, wheat, *tuer chuni*, gram *chuni* and *babul* pod etc. Feeding of home made concentrate to the pregnant does practised in the region by 6.11% owners, only however, 51.81% goat keepers fed concentrate to lactating does for better nourishment of kids. The feeding of concentrate is very common to the male kids (93.81%) rather than the female kid (13.68%) for achieving the better growth rate resulting good return. The feeding of common salt was general practice in the area but animal holders did not provide the mineral mixture to the goats, irrespective of the category. Concentrate feeding was not practice by goat keepers in the breeding tract of Zalawadi goats of Gujarat as reported by Singh *et al.* (2009), which showed the variation within the

state for feeding pattern.

SUMMARY

Peculiar characteristic of goats to thrive well on zero or minimum input system makes the goat enterprise very popular among the artisan people and back word communities of the South Gujarat. The managerial practice in the region is somewhat better than the other parts of the Gujarat but not up to the mark. Results of the study indicated that there is an urgent need to make aware the goat keepers for the scientific feeding as well as the housing so that the owners can achieve maximum return from the enterprise to improve their socio-economic status.

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