

## Housing and Health Care Management Practices Adopted by Sheep Farmers in Telangana Region of Andhra Pradesh

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**Abstract:** A study on housing, health management practices of sheep in Telangana region of Andhra Pradesh was carried out on 576 sheep farmers randomly selected from 96 villages in Telangana region of Andhra Pradesh. The study revealed that semi closed type of housing system was adopted by 60.07% shepherds with thatched roof and kutchra floor. Significant association ( $p < 0.01$ ) was observed between zone and housing pattern. Barely 6.60% of farmers replaced soil on the floor of sheep shed once in a year. Majority (82.12%) of farmers provided lamb enclosures while 17.88% did not provide the lamb enclosures. Results further indicated that majority (93.40%) of farmers stored sheep's manure in open place as a heap. Deworming (100%), spraying (8.16%) and immunization (100%) schedule were followed as preventive health measures. Majority (88.54%) of sheep farmers were threw dead animals into open fields and unused open wells.

**Key words:** Housing, health care management practices, sheep, Telangana, farmer

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### INTRODUCTION

Sheep production is still in the hands of traditional shepherd community or economically weaker sections of the society under traditional extensive system of rearing which is influenced by agro-climatic conditions and rigors of nature. According to 2008 census sheep population in Andhra Pradesh are 255.39 lakhs and ranks first in the country.

The state has 34.5% of Indian sheep population. (Reddy *et al.*, 2009). Though, the sheep population in Telangana region constitute a significant number (50.1%) compared to the regions in the state but the information available on housing and health care management practices in respect of sheep in Telangana region had not been documented. Therefore, a systemic survey was undertaken to study the existing housing and health care management practices followed by farmers for rearing of sheep under field conditions and the resulting information will be useful for future policies for improvement of production potential of sheep.

### MATERIALS AND METHODS

The study was conducted in three agro-climatic zones viz., Northern Telangana Zone (NTZ), Central Telangana Zone (CTZ) and Southern Telangana Zone (STZ) of Telangana region of Andhra Pradesh because of

having dense population of sheep. A multistage stratified random sampling technique was employed to select the respondents. In the first stage two districts from each zone and in the second stage four mandals from each district and in the third stage four villages from each mandal were selected based on sheep population. From each village six respondents possessing sheep were selected randomly to collect requisite information. Thus, 576 sheep farmers possessing varying sheep flock were selected for the study. Information on housing and health care management practices were collected through formal interviews using a structured questionnaire personally. The data on different management practices were tabulated, frequency and percentage was calculated as per standard procedure and the association between zones was analysed by  $\chi^2$ -test.

### RESULTS AND DISCUSSION

**Housing practices:** It was observed that 60.07% shepherds provided semi open housing type to their sheep followed by night penning (22.92%) either in open fields or harvested fields while 17.01% observed both the patterns in the Telangana region of Andhra Pradesh (Table 1). The pen sides were closed with wooden planks or stone poles or thorny bushes. Significant association ( $p < 0.01$ ) was observed between zone and housing pattern followed by the shepherds. These findings were

Table 1: Housing management practices of sheep in Telangana region of Andhra Pradesh

Practices	NTZ (192)	CTZ (192)	STZ (192)	Overall (576)	$\chi^2$
<b>Housing pattern</b>					
Night penning	0 (00.00)	96 (50.00)	36 (18.75)	132 (22.92)	145.039**
Semi closed	159 (82.81)	75 (39.06)	112 (58.33)	346 (60.07)	
Both	33 (17.19)	21 (10.94)	44 (22.92)	98 (17.01)	
<b>Housing type</b>					
Kutcha	191 (98.96)	186 (96.88)	185 (96.35)	562 (97.57)	139.14**
Pucca	1 (1.04)	6 (3.12)	7 (3.65)	14 (2.43)	
<b>Flooring type</b>					
Kutcha	192 (100.00)	192 (100.00)	192 (100.00)	576 (100.00)	-
Pucca	0 (00.00)	0 (00.00)	0 (00.00)	0 (00.00)	
<b>Roofing material of shed</b>					
Asbestos	79 (41.15)	46 (23.96)	78 (40.63)	203 (35.24)	143.42 **
Thatched	112 (58.33)	146 (76.04)	113 (58.85)	371 (64.41)	
Others (tiles)	1 (0.52)	0 (00.00)	1 (0.52)	2 (0.35)	
<b>Lamb enclosure</b>					
Provided	175 (91.15)	157 (81.77)	141 (73.44)	473 (82.12)	22.81**
Not provided	17 (8.85)	35 (18.23)	51 (26.56)	103 (17.88)	
<b>Soil replacement</b>					
Followed	7 (3.65)	16 (8.33)	15 (7.81)	38 (6.60)	4.46 <sup>NS</sup>
Not followed	185 (96.35)	176 (91.67)	177 (92.19)	538 (93.40)	
<b>Method of manure storage</b>					
Open method	164 (85.42)	185 (96.35)	189 (98.44)	538 (93.40)	30.48**
Pit method	28 (14.58)	7 (3.65)	3 (1.56)	38 (6.60)	
<b>Manure disposal pattern</b>					
Own farm use	59 (30.73)	72 (37.50)	166 (86.46)	297 (51.56)	162.76**
Sale	91 (40.70)	104 (54.17)	26 (13.54)	221 (38.37)	
Both	42 (21.88)	16 (8.33)	0 (0.00)	58 (10.07)	
<b>Frequency of manure sale</b>					
Yearly once	93 (69.92)	97 (80.83)	23 (88.46)	213 (76.34)	156.87**
Yearly twice	40 (30.08)	23 (19.17)	3 (11.54)	66 (23.66)	

Parenthesis in the table indicates percentages; \*\*Significance ( $p < 0.01$ )

in conformity with earlier reports of Rajapandi (2005) and Kandasamy *et al.* (2006). Absolute majority (100%) of sheep farmers provided kutcha type of floor in sheep sheds prepared with locally available morram and gravel at a cheaper price and which gives coolness in Summer and warmth during Winter seasons as well as quick absorption of moisture due to urine, defecations, etc. In general Kutcha type floor leads to unhygienic condition especially during rainy season that makes the animals susceptible to various diseases. The results in the study area were in conformity with Sharma *et al.* (2007) and Suresh *et al.* (2008). The effect of zone on roofing material was significant ( $p < 0.01$ ). Majority (64.41%) of sheep farmers used thatch as a roof material followed by asbestos sheets (35.24%) and tiles (0.35%). This might be due to that the locally available materials like paddy straw, tunga, maize and jowar straws, palmyra tree leaves, forest tree leaves, bushes at low cost. The durability of thatch roof was low and sanitary conditions were poor. The findings were in concurrence.

Majority (82.12%) of farmers provided lamb enclosures while 17.88% did not provide the lamb enclosures. The association between zone and lamb enclosure was significant ( $p < 0.01$ ). These enclosures were made up of bamboo sticks and kept in an inverted position called as 'Guduku' or 'Podi' in local language.

This is done mainly to protect the lambs from predators after birth. These results gained the support of Chandran *et al.* (2009) who reported lambs were kept in Koodu, a round lamb hut during day time and released into the flock at night.

It was found that 93.40% did not follow the replacement of soil whereas 6.60% of farmers replaced soil on the floor of sheep shed once in a year. Kumaravelu (2007) reported 50 and 48.75% farmers of northeastern and Southern zones of Tamil Nadu, respectively replaced top soil once a year.

**Manure management:** The association between zone and manure storage was significant ( $p < 0.01$ ). The overall result indicated that majority of farmers (93.40%) stored sheep's manure in open place as a heap while 6.60% farmers stored in pit method (Table 1). Among zones 14.58% sheep farmers of NTZ followed the pit method of storage. This could be lack of awareness about manure handling practices among shepherds in the study area. Similar findings were reported by Padmanabhan (1994) among sheep farmers in Mecheri tract of Salem district in Tamil Nadu. Among sheep farmers 51.56, 38.37 and 10.07% used sheep manure in own agricultural land, sold to others and followed both pattern, respectively whereas majority (76.34%) of sheep farmers sold sheep manure once in a

Table 2: Health care management practices of sheep in Telangana region of Andhra Pradesh

Practices	NTZ (192)	CTZ (192)	STZ (192)	Overall (576)	$\chi^2$
<b>Deworming</b>					
Practiced	192 (100.00)	192 (100.00)	192 (100.00)	576 (100.00)	-
Not practiced	0 (00.00)	0 (00.00)	0 (00.00)	0 (00.00)	
<b>Frequency of deworming</b>					
Twice a year	11 (5.73)	22 (11.46)	0 (00.00)	33 (5.73)	42.958**
Thrice a year	79 (41.15)	88 (45.83)	67 (34.90)	234 (40.63)	
Four times a year	102 (53.13)	82 (42.71)	125 (65.10)	309 (46.35)	
<b>Drugs used</b>					
Bendamidazoles	133 (69.27)	111 (57.81)	119 (61.98)	363 (63.02)	51.39**
Levamisole group	59 (30.73)	81 (42.19)	73 (38.02)	213 (36.98)	
<b>Deworming agent</b>					
Self	129 (67.19)	139 (72.40)	132 (68.75)	400 (69.44)	1.30 <sup>NS</sup>
Vet	63 (32.81)	53 (27.60)	60 (31.25)	176 (30.56)	
<b>Practice of spraying</b>					
Followed	16 (8.33)	18 (9.38)	13 (6.77)	47 (8.16)	0.88 <sup>NS</sup>
Not followed	176 (91.67)	174 (90.63)	179 (93.23)	529 (91.84)	
<b>Immunization</b>					
Practiced	192 (100.00)	192 (100.00)	192 (100.00)	576 (100.00)	-
Not practiced	0 (00.00)	0 (00.00)	0 (00.00)	0 (00.00)	
<b>Treatment of sick animals</b>					
ITK	0 (00.00)	4 (2.08)	0 (00.00)	4 (0.69)	42.96**
Allopathy	192 (100.00)	169 (88.02)	159 (82.81)	520 (90.28)	
Both	0 (00.00)	19 (88.02)	33 (82.81)	52 (90.28)	
<b>Carcass disposal pattern</b>					
Thrown in open fields	167 (86.98)	169 (88.02)	174 (90.63)	510 (88.54)	1.92 <sup>NS</sup>
Buried	12 (6.25)	9 (4.69)	10 (5.21)	31 (5.38)	
Used for consumption	13 (6.77)	14 (7.29)	8 (4.17)	35 (6.08)	

Parenthesis in the table indicates percentages; \*\*Significance ( $p < 0.01$ )

year followed by twice in a year (23.66%). Significant ( $p < 0.01$ ) association was observed between manure disposal pattern and frequency of sale with zones. This could be due to the land holding pattern among sheep farmers in the present study area.

**Health care practices:** In the present study absolute (100%) majority of farmers followed deworming to control parasites but the frequency varied among zones. The association between zone and deworming frequency was significant ( $p < 0.01$ ). Most of the sheep farmers (46.35%) practiced deworming four times in a year followed by thrice (40.63%) and twice (5.73%) in a year (Table 2). Among the zones, farmers (65.10%) of STZ dewormed their sheep once in 3 months. Similar observations were reported by Mehta *et al.* (1995) in Malpura sheep and Devendran *et al.* (2010) in Coimbatore sheep. The zone didn't affect the agent of deworming. Majority (69.44%) of shepherds dewormed their flocks on their own while 30.56% sheep farmers got dewormed their flocks by veterinarian. It indicates that farmers were taking up deworming activity by procured the required deworming drugs indiscriminately with the help of the stockiest who are playing a predominant role in selection of drugs rather than veterinarian. These observations were similar with the results reported by Swarnkar and Singh (2010) in Rajasthan. It was observed that majority (63.02%) of the farmers used Benzamidazole group of drugs for deworming while 36.08% shepherds used Levamisole

group of drugs in Telangana region. Significant ( $p < 0.01$ ) association was observed between drugs used for deworming and zones. This might be due to that most of the farmers depended on the stockist for selection of drugs rather than on qualified veterinarians in the study area. These findings were similar with reports of Rajapandi (2005) and Gurmejsingh and Anandjain. The ectoparasites control measures like spraying was not practiced by 91.84% farmers surveyed. Similar results were reported by Mehta *et al.* (1995) in Malpura sheep breeding tract.

The survey revealed that majority (100%) of farmers adopted the practice of immunization of their flock to protect their animals from infectious diseases. This might be due to regular and free immunization programmes being taken up by the state Animal Husbandry department.

The effect of zone on method of treatment of sick animals was significant ( $p < 0.01$ ). Majority of sheep farmers (90.28%) followed allopathic treatment followed by both allopathic and ITK (9.03%) and ITK (0.69%) methods used for the treatment sick animals. These finding were similar with reports of Rao *et al.* (2008). The effect of zone on carcass disposal pattern was not significant. It was found that 88.54% sheep farmers were threw dead animals into open fields and unused open wells while 6.08% used the dead animals for consumption and 5.38% farmers buried the dead animals. Anandarao (2010) reported that majority (53.22%) of the sheep farmers consumed the meat of carcass while 17.39% of them buried the carcass.

## CONCLUSION

It may be concluded that the sheep management practices pursued by the shepherds were traditional in nature except the adoption of periodical deworming and immunization against infectious diseases. Propagation of improved scientific management practices in terms of better housing and effective health care practices by periodical training and conducting result demonstrations are needed to improve the productive and reproductive performance of the sheep.

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