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Health management practices in goat farming under field conditions of Tamil Nadu

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Abstract

This work aimed to study the management practices followed by the goat farmers for the productive health of goats from the selected villages of Tirunelveli, Thoothukudi and Virudhunagar districts of Tamil Nadu. More than half of the goat farmers (55 per cent) in the study area had awareness about the control of internal parasites and they regularly dewormed their goats once in 3 months. Unless there was a severe infestation, farmers were not following the deticking for their herds. Treatment of sick animals of the study area was done as self-medication, by veterinarian, from experienced herd owners by 32.78, 33.33 and 33.89 per cent of the farmers, respectively. Goat farmers in the study area were following the vaccination against peste-des-petits ruminants (35.00 per cent), enterotoxaemia (27.78 per cent), foot and mouth disease (21.11 per cent), anthrax (12.22 per cent) and goat pox (3.89 per cent). Goat farmers were followed the scientific.

Keywords: health management, practices, goat farming, Tamil Nadu

Introduction

Goats are distributed all over the world because of their wide adaptability to varying environmental conditions and the different nutritional regimes under which they are evolved and subsequently maintained. Goats are considered as a mobile bank and often termed mortgage lifter and automatic teller machine (ATM) for the weakest section of society and ray of hope in the areas where agriculture is not economically viable and ecologically sustainable. The demand of goat meat in India is high for its acceptability over other type of meat. Its meat is costliest of all livestock meat because it is most preferred. Even though India possesses 34 recognized breeds of goats raised for meat production and nearly 70 per cent of the goats are non-descript due to indiscriminate breeding and intermixing of flocks. India ranks second in world goat population (148.88 million) and growth rate of 10.14 percent (DHAD, 2019) ^[1]. The local goat breeds in the particular region constitute valuable sources of genetic material and they consume vegetation of tree foliage, shrubs, flowering parts, seeds, and nuts which are not useful for other livestock species. Goat production in India varies greatly in different agro-climatic regions. Goat production system in India is highly diverse and has been broadly divided into six zones on the basis of agro-climatic conditions Singh *et al.*, 2008) ^[10].

Tamil Nadu is endowed with three recognised breeds of goats viz. Kanni and Kodi and Salem black which are belongs to meat type. There are about 9.89 million goat population reported in Tamil Nadu and out of this 27.74 per cent of the population are found in southern agro-climatic region of Tamil Nadu particularly Tirunelveli, Thoothukudi and Virudhunagar districts (DAHD, 2019). These local goat breeds constitute valuable sources of genetic material because of their adaptation to harsh climatic conditions, their ability to better utilise the limited and poor quality feed resources.

Material and Methods

The study was carried out in southern agro-climatic regions viz., Tirunelveli, Thoothukudi and Virudhunagar districts of Tamil Nadu to document the existing health management farming practices adopted by goat farmers. The villages were selected in consultation with the Department of Animal Husbandry of the Tirunelveli, Thoothukudi and Virudhunagar districts on the basis of goat population existing there and goat herds were selected at random. The details of different health management practices followed by the goat farmers in the study area was properly documented and statistically analysed.

Results and Discussion

Deworming

Most of the goat farmers (55 per cent) followed deworming once in 3 months. Others dewormed their animals once in 6 months (15 per cent), once in 12 months (7.78 per cent) and some farmers did not deworm at all (22.22 per cent). Method of deworming was practiced by the goat farmers themselves, with the help of herd man and veterinary doctor in 42.22, 22.78 and 13.66 per cent, respectively. Whereas, Ershaduzzaman *et al.* (2007) [4] observed that the Black Bengal goats in Bangladesh, deworming was done regularly twice a year prior to summer (April) and immediately after the onset of monsoon season (November).

More than half of the goat farmers (55 per cent) in the study area had awareness about the control of internal parasites and they regularly dewormed their goats once in 3 months. Without proper technical guidance from the veterinary doctors, some of the goat farmers were giving the deworming drugs continuously resulting in the development of drug resistance. Hence, awareness camp may be conducted periodically on health management of goats especially about the deworming drugs to be used.

Deticking

Most of the goat farmers did not follow (51.11 per cent) deticking or dipping with chemicals to remove the external parasites of the goats. Deticking of the affected goats (48.89 per cent) in the study area was done by a chemical mixed with water in a tub (47.23 per cent) and with the help of hand sprayer (14.44 per cent). Among the farmers following deticking, the frequency was once in 3 months, once in 6 months, and occasional. There was no significant difference observed between the frequencies of deworming to the goats among districts. Unless there was a severe infestation the farmers were not following deticking of their herds. Some of the farmers manually removed the ticks from the affected parts of animals.

Treatment and Veterinary care

Treatment of sick animals in the study area was carried out as self-medication, by veterinarian, from experienced herd owners and the values were 32.78, 33.33 and 33.89 per cent respectively. In contrast, Ekambaram *et al.* (2011) [3] reported

that 71.33 per cent of the goat farmers utilised the nearby veterinary dispensary or hospital for the treatment of sick animals, whereas 6.67 per cent farmers followed self-medication while 22 per cent of farmers used both veterinary dispensaries and self-medication in attending sick animals. In Rajasthan, most of the goat keepers preferred to use indigenous practices for treating the ailing animals and treat themselves or took the help from available well experienced person. Consultation with the veterinary doctor was rarely practiced due to cost involvement and difficulty in accessibility (Rai and Singh, 2004) [7]. For simple ailments like diarrhoea, wound and anorexia conditions the goat farmers themselves treated the animals. They depended on veterinarian when there is incidence of disease outbreak along with mortality occurred. Some of the farmers followed the guidance from the experienced herd owners for treatment of goats (Report, 2011) [8].

Vaccination of sick animals

Goat farmers in the study area were following the vaccination against *peste-des-petits ruminants* (35 per cent) enterotoxaemia (27.78 per cent), foot and mouth disease (21.11 per cent), anthrax (12.22 per cent) and goat pox (3.89 per cent) diseases. But this is still to be improved. Thiruvankadan *et al.* (2005) also reported that vaccination against enterotoxaemia, anthrax, *peste-des-petits-ruminants* and foot and mouth disease were practiced in the face of outbreaks by the Kanni adu goat farmers in southern districts of Tamil Nadu.

But Deshpande *et al.* (2010) [2] reported that majority of the goat keepers in south Gujarat region availed the facility of vaccination programme run by state animal husbandry department as and when required. In Maharashtra, Gokhale *et al.* (2002) [5] observed that 39.90 per cent of the goat rearers vaccinated their goats for various diseases namely foot and mouth disease (47.49 per cent), haemorrhagic septicaemia and black quarter (27.90 per cent), enterotoxaemia (23.04 per cent) and goat pox (9.02 per cent) respectively. Since, *peste-des-petits ruminants* is considered as an economically important disease of goats, most of the Kodi goat farmers preferred to vaccinate against this disease (Report 2012) [9]. Loss due to mortality by this disease was so severe than other infectious diseases affecting the goats.

Table 1: Health management practices (per cent) followed by the goat farmers in southern agro-climatic region of Tamil Nadu

Particulars	Category	Tirunelveli	Thoothukudi	Virudhunagar	Overall	Chi-square
	Frequency					
Deworming	Once in 3 months	50.00 (30)	55.00 (33)	60.00 (36)	55.00 (99)	9.45 ^{NS}
	Once in 6 months	11.67 (7)	13.33 (8)	20.00 (12)	15.00 (27)	
	Once in 12 months	13.33 (8)	3.33 (2)	6.67 (4)	7.78 (14)	
	Not followed	25.00 (15)	28.33 (17)	13.33 (8)	22.22 (40)	
	Method					
	Self	41.67 (25)	41.67 (25)	43.33 (26)	42.22 (25.33)	2.85 ^{NS}
	Herd man	23.33 (14)	20.00 (12)	25.00 (15)	22.78 (41)	
	Veterinary Doctor	10.00 (6)	10.00 (6)	13.33 (8)	13.66 (20)	
Deticking	Practice					
	Followed	61.67 (37)	33.33 (20)	51.67 (31)	48.89 (88)	9.92 ^{**}
	Not followed	38.33 (23)	66.67 (40)	48.33 (29)	51.11 (92)	
	Method					
	Tub dip	78.38 (29)	28.33 (17)	35.00 (21)	47.23 (67)	2.17 ^{NS}
	Hand spray	21.62 (8)	5.00 (3)	16.67 (10)	14.44 (21)	
	Frequency					
	Once in 3 months	25.00 (15)	8.33 (5)	20.00 (12)	17.78 (32)	7.00 ^{NS}
	Once in 6 months	26.67 (16)	16.67 (10)	25.00 (15)	22.78 (41)	
	Occasional	10.00 (6)	8.33 (5)	6.67 (4)	8.33 (15)	

Treatment of sick animals	Self-medication	36.67 (22)	20.00 (12)	41.67 (25)	32.78 (59)	13.63 **
	By Veterinarian	25.00 (15)	35.00 (21)	40.00 (24)	33.33 (60)	
	Experienced persons	38.33 (23)	45.00 (27)	18.33 (11)	33.89 (61)	
Vaccination for specific diseases	PPR	31.67 (19)	38.33 (23)	28.33 (11)	35.00 (63)	19.87 **
	Enterotoxaemia	25.00 (15)	18.33 (11)	40.00 (24)	27.78 (50)	
	FMD	15.00 (9)	20.00 (12)	18.33 (17)	21.11 (38)	
	Anthrax	20.00 (12)	8.33 (5)	8.33 (5)	12.22 (22)	
	Goat pox	8.33 (5)	15.00 (9)	5.00 (3)	3.89 (7)	

Conclusion

Based on this study many of the goat farmers were aware about eradication of internal parasites in their animals and regularly deworming being practiced. Unless there is a severe infestation the farmers were not following the deticking for their herds. Periodical manual deticking must be carried out irrespective of degree of infestation. Vaccination against the infectious disease like peste-des-petits ruminants, enterotoxaemia, foot and mouth disease, anthrax and goat pox should be carried out with the advice of local veterinarians.

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