



RESEARCH ARTICLE.....

Management practices adopted by goat owners of self-help group under MAVIM in Akola district

Jyoti Y. Mote, K. U. Bidwe, **R. R. Shelke** and S.D. Chavan

ABSTRACT..... The present investigation on management practices adopted by goat owners of self-help group under MAVIM in Akola district was carried out in Akola district, Department of Animal Husbandry and Dairy Science, Dr. PDKV, Akola during the year 2016-2017. The data of 125 goat keepers belonging to SHG's under MAVIM were collected by personally interviewing with the help of pretested structure. Finally revealed that majority of the goat keepers had knowledge about feeding of leaves of bushes (100%), extensive method of rearing (35.20%) and type of housing (40.80%), goat insurances (64%) and duration of feeding of colostrums (84.80%). The goat keepers in majority were found to be aware and adopting the practices of buck for natural service (100%), kaccha or packka type of housing (40.80%), extensive method of rearing (35.20%). The important constraints reported by goat owners were non-availability of pure breeding buck, lack of knowledge about breeding practices, housing requirement, non-availability of grazing area. To overcome the constraints it is proposed to train the goat owners of SHG to develop pasture land at Gram Panchayat level for economic feeding of goats and providing loan facilities to goat owners for purchasing foods and fodders, construction of sheds.

KEY WORDS..... Management practices, Shelf-help group (SHG), Goat, Grazing area, Adopted practices

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INTRODUCTION.....

Goat is economically, sustainable animal for rearing and suited to landless laborers, marginal farmers and village artisans and also to people who are living below poverty line. India has the largest goat population in the world. It is estimated that the goat population has declined by 3.82 per cent over the previous census and

total goat in country is 135.17 million numbers in 2012 (Anonymous, 2017). Goat provides a cost benefit ratio of 1:11.7 with a high investment return of about 30 per cent. Likewise the contribution of goat to Indian economy is about Rs. 12,000 million every year (Saxena *et al.*, 2001).

MAVIM is the state women's development co-

operation of Maharashtra, established on the 24th February, 1975 on the occasion of International Women’s year. The mission of the corporation is “To bring about gender justice and equality for women, investing in human capital and the capacity building of women, thus making them economically and socially empowered and enabling them to access sustainable livelihood.” SHG’s have played crucial role in micro finance and for social and economic upliftment of women. Since, the early 1990’s, micro finance was being disbursed largely due to linkages between NABARD, self-help groups and banks (Sharma, 2013).

India has very big goat industry comprising 126 million goats, which is the biggest population in the world. But India’s average meat from a goat is only 10 kg against 20 kg in Sri Lanka and Pakistan. This is might be due to lack of knowledge in goat husbandry practices and their faulty management. There might be certain kind of relationship of these aspects with knowledge and adoption of goat management practices. It was, therefore, felt necessary to undertake the study and put forth some empirical evidences about adoption of the goat management practices by goat keepers of the SHG.

RESEARCH METHODS.....

The present study was conducted in Akola district of Maharashtra state; there were 2805 self-help groups of goat keepers in all the 07 Panchayat Samiti of Akola district, out of these 05 Panchayat Samiti namely, Akola, Akot, Barshitakali, Murtijapur and Patur were selected purposively on the basis of larger self-help groups of goat keepers. There are 10 members in each self-help group who started goat keeping called as goat keepers hereafter which are under MAVIM. Out of which 05 goat keepers from each self-help group in a village were selected randomly. In this way, a sample of 125 goat keepers was drawn randomly from each SHG in selected 20 villages.

The interview schedule was prepared considering the dependent and independent variables for introducing input from resource person. The selected goat owners of SHG were informed the detail objective of the survey. The observation on management practices in terms of feeding, breeding, housing, health care and other management practices were monitored to find out the extent of adoption of recommended management practices by the goat owners of SHG.

Rogers (1983) conceptualized adoption as a decision to make full use of an innovation as the best course of action available. The management practices adopted by goat owners was divided by ‘Yes’ and ‘No’- *i.e.*, complete, partially and no adoption. The complete adoption scored 3, partially 2 and no adoption 1. Management index is single numerical value representing net adoption of all components of technology whose value lies between 0 to 1.

Mathematically management index is defined as:

$$\text{Management index} = \frac{\sum_{i=1}^n \frac{S_i}{W_i}}{n}$$

where, S_i = Obtained score for i^{th} practice, W_i = Standard score for i^{th} practice, N = Number of i^{th} followed.

RESEARCH FINDINGS AND ANALYSIS.....

The data obtained during the survey on following important management and other parameters were analyzed, tabulated, presented and discussed with following heads.

Knowledge about recommended goat management practices :

Data obtained in respect to knowledge about recommended practices knows to the goat owners of self-help group of MAVIM was tabulated and presented in Table 1.

The practice wise knowledge of goat owners Table 1 reveals that in selection of descript breeds of goat for goat keeping and meat, milk had 91.2 per cent, 100 per cent and 64.8 per cent, respectively. Regarding breeding management 69.6 per cent of goat owners had knowledge about puberty age of goat *i.e.* 9 to 12 months. Average age of goat at first service *i.e.* 12 to 18 month had 61.1 per cent. The knowledge about symptoms of heat *i.e.* shaking tail, become restless, swelling and slight reddening of the genital opening and methods of breeding had 55.2 per cent and 100 per cent, respectively of goat owners.

The knowledge of goat owners about type of housing, space required for adult doe and space required for adult buck had 40.8 per cent, 41.6 per cent and 68.8 per cent, respectively. The knowledge of goat keepers about method of rearing number of goat in a flock and maintain one breeding buck for 20 to 25 does had 35.2

per cent, 8 per cent and 88 per cent, respectively. 80.8 per cent of goat owners had knowledge about first feeding of colostrums to kids immediately after birth, duration of feeding of colostrums and feeding 250g of concentrates for milking goat had, 84.8 per cent and 46.4 per cent, respectively. The 100 per cent goat owners of SHG had knowledge about feeding leaves of bushes of Ber, Babul, Subabul, Kanchan and Pimple to goats. 51.2 per cent goat owners had knowledge about disease of goat like Mastitis, FMD, Bloat and Brucellosis. About 64 per cent goat owners of SHG had knowledge about goat insurance. The present findings go to corroborate the findings of Gaikwad (2003) who reported that majority of goat owners had medium level of knowledge about different goat management practices.

Adoption of recommended management practices:

The data with regards to the practice wise adoption of goat management practices have been furnished in Table 2. It is observed that about 52.8 per cent goat owners adopt the practices of selection of descript breeds of goat and meat production. Whereas 52 per cent goat owners adopted descript goat breeds for milking. While goat owners adopted partially descript goat for keeping, meat and milk had 34.4 per cent, 19.2 per cent and 12.8 per cent, respectively. Whereas 12.8 per cent goat owners did not adopted descript goat for keeping, 28 per cent goat owners not adopted descript goat for meat and 35.2 per cent not adopted descript goat for milk. 28.8 per cent goat owners were adopted puberty age of goat, while 44.8 per cent, 23.2 per cent goat keepers

Table 1: Knowledge about recommended goat management practices

(n = 125)

Sr. No.	Name of practice Knowledge about	Respondents	
		Frequency	Per cent
Selection of goat breeds			
1.	Descript goat breeds for goat keeping - Osmanabadi, Sangamneri	114	91.20
2.	Descript goat breeds for meat production - Osmanabadi, Sangamneri	125	100.00
3.	Descript goat breeds for milk production - Osmanabadi, Sangamneri	81	64.80
Breeding management			
4.	Puberty age of goat - 9 to 12 months	87	69.60
5.	Average age of goat at first service - 12 to 18 months	77	61.60
6.	Symptoms of heat - Shakes tail, becomes restless, swelling and slight reddening of the genital opening	69	55.20
7.	Duration of heat period - 18 to 24 hours	53	42.40
8.	Methods of breeding - Natural service, artificial insemination	125	100.00
9.	Gestation period of goat - 150 days	73	58.40
Housing management			
10.	Type of housing - <i>Kaccha</i> , <i>Packka</i>	51	40.80
11.	Space required for adult doe - 12 to 16 sq. ft	52	41.60
12.	Space required for adult buck - 20 sq. ft	86	68.80
13.	Method of rearing - intensive, extensive method	44	35.20
14.	Number of goats in a flock - 60 to 80	10	8.000
15.	Maintaining one breeding buck for 20 to 25 does	110	88.00
Feeding management			
16.	First feeding of colostrum to kids immediately after birth	101	80.80
17.	Duration of feeding of colostrum - 3 to 5 days	106	84.80
18.	Feeding 250 g of concentrates for milking goat	58	46.40
19.	Feeding 400 g of concentrates to breeding buck	64	51.20
20.	Feeding leaves of bushes to goats	125	100.00
Health management			
21.	Disease of goat like, mastitis, foot rot, bloat, Brucellosis	64	51.20
22.	Goat insurance	80	64.00

adopted age at first conception *i.e.* 12 to 18 months and symptoms of heat. About 17.6 per cent goat owners adopted interval in heat and conception whereas 100 per cent and 36 per cent goat owners adopted breeding buck for natural service and gestation period of goat, respectively. The goat owners about 12 per cent partially adopted puberty age, 16 per cent age at first conception, and 22.4 per cent symptoms of heat, 18.4 per cent interval in heat and conception and 21.6 per cent gestation period of goat. While 59.2 per cent goat owners not adopted puberty age of goat, 39.2 per cent and 54.4 per cent not adopted age at first conception and symptoms of heat, respectively. About 64 per cent goat owners not adopted interval in heat and conception and 42.4 per cent not

adopted gestation period of goat. About 16.8 per cent goat owners adopted kacchha, packka housing system while 20.8 per cent partially adopted and 62.4 per cent not adopted. Whereas 22.4 per cent goat owners adopted space for doe *i.e.* 12 to 16 sq ft and 17.6 per cent partially adopted while 60 per cent not adopted this management practice. The goat owners about 33.6 per cent adopted space for buck, 16 per cent adopted partially and 50.4 per cent not adopted.

The goat owners of SHG 16.8 per cent adopted method of rearing, 12 per cent partially adopted and 71.2 per cent not adopted this practice. Whereas 88 per cent goat owners maintained one breeding buck for 20 to 25 does while 12 per cent not adopted. 46.4 per cent goat

Table 2: Adoption of recommended practices by goat owners of SHG under MAVIM (n=125)

Sr. No.	Name of practice	Adoption (Respondent)					
		Complete		Partial		No	
		Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Use of goat breeds							
1.	Describe goat breeds for goat keeping	66	52.80	43	34.40	16	12.80
2.	Describe goat breed for meat production	66	52.80	24	19.20	35	28.00
3.	Describe goat breed for milk production	65	52.00	16	12.80	44	35.20
Breeding management							
4.	Puberty age of goat – 9 to 12 months	36	28.80	15	12.00	74	59.20
5.	Age at first conception - 12 to 18 months	56	44.80	20	16.00	49	39.20
6.	Symptoms of heat	29	23.20	28	22.40	68	54.40
7.	Interval in heat and conception - 18 to 24 hrs	22	17.60	23	18.40	80	64.00
8.	Breeding buck for natural service	125	100.00	00	0.000	00	0.000
9.	Gestation period of goat - 150 days	45	36.00	27	21.60	53	42.40
Housing management							
10.	Type of housing – <i>Kachha, Packka</i>	21	16.80	26	20.80	78	62.40
11.	Space kept for doe - 12 to 16 sq. ft.	28	22.40	22	17.60	75	60.00
12.	Space kept for buck - 20 sq. ft.	42	33.60	20	16.00	63	50.40
13.	Method of rearing - extensive method	21	16.80	15	12.00	89	71.20
14.	Number of goats in flock - 60 to 80 goats	06	4.80	04	3.200	115	92.00
15.	Maintaining one breeding buck for 20 to 25 does	110	88.00	00	0.000	15	12.00
Feeding management							
16.	First feeding of colostrums immediately after birth	58	46.40	39	31.20	28	22.40
17.	Duration of colostrums feeding - 3 to 5 days	63	50.40	44	35.20	18	14.40
18.	Feeding of concentrates to milking goat - 250g	08	6.40	50	40.00	67	53.60
19.	Feeding of concentrates to breeding buck– 400g	00	0.000	64	51.20	61	48.80
20.	Feeding leaves of bushes to goat	00	0.000	125	100.00	00	0.000
Health management							
21.	Vaccination of goat against	36	28.80	27	21.60	62	49.60
22.	Goat insurance	52	41.60	00	0.000	73	58.40

owners adopted first feeding of colostrums immediately after birth while 31.2 per cent partially adopted and 22.4 per cent no adopted this practice. About 50.4 per cent goat owners adopted duration of colostrums feeding, 35.2 per cent partially adopted and 14.4 per cent not adopted this practice of feeding. Goat owners adopted feeding of concentrates to milking goat *i.e.* 250g about 6.4 per cent while 40 per cent partially adopted and 53.6 per cent not adopted. About 51.2 per cent goat owners partially adopted feeding of concentrates to breeding buck *i.e.* 400g while 48.8 per cent not adopted, Where as 100 per cent goat owners partially adopted feeding leaves of bushes to goat *i.e.* Ber, Babul, Subabul, Kanchan etc. 28.8 per cent adopted vaccination of goat against Goat pox, Rinderpest, Entero toxamia, Hoemorrhagic septicaemia diseases and 21.6 per cent partially adopted while 49.6 per cent not adopted vaccination. The goat owners about 41.6 per cent adopted goat insurance while 58.4 per cent not adopted. About 28.8 per cent goat owners completely adopted vaccination of goat while

21.6 per cent partially adopted and 49.6 per cent not adopted. Sabapara *et al.* (2014) revealed that nearly 49 per cent of the goat owners adopted vaccination against H.S., F.M.D. and Enterotoxaemia diseases. Only 19.2 and 11.2 per cent of the goat owners were practiced deworming and ectoparasitic controls in goats. About 85 per cent of the goat owners preferred livestock inspector for treatment of their sick animals.

Half of the goat owners (54.4%) had adoption of recommended practices of goat management to a medium level, whereas 23.2 per cent goat owners had high level of adoption of goat management practices. The percentage of goat keepers adopting management practices in low category was merging in (22.4%).

From Table 3, it is concluded that breeding index is very high *i.e.* 69.55 and then followed by feeding index is about 64.26 and 63.60 is the housing index is due to the no optimum space for housing. Health care index is very low *i.e.* 60.40, because the goat owners had no more knowledge and veterinary aids and artificial

Sr. No.	Management index	Average index
1.	Breeding index	69.55
2.	Housing index	63.60
3.	Feeding index	64.26
4.	Health care index	60.40

Sr. No.	Constraints	Frequency	Percentage
Knowledge			
1.	Lack of technical knowledge about goat management practices	89	71.20
Breeding constraints			
1.	Non-availability of buck of descript breed of Sangamneri and Osmanabadi	45	36.00
2.	Non-availability of improved breeds of goats	102	81.60
Housing constraints			
1.	Inadequate space for goat	68	54.40
Feeding constraints			
1.	Non- availability of grazing land	70	56.00
2.	Exhorbitant prices of concentrates restrict feeding to the goats	56	44.80
Health care constraints			
1.	Non-availability of veterinary aids and artificial insemination facility at village level	84	67.20
Marketing constraints			
1.	Fluctuation of prices towards sale of goats due to unavailability of regular market	95	76.00
2.	Getting low price by the goat keepers towards sale of their goats due to creation of chain and compromise between buyers and middlemen	86	68.80

insemination facilities at village level.

Constraint:

The data obtained in respect to constraints for adoption of recommended practices were tabulated and presented in Table 4.

It is revealed from the Table 4 that 71.2 per cent goat owners had lack of technical knowledge about goat management practices were the major constraints for majority of goat keepers. 36 per cent goat owners have constraints of non-availability of buck of descriptive breed of Sangmneri and Osmanabadi. 54.4 per cent goat owners did not have knowledge of housing requirement for goats shed. 56 per cent of goat owners had non-availability of grazing land. About 44.8 per cent goats had constraint about exorbitant price of concentrates restrict feeding to the goat's cent per cent, about 67.2 per cent had non-availability of veterinary aids and artificial insemination facility at village level while, 76 per cent of goat owners stating that fluctuation of price towards sale of goat due to unavailability of markets.

Anonymous (2003) observed that non-availability of improved breed of goat and non-availability of common grazing land in the village were the major constraints

(100 %), followed by lacked the training in goat rearing (92 %), veterinary facilities (73.33 %), non-availability of loan from financing institution (68.00 %). Thorat *et al.* (2012) found that 60.31 per cent and 70.67 per cent respondents had lack of grazing land as major constraints. Patil (2003) revealed that majority of goat keepers reported the constraints as seasonal variation in market (80.00 %). These reports support the present finding.

Conclusion:

Majority of goat owners had medium level of knowledge about management practices. The overall goat owners had major breeding followed by marketing, knowledge, health care constraints. Hence, they need to train by appropriate technologies and skill for efficient management and for economics of goat enterprises. These practices/technologies disseminated SHG training and various Government Agencies by organizing training, exhibition, group discussion etc. at regular intervals.

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