

FEEDING PRACTICES ADOPTED BY GOAT OWNERS IN RAMTEK TAHSIL OF NAGPUR DISTRICT

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ABSTRACT

The present investigation was carried around Ramtek tahsil of Nagpur district during the year 2019-20, to study the feeding and management practices followed, constraints faced by the goat owners and ways to overcome that constraints, by randomly selecting 80 goat owners. From Ramtek tahsil, four villages were selected i.e. Bhojapur, Dhudala, Manapur, and Nagardhan randomly and from each village 20 goat owners were again selected constituting 80 goat owners and were classified in four different flock size groups i.e. very small (1-10 goats), small (11-25 goats), medium (26-50 goats) and large (above 50 goats). In feeding practices majority goat owners followed only grazing (78.75%), stall feeding 25.50 per cent, grazing + stall feeding 25.00 per cent, feeding of green fodder 41.25 per cent, dry fodder 58.75 per cent, additional ration for pregnant doe 37.50 per cent, feeding of common salt 17.50 per cent, feeding of concentrate 11.25 per cent, feeding of tree leaves 52.50 per cent and providing mineral blocks for licking 12.50 per cent.

The constraints faced by goat owners in adoption of goat rearing practices were classified mainly in five groups like management, resource, institutional, personal awareness, economical. From this group of constraints, it was revealed that, majority of goat owners faced management (73.75%) of goats during rainy season, resource (100%) of diminishing grazing land, institutional (90%) of poor extension services, personal awareness (78.75%) ignorance and economical (72.50%) lack of credit and insurance facility. Thus, the results revealed that there is wide scope of improvement in the adoption of scientific practices by educating them properly.

(Key words : Feeding and management practices, goat owners)

INTRODUCTION

Goat is an important species of livestock reared in arid and semi- arid regions of the country. India possess the second largest goat population of India is 148.9 million (Department of Animal Husbandry and Dairying releases 20th Livestock Census). India ranks second in the world for goat population. Goat population show an increase of 10.14 per cent over the previous census (2012). About 27.8 per cent of the total livestock population is contributed by goats. Share of livestock in gross value added/gross domestic product is 4.9 per cent. Share of livestock in agriculture sector is 28.4 per cent (Anonymus,2018).

Goat farming has been recommended as the best choice for the rural people in developing countries because of low investment, wide adoptability, high fertility and fecundity, low feed and management needs, high feed conversion efficiency, quick pay-off and low risk involved. Goat rearing play an important role income generation, capital storage, employment generation and improving household nutrition. The goat rearing is the backbone of the economy of small and landless farmers in India. It is an insurance against crop failure and provides alternate source of income

to 40 per cent of the rural population that are below poverty line. Goats are multi-purpose animals, producing meat, milk, hide and fiber. Goat meat is relished in all countries of Asia, Africa and Middle East. Goat is the major supplier of meat, thus, there is a considerable potential for developing goat production for meat for internal consumption. Goat farming is one of the important agricultural enterprises particularly in rural parts of this country and have proved very useful to man throughout the ages, largely because of their adaptability to varying environmental conditions (Bansod *et al.*,2019).

Goat maintained mainly for meat, milk, fibre and also for skin and manure. In addition to this, goat has religious and ritualistic importance in many societies. Initial investment on the purchase of goat is very less and can be offered by the landless labourers and economically poor people. The housing requirements and managements problems are also less. It contributes to the national economy by providing food and nutritional security to millions of marginal and small farmers and agricultural labourers (Kumar, 2007).

Keeping these in view, an attempt was made to study on the feeding and management practices adopted by goat owners around Ramtek tahsil, Dist. Nagpur.

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MATERIALS AND METHODS

The study was carried out around Ramtek tahsil of Nagpur district during the year 2019-20. Four villages *viz.*, Bhojapur, Dhudhala, Manapur, and Nagardhan were randomly selected. A list of farmers who possess goat from each selected village was prepared with concerned villages. From each selected village 20 goat owners were selected randomly. The data from 80 goat owners were collected by contacting them personally with the help of structured interview schedule.

The work of collection of data on feeding and management practices adopted by goat owners in Ramtek tahsil was carried out by developing a proforma questionnaire. To study the recommended feeding and management practices and the constraints faced by the selected goat owners, the data were categorized on the basis of size of herd of goats owned by the goat owners.

1. very small (1-10 goat)
2. small (11-25 goats)
3. medium (26-50 goats)
4. large (above 50 goats)

The data collected in respect of above parameters were tabulated and subjected to statistical evaluation by adopting the method suggested by (Amble, 1975).

RESULTS AND DISCUSSION

System of feeding

It was observed from Table 1 that, majority of goat owners were followed only grazing 78.75 per cent, followed by stall feeding 25.50 per cent, and 25.00 per cent goat owners followed stall feeding plus grazing. Very few goat owners adopted only grazing plus stall feeding due to unavailability of sufficient fodder for stall feeding and grazing land is hardly available.

The results of present study are in line with Sandhu *et al.* (2017), they reported that large chunk of goat owners depends only on grazing (77.78%) for feeding their animals followed by grazing-cum-stall feeding (14.44%) and stall feeding (zero grazing) alone (7.78%). Sharma (2007) also reported that 55 per cent goat adopted extensive grazing pattern on community land.

It was noticed that, out of the 80 goat owners of each flock size in category of goat owners *viz.*, very small, small, medium and large with 15.00 per cent, 20.00 per cent, 60.00 per cent and 60.00 per cent respectively adopted the feeding of green fodder. The overall adoption of practice of feeding green fodder was 41.75 per cent as this is minimizing the goat production.

More or less similar results observed by Sandhu *et al.* (2017) reported that majority of the goat keepers fed their animals on common property resources (85.56%) followed very few goat keepers fed cultivated green fodder (13.33%) and purchased fodder (1.11%).

Feeding of dry fodder was the imaginary thought for the goat owners due to lack of sufficient green fodder. It

was observed that out of the 80 goat owners of each flock size in category of goat owners *viz.*, very small, small, medium and large with 25.00 per cent, 60.00 per cent, 70.00 per cent and 80.00 per cent respectively adopted the feeding of dry fodder. The overall adoption of practice of feeding dry fodder was 58.75 per cent.

Roy *et al.* (2002) suggested that goats remained on grazing for 5-6 hours daily, therefore supplementary feeding with recommended quantity of concentrate as well as seasonally available green and dry fodder were fed subject to availability.

Similar result was also reported by Sasane *et al.* (2012). They noticed that all of the respondents completely adopted the management practices like purpose of goat breeds, grazing plus stall feeding, goat rearing methods, maize, jowar straw, bajra straw as forage crop.

The pregnant animals should be given concentrate mixture during last trimester of pregnancy over and above the maintenance quota for the overall development of foetus. However, it was observed from that, overall adoption of this practice was only 37.50 per cent. Considering the various categories of the goat owners, the higher adoption of this practice was found in very large size of goat owners 80.00 per cent, followed by medium size goat owners 40.00 per cent, small size goat owners 20.00 per cent, and 10.00 per cent found in very small size category of the goat owners.

Tripathi and Gautam (2003) also reported that majority of the respondents fed common salt (53.33%), and extra concentrates to lactating and pregnant goats (80.67%). Sharma (2007) also reported that majority of goat keepers provided concentrate mixture to kids, lactating does and bucks.

Salt feeding done by 30.00 per cent, 25.00 per cent, 15.00 per cent, and 0 per cent goat owners in small, large, medium, and very small of goat owners respectively and overall adoption of this practice was only 17.50 per cent.

The present trend of the results are in agreement with the result reported by Tripathi and Gautam (2003). They reported that majority of the respondents fed common salt (53.33%).

It was noticed that the adoption of concentrate feeding was highest in large goat owners 20.00 per cent followed by medium 15.00 per cent and small 10.00 per cent. The overall adoption rate of feeding concentrate according to milch production was 11.25 per cent. The goat owners were utilizing groundnut seed cake, cotton seed, rice bran, pulse chunni for preparation of home-made concentrate mixture and sugras in the form of compounded concentrate feed.

Sharma (2007) reported that majority of goat keepers provided concentrate mixture to kids, lactating does and bucks. Likewise, Vidyarthi *et al.* (2008) reported that majority of intakes of dry matter (DM), digestible crude protein (DCP), and total digestible nutrients (TDN) through roughages and concentrates.

Fodder tree/shrub legumes have the potential for alleviating some of the feed shortages and nutritional deficiencies experienced in the dry season on small holder farmer. It was observed that out of 80 goat owners from each type of flock size adopted this practice by very small, small, medium and large category of goat owners with 80.00 per cent, 40.00 per cent, 35.00 per cent, and 55.00 per cent respectively. The overall practice followed by goat owners was 52.50 per cent among 80 selected goat owners.

Narmatha *et al.* (2013) reported that high adoption was noticed in feeding tree leaves (77.86%) which ranked first, while low level of adoption was noticed in feeding crushed prosopis and tamarind seeds (3.57%), feeding neem leaves (3.57%). Geetha and Tensingh (2018) also reported that feeding tree leaves and low adoption was in feeding neem leaves, providing mineral blocks and feeding crushed prosopis and tamarind seeds.

With respect to provision of mineral block overall, 12.50 per cent of goat owners used mineral mixture or mineral bricks. The constraints in non-adoption of this valuable recommendation reported by goat owners were lack of scientific knowledge and lack of technical guidance in adopting the practice of use of mineral mixture or mineral bricks.

On controrory, Narmatha *et al.* (2013) noticed low adoption in providing mineral blocks (3.57%), feeding crushed prosopis, tamarind seeds and neem leaves (3.57%).

Constraints faced by goat owners

The data regarding constraints faced by goat owners in adoption of goat rearing practices were classified mainly in five groups like management, resource, institutional, personal awareness and economical are presented in Table 2.

Management practices constraints involved high mortality of goats during rainy season was 73.75 per cent, inadequate knowledge on scientific rearing of goat 53.75 per cent and lack of knowledge about housing management 42.50 per cent. Resource constraints that involved, scarcity of green fodders 70.00 per cent, diminishing grazing land 100.00 per cent, non-availability of good breeding stock/

buck 91.00 per cent, labour demand 82.50 per cent and high cost of concentrate feed 85.00 per cent.

Tanwar (2011) revealed that the main constraint regarding feeding management was lack of knowledge about balanced feeding, high cost of feeds and fodder, lack of irrigation facilities, non availability of green fodder.

Narmatha *et al.* (2013) reported that majority of the respondents were lack of knowledge on fattening of kids (77.14%) followed by high mortality of goats during rainy season (61.43%), scarcity of green fodder (78.57 per cent), diminishing grazing areas (77.86 per cent). They also reported that the major constraints perceived by the goat farmers were exploitation by middlemen (88.57%), complicated loan getting/sanctioning procedure (87.86%). These results are more or less comparable with the results of present study.

Institutional constraint involved, poor veterinary infrastructure and services 73.75 per cent, poor extension service 90.00 per cent, unavailability of vaccine 81.25 per cent and poor market services 77.50 per cent. Personal awareness that involved, poor knowledge about improved technology 58.75 per cent, lack of knowledge about health and care practices 68.75 per cent and ignorance by the goat owners 78.75 per cent. With respect to personal constraints economical constraints that involved, high cost of veterinary service 65.00 per cent, high cost of medicine 68.75 per cent, lack of capital 70.00 per cent and lack of credit and insurance facility 72.50 per cent.

Thombre *et al.* (2010) also reported that costly veterinary services (76.38%) inadequate and untimely loan supply (68.05%) were major problems faced by the goat keepers.

Economical constraints that involved, high cost of veterinary service 65.00 per cent, high cost of medicine 68.75 per cent, lack of capital 70.00 per cent and lack of credit and insurance facility 72.50 per cent.

The present result are in conformity with the observation reported by Thombre *et al.* (2010), they also reported that costly veterinary services (76.38%), inadequate and untimely loan supply (68.05%) were major problems faced by the goat keepers.

Table 1. Feeding and management practices adopted by goat owners in Ramtektahsil

Sr. No.	Feeding practices	1-10 Very small goat owners (n=20)	Per cent	11-25 Small goat owners (n=20)	Per cent	26-50 Medium goat owners (n=20)	Per cent	Above 50 large goat owners (n=20)	Per cent	Ramtek Tahsil Total (n=80)	Per cent
1	Grazing	12	60.00	13	65.00	20	100	18	90.00	63	78.75
2	Stall feeding	2	10.00	3	15.00	5	25.00	8	40.00	18	22.50
3	Grazing + Stall feeding	2	10.00	3	15.00	6	30.00	9	45.00	20	25.00
4	Feeding of green fodder	3	15.00	4	20.00	12	60.00	14	70.00	33	41.75
5	Feeding of dry fodder	5	25.00	12	60.00	14	70.00	16	80.00	47	58.75
6	Additional ration for pregnant doe	2	10.00	4	20.00	8	40.00	16	80.00	30	37.50
7	Feeding of common salt	0	00.00	6	30.00	3	15.00	5	25.00	14	17.50
8	Feeding of concentrates	0	00.00	2	10.00	3	15.00	4	20.00	9	11.25
9	Feeding of tree leaves	16	80.00	8	40.00	7	35.00	11	55.00	42	52.50
10	Providing mineral blocks	0	00.00	0	00.00	3	15.00	7	35.00	10	12.50

Table 2. Constraints faced in feeding and management practices adopted by goat owners in Ramtek tahsil

Sr. No.	Constraints	1-10 Very small goat owners (n=20)	Per cent	11-25 Small goat owners (n=20)	Per cent	26-30 Medium goat owners (n=20)	Per cent	Above 50 large goat owners (n=20)	Per cent	Over all (n=80)	Per cent
A Management											
1	High mortality of goats during rainy season	14	70.00	16	80.00	12	60.00	17	85.00	59	73.75
2	Inadequate knowledge on scientific rearing of goat	13	65.00	12	60.00	10	50.00	8	40.00	43	53.75
3	Lack of knowledge about housing management	12	60.00	9	45.00	5	25.00	7	35.00	34	42.50
B Resource											
	Scarcity of green fodders	11	55.00	13	65.00	15	75.00	17	85.00	56	70.00
	Diminishing grazing land	20	100	20	100	20	100	20	100	80	100
	Non availability of good breeding stock	20	100	20	100	17	85.00	16	80.00	73	91.00
	Labour demand	20	100	20	100	12	60.00	14	70.00	66	82.50
	High cost of concentrate feed	20	100	20	100	13	65.00	15	75.00	68	85.00
C Institutional											
1	Poor veterinary infrastructure and services	17	85.00	12	60.00	11	55.00	19	95.00	59	73.75
2	Poor extension services	20	100	20	100	17	85.00	15	75.00	72	90.00
3	Unavailability of vaccine	18	90.00	16	80.00	14	70.00	17	85.00	65	81.25
4	Poor market facilities	16	80.00	13	65.00	15	75.00	18	90.00	62	77.50
D Personal awareness											
1	Poor knowledge about improved technology	17	85.00	14	70.00	12	60.00	8	40.00	47	58.75
2	Lack of knowledge about health and care practices	16	80.00	15	75.00	13	65.00	11	55.00	55	68.75
3	Ignorance	18	90.00	17	85.00	15	75.00	13	65.00	63	78.75
E Economical											
1	High cost of veterinary service	17	85.00	14	70.00	12	60.00	9	45.00	52	65.00
2	High cost of medicine	17	85.00	15	75.00	13	65.00	10	50.00	55	68.75
3	Lack of capital	19	95.00	17	85.00	12	60.00	8	40.00	56	70.00
4	Lack of credit and insurance facility	20	100	20	100	11	55.00	7	35.00	58	72.50

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