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Adoption of goat rearing practices in Risod tahsil of Washim district

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Abstract

The present investigation on adoption of goat rearing practices in Risod tahsil of Washim district was carried out by randomly selecting 120 goat keepers on the basis of flock size from six villages namely Keshavnagar, Chikhali, Aasegaon (pen), Deulgaon (BK), Kavatha and Pedgaon. Majority of the goat keepers were followed grazing (84.16%) whereas very few% goat keepers followed stall feeding + grazing. The adoption of feeding green fodder was 22.50%, while dry fodder was 15.83%. The additional ration of pregnant doe was 26.66%, whereas feeding common salt was 36.66%. Feeding of concentrate was 13.33%, processing of concentrate before feeding was 20.83%, while none of goat keepers adopted the use of mineral mixture or mineral bricks. Feeding concentrate mixture with separate was 22.34 and with roughages was 71.66%. All of the goat keepers adopted natural breeding while none of the goat keepers adopted AI and cross breeding, whereas 59.16% adopted care after service and 71.66% goat keepers was adopted drying milk at an advanced stage of pregnancy. All of goat keepers was maintain shed in clean condition, 47.50% goat keepers provided adequate light and ventilation, 50.83% goat keepers were a separate arrangement of kids and buck while 45.00% goat keepers provided clean drinking water. With respect to the health care washing of goat, control of external parasite and vaccination was 14.16%, 33.33%, and 25.00% respectively. While none of the goat keepers adopted by deworming of goat. The major constraints perceived by goat keeper were the high cost of feeding material (92.50%), non-availability of breeding buck (100%), lack of scientific knowledge (97.50%), lack of grazing land (55.00%), non-availability of loan facility (93.33%) and inadequate veterinary aids (76.66%).

Keywords: Feeding and management practices, constraints

Introduction

The agriculture and allied sector contributes nearly 20% of India's Gross Domestic Product (GDP) and more than two third of the population is dependent on agriculture for their livelihood. Amongst the major activities related to agriculture, animal husbandry stands as an important sector. The livestock sector contributes nearly 8% to total GDP. Livestock plays an important role in socioeconomic life of India. It is a rich source of high quality food such as milk, meat, eggs etc. In India, livestock provides regular supplementary income to producer engaged in secondary and tertiary farms related to livestock business. Besides providing organic manure, livestock is an important source of several value added bi-products, which are not properly processed and utilized as commercial activity, but have immense future business potential. Today livestock plays an important role in strengthening India's economy.

Adoption of goat rearing practices is an individual phenomenon in all social systems. It is widely recognized fact that neither flow of goat husbandry innovation of farming commonly in the sector is neither rapid or nor smooth. Goat is multifunctional animal it is known as the "poor man's cow" in India and "wet nurse" of infants in Europe, which act as an economical backbone of small and agricultural labors of rural India to run their livelihood. It provides benefits to the farmer who earns income through selling of resources from goat such as milk, meat, skin, fiber and manure and dependable source of income to 40% of the rural population who are below the poverty line.

Materials and Methods

The data used for present investigation were collected Risod tahsil of Washim district (M. S.). The six villages namely Keshavnagar, Chikhali, Aasegaon (pen), Deulgaon (BK), Pedgaon and Kavatha were randomly selected. The information on feeding practices, *i.e.* System of feeding, Feeding of green fodder, Feeding of dry fodder, Additional ration for pregnant doe, feeding

common salt, Feeding of concentrate, Processing concentrate before feeding (crushing, soaking. etc.), use of mineral mixture or mineral bricks, Feeding of concentrate mixture, was obtained from the goat keepers through personal interaction with the help of a questionnaire. These collected parameters were tabulated carefully. While tabulating the information, Total sample of 120 goat keepers was drawn by adopting the proportionate random sampling method. The data were categorized on the basis of flock size of goat keepers as follows.

Classification of goat keepers according to flock size: 1. Very small (1-10 goat) 2. Small (11-25 goat) 3. Medium (26-50 goat) and Large (above 50 goats).

The data was tabulated and analysed statistically by using appropriate methods to ascertain the objectives under study.

Results and Discussion

It was observed from Table 1 that, majority of goat keepers were followed only grazing 84.16%, stall feeding plus grazing 15.84%, and none of the goat keepers followed stall feeding 0.00%. Very few goat keepers adopted only grazing and stall feeding due to unavailability of sufficient fodder for stall feeding and grazing land is hardly available.

The present study was similarly matched with Sandhu *et al.* (2017), reported that large chunk of goat keepers depends only on grazing 77.78% for feeding their animals

Feeding and management practices

The practice of practice of feeding green fodder was adopted by very small, small, medium and large category of goat keepers with 36.66%, 23.33%, 20% and 10%) respectively.

The overall adoption of the practice of feeding green fodder was 22.50% as this is minimizing the goat production.

This results similarly observed by Sandhu *et al.* (2017), reported that the 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%.

Out of the 120 goat keepers of each flock size in category of goat keepers *viz.* Very small, small, medium and large with 30.00%, 10.00%, 16.67% and 6.66%, respectively adopted the feeding of dry fodder. The overall adoption of the practice of feeding dry fodder was 15.83%.

A similar result was reported by Sasane *et al.* (2012), resulted 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.

Additional ration for pregnant doe was only 26.66%. Considering the various categories of the goat keepers, the higher adoption of this practice was found in very small size goat keepers 46.66%, followed by small size goat keepers 26.67%, medium size goat keepers 23.33%, and 13.33% found in the large size category of the goat keepers.

The present trend of the result is in agreement with results reported by Tripathi and Gautam (2003), the majority of the respondents fed common salt 53.33%, and extra concentrates to lactating and pregnant goats 80.67%.

Feeding of common salt was the majority of goat keepers were 56.66%, 53.55%, 20.00%, and 16.67% were small, very small, medium, and large size of goat keepers. Overall adoption of this practice was only 36.66%.

The present trend of the result was in agreement with results

reported by Tripathi and Gautam (2003), the majority of the respondents fed common salt 53.33%.

Feeding of concentrate was highest in very small 23.33%, followed by large 13.33%, medium 10%, and small 6.66% category of goat keepers.

Similar results were reported by Mandavkar *et al.* (2015), Highest increase in adoption was found in feeding of colostrums to kids 53.3%, and use of mineral mixture & bricks and concentrate feed 36.7%.

None of goat keepers used a mineral mixture or mineral bricks for feeding goats.

The practice of processing of concentrate before feeding was adopted by small, medium, large and very small category of goat keepers with 36.66%, 23.33%, 13.33%, and 10.00%, respectively.

Shyam and Narpat (2016), low adoption was in providing mineral blocks (3.57%), feeding crushed cotton cack, tamarind seeds and neem leaves (3.57%).

Out of 120 goat keepers from each type of flock size adopted by separate concentrate feeding by 30.00%, 43.33%, 23.33%, and 16.66% very small, small, medium and large category of goat keepers respectively. The overall adoption was 28.34% among 120 selected goat keepers.

Similarly, feeding of concentrate with roughages were adopted by 70.00, 76.66, 83.33, and 56.66% goat keepers from each type of flock size of very small, small medium and large category of goat keepers respectively. The overall adoption was 71.66% among 120 selected goat keepers.

Practices of care after service the overall 59.16% goat keepers adopting care after service. Drying milk at advance stage of pregnancy 76.66%, 80.00%, 60.00%, and 70% very small, small, medium and large category of goat keepers respectively. The overall adoption was 71.66% among 120 selected goat keepers.

Housing management practices adopted by goat keepers

Adequate light and ventilation the overall adoption was 47.50% among 120 selected goat keepers.

Salahuddin *et al.* (2017), revealed that 77.25% traditional farmer house were attached with their own house without maintaining proper direction and ventilation system.

Separate arrangement for buck and kids the overall adoption was 50.83% among 120 selected goat keepers.

The present results were in conformity with the observation reported by Roy *et al.* (2002), Goats were housed in the sheds during the night, particularly in winter and rainy season. Various categories of goats were housed separately according to age, kid, buck sex, and physiological status *viz.*, pregnant, dry and milch.

Providing clean drinking water, it was observed from the table 4 and the overall adoption was 45.00% among 120 selected goat keepers.

This results were more or less comparable with Tripathi and Gautam (2003), providing clean drinking water and proper cleaning of utensils were adopted by 80-100% families.

Health care practices adopted by goat keepers

Tanwar (2011), who observed that most of the goat farmers with respect to health care the major constraints were lack of veterinary services in villages, high cost of treatment, ignorance about importance of deworming, lack of knowledge about common diseases and vaccination programme not carried out by any agency.

Control of external parasite at an overall level, 33.33% goat keeper control external parasite.

This results were more or less comparable with Mandavkar *et.al* (2015), who observed that half of the goat keepers use of vaccine like PPR, ET, FMD etc. (56.7%) followed by lack of timely veterinary facility at the village level (50%).

Vaccination the trend in adopting vaccination was more in very small 30.00%, followed by small 26.66%, medium 23.33% and large 20%

This results were more or less comparable with Sangameswaran and Sunita Prasad (2016), Majority of the

farmers were not following the practice of deworming and vaccination. The majority of the farmers was not availing any health care and preventive services for their goats.

Deworming of goat it was revealed from the table 8 and depicted in fig 12 that, the all of the goat keepers (100.00%) not adopted deworming practices of health care (120 goat keepers).

This results were less comparable with Mandavkar *et al* (2015), highest increase in adoption was found in feeding of colostrums to kids (53.3%), deworming of goats 46.7% and use of mineral mixture and concentrate feed 36.7%.

Table 1: Feeding and management practices adopted by goat keepers

| Sr. No | Feeding practices | Very Small (1-10) | Small (11-25) | Medium (26-50) | Large (above 50) | Total 120 |
|--------|---|-------------------|---------------|----------------|------------------|-------------|
| 1 | System of feeding | 30 (100) | 30 (100) | 30 (100) | 30 (100) | 120 (100) |
| i) | Grazing | 18 (60.00) | 23 (76.67) | 30 (100) | 30 (100) | 101 (84.16) |
| ii) | Stall feeding | 0 (00) | 0 (00) | 0 (00) | 0 (00) | 0 (00) |
| iii) | Grazing + Stall feeding | 12 (40.00) | 7 (23.33) | 0 (00) | 0 (00) | 19 (15.84) |
| 2 | Feeding of green fodder | 11 (36.66) | 7 (23.33) | 6 (20.00) | 3 (10.00) | 27 (22.50) |
| 3 | Feeding of dry fodder | 9 (30.00) | 3 (10.00) | 5 (16.67) | 2 (6.66) | 19 (15.83) |
| 4 | Additional ration for pregnant doe | 14 (46.66) | 8 (26.67) | 7 (23.33) | 4 (13.33) | 32 (26.66) |
| 5 | Feeding of common salt | 16 (53.55) | 17 (56.66) | 6 (20.00) | 5 (16.67) | 44 (36.66) |
| 6 | Feeding of concentrates | 7 (23.33) | 2 (6.66) | 3 (10.00) | 4 (13.33) | 16 (13.33) |
| 7 | Processing of concentrate before feeding (crushing, soaking etc.) | 3 (10.00) | 11 (36.66) | 7 (23.33) | 4 (13.33) | 25 (20.83) |
| 8 | Use of mineral mixture or mineral bricks | 0 (00) | 0 (00) | 0 (00) | 0 (00) | 0 (00) |
| 9 | Feeding of concentrates mixture | | | | | |
| i) | Separate | 9 (30.00) | 13 (43.33) | 7 (23.33) | 5 (16.66) | 34 (28.34) |
| ii) | With roughages | 21 (70.00) | 23 (76.66) | 25 (83.33) | 17 (56.66) | 86 (71.66) |

(Figures in parenthesis indicate percentage of total)

Followed by grazing-cum-stall feeding (14.44%) and stall feeding (zero grazing) alone (7.78%).

Table 2: Breeding practices adopted by goat keepers

| Sr. No. | Breeding practices | Very small (N=30) | Small (N=30) | Medium (N=30) | Large (N=30) | Total (N=120) |
|---------|---|-------------------|--------------|---------------|--------------|---------------|
| 1 | Artificial insemination | 0 (00) | 0 (00) | 0 (00) | 0 (00) | 0 (00) |
| 2 | Natural breeding | 30 (100) | 30 (100) | 30 (100) | 30 (100) | 120 (100) |
| 3 | Cross breeding | 0 (00) | 0 (00) | 0 (00) | 0 (00) | 0 (00) |
| 4 | Care after service | 19 (63.33) | 23 (76.66) | 16 (53.33) | 13 (43.33) | 71 (59.16) |
| 5 | Drying milk at advance stage of pregnancy | 23 (76.66) | 24 (80.00) | 18 (60.00) | 21 (70.00) | 86 (71.66) |

(Figures in parenthesis indicate percentage of total)

It was observed from Table 2 that, none of the goat keepers (100%) not adopted artificial insemination, cross breeding, while all of the goat keepers (100%) are adopted natural method of breeding.

Table 3: Housing management practices adopted by goat keepers

| Sr. No. | Housing practices | Very small (N=30) | Small (N=30) | Medium (N=30) | Large (N=30) | Total (N=120) |
|---------|--|-------------------|--------------|---------------|--------------|---------------|
| 1 | Maintain shed in clean condition | 30 (100) | 30 (100) | 30 (100) | 30 (100) | 120 (120) |
| 2 | Adequate light and ventilation | 22 (73.33) | 11 (36.66) | 11 (36.66) | 13 (43.33) | 57 (47.50) |
| 3 | Separate arrangement for kids and buck | 13 (43.33) | 10 (33.33) | 18 (60.00) | 20 (66.66) | 61 (50.83) |
| 4 | Providing clean drinking water | 23 (76.66) | 17 (56.66) | 6 (20.00) | 8 (26.66) | 54 (45.00) |

(Figures in parenthesis indicate percentage of total)

It was observed from Table 3 that, all of the goat keepers maintain shed in clean condition.

Table 4: Health care practices adopted by goat keepers

| Sr. No. | Health care practices | Very small (N=30) | Small (N=30) | Medium (N=30) | Large (N=30) | Total (N=120) |
|---------|-------------------------------|-------------------|--------------|---------------|--------------|---------------|
| 1 | Washing of goats | 3 (10.00) | 5 (16.66) | 7 (23.33) | 2 (6.66) | 17 (14.16) |
| 2 | Control of External parasites | 13 (43.33) | 9 (30.00) | 11 (36.66) | 7 (23.33) | 40 (33.33) |
| 3 | Vaccination | 9 (30.00) | 8 (26.66) | 7 (23.33) | 6 (20.00) | 30 (25.00) |
| 4 | Deworming | 0 (00) | 0 (00) | 0 (00) | 0 (00) | 0 (00) |

(Figures in parenthesis indicate percentage of total)

It was observed from Table 4 that, washing of goat the overall adoption was only 14.16% among 120 selected goat keepers.

Conclusions

It is concluded that there is a need to rearing management of goat on the scientific line which includes, proper feeding, breeding, housing and health care. So, regular training programs of goat owners in the area *viz.*, vaccination, deworming, fodder cultivation, AI etc. should be undertaken to make the dairy sector sustainable.

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