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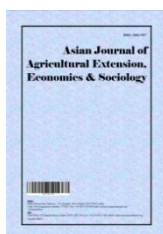
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Adoption of Management Practices of Goat Farming in Sirohi Tehsil of Sirohi District, Rajasthan, India

**Arjun Lal Kakraliya^{a*}, Ramesh Pandey^a, Gautam Chopra^a,
Jhabar Mal Tatarwal^a and Rohan Serawat^a**

^a Department of Animal Husbandry and Dairying, Sam Higginbottom University of Agriculture, Technology & Sciences, Prayagraj, 211007 (U.P.), India.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Total 80 respondents from Sirohi tehsil of Sirohi district from 4 randomly selected villages were used for this study. Total 80 respondents were used in this study. Results showed that 67.50% of respondents had partially adopted the goat management practices. Majority of the respondents highly adopted the feeding and marketing practice among the goat management practices. In breeding practices, heat detection by observing proper symptoms was highly adopted by goat owners and obtained overall first rank (MPS=91.35). In case of feeding practices, protection of pasture land from predator/wild animals through fencing was highly adopted by the goat owners and obtained first rank (MPS=93.33). Adoption of providing drinking water through in animal shed got first rank in housing practices. In case of health care practices, disposal of placenta was highly adopted by the goat owners and obtained first rank. Sale of buck at the marketing age was highly adopted among the marketing practices for getting higher price and obtained first rank.

Keywords: Management practices; adoption; goat; Sirohi.

*Corresponding author: E-mail: arjunkakraliya65000@gmail.com;

1. INTRODUCTION

In Rajasthan, the largest state accounting for more than 10% of the nation's geographical area and 5% of its population, livestock is the most important source of livelihood after agriculture. The state has the highest (11%) livestock population of 20.94 Population (In million) 2019. However, the major part of the state is under arid zone and part of Thar Desert, having adverse climatic conditions with scarcity of water for irrigation and erratic rains with very low average annual rainfall and facing recurrent drought [1-3]. At time of adversities in the state, animal husbandry is the most important source of livelihood in the state and contributes significantly to the rural family income. Further, this sector contributes approximately 8% to the state's GDP [4-6].

The main sources of livelihoods in the arid and semi-arid region of Rajasthan are agro forestry, agri-horticulture and animal husbandry. The landless and marginal farmers generally rear goats for their livelihoods. The goats in the region are mainly non-descript and different grades of Jakhrana, Sirohi and Marwari.

Efficient management is necessary to increase milk and meat production. An efficient management needs a strong database. Efforts should be aimed to collect and correlate all available information. Valid guidelines for developing programs by introducing improved and scientific management practices for solving the problems encountered, are required.

2. METHODOLOGY

The study was conducted in Sirohi District, Rajasthan, which was selected purposively. The district comprised of 5 tehsils, out of which one tehsil Sirohi was selected. Further, four villages selected from tehsil were identified. From each village 20 respondents were selected randomly. Thus, the entire sample consists of 80 respondents from selected four villages in Sirohi tehsil of Sirohi District, Rajasthan. A list of goat owners of selected villages was prepared with the help of village Sarpanch and Patwari with the criteria to select from all strata, was divided in

three categories according to herd size viz. small, medium, large.

Interview method was applied during data collection. Interview schedule was divided into major parts. First section included profile of respondents and second section was 1 question related to management practices of goat owners.

3. RESULTS AND DISCUSSION

3.1 Adoption of Various Improved Management Practices by Goat Owners

To get an overview of adoption level, the respondents were divided into three groups viz., (i) least adoption (<59), (ii) partially adoption (59-67) and (iii) fully adoption (>67). The groups were formulated on the basis of calculated mean and standard deviation of the adoption scores obtained by the respondents. The data presented in table 1 indicate that majority of respondents (67.50%) adopted the partially, 21.25% adopted least while remaining 11.25% adopted fully the recommended goat management practices.

3.2 Adoption of Improved Breeding Management Techniques

The data accorded in (Table 2) indicated that a fair majority of goat owners (MPS=91.35) practiced heat detection by observing proper heat symptoms and ranked first in the ranked order. Likewise extra managerial care (MPS=74.44) at the time of kidding and allowing one breeding buck for 25-30 breedable goats (MPS=64.98) were adopted by majority of respondents according to the way they were ranked at second and third in the priority. It was noted that extra care of pregnant doe (MPS=63.33), extra ration for strength to breeding buck (MPS=54.75) were adopted by majority of the goat owners in the study area, selection of breeding buck (MPS=48.33), practice of changing breeding buck (MPS=40.00) and castration at less than 3 months age (MPS=36.33) were followed by less than half of the total respondents of the study thus fourth, fifth, sixth, seventh and eighth rank in the hierarchy.

Table 1. Adoption of improved management practices by goat owners

S. No.	Adoption level	F	%
1	Least adoption (<59)	17	21.25
2	Partially adoption (59- 67)	54	67.50
3	Fully adoption (>67)	9	11.25

Table 2. Adoption of improved breeding management techniques

Sr. No.	Practices	MPS	Rank
1	Use of breeding buck for 25-30 breedable goat	64.98	III
2	Extra care of pregnant doe	63.33	IV
3	Extra managerial care of at the time of kidding	74.44	II
4	Feeding of extra ration for strength to breeding buck	54.75	V
5	Castration at the age of less than 3 months age	36.33	VIII
6	Heat detection by observing proper symptoms	91.35	I
7	Selection of breeding buck	48.33	VI
8	Exchange of breeding buck	40.00	VII

3.3 Adoption of Improved Feeding Management Techniques

The data accorded in (Table 3) indicated that a fair majority of goat owners (MPS=93.33) practiced protection of pasture land from predator/wild animals through fencing and ranked first in the ranked order. Likewise feeding of dry fodder (MPS=68.12) as per requirement and providing calcium treated clean drinking water (MPS=56.33) were adopted by majority of respondents according they were ranked at second and third in the priority. It was noted that preservation of tree leaves after drying at appropriate moisture (MPS=52.66), feeding of mineral mixture (MPS=48.11) were adopted by majority of the goat owners in the study area. Adding common salt in feed (MPS=46.33), feeding of balance ration in quality and quantity according to their age (MPS=38.67) and feeding of concentrates as per production (MPS=36.11) were followed by less than half of the total respondents of the study thus fourth, fifth, sixth, seventh and eighth rank in the hierarchy.

3.4 Adoption of Improved Housing Management Techniques

The data accorded in (Table 4) indicate that a fair majority of goat owners (MPS=90.11) providing drinking water through in animal shed and ranked first in the ranked order. Likewise provision for proper ventilation (MPS=84.30) for fresh air and provision to protect from cold stress during winter season (MPS=82.08) were adopted by majority of respondents according they were ranked at second and third in the priority. It was noted that regularly use of disinfectant in goat house (MPS=61.13), feeding through/manger for hygiene (MPS=53.75) were adopted by majority of the goat owners in the study area, construction of goat house in East-West direction (MPS=49.98), isolation shed of sick animals (MPS=43.12) and separate breeding pen for breeding buck (MPS=40.00) were followed by

less than half of the total respondents of the study thus fourth, fifth, sixth, seventh and eighth rank in the hierarchy.

3.5 Adoption of Improved Health Care Management Techniques

The data accorded in (Table 5) indicate that a fair majority of goat owners (MPS=94.11) disposal of placenta and ranked first in the ranked order. Likewise regular control of ectoparasites (MPS=68.33) and deworming against internal parasites (MPS=62.94) were adopted by majority of respondents according they were ranked at second and third in the priority. It was noted that timely vaccination against contagious disease (MPS=58.67), treatment of common disease of goat by veterinarians (MPS=48.19) were adopted by majority of the goat owners in the study area. Practicing isolation of sick animals from flock (MPS=41.33), practicing hair clipping at proper time (MPS=39.79) and hoof trimming at proper time (MPS=33.98) were followed by less than half of the total respondents of the study thus fourth, fifth, sixth, seventh and eighth rank in the hierarchy.

3.6 Adoption of Improved Marketing Management Techniques

The data accorded in (Table 6) indicate that a fair majority of goat owners (MPS=64.33) sale of buck at the marketing age and ranked first in the ranked order. Likewise sale of buck at proper weight (MPS=61.98) and selection of right marketing channel for sale (MPS=45.66) were adopted by majority of respondents and according they were ranked at second and third in the priority. It was noted that sale of buck during festival days (MPS=38.67) and regular sale of goat manure through appropriate channel (MPS=33.58) were followed by less than half of the total respondents of the study area thus fourth and fifth rank in the hierarchy.

Table 3. Adoption of improved feeding management techniques

Sr. No.	Practices	MPS	Rank
1	Preservation of tree leaves after drying at Appropriate moisture	52.66	IV
2	Feeding of dry fodder as per requirement	68.12	II
3	Feeding of concentrates as per production	36.11	VIII
4	Feeding of mineral mixture	48.11	V
5	Providing calcium treated clean drinking water	56.33	III
6	Protection of pasture land from predator/wild animals through fencing	93.33	I
7	Feeding of balance ration in quality and quantity according to their age	38.67	VII
8	Adding common salt in feed	46.33	VI

Table 4. Adoption of improved housing management techniques

S. No.	Practices	MPS	Rank
1	Isolation shed of sick animals	43.12	VII
2	Separate breeding pen for breeding buck	40.00	VIII
3	Providing drinking water through in animal shed	90.11	I
4	Regularly use of disinfectant in goat house	61.13	IV
5	Construction of goat house in East- West direction	49.98	VI
6	Provision to protect from cold stress during winter season	82.08	III
7	Feeding through/manger for hygiene	53.75	V
8	Provision for proper ventilation for fresh air	84.30	II

Table 5. Adoption of improved health care management techniques

Sr. No.	Practices	MPS	Rank
1	Timely vaccination against contagious diseases	58.67	IV
2	Deworming against internal parasites	62.94	III
3	Regular control of ectoparasitic	68.33	II
4	Treatment of common disease of goat by veterinarians	48.19	V
5	Hoof trimming at proper time	33.98	VIII
6	Practicing isolation of sick animals from flock	41.33	VI
7	Practicing hair clipping at proper time	39.79	VII
8	Disposal of placenta	94.11	I

Table 6. Adoption of scientific marketing practices by the goat owners

Sr. No.	Practices	MPS	Rank
1	Selection of right marketing channel for sale	45.66	III
2	Sale of buck during festival days	38.67	IV
3	Sale of buck at proper weight	61.98	II
4	Sale of buck at the marketing age	64.33	I
5	Regular sale of goat manure through appropriate channel	33.58	V

4. CONCLUSION

It may be concluded that a tremendous adoption gap exists in almost all the goat management practices in the study area. These may be due to lack of awareness, orientation and training to the goat keepers it's there for suggested that more number of training program be organized for the

client system so as to improve their skills in performing significant goat management practices it must be understood properly that all the goat management practices are equally important and if they are not there are practices properly, we have adverse effect on production and productivity of the goat.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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