

Factors Influencing Rearing of Jammunapari Goat in Semi-Arid Region of Uttar Pradesh

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Abstract

The present study was carried out to analyse the constraints perceived by the farmer in goat rearing in Etawah District of Uttar Pradesh. A total 120 farmer actively involved in goat rearing was randomly selected from the study area. The data was collected through a semi-structured interview schedule consisting of factors that were affecting the Jammunapari goat production. The data were tabulated and percentage score was calculated to analyze the factors as perceived by the respondents. The study revealed that shrinking of grazing land / lack of grazing land, inadequate availability of breeding buck (non-availability of improved breeding bucks), lack of veterinary services at the door step at time of emergency (lack of veterinary aid) and middleman not providing remunerative price to kids were the main constraints in the major domain of feeding, breeding, health care and marketing respectively.

Keywords: Constraints, Goat Rearing, Jammunapari, Marketing, Uttar Pradesh

Introduction

The Jamunapari goat, the best milch purpose breed of goat is well adapted to the unique ravine of Yamuna and Chambal river covered with dense bushes and drought resistance tree vegetation mainly mesquite (*Prosopis juliflora*) and plum (*Ziziphus jujube*), babool (*Acacia nilotica*), Chhonkra (*Prosopis spicigera*), Hingota (*Balanites aegyptica*), Pala (*Zizyphus numularia*), Khejri (*Prosopis cineraria*) in Etawah district and generally maintained on grazing/browsing with supplementary feeding of locally available crop residues, agro-industrial by-products and a variety of vegetation, which are not useful for other species of livestock (Tanwar, 2011). Ravine formation increases soil losses from agricultural land and severely impacts on agricultural activity. Low input, high fecundity, easy marketing and social acceptance of their products provides higher income and livelihood security to landless, marginal and small farmers particularly in the areas having low agricultural production, like the cold arid up hills, hot arid deserts, hilly tracts of mountain and ravine area where in the goats have survived and sustained the poor people in these areas. Jamunapari goat has been mostly used as an improver breed by the farmers and at institutions in cross breeding/grading up to increase genetic potential for body weight and milk yield of non-descript breed and small/medium size breed. Various studies suggested that the Jamunapari goat population is shrinking day by day. The reduction in population is attributed to prevalence of several diseases in goat and other rearing constraints faced by goat owners such as loss of vegetation in habitat, lack of farmer's involvement in development programme, less availability of buck and poor data base in ravine region. The Jammunapari goat is endangered, so there is need for positive environment for conservation of this valuable breed. Keeping this in view, the present study was taken up with the objectives to identify the constraints perceived by the goat farmer in ravine region in feeding practices, breeding practices, health care and management practices.

Materials and Methods

The present study was purposively conducted in Etawah District of Uttar Pradesh which is the breeding tract of Jammunapari goat. The total population of goats in Uttar Pradesh is 14.48 million that is decreased by 7.09 percent from previous livestock census (Livestock census, 2020). The highest population of Jamunapari is 45,577 number found in Etawah district. A total of 120 farmers actively involved in goat rearing (Jammunapari) were selected randomly for the study. A semi-structured interview schedule containing a list of constraints in various major domains was developed with the consultation of subject matter specialists and by review of literatures. The data was collected by using this pre-tested interview schedule and the farmer were asked to rank the listed constraints as they perceive important and which were limiting the goat farming activities. Percentage score technique was adopted to analyze the constraints perceived by the farmer. Thus, percentage score for each constraint was ranked by arranging them in descending order.

Results and Discussion

Constraints in Feeding

All the respondents were rearing goat in extensive system and followed grazing on natural vegetation or degraded common grazing lands and tree lopping. The stall feeding is not practiced by the respondents. However, the productivity of goats under the prevailing traditional production system is very low (Singh and Kumar, 2007).

Table 1: Feeding constraints perceived by the farmer in goat rearing (n=120)

S. No.	Constraints	Frequency	Percentage	Ranks
1	Non-availability of green fodder	120	100	I
2	Lack of fertile land	120	100	I
3	Inadequate knowledge about balanced feeding	86	71.66	II
4	Inadequate knowledge about importance of mineral mixture	85	70.83	III
5	Problems in availing good quality feed for goats	67	53.83	IV
6	High cost of feed and fodder.	34	28.33	V
7	Inadequate clean water facilities.	53	44.17	VI

The study reveals that lack of fertile and non-availability of green fodder was ranked first by the respondents. It was further found that inadequate knowledge about balanced feeding practices (71.66%), inadequate knowledge about

importance of mineral mixture (70.83%) and problems in availing good quality feed for goats (53.83%) second, third and fourth respectively. Kumar *et al.* (2012) stated that the adoption gap percentage in case of feeding was 72.39 per cent in unorganized farm. Rashmi *et al.* (2016) also revealed that in semi-arid area only tree leaves were offered and were hanged in the shed or spread on a bed due non availability of green fodder.

Constraints in Breeding

The most important breeding constraints perceived by the farmer in goat rearing were inadequate availability of breeding buck (non-availability of improved breeding bucks). Pathodiya (2008), who stated lack of improved breeding buck (81.66%) as a major constraint.

Table 2: Breeding constraints perceived by the farmer in goat rearing (n=120)

S. No.	Constraints	Frequency	Percentage	Ranks
1	Inadequate availability of breeding buck	68	81.6	I
2	Lack of knowledge about breeding practices	58	69.6	II
3	Lack of awareness of heat sign	41	49.2	III
4	Delay in puberty in goat.	38	45.6	IV

Gokhale *et al.* (2002) reported that more than three fourth respondents had little awareness about artificial insemination in goats and he found that about 17.50 percent of goat owners indicated that they were prepared to get their animals inseminated if the facilities are made available. Breeding constraints like lack of awareness of heat sign and delay in puberty in goat were effecting their reproduction. Hassan *et al.* (2010) reported that the Jamunapari goats showed first oestrus (puberty) at 354.7 ± 17.1 days. Chowdhury (2002) reported that the age at 1st heat varied considerably between goats with a mean of 216 days (7.2 months), which supports the result observed in study area. Rashmi *et al.*, (2014) also stated that no respondents were giving flushing ration 30 days prior to breeding season which is very essential to enhance the breeding capacity of the goats. This finding underlines the need for organizing periodical training programmes for farmer in breeding management to improve and update their knowledge in breeding aspects (Meena *et al.*, 2016) in goat rearing.

Constraints in Health Care

The major health constraints as experienced by the respondents in goat rearing was that invariably cent percent of the respondents had specified that lack of veterinary services at the door step at time of emergency, high cost of treatment and non-availability of medicines in veterinary hospital were ranked higher by the respondents. Ndegwa *et al.* (2001) reported lack of proper care and overall faulty husbandry practices are also responsible for higher goat mortality in the prevailing production. The findings are in accordance with those reported by Braj Mohan *et al.* (2009), Patil *et al.* (2009), Tanwar *et al.* (2010) and Tanwar (2011). The state Animal husbandry department only provide free PPR vaccination to goat.

Table 3: Health constraints perceived by the farmer in goat rearing (n=120)

S. No.	Constraints	Frequency	Percentage	Ranks
1	Lack of veterinary services at the door step, at time of emergency	120	100	I
2	High cost of treatment	120	100	I
3	Lack of knowledge about prevalent common diseases	90	75	II
4	Non-availability of medicines	120	100	I
5	Non-availability of vaccination facility against contagious diseases	67	53.83	III
6	Lack of knowledge about goat diseases	34	28.33	IV

Constraints in Goat Marketing

Marketing is one of the important aspects as the goat rearing is highly common viable enterprise. The major marketing constraints as experienced by the goat owners in goat rearing were non-availability of credit facilities

from organised sector as all the respondents had observed it. The livestock insurance scheme that was launched by Govt. cover only dairy animal so there should be provision to incorporate goat in it. Roy *et al.* (2013) reported that farmer's lethargy / indifference, inadequate / ineffective extension system, inadequate input supply; inadequate credit support and inadequate market infrastructure are major constraints in low productivity in animal. Similarly, Kumar *et al.* (2017) revealed that 38.80 % of farmers felt poor infrastructure of marketing as most serious institutional constraint.

Table 4: Marketing constraints perceived by the farmer in goat rearing (n=120)

S. No.	Constraints	Frequency	Percentage	Ranks
1	Distant goat market	92	76.66	IV
2	Non-availability of insurance agency	120	100	I
3	Non-availability of credit facilities	120	100	I
5	Inability to procure good quality goat breeds	90	75	III
6	Middleman not providing remunerative price to kids	95	79.16	II
7	Inability to find market for goats' milk and kids	53	44.16	VI
6	Lack of transport for marketing of goat	67	53.85	V

Conclusion

The study revealed that lack of fertile land / lack of grazing land, non-availability of improved breeding bucks, lack of veterinary services at the door step at time of emergency (lack of veterinary aid) and middleman not providing remunerative price to kids were the main feeding, breeding, health care and marketing constraints perceived by the farm women in goat rearing in Etawah District of Uttar Pradesh .Hence, there is a need to educate farmer and organize the training in goat rearing practices to get more profit out of the enterprise and there should be provision of availability of improved breeding bucks on low price to the rural farmer involved in goat rearing. Apart from improving the extension efforts, the research sector should also explore more sustainable resources to be used housing and feeding to reduce the input cost in goat value chain. The government, cooperative or the private organization should take necessary steps to ensure that the farmer producers will get adequate resources which will be farmers in getting higher income from goat farming making it more sustainable.

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Conflict of Interests

There is no conflict of interest.

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