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Small Farm Goat Production in Semi-Arid Region of Uttar Pradesh

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Majority of selected goat farmers were landless and marginal (69%) with an annual average income of Rs.I9200.00. However, average income of small and medium goat farmers were about Rs.25500.00.Ownership pattern of goats revealed that about 78% goats were owned by the landless and marginal farmers. Majority of the farmers had Barbari/Barbari type goats (54%) followed by non-descript (43%) *and Sirohi type goats (3%). Furthermore, 69 per cent goat houses were of Kaccha type and 49 per cent of selected respondent availed private veterinary services for their goats however, 40 per cent of the goat farmers used home remedies. Merely, 11 per cent of the respondents visited government veterinary hospitals Though, poor socio-economic status cannot be ignore for the goat improvement in study village, some policy support is imperative to encourage goat farmers for their overall development.*

India has the largest goat population in the world. As per Food and Agriculture Organization Statistics (FAO Stat), India was home to 157 million goats in 2011.Goat population in India has increased from 61 million to 157 million between1961 and 2011 with an annual growth of 2%.Goat sector contributes about 9 per cent to the country's livestock GDP, India is the second largest producer of goat meat sharing 12 per cent global meat production. Goat also contributes 4 per cent to country's total milk production, Furthermore, goats accounts for more than 25 percent of the total livestock and provide food and nutritional security to millions of poor farmers and landless labourers, A notable character of goat production in the country is that more than 75 per cent goats are reared by the marginal and small farmers and landless labourers. Goat rearing is preferable to these categories because its farming is a low cost enterprise (sustain on zero-input based production system), having unique productive and reproductive characteristics like small size, clean habits, maintenance of low grade ration, high conversion ratio, and small inter kiding period and high prolificacy (Dikshit *et al.,* 1995),In recent past goat farming has become very popular as a pathway to poverty alleviation and nutritional security (Ahuya *et al.* 2004). Till recently, goat farming did not get desired pace in the rural development programs aimed at alleviating the problems of poverty and unemployment and the productivity of goats under traditional production system is very low. Therefore, introduction of improved technologies of goat farming not only increase the returns but also improve the socio-economic status of goat farmers (Mohan *et a1*; 2012)

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Central Institute for Research for Goats (CIRG), Mathura (U.P.), has made extension efforts for transferring the improved goat production practices to the end users. Keeping the importance of goat farming for poor, an attempt has been made to study the socio-economic status of goat in the adopted village Hayatpur in Baldeo block of Mathura district which falls under Semi-arid tropic region.

METHODOLOGY

To study the socio-economic status of goat farmers in adopted villages, survey was conducted in Hayatpur village of Mathura district. 35 goat farmers were randomly selected and data were collected through personal interview on key socio-economic indicators i.e. land holding size, livestock holding, caste and income. The other important indicators of goat farming were veterinary care and housing. These indicators were identified with the help of experts keeping its relevance to goat farmers. To study the inclusiveness in goat farming the analyses have been carried out according to land holding categories. The data collected were tabulated and statistical tools like frequency and percentage were used for logical conclusion.

FINDINGS AND DISCUSSION

In the present section, the outcomes on the socio-economic status are presented and discussed in terms of land holding, livestock holding, caste and income. Types of housing and veterinary care are discussed under prevailing management practices.

Socio-Economic Status of Goat Farmers in Adopted Village

Table 1 revealed that out of total sample households about 48.6 per cent were of landless followed by marginal (20%) and Medium and small together constitute 31.4 per cent of total households. Average land holding size with marginal farmers was 0.04 Ha followed by 0.19Ha with medium and small farmers. Distribution of households according to social group indicated that 54.29 per cent households belonged to Scheduled cast group followed by Backward (20%) and General (17.14%) and Minority group (8.54%). Educational status of goat keepers revealed that 60 per cent were illiterate, 4 per cent were educated up to middle class and rest 6 per cent were matriculate and above., Occupational status of the goat farmers indicated that more than 54 per cent were agricultural labour, 20 per cent were engaged with business and service and rest 17 per cent had agriculture and animal husbandry as main occupation. Average annual income of households was Rs.21000,00. However, it was Rs.25,500,00 was reported for small and medium households.

Ownership Pattern of Livestock in Adopted villages

Livestock in India is mainly reared by the marginal and small farmers. Marginal and small households together comprised more

Table 1.
Socio-Economic Indicators of Goat Farmers in Adopted Village **(n=35)**

SI.No.	Particulars	Values
I	**Number of Households** (%)	
1.	Landless	48.6
2.	Marginal	20.0
3.	Medium and Small	31.4
II	**Average size of holding (Ha)**	
1.	Landless	0
2.	Marginal	0.04
3.	Medium and Small	0.19
4.	All size	0.07
III	**Social Groups** (%)	
1.	SC	54.29
2.	Other Backward Class	20
3.	Minorities	8.57
4.	General	17.14
IV	**Educational Status** %)	
1.	Illiterate	60
2.	Up to Middle	34
3.	Matriculate and above	6
V	**Occupational**	**Status** (%)
1.	Agriculture and A.H.	17.14
2.	Agriculture labour	54.29
3.	Others (Business, service etc.)	28.57
VI	**Average Annual Income (Rs.)**	
1.	Landless	19352.94
2.	Marginal	18857.14
3.	Medium and Small	25545.45
4.	All size	21200.00

than 60 per cent of total rural households and possess 74 per cent of country's cattle, 71per cent of buffaloes, 78 per cent small ruminants, 89per cent pigs and 81per cent of poultry birds. However, their share to total land was only 44 per cent. Since these groups of households operating tiny pieces of land and they face severe constraints of feed and fodder hence, the role of pastures and grazing lands for their livestock is very significant. Furthermore, weakening stake of landless households in animal husbandry was mainly due to grazing based production system, deterioration of common lands in terms of quantitadvely and qualitatively and poor access to harvested field due to intensive cultivation (Birthal *et al* 2013).

Distribution of different species of livestock according to landholding groups provides a clear picture of ownership pattern of livestock and their composition in the adopted village. Data provided in table-2 revealed that more than 72 per cent of goats are reared by the landless and marginal farmers. However, 22 per cent of total goats in sample households were possessed *by* the medium and small farmers. Similar patterns were observed in the case of sheep. In contrast, (60%) cows and (40%) buffaloes were reared by the medium and small farmers. This may be due to better availability of feed and fodder compare to landless and marginal farmers. However, more than 70 per cent birds were kept by the landless and marginal farmers. A study conducted in Trans Gangatic Plains found that small stock (sheep, goat and pigs) were invariably kept by landless and marginal farmers and depended upon grazing the limited common property resources (Erenstein, *et al.,2007).*

Breed Wise Distribution of Goats

The study revealed that sample households had three types of goats breed i.e. Barbari, Non-descript and Sirohi. Out of total goats kept by goat farmers, Non-descript type goats were more dominant in terms of share (55.56%) followed by Barbari (42.86%) and Sirohi (1.58%). It is worthwhile to mention here that Mathura is one of the home tracts of Barbari breed. This finding indicates that there should be a need of breeding policy for this area to increase the production performance of Barbari breed.

Table 2.
Ownership Pattern of Livestock

Sl.No.	Species	Landless	Marginal	Medium and Small	All
1.	Goat	100 (39.7)	97(38.5)	55(21.8)	252(100.0)
2.	Sheep	32 (80.)	8(20.0)	0(0.0)	40(100.0)
3.	Cows	1(10.0)	3(30.0)	6(60.0)	10(100.0)
4.	Buffaloes	15(41.3)	5(13.9)	16(44.4)	36(100.0)
5.	Poultry birds	20(46.5)	12(27.9)	11(25.6)	43(1000)

Figures in parentheses are % to total

Goat Housing in Adopted Villages:

A proper shelter controls the incidence of diseases, pests and enhances the productivity of the animal. Poor housing can cause adverse effects in goats resulting in pneumonia and increased parasitic infestation (Devendra & McLeroy, 1982). Goat production system is. basically small farm activity. Majority of goats are reared under extensive system with zero input concepts. Similarly, majority of the goats are reared either in open yard or in mixed type houses without scientific basis. Information collected through survey on goat house management revealed that about 68.57 per cent households kept goats under Kaccha house whereas about 31.43 per cent respondents had used Pucca type house. Majority of Kaccha house were found with landless and marginal farmers due to lack of space and resources.

Grazing Pattern in Adopted Village

The gap between demand and supply of fodder has widened over the periods due to increase in livestock population and degradation of fodder resources. The problems further aggravate as the critical dependence of millions of marginal, small households and landless labourers on shrinking pastures and grazing lands. In this paper, an attempt has been made to study the grazing pattern of sample goat farmers and their dependency on grazing lands in terms of grazing hours. Information provided in table revealed that about 48.6 per cent sample households grazed their goats and other animals for 1 to 4 hours. However, 17.1 per cent households reported 5-7 hours grazing and 8.6 per cent households grazed their animals more than 7 hours. Analysis of data on landholding wise hours of grazing revealed that on an average a goat household (excluding households reported no grazing) grazed their animals for 4.5 hours per day. Grazing of goats was most important activity in goat production for landless and marginal farmers. Out of total hours of grazing reported by the all goat households, about 83 per cent hours were reported by the landless and marginal farmers. However, 17 per cent hours were reported by the small and medium households.

Veterinary Care Availed by the Goat Farmers in Adopted Village

Increase in goat population in last three decades and its intensification to meet the increasing demand for goat meat has also created complex animal health and production problem in terms of stress (Mohan, 2012) studies done on goat diseases revealed that diseases in goats result in mortality which ranges from 5 to 25 per cent in adults and 10 to 40 per cent in kids. Therefore, timely supply of health input is not only reduce the incidence of mortality and morbidity losses but also increase the marketable surplus *to goat fanners.* About 50 per cent goat farmer availed services from private veterinarian for their animals. However, 23 per cent goat farmers used services of private veterinarian and home remedy while, 6 per cent used only home remedies. It is worthwhile to mention here *that* merely 12 per cent goat farmers consulted the government veterinary hospital for their animal's treatment.

CONCLUSION

Study revealed that there was a great dependence of goat farmers in general and landless and marginal in particular on common property resources for feed and fodder for their livestock. Hence, there is a need to stop further degradation of common property resources and suitable. Technology should be developed for their improvement and to stop their further degradation. Apart from this, there is a need to improve accessibility of veterinary care services at low price, insurance and farmers should be linked with market for better returns.

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