

Economical Structure of Goat Farming in North Karnataka

K.C. VEERANA, D.P. SINGH AND M.C. SHIVAKUMAR

Department of Veterinary and Animal Husbandary Extension
Veterinary College, Nandi Nagar, Bidar - 585 401

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Abstract: The study conducted to know the structure of goat farming and its income in four districts of Karnataka viz., Bidar, Gulbarga, Raichur and Bellary. Revealed that more number of farmers preferred two species of goat farming structure with a combination of goat and cow, followed by 3 species structure of goat farming with the combination of goat, cow and poultry. Income per cattle unit was significantly ($P < 0.01$) highest in Bidar district (Rs. 3585.68), followed by Bellary (Rs. 2760.63) and Raichur (Rs. 1375.38) respectively.

Introduction

In Karnataka various combination of goat farming structure are being observed and its income varied depending upon the combination of structure in goat farming. So far no systematic study was done with respect to goat farming structure and its income in Karnataka. Hence the present study was designed to find out the structure of goat farming especially existing in north Karnataka and its income per cattle unit and the predominant goat farming structure.

Material and Methods

In the present study 160 livestock farmers were randomly selected from 4 districts of Karnataka viz., Bellary, Raichur, Gulbarga and Bidar. The pre tested structural interview schedule was used to collect the data from livestock farmers. The structure of goat farming implied the combination of goat reared by the livestock farmers in their farm/home. This variable was operationalized to work out the different possible combinations using the formula $r = NCx$ where 'N' is the number of species and 'r' the combination of species. The predominant structure of goat farming was the type of goat combination prevalent with most of the livestock farmers.

By calculating frequency, farmers in each category of farming structure and their distribution with respect to different farming structure was amount to goat farming structure income. The total income derived from the livestock farm through sale of livestock products, livestock, manure and other related items were included to calculate the total income in livestock farm during the year of study. The variable per cattle unit income was operationalized by using the following formula.

$$\text{Income per cattle unit} = \frac{\text{Total livestock income}}{\text{Total cattle unit of the farm}}$$

One cattle unit being equal to one cow, one buffalo, one draft bullock, 10 goats, 10 sheep, 5 pigs and 100 poultry (Anon., 1963). The data collected were analyzed as per methods of Snedecor and Cochran (1985) and results inferred.

Results and Discussion

The structure of goat farming with various combinations and number of households in each one of the farming in four districts are presented in table 1. It revealed that species of animals i.e.

cow, buffalo, bullock, sheep, goat and poultry were maintained by the farmers. Twenty combinations of farming structure with six categories were observed. More number of households (9) are maintaining combination number 2 ie goat and cow as two species combination with income per cattle unit of Rs. 2175 + 631.59, followed by 5 number of households maintaining combination number 9 ie goat, cow and bullock with income per cattle unit Rs. 1438 + 256.36.

Among the six species, cow holds an important place in the livestock structure of north Karnataka. The results are in line with the findings of Pasha (1991) and the same trend is also observed in the Tamil Nadu State as reported by Arunachalam *et al.* (2002).

The distribution pattern of goat farming structure in relation to landholding and values of chi-square test are presented in table 2. The result indicated that there was a significant ($P > 0.05$) relation between the farming structure and extent of land holding by the farmers. The farmers who are maintaining single goat species were entirely landless (100%). There was no single goat species farming structure noticed among those who own less than and more than 2 hectares of land. This may be due to the resource poor and landless farmers were not able to maintain more than one species of livestock.

The distribution pattern of goat farming structure in relation to land holding size had highly significant ($P < 0.01$) association (Table 2). It

Table 1. The structure of goat farming in various combination and its income per cattle unit per annum

Combina- tion No.	Structure of farming	No. of household	Income per cattle unit
1	Goat	3	2206 ± 366.42
2.	Goat, Cow	9	2175 ± 631.59
3.	Goat, Buffalo	4	2224 ± 838.67
4.	Goat, Bullock	2	1940 ± 516.35
5.	Goat, Sheep	1	2092 ± 0.00
6.	Goat, Poultry	1	1896 ± 0.00
7.	Goat, Cow, Sheep	3	1765 ± 424.54
8.	Goat, Cow Buffalo	4	3109 ± 385.82
9.	Goat, Cow, Bullock	5	1438 ± 256.36
10.	Goat, Cow, Poultry	2	1513 ± 182.21
11.	Goat, Cow, Sheep	1	1356 ± 0.00
12.	Goat, Cow, Bullock	2	1672 ± 260.63
13.	Goat, Bullock, Sheep	1	1562 ± 0.00
14.	Goat, Cow, Buffalo, Bullock	2	3471 ± 260.38
15.	Goat, Cow, Bullock, Sheep	1	1472 ± 0.00
16.	Goat, Cow, Poultry, Sheep	1	1847 ± 0.00
17.	Goat, Buffalo, Bullock, Sheep	1	1533 ± 0.00
18.	Goat, Cow, Buffalo, Bullock, Sheep	2	2113 ± 183.28
19.	Goat, Cow, Bullock, Poultry, Sheep	1	1673 ± 0.00
20.	Goat, Cow, Buffalo, Bullock, Poultry, Sheep	1	1583 ± 0.00

Structure of Goat

was found that total of 27 livestock farmers maintain goat farming structure, among which 12 farmers were landless, 5 farmers have 2 hectares land and 9 farmers with more than 2 hectares of land. It reveals that number of livestock farmers rearing goat was more only in landless and farmers have land of 2 hectares and above. The impact of goat farming structure on the total annual livestock income is presented in table 3. The results revealed that impact of goat farming structure on total annual livestock income was highly significant ($P < 0.01$) in all the districts

viz., Bellary, Raichur, Gulbarga and Bidar. The data further revealed that how each one of the goat farming structure under different agro climatic conditions brings about varying level of income. In accordance with local condition, the highest income of Rs. 3585.68 was found in Bidar district, followed by Bellary (Rs. 2760.63) and Gulbarga (Rs. 1726.26). The least income of Rs. 1375.38 was observed in Raichur district. Mahanta et al (1988) reported that reason for such a variation between region and farming structure is due to the difference in cost of production and pricing of the products.

Table 2. The distribution pattern of goat farming structure in relation to landholding

Sl.No.	Land holding	Goat only	Combination of more than one species	No. of farmers rearing goats
1.	Landless	3 (100)	34(26.15)	12 (44.44)
2.	0-2 hectares	0	45 (34.62)	6 (22.22)
3.	2 hectares and above	0	51 (39.23)	9 (33.33)
4.	Total	3 (100)	130 (100)	27 (100)
	Chi-square		24.63*	40.19**

*Significant at 5 percent level of probability
(Figures in parenthesis indicate percentage)

**Significant at one percent level of probability

Table 3. Impact of goat farming structure on the total annual livestock income (Rs.) in four districts of North Karnatakaka

Districts	R ²	Regression constant	Regression Co-efficient + (Rs.)
Bellary	0.83	1084.21	2760.63** (3.19)
Raichur	0.63	2631.93	1375.38** (6.92)
Gulbarga	0.67	4837.33	1726.26** (3.73)
Bidar	0.72	3589.82	3585.68** (1.92)
Total	0.65	4469.00	1265.56** (4.35)

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