# Socio Economic Profile of Goat Farmers in Kallakurichi District of Tamil Nadu, India

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***Authors' contributions***

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

***Original Research Article***

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## ABSTRACT

The present study aims to analyze the socio-economic profile of goat farmers in the Kallakurichi district of Tamil Nadu, a region where livestock rearing plays a pivotal role in rural livelihoods. Goat farming served as a significant regular source of income and employment for small and marginal farmers, particularly in economically weaker sections. A stratified random sampling method was employed to select goat farmers from various blocks of the district. Primary data were collected through structured interviews and questionnaires. Survey data was collected from 240 progressive goat farmers in the study area with a pre-tested questionnaire by personal interview. The statistically analysed data revealed that the majority of the goat farmers in Kallakurichi District were women (76.7 %), old aged (52.5 %) and illiterate (63.4 %) owning an average flock size of 48 numbers of goats (64.1 %) and the majority are small farmers (61.6 %) holding less than 2.5 acres of agricultural land. The major primary occupation of the respondents was goat farming having experience of 16.39 years. These findings reveal that most goat farmers are smallholders with limited education and land resources, relying heavily on goat rearing as a supplementary source of income for poor. Women participation in goat farming is notably high, reflecting the gendered nature of livestock management in the Kallakurichi district. The study underscores the need for targeted policy interventions, capacity-building programs, and improved access to credit and veterinary care to enhance the livelihoods of goat farmers in the Kallakurichi district.

## 1. INTRODUCTION

Agriculture remains the backbone of the Indian economy, with nearly 60% of the population dependent on it for livelihood. Among various agricultural and allied activities, livestock farming occupies a central position, especially in the rural economy. It provides a continuous source of income, employment, nutrition, and draught power for small and marginal farmers. In particular, livestock plays a complementary and supplementary role in the mixed farming system that dominates much of rural India (Government of India, 2020).

India possesses one of the largest livestock populations in the world, including cattle, buffaloes, sheep, and goats. As per the 20th Livestock Census (2019), India is home to over 148 million goats, making it the second-largest goat population globally after China. The growth of the goat population over the past few decades signals an increased preference for small ruminants among rural farmers, primarily due to their low maintenance cost, adaptability, and potential for income generation.

Livestock rearing provided significant employment opportunities and is a crucial income source for rural populations. Goat farming plays a crucial role in the rural economy of Tamil Nadu, particularly among small and marginal farmers and landless labourers. With its adaptability to diverse agro-climatic conditions, low investment requirement, and relatively quick returns, goat rearing had emerged as a sustainable livelihood option in the state. Livestock farming played a vital role in the rural economy of India, providing livelihood, food security, and supplementary income to millions of small and marginal farmers. Among various livestock, goat rearing stands out as a preferred enterprise due to its low capital requirement, short gestation period, and adaptability to diverse agro-climatic conditions. In particular, goats are often referred to as the "poor man's cow" because of their potential to contribute significantly to poverty alleviation and nutritional security (Birthal & Ali, 2005; Policy note 2023–2024 n.d.). Tamil Nadu, with its diverse agro-climatic zones, is one of the leading states in India for goat farming. Within the state, Kallakurichi district—which was recently carved out from Villupuram—has emerged as an important region for small ruminant farming because of agricultural based districts. The district's rural economy is heavily reliant on agriculture and allied activities, and goat farming serves as a major source of income for landless labourers and marginal farmers. It supports rural households by providing a continuous source of income through milk, meat, and manure (Kumar et al., 2010). The livestock sector contributes about 5.63% to Tamil Nadu's Gross State Value Added (GSVA) and 43.70% to agriculture and allied activities. Goat rearing is one of the most remunerative farming enterprises in India, providing income, employment and nutritional

security to millions of marginal, small farmers and agricultural labourers. According to the 20th livestock census, the Indian goat population is 148.9 million among which Tamil Nadu ranks 7th with a goat population of 98.88 lakh Nos. In Tamil Nadu, the goat population is evenly distributed in rural villages throughout the state. Hence the present study was focused on the rural village population in the Kallakurichi district of Tamil Nadu. Understanding the socio-economic profile of goat farmers is essential to design targeted interventions and policies that can enhance productivity, sustainability, and livelihood security. Socio-economic factors such as education level, landholding size, herd size, income, access to veterinary services, and credit facilities significantly influence the management practices and profitability of goat farming enterprises. Despite the economic importance of goat farming in Kallakurichi, there is limited empirical data on the socio-economic conditions of goat farmers in the district. This study aims to bridge this knowledge gap by analyzing the socio-economic characteristics of goat farmers in Kallakurichi district. It explores aspects such as demographic profile, resource availability, income pattern, and challenges faced by the farmers. The findings are expected to inform policy recommendations for improving the socio-economic status of rural goat farmers and promoting sustainable livestock development in the region.

## 2. MATERIALS AND METHODS

The present study was conducted in Kallakurichi district, located in the northern part of Tamil Nadu, India. Kallakurichi district was carved out from Villupuram in 2019 and is predominantly rural, with agriculture and allied activities serving as the main source of livelihood for a majority of its inhabitants. The district is characterized by dryland agriculture, red loamy soils, and a semi-arid climate, making it conducive for small ruminant farming, particularly goat rearing. The survey was conducted by way of personal interviews. A stratified proportionate random sampling procedure was followed for data collection and analysis of this study (Kothari, 2004). Data was collected from 240 goat farmers through personal interviews by using a pre-tested questionnaire. The interview schedule was pre-tested with 15 goat farmers in a non-sample area to ensure clarity, relevance, and sequencing of questions. Based on the feedback, minor modifications were made to improve the flow and comprehensiveness of the instrument. The collected data was analysed statistically. The primary data collection was carried out through face-to-face interviews conducted by

**Table 1. Variable and Definition/operationalization of term &amp**

| S. No | Variable | Definition/operationalization of term &amp; | Measurement technique/scale |
|---|---|---|---|
| 1 | Age | It refers to the chronological age of the respondent in completed years at the time of interview. Age is a significant factor that influences labour availability, experience in goat rearing, and openness to adopting modern technologies. | |
| 2 | **Sex** | It refers to the gender of the respondent who takes care of the goats. The respondents were categorized into male and female. Gender distribution in goat farming often reflects broader socio-cultural patterns in rural. | |
| 3 | **Education** | It refers to the level of education successfully completed in formal schooling or college by the respondent. Education plays a critical role in awareness, management efficiency, and adoption of scientific goat farming practices. | |
| 4 | **Occupation** | It refers to the occupation of the respondent for earning livelihood at the time of investigation, Occupation plays a vital role in determining a farmer's dependence on goat rearing as a primary or supplementary source of income. | **a.Primary occupation:** It refers to the occupation that provides more than 50 per cent of the respondent's family income. |

| S. No | Variable | Definition/operationalization of term &amp; | Measurement technique/scale |
|---|---|---|---|
| 5 | **Flock size** | It refers to the total number of goats owned by the respondent's family at the time of interview. Flock size is a crucial indicator of the scale and intensity of goat farming operations. It reflects the economic status of the farmer, investment capacity, land availability, labor input, and reliance on livestock as a source of livelihood. | |
| 6 | **Experience in goat rearing** | It refers to total number of years of direct experience of the respondent in goat rearing at the time of interview. Experience in goat farming plays a crucial role in shaping the management practices, productivity, and sustainability of small ruminant rearing. It reflects the level of traditional knowledge, practical skills, and adaptive capacity that farmers bring to livestock management. | |

the researcher and trained field assistants. Each interview lasted approximately 45 to 60 minutes and was conducted at the respondent's home or farmstead. Data collection was carried out during early mornings and late evenings to ensure that respondents were available and not engaged in farm or wage labour activities.

## 3. RESULTS AND DISCUSSION

### 3.1 Gender

The result revealed that majority women (76.7%) are engaged in goat farming than men (23.3%), Since men are involved other agriculture related practices (Table 2).

This finding is in line with Mallikarjuna et al*., (2021), Misra et al*., (2006) and Tanwar et al*., (2008) reported that rural women played an important and substantial role in goat farming. These findings are in contrast with the study of Bhagat et al., (2023), Rawat et al., (2016), Dhaliwal et al*., (2022), also reported rural men played an important role in goat farming.

### 3.2 Age

Majority of goat farmers (52.5%) were belonged to the old age group (> 50 years). The middle age group (31-50 years) and young (≤ 30 yrs) comprised 38.8 and 8.7 per cent respectively.

The old age group dominated in goat farming activity in the study area due to less involvement of youth generation in goat farming (Table 3).

This finding is in agreement with the observations of Mallikarjuna et al., (2021) Sabapara (2016), Ready et al., (2017), Bhikya et al., (2021) and Deshpande (2010) stating that majority of the goat farmers were in the higher age group.

### 3.3 Education

Literacy is one of the important factors which accelerates development and progress of any enterprise. The results revealed that 63.4 per cent were illiterate, whereas only 22.9 per cent of goat farmers were educated up to the secondary level. It also showed that 10.8 per cent of the goat farmers educated up to primary level and meagre numbers of graduates were involved in goat farming (2.9%) (Table 4).

The present finding is in agreement with the findings of Mallikarjuna et al*., (2021), Dhara et al. (2016), Bashir and Venkatachalapathy (2017), Bhikya et al. (2021) and Tanwar et al*., (2008). However, this finding is in contrary to that of Deshpande et al*., (2010), Reddy et al*., (2017) and Gamit et al. (2020) who revealed that majority of their respondents were literate.

**Table 2. Classification of farmers based on gender**

| S.No | Gender | Overall (n=240) |
|---|---|---|
| 1 | Men | 184 (76.7%) |
| 2 | Women | 56 (23.3%) |

**Table 3. Age-wise categorization of goat farmers**

| S.No | Age | Overall (n=240) |
|------|-----|-----------------|
| 1 | Young (≤ 30yrs) | 21 (8.7 %) |
| 2 | Middle age group (31-50 years) | 93 (38.8 %) |
| 3 | Old age group (> 50 years) | 126 (52.5 %) |

**Table 4. Educational status of goat farmers in the study area**

| S.No | Education | Overall (n=240) |
|------|-----------|-----------------|
| 1 | No Schooling | 152 (63.4) |
| 2 | Primary | 26 (10.8) |
| 3 | Secondary | 55 (22.9) |
| 4 | College and above | 7 (2.9) |

## 3.4 Primary Occupation

From the Table 5 goat farming is the primary occupation for 73.3% of the respondents followed by agricultural and allied activities (26.7%).

This finding is similar to Mallikarjuna et al*.,* (2021), Reddy et al*.,* (2017) and Gamit et al*.,* (2020) and Deshpande (2010) who found that goat farming was the primary occupation and source of livelihood, whereas, it served as a source of additional income to some farmers.

## 3.5 Landholding

The majority of the goat farmers were small farmers (61.6%) followed by medium (26.7%), landless (9.2%) and large (2.5%) respectively based on the land holding capacity (Table 6).

The results were contrary to the findings of Mallikarjuna et al*.,* (2021) and Veeranna et al*.,* (2004) who found that the majority of the goat farmers in Puducherry (87.9%) and Karnataka (86%) were landless labourers.

## 3.6 Flock Size

The majority of the respondents (64.1%) had medium flock size, followed by small (23.8%) and large (12.1%) flock size. The flock size ranged from 6 to 250 numbers with a mean flock size of 48.26.

The results were contrast with the results of Bhikya et al*.,* (2021), Mallikarjuna et al*.,* (2021), Jaya Shree et al*.,* (2014), Sabapara et al*.,* (2016), Bashir and Venkatachalapathy (2017) and Bhikya et al., (2021).

## 3.7 Source of Animal Purchase

Most of the goat farmers (49.2%) are the study area, utilised their own farm bred animals followed by 34.6 per cent of respondents purchasing from shandies and 16.2 per cent through traders.

The results were in line with Mallikarjuna et al*.,* (2021) and in contrast with Ojha et al*.,* (1993) that 60 per cent of the goat farmers in Mathura used to procure their goats from other goat farmers.

## 3.8 Experience in Goat Farming

In the current study, 47.1 per cent of the respondents were had experience in goat farming up to 21-30 years, while 11-20 years; 30 years and above categories were 35.4 per cent and 11.3 per cent respectively. Only 6.2 per cent of the goat farmers had experience of up to 10 years. Experience of the goat farmers ranged from 1- 42 years and the mean experience of the goat farmers was 16.39.

These findings are in line with Mallikarjuna et al*.,* (2021) and Ojha et al*.,* (1993) that majority of the goat farmers had an experience of more than 5 years in goat farming.

**Table 5. Major occupation of goat holders in the study area**

| S.No | Occupation | Overall (n=240) |
|------|------------|-----------------|
| 1 | Agriculture | 64 (26.7%) |
| 2 | Animal husbandry | 176 (73.3%) |

**Table 6. Classification of goat farmers based on agricultural land holding in the study area (Acres)**

| S.No | Land holding in the study area (Acres) | Overall (n=240) |
|------|----------------------------------------|-----------------|
| 1 | Landless | 22 (9.2%) |
| 2 | Small (1-2.5 acres) | 148 (61.6%) |
| 3 | Medium (2.5-5 acres) | 64 (26.7%) |
| 4 | Large (5 acres and above) | 6 (2.5%) |

**Table 7. Classification of farmers based on flock size in the study area**

| S.No | Herd size | Overall (n=240) |
|------|-----------|-----------------|
| 1 | Small (10-12) | 57 (23.8%) |
| 2 | Medium (12-20) | 154 (64.1%) |
| 3 | Large (20 above) | 29 (12.1) |

**Table 8. Source of animal purchase**

| S.No | Herd size | Overall (n=240) |
|------|-----------|-----------------|
| 1 | Own farm bred | 118 (49.2%) |
| 2 | Shandies | 83 (34.6%) |
| 3 | Traders | 39 (16.2%) |

**Table 9. Goat farming experience of farmers in the study area**

| S.No | Experience (in Years) | Overall (n=240) |
|------|-----------------------|-----------------|
| 1 | Up to 10 years | 15 (6.2%) |
| 2 | 11-20 Years | 85 (35.4%) |
| 3 | 21-30 years | 113 (47.1%) |
| 4 | 31and above | 27 (11.3%) |

## 4. CONCLUSION

Goat farming in India presents a promising avenue for sustainable agriculture, rural development and women empowerment. Adaptability of goats to diverse climates, economic viability and increasing demand for goat products, the sector holds significant potential. Providing effective extension services and imparting scientific goat farming will raise awareness and improve their socio-economic status, which ultimately aid in the improvement of productivity of small ruminants in the livelihood sustainability of goat farming among rural farmers. The results indicate that the production potential of goats can be significantly enhanced by adopting improved practices, which would help farmers meet their needs and elevate their socio-economic status. The findings reveal that most goat farmers are smallholders with limited education and land resources, relying heavily on goat rearing as a supplementary source of income for poor. Women participation in goat farming is notably high, reflecting the gendered nature of livestock management in the district.

Despite the economic potential, the sector faces challenges related to disease management, fodder availability, and lack of organized marketing. The study underscores the need for targeted policy interventions, capacity-building programs, and improved access to credit and veterinary care to enhance the livelihoods of goat farmers in the district.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

I here by declare that No generative AI technologies used for this research article.

## CONSENT

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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