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# Socio economic profile of Pattanam sheep farmers in the Cauvery delta zone of Tamil Nadu

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**Abstract**
A survey was conducted to document the socio-economic profile of 180 Pattanam sheep farmers in six districts of Cauvery Delta Zone of Tamil Nadu with a pre-tested interview schedule. Pattanam sheep farmers in Cauvery Delta Zone were mainly males in backward class, middle age group with primary school of education and marginal land holders with 2.5 acres of land leading their life in nuclear family with agriculture as their primary occupation and sheep, cattle rearing as secondary occupation with the flock capacity of minimum 25 to 50 sheep with foundation stock procured from fellow herd mates. They had more than 7 years of experience in sheep farming but lack of knowledge about the training programmes in sheep farming. They reported the annual income of around 3 to 5 lakhs.

**Keywords:** Socio-economic profile, Pattanam sheep farmers, Cauvery delta zone

## Introduction
Indian rural population mainly depends on agriculture, animal husbandry and allied fields for their livelihood. The animal husbandry sector plays an important role in the economy of India and in the socio-economic development of the country. Livestock plays a significant role in our economy and contributed about 4.11 per cent of total GDP. It provided employment to 8.80 per cent of population in India. Sheep farming is an important activity to a large population of small and marginal farmers as well as landless agricultural labours. According to the 20th livestock census, the country has 74.26 million sheep and third in ranking. Tamil Nadu ranks fifth in India in terms of population with 4.50 million sheep sharing 6.06 per cent of national population of sheep. Tamil Nadu is the home of eight recognized sheep breeds (Ganesakale and Rathnasabapathy, 1973 [1]; Acharya, 1982) [2]. Pattanam sheep is an important mutton type breed of Tamil Nadu and popular for its higher body weight. This study was carried out for the analysis of the profile characteristics of Pattanam sheep farmers, their adoption level in sheep practices, which would help in formulating suitable strategies to obtain maximum benefit from the sheep enterprises in Cauvery Delta Zone.

## 2. Materials and methods
### 2.1 Study area
A survey was conducted in six selected districts (Thanjavur, Thiruvarur, Nagapattinam, Pudukkottai, Tiruchirappalli and Mayiladuthurai) in the Cauvery Delta Zone (CDZ) with a pre-structured interview schedule for identifying the socio-economic profile of the farmers.

### 2.2 Collection of data
Based on the survey, farmers having at least five Pattanam sheep were selected from five representative villages in each district ultimately 30 farmers per district (five villages with six replicates) were selected for the present study. Area of work and method of village sampling is given below in Table 1 and Table 2.

**Table 1:** Sample distribution

| SI. No. | Particulars | Numbers |
|---|---|---|
| 1 | Total number of districts | Six (Thanjavur, Thiruvarur, Nagapattinam, Pudukkottai, Tiruchirappalli and Mayiladuthurai) |
| 2 | Number of villages in each district | Five |
| 3 | Number of sheep rearing farmers (Minimum 5 Sheep) | Six |
| 4 | Sample size: 6 (District) X 5 (Villages) X 6 (farmers/village) | 180 |

**Table 2:** Selection of villages

| SI. No. | Name of the district | Name of the village |
|---|---|---|
| 1 | Tiruchirappalli | Keerampoor |
| | | Senkattupatti |
| | | Sellipalayam |
| | | Kottathur |
| | | Pulivalam |
| 2 | Thanjavur | Vallampudur |
| | | Varahur |
| | | Poovaanam |
| | | Kalyanaramanathapuram |
| | | Perumakkanallur |
| 3 | Pudukkottai | Meikudipatti |
| | | Ariyanipatti |
| | | Manchapettai |
| | | Nattani |
| | | Kothampatti |
| 4 | Thiruvarur | Letchumanagudi |
| | | Senthamangalam |
| | | Peraiyur |
| | | Ullikkottai |
| | | Nannilam |
| 5 | Nagapattinam | Thennadar |
| | | Karupanpulam |
| | | Sembaharayanallur |
| | | Vaimedu |
| | | Marudhur |
| 6 | Mayiladuthurai | Karuvazhakarai |
| | | Sembanarkoil |
| | | Parasalur |
| | | Arupathy |
| | | Memathur |

## 3. Results and Discussion

Socio economic profile of Pattanam sheep farmers in Cauvery Delta Zone are presented in Table 3.

**Table 3:** Socio economic profile of Pattanam sheep farmers in Cauvery Delta Zone (n=180)

| SI. No. | Categories | | Frequency (f) | Percentage (%) |
|---|---|---|---|---|
| 1. | Gender | Male | 177 | 98.33 |
| | | Female | 03 | 01.66 |
| 2. | Age | Below 30 years | 08 | 04.44 |
| | | 30 – 50 years | 98 | 54.44 |
| | | Above 50 years | 74 | 41.11 |
| 3. | Education | Illiterates | 53 | 29.44 |
| | | Primary | 72 | 40.00 |
| | | Secondary | 38 | 21.11 |
| | | Higher secondary | 05 | 02.77 |
| | | Diploma | 03 | 01.67 |
| | | Graduation | 09 | 05.00 |
| 4. | Occupation | Sheep farming only | 30 | 16.67 |
| | | Agriculture + Sheep farming + Dairy farming | 80 | 44.44 |
| | | Agriculture + Sheep farming + Others | 67 | 37.22 |
| | | Others | 03 | 01.67 |
| 5. | Family type | Nuclear family | 176 | 97.77 |
| | | Joint family | 04 | 02.22 |
| 6. | Annual income | Below 1 lakh | 01 | 0.55 |
| | | 1-3 lakhs | 31 | 17.22 |
| | | 3-5 lakhs | 99 | 55.00 |
| | | Above 5 lakhs | 49 | 01.11 |
| 7. | Community | OC | 0 | 0.00 |
| | | BC / BCM | 159 | 88.33 |
| | | MBC / DNC | 19 | 10.55 |
| | | SC / ST | 02 | 01.11 |
| 8. | Land holding | Landless farmers | 26 | 14.44 |
| | | Marginal farmers (2.5 acres) | 127 | 70.55 |
| | | Small farmers (5 acres) | 19 | 10.55 |

| | | | | |
|---|---|---|---|---|
| | | Landlords | 08 | 04.44 |
| 9. | Flock size | 1-25 animals | 12 | 06.66 |
| | | 25-50 animals | 63 | 35.00 |
| | | 50 -100 animals | 60 | 33.33 |
| | | >100 animals | 45 | 25.00 |
| 10. | Purchase of sheep | Shandy only | 08 | 04.44 |
| | | Middlemen / Brokers | 24 | 13.33 |
| | | Other herd mates | 148 | 82.22 |
| 11. | Sheep farming experience | Less than 2 years | 04 | 02.22 |
| | | 2-5 years | 16 | 08.88 |
| | | 5-7 years | 19 | 10.55 |
| | | Above 7 years | 141 | 78.33 |
| 12. | Training attended | Less than three | 03 | 01.66 |
| | | More than three | 04 | 02.22 |
| | | Not attended | 173 | 96.11 |

### 3.1 Gender
From the Table 3, it was revealed that most of the farmers were male (98.33 per cent) and only 1.66 per cent were female. The above findings are in concordance with the findings of Ramesh and Meena (2012) [3] reported that mainly men were involved in small ruminant farm activities.

### 3.2 Age
Above half of the farmers rearing sheep in the study area belongs to the age group of 30-50 years (54.44 per cent) followed by the age group of above 50 years (41.11 per cent) and only 4.44 per cent of the farmers are between the age group of below 30 years. These findings agree with the Shaik *et al.* (2017) [4] were most of the farmer falls under middle age group.

### 3.3 Education
Most of the respondents had primary school education (40.00 per cent) followed by illiterates (29.00 per cent), secondary school education (21.11 per cent), few of the farmers were graduated (5 per cent), very few had higher secondary school education (2.77 per cent) and diploma (1.67 per cent) respectively in the Cauvery Delta Zone of Tamil Nadu. The above findings are in consonance with Amin *et al.* (2020) [5] who reported that most of the respondents had primary education level.

### 3.4 Occupation
Table 3 indicated that nearly half of the farmers in CDZ were doing agriculture along with sheep farming and dairy farming (44.44 per cent) followed by agriculture along with sheep farming and others (37.22 per cent), One-third of the farmers (16.67 per cent) were doing sheep farming alone and only 1.67 per cent of farmers are doing other works. The present findings were similar with the results of Manzoor *et al.* (2020) [6] and Amin *et al.* (2020) [5] reported that sheep farmers had agriculture as their primary occupation and sheep rearing as a secondary one.
Further, the findings were in accordance to Henry *et al.* (2022) [7] who reported that majority of farmers involved in agriculture (61.11 per cent) as main occupation compared to animal husbandry (25.56 per cent) in Cauvery delta region of Tamil Nadu.

### 3.5 Family type
The majorities of the farmers were nuclear families (97.77 per cent) and while the rest were joint families (2.22 per cent). This is similar to the findings to Srinivasan and Roopa (2020) [8] who reported in his study that most of the farmers were in nuclear family.

### 3.6 Annual income
More than half of the farmers (55.00 per cent) had annual income between 3 to 5 lakhs continued by 1 to 3 lakhs (17.22 per cent), further 1.11 per cent and 0.55 per cent of the farmers had an annual income of above 5 lakhs and below 1 lakh categories respectively.

### 3.7 Community
From the study, it was found that majority of the farmer falls under the category of Backward class / Backward ward class Muslim (88.33 per cent) followed by Most backward class (10.55 per cent) category and only very few of the farmers belonged to SC /ST (1.11 per cent) category respectively. These findings are in consonance with the results of Shaik *et al.* (2017) [4] who reported that most of the farmers in his belongs to back ward class community.

### 3.8 Land holding
In this category, nearly two-thirds of the farmers were marginal farmers with 2.5 acres (70.55 per cent) followed by the landless farmers (14.44 per cent), small farmers with 5 acres of land (10.55 per cent) and very few farmers were (4.44 per cent) are landlords respectively. This is similar with the findings of who reported in his study that most of them were marginal farmers. This is consistent with Manzoor *et al.* (2020) [6] findings, which stated that most of them were marginal farmers.

### 3.9 Flock size
More than one-third of the farmers had a flock size of 25-50 animals (35.00 per cent) followed by 50-100 animals (33.33 per cent), only 25 per cent of the farmers had a flock size of more than 100 animals. Finally, the very least number of farmers (6.66 per cent) had a flock size of 1-25 animals. The above findings are almost in concordance with the results of Srinivasan and Roopa (2020) [8] reported that sheep farmers had an average flock size of more than 58.

### 3.10 Purchase of sheep
The Table 3 exposed that most of the sheep farmers (82.22 per cent) purchased the Pattanam sheep breeding stock from other herd mates followed by some farmers (13.33 per cent) purchased from middlemen /brokers and only (4.44 per cent) of the farmers has purchased the sheep from nearby sandy. These results are in agreement with the findings of Shirsat *et al.* (2019) [9] reported that village level market was preferred mostly by the farmers for marketing of sheep and sheep by

products.

### 3.11 Sheep farming experience
In the farming experience category, above three-fourths of the sheep farmers (78.33 per cent) had an experience of above 7 years while 10.55 per cent and 8.88 per cent of the farmers had the experience of within 5-7 years and 2-5 years in sheep farming respectively and very few farmers (2.22 per cent) had the experience of fewer than 2 years. The present findings agree with the findings of Singaravadivelan *et al.* (2019) [10] who reported that most of the farmers had more than two decades of experience in sheep farming.

### 3.12 Training attended
Many of the farmers (96.11 per cent) did not attend the training about sheep farming followed by (2.22 per cent) had attended more than three training and only (1.66 per cent) of the farmers had attended less than three training. The current findings are consistent with Rajanna *et al.* (2013) [11] and Shirsat *et al.* (2019) [9] findings, which indicated that shepherds did not pursue sheep husbandry to the same extent.

## 4. Conclusions
Based on the present study, most of the farmers in the Cauvery Delta Zone were interested to continue Pattanam sheep farming with the existing management practices. None of the farmers in the zone reported sheep farming as a non-remunerating business even though they were experienced with several natural disasters.

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