



# Socio-economic status of the cattle farmers of Lakshadweep islands<sup>#</sup>

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## Abstract

An investigation on the socio-economic characteristics of the cattle farmers of Lakshadweep islands was carried out. Twenty cattle farmers each were randomly selected from five islands viz. Minicoy, Amini, Kavaratti, Androth and Agatti and a total of 100 farmers formed the respondents of the study. Data were collected using pretested structured interview schedules during the period from January to March 2023. Analysis of data revealed that majority (46 per cent) of cattle farmers were less than 40 years of age and men were engaged to a greater extent in this vocation (92 per cent). The educational status of most of the farmers was that of secondary school (44 per cent). Dairying was reported as a subsidiary occupation by 32 per cent of the farmers. About 80 per cent of the farmers had between one to two animals with less than 10 years of experience. The annual income from cattle farming in Lakshadweep islands was Rs. 25,000 or below. It could be observed that cattle farmers in Lakshadweep islands were small holders but relatively young and educated and considered dairy farming as an extra source of income.

**Keywords:** Socio-economic status, cattle farmers, Lakshadweep

The livestock sector is an important component of the agrarian economy worldwide. This sector provides social, cultural and sustainable economic support for the rural communities with low-income settings across the world. Cattle production systems vary from place to place,

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depending upon the animals, climate, land availability, socio economic background of the farmers and regional interest. Cattle production practices existing in relatively small islands differ significantly from mainland, face challenges in resources and facilities and require special attention. Cattle farming in Lakshadweep islands of India is an integral part of the local community and a significant mean of income generation. However, till date there has not been any in depth study to understand the cattle production systems and challenges faced by the farmers in the islands of Lakshadweep. It is absolutely necessary to recognize the strength and weakness of the sector to undertake suitable interventions for achieving sustainable growth.

Lakshadweep is the smallest Union Territory of India composed of 36 islands with a total area of 32 sq. km in the Arabian Sea, out of which only 10 islands are inhabited. All the islands are located 220 to 440 km away from the coastal city of Kochi in Kerala and Kavaratti is the administrative headquarter. It is a uni-district union territory with a resident population of 64,473 inhabitants, representing 0.01 per cent of the population of India (Agricultural statistics at a Glance, 2020). The cattle population in Lakshadweep Island is 2460 only (Basic Animal Husbandry Statistics, 2019). The main occupations of the people of Lakshadweep are fishing, coconut cultivation and cattle farming.

This study was undertaken in five islands of Lakshadweep with the objective of understanding the socio-economic background of cattle farmers and their role in cattle production. The information will be beneficial while formulating future developmental projects for the interest of cattle farmers of the islands.

### Materials and methods

The study was conducted among 100 cattle farmers in five islands of Lakshadweep viz. Minicoy, Amini, Kavaratti, Androth and Agatti. Minicoy island is the southern-most island of Lakshadweep and Amini island lies at a distance of 407 km from Kochi. The capital of Lakshadweep is Kavaratti island and it lies 360 km off the coast of the State of Kerala and the

largest island is Androth island with an area of 4.90 sq. km. Agatti island lies at a distance of 459 km from Kochi. The Islands studied were selected on the basis of cattle population (AHD, 2021); from each island 20 cattle farmers were selected by simple random sampling method. Data were collected using pretested structured interview schedules during the period from January to March 2023. The information collected was analysed and interpreted.

## Results and discussion

### Age of cattle farmers

The age group of cattle farmers were studied in all the five islands. The majority of the farmers in all islands, except Agatti, were less than 40 years of age. In Agatti island about 55 per cent of the farmers were within the age group of 40-60 years. The findings of this study were contrary to the observations of Sasidharan *et al.* (2023), except for Agatti island, where the majority of dairy farmers fell in the age group of 40-60 years in Kerala. Interestingly, cattle farmers aged above 60 years were comparatively less in all the islands.

### Gender

Irrespective of the islands, most of the farmers were male. The present findings agreed with the observations of George (2016) in Kerala and Wijethilaka *et al.* (2018) in Sri Lanka where majority of the cattle farmers were male. In general, cattle farming involved lots of physical works and this could be the reason for a greater involvement of men in the daily farm activities in Lakshadweep islands also.

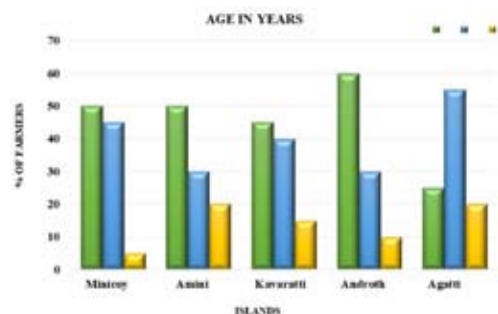


Fig. 1 Distribution of farmers based on age

**Table 1:** Distribution of cattle farmers based on gender, marital status and family type in Lakshadweep islands (per cent)

Social characteristic	Category	Islands					Overall
		Minicoy	Amini	Kavaratti	Androth	Agatti	
Gender	Male	85.0	100	100	95.0	80.0	92.0
	Female	15.0	0.0	0.0	5.0	20.0	8.0
Marital status	Married	50.0	85.0	85.0	85.0	95.0	80.0
	Unmarried	50.0	15.0	15.0	15.0	5.0	20.0
Family type	Joint	65.0	85.0	45.0	75.0	70.0	68.0
	Nuclear	35.0	15.0	55.0	25.0	30.0	32.0

n=20 for all islands

### Marital status and family type

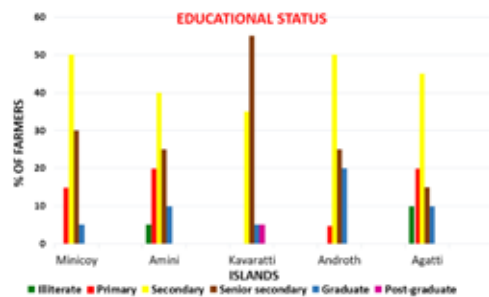
Perusal of data on the marital status and family type of cattle farmers revealed that almost 80 per cent of them were married and majority (68 per cent) belonged to joint families. Similar findings were reported by Kumar *et al.* (2013) in Gujarat, where 70.83 per cent of farmers lived in joint families. However, the result was contrary to that of Saravanan *et al.* (2021) and Sasidharan *et al.* (2023) from Kerala, where most of the dairy farmers lived in a nuclear family system. In small islands like Lakshadweep, people preferred traditional joint families rather than nuclear families due to scarcity of land and other economic constraints. Apart from this, joint families could provide valuable family labour for the various routine farm operations.

### Educational status

It was evident from the result (Table 2), that the majority of farmers in all islands except Kavaratti had secondary and higher secondary school-level education. The result was similar to the findings of Mukesh (2015) and Sasidharan *et al.* (2023) who conducted studies in the Lakshadweep islands and Kerala respectively. Interestingly, 10 per cent of the farmers were graduates also. But according to Patil *et al.* (2022) only 2.7 per cent of the respondents in Kerala had an education level up to graduation. This was a general reflection of Lakshadweep islands where facilities were available for education up to graduation.

### Major occupation

The major occupation of cattle farmers in Lakshadweep were agriculture, fisheries,



**Fig. 2** Distribution of farmers based on educational status

dairying, government jobs, private jobs and business. Only 15 per cent of the cattle farmers reported dairying as their major occupation. The findings of the study were entirely different from the earlier reports of Patil *et al.* (2022) and Jose and Meena (2019) who all reported that the primary occupation of most of the farmers in Kerala was dairying. This difference could be due to the limited facilities in the Lakshadweep islands, where dairy farming alone could not be considered as a sole source of income. The major occupation of most of the cattle farmers in Minicoy, Amini and Androth islands were private jobs and the reason was probably be due to limited opportunities for industries and organised farming in the islands.

### Subsidiary occupation

Dairying was the major subsidiary occupation for about 30-45 per cent of cattle farmers in all islands except in Agatti island, which was in agreement with the observations of Kannan (2002) and Poulouse and Veerakumaran (2022) who observed that dairying was the major subsidiary occupation for most of the respondents studied in the Nagapattinam district of Tamil Nadu and Palakkad district of

Kerala respectively. In islands like Lakshadweep where resources for other large enterprises are limited, dairy farming could be a good source of additional revenue with minimum inputs.

### Experience

The experience of farmers in cattle rearing is a major criterion to assess the production system. The results in the present study indicated that an experience of less than 10 years (Table 2) was reported among a higher percentage of farmers in all islands. When compared to the farmers from the adjacent state of Kerala, the experience of farmers in cattle farming in Lakshadweep was lower. According to Patil *et al.* (2022) about 86.7 per cent of dairy farmers in Kerala had an experience of more than 10 years. The findings of the present study were also contrary to those of Gaikwad (2010) and Vekariya *et al.* (2016) who also opined that all the farmers in their study in Ahmadnagar district of Maharashtra and Sourashtra in Gujarat had an experience of more than ten years in dairying. In Lakshadweep islands except in Agatti, majority of the farmers were less than 39 years of age and therefore their

experience in cattle rearing was also lower.

### Annual income from animal husbandry

Perusal of data pertaining to the annual income of farmers from animal husbandry (Table 3) revealed that majority (80 per cent) had an income of less than Rs. 25,000 and only four per cent reported an income of more than one lakh per year. But as per the study by Patil *et al.* (2022) majority of dairy farmers in Kerala had an annual income between Rs. 30,000 and Rs. 60,000 from animal husbandry. Singh (2013) also reported a higher return of Rs. 75,658.50 to Rs. 1,46,743.60 from animal husbandry in farmers in eastern Uttar Pradesh in India. Although cattle farming could be considered as an important avenue for employment in Lakshadweep, the income generated from this sector was considerably low due to high cost of production and limited marketing opportunities.

### Landholding

The landholdings of majority of the farmers in Minicoy, Amini and Agatti were between 0 to 15 cents and most of the farmers

**Table 2:** Distribution of cattle farmers based on major occupation, subsidiary occupation and experience in Lakshadweep islands (per cent)

Social characteristics	Category	Islands					Overall
		Minicoy	Amini	Kavaratti	Androth	Agatti	
Major occupation	Agriculture	15.0	20.0	0.0	5.0	20.0	12.0
	Fisheries	10.0	15.0	35.0	0.0	10.0	14.0
	Dairying	10.0	25.0	15.0	15.0	10.0	15.0
	Govt job	0.0	0.0	25.0	0.0	15.0	8.0
	Private job	30.0	30.0	10.0	55.0	10.0	27.0
	Business	20.0	0.0	5.0	20.0	5.0	10.0
	Govt retired	0.0	10.0	10.0	5.0	15.0	8.0
	Nil	15.0	0.0	0.0	0.0	5.0	6.0
Subsidiary occupation	Agriculture	5.0	0.0	10.0	30.0	20.0	13.0
	Fisheries	0.0	10.0	0.0	0.0	10.0	4.0
	Dairying	45.0	35.0	35.0	30.0	15.0	32.0
	Business	0.0	0.0	0.0	0.0	0.0	0.0
	Poultry rearing	20.0	0.0	5.0	0.0	0.0	5.0
	Nil	30.0	55.0	50.0	40.0	55.0	46.0
Experience (Years)	< 10	100	60.0	70.0	80.0	85.0	79.0
	10-18	0.0	25.0	20.0	15.0	10.0	14.0
	19-26	0.0	10.0	0.0	0.0	5.0	3.0
	27-34	0.0	0.0	5.0	5.0	0.0	2.0
	> 34	0.0	5.0	5.0	0.0	0.0	2.0

n=20 for all islands

**Table 3:** Distribution of cattle farmers based on annual income from animal husbandry, landholding and purpose of cattle rearing in Lakshadweep islands (per cent)

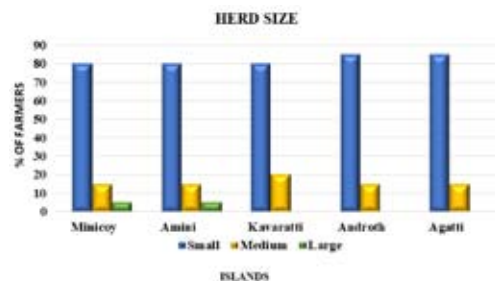
Economic characteristics	Category	Island					Overall
		Minicoy	Amini	Kavaratti	Androth	Agatti	
Annual income from animal husbandry (Rs)	0-25,000	95.0	85.0	70.0	65.0	85.0	80.0
	25,000-50,000	0.0	10.0	30.0	25.0	10.0	15.0
	50,000-75,000	0.0	0.0	0.0	0.0	0.0	0.0
	75,000-1,00,000	0.0	0.0	0.0	0.0	5.0	1.0
	Above 1,00,000	5.0	5.0	0.0	10.0	0.0	4.0
Landholding (cents)	0-15	60.0	60.0	40.0	35.0	65.0	59.0
	16-30	10.0	0.0	15.0	0.0	0.0	5.0
	31-45	0.0	0.0	0.0	0.0	0.0	0.0
	46-60	5.0	0.0	0.0	0.0	0.0	1.0
	Joint property	25.0	40.0	45.0	65.0	35.0	35.0
Purpose of cattle rearing	Self employment	10.0	25.0	15.0	20.0	25.0	19.0
	Additional income	55.0	50.0	40.0	45.0	30.0	44.0
	Manure	5.0	0.0	0.0	0.0	0.0	1.0
	Quality milk	10.0	5.0	0.0	5.0	5.0	5.0
	Inheritance	0.0	15.0	35.0	25.0	15.0	18.0
Passion	20.0	5.0	10.0	5.0	25.0	13.0	

n=20 for all islands

in Kavaratti and Androth islands indicated that their land holdings were joint property shared with other family members. A similar finding was reported by Sasidharan *et al.* (2023) in Kerala. An entirely different result was reported by Varghese *et al.* (2000) where 27.68 per cent had landholding of more than an acre in Kerala. Comparatively smaller holdings in Lakshadweep islands could be attributed to the limited availability of land where the total area of all the ten inhabited islands was 32 km<sup>2</sup> only.

#### Purpose of rearing cattle

Most of the farmers in all islands reared cattle as an extra source of income. In fact, very few farmers in all the islands, except Kavaratti, reared cattle for quality milk production and only five per cent in Minicoy used cattle for manure purposes. This finding was against the observations of Bamini *et al.* (2018) who reported that farmers in Kilinochchi district of Sri Lanka reared cattle mainly for milk and manure production. The findings of the present study indicated that in Lakshadweep islands, the bulk requirement for milk and manure was less and dairy production was generally limited to domestic use only.



**Fig. 3** Distribution of farmers based on herd size

#### Herd size

When considering the herd size of cattle, on homesteads, (Table 3) more than 80 per cent of farmers in all islands had only one to two animals. This finding was similar to that of George (2016) in Kerala. The difficulty in maintaining more number of animals could be due to financial constraints, scarcity of land, limited material resources, poor service facilities and support.

#### Conclusion

Cattle farmers in Lakshadweep islands were generally, less than 40 years

of age and men engaged to a greater extent in this vocation. The majority of the farmers were educated with secondary school level of education and belonged to joint families. Cattle farmers with less than 10 years of experience were more and the annual income generated from animal husbandry was Rs. 25,000 or less only. Smallholder cattle farming with one to two animals was prevalent in Lakshadweep where most of the farmers considered this as a subsidiary enterprise. Landholding was generally in the form of joint holdings shared among family members. Cattle were reared as an extra source of income in most cases. It could be concluded that cattle farmers in Lakshadweep islands were small holders but relatively young and educated and considered dairy farming as an extra source of income.

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#### Conflict of interest

The authors declare that they have no conflict of interest.

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