P-ISSN: 2618-0723
E-ISSN: 2618-0731

NAAS Rating: 5.04
www.extensionjournal.com

International Journal of Agriculture Extension and Social Development

Volume 8; SP-Issue 5; May 2025; Page No. 86-89

Received: 20-02-2025
Accepted: 25-03-2025

Indexed Journal
Peer Reviewed Journal

Socio-economic status and constraint's faced by piggery growers in Ernakulam district of Kerala

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DOI: https://doi.org/10.33545/26180723.2025.v8.i5Sb.1957

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Abstract

Piggery farming is an important livelihood activity in Kerala, contributing to rural income generation and nutritional security. The present study examines the socio-economic profile of pig farmers and the challenges they face in Ernakulam district. The respondents were categorized into three groups based on herd size: small farmers (1-10 pigs, 36%), medium farmers (10-50 pigs, 40%), and large farmers (above 50 pigs, 24%). The demographic analysis revealed that the highest proportion of respondents (23.08%) belonged to the 40-50 and above 60 age groups, followed by 21.15% in the 30-40 age group, 17.31% in the 50-60 group, and 15.38% below 30 years. In terms of experience, 9.09% were novices (<2 years), 10.91% intermediate (2-4 years), 16.36% experienced (4-8 years), 20% advanced (8-10 years), and 16.36% experts (>10 years). Additionally, 14.55% were specialists in specific pig varieties, while 12.73% served as consultants. Occupational patterns showed that 37.78% combined piggery with agriculture and retail/business, 22.2% relied solely on agriculture, 17.78% supplemented farming with part-time employment, 8.89% balanced agriculture with full-time jobs, and 13.33% engaged in technical/skilled trades. Major constraints identified included high feed costs, disease outbreaks, inadequate veterinary services, lack of organized marketing channels, and limited access to credit facilities. The study suggests the need for improved extension services, better healthcare support, and policy interventions to enhance the sustainability and profitability of piggery farming in the region.

Keywords: Piggery farming, socio-economic status, production constraints, marketing challenges

Introduction

Piggery farming in Kerala has emerged as an important livelihood activity, contributing to both rural income generation and nutritional security. Historically, pig rearing in the state has been practiced by small and marginal farmers, particularly in regions like Ernakulam, where it serves as a supplementary source of income alongside traditional agriculture. Over the years, piggery has gained traction due to its relatively low investment requirements and quick economic returns compared to other livestock sectors. However, the sector faces numerous challenges, including high feed costs, disease outbreaks, inadequate veterinary services, and unorganized marketing channels. The majority of pig farmers in Ernakulam district are smallholders, with many falling into economically vulnerable categories due to fluctuating market prices and limited access to institutional support. Despite its potential, piggery remains an underdeveloped sector, constrained by a lack of technical knowledge, poor breed improvement programs, and insufficient government policies. The socio-economic profile of pig farmers often reflects these challenges, with many relying on traditional practices that limit productivity and profitability. While pig farming offers opportunities for livelihood diversification, its growth is hindered by structural issues such as fragmented supply chains, limited cold storage facilities, and weak market linkages. Additionally, cultural perceptions and limited awareness about modern pig-rearing techniques further restrict the sector's expansion. Addressing these constraints through better extension services, improved healthcare support, and policy interventions could enhance the sustainability and profitability of piggery farming in Kerala, ensuring its role in the state's rural economy.

Research methodology

The research employed a purposive-multistage random sampling methodology to select respondents from Ernakulam district, ensuring a representative sample of piggery farmers and market functionaries. Ernakulam district was purposively chosen as the study area due to its significant pig population growth (86.19% over seven years) and established pig farming culture, while also considering logistical feasibility for the investigator. Within Ernakulam district, Angamaly block was selected purposively given its historical engagement in piggery and high demand for pork in Kochi and surrounding areas. A complete list of pig-rearing villages in Angamaly block was prepared with assistance from the Krishi Bhavan (Angamaly), from which 5% of villages were randomly selected for the study. From these villages, 10% of pig farmers were randomly chosen,

resulting in a final sample size of respondents. The selected pig farmers were classified into three operational size categories based on herd size: small farmers (1-10 pigs), medium farmers (10-50 pigs), and large farmers (more than 50 pigs). Additionally, market functionaries including traders, middlemen, and retailers were identified through the Piggery Association, with 10% randomly selected for inclusion in the study. Primary data was collected through structured personal interviews-using a pre-tested questionnaire, conducted over six months to cover a complete production cycle, focusing on production practices, costs, marketing channels, and constraints faced by farmers. Secondary data was obtained from various sources including published reports and journals, government records (Agriculture Department, Block Development Office), KVK (Krishi Vigyan Kendra) and APMC (Agricultural Produce Market Committee) records, CPCRI (Central Plantation Crops Research Institute) data, and marketing officers' reports. The data collection was conducted during the 2024-2025 financial year to ensure relevance to current farming practices and market conditions. Collected data was analyzed using appropriate statistical tools including descriptive statistics, cost-benefit analysis, and marketing efficiency measures to derive meaningful conclusions about piggery production and marketing in the study area. This methodological approach ensured comprehensive coverage of both production and marketing aspects while maintaining scientific rigor in sample selection and data analysis, capturing the diversity of pig farming operations in Ernakulam district from small backyard units to larger commercial enterprises.

Analytical Tools

1. **Chi-Square:** $\chi^2 = \sum(Oi - Ei)^2 / Ei$
2. **Garrett Ranking:** Per cent position = 100 (Rij - 0.5) / Nj

Results and Discussion

Table 1: Distribution of respondents according to their pig holding.

S. No.	Categories (members)	Respondent	
		Frequency	Percentage (%)
1.	Small Farmers (1-10 pigs)	18	36
2.	Medium Farmers (11-50 pigs)	20	40
3.	Large Farmers (Above 50 pigs)	12	24
Total		50	100.00

Table 1: The Table shows the land holdings of the respondents. The response are categorized into 3 groups: small farmers (1-10 pigs), medium farmers (10-50 pigs), and large farmers (more than 50 pigs). As shown in the table, the distribution of respondents by pig holding is as follows 36% are small farmers (1-10 pigs), 40% are medium farmers (10-50 pigs), and 24% are large farmers (more than 50 pigs)

Table 2: Distribution of respondents according to their age.

Sr. No.	Age	Sample farmers				
		Small	Medium	Large	Total	Percentage
1	Below 30	1	3	4	8	15.38
2	Between 30-40	5	2	4	11	21.15
3	Between 40-50	3	5	4	12	23.08
4	between 50-60	3	4	2	9	17.31
5	Above 60	2	5	5	12	23.08
	Total	14	19	19	52	100

Note: There is no significant relationship between variables.

Table 2: The analysis reveals that the respondents have been grouped into five categories based on their land holdings, and a basic comparison has been made between age and land ownership. The demographic analysis reveals a notable distribution of respondents across various age groups. Specifically, 23.08% of respondents within the 40-50 age, followed by 23.08% in the above 60 age range. Additionally, 21.15% of respondents are between 30-40years old, while 17.31% are between 50 and 60 years old. Lastly, 15.38% of respondents are below 30 years old.

Table 3: Distribution of respondents based on their experience.

Sr. No.	Experience (year)	Sample farmers				
		Small	Medium	Large	Total	Percentage
1	Novice (<2)	2	1	2	5	9.09
2	Intermediate (2-4)	3	1	2	6	10.91
3	Experienced (4-8)	1	4	4	9	16.36
4	Advanced (8-10)	2	4	5	11	20
5	Expert (>10)	1	5	3	9	16.36
6	Specialist (in Large White Yorkshire)	1	4	3	8	14.55
7	Breeding Consultant (professionals providing expert advice)	5	1	1	7	12.73
	Total	15	20	20	55	100

Note: There is significant relationship between variables.

Table 3: The respondents have been grouped into seven categories based on their land holdings, and experience of the respondents. The response are categorized into seven groups according to their experience: Novice (<2years), Intermediate (2-4years), experienced(4-8years), Advanced (8-10years), Expert(>10years), Specialist in certain

varieties, Consultant (professional providing expert advice).The response noted as 9.09% of respondents are Novice, while 10.91% are Intermediate, a further 16.36% are Experienced, and 20 are Advanced, the largest group, at 16.36%, are Experts, 14.55% of respondents are Specialists, with expertise in specific areas or varieties, and 12.73% are Consultants, providing professional expert advice.

Table 4: Distribution of respondents based on their occupation.

Sr. No.	Occupation	Sample farmers				
		Small	Medium	Large	Total	Percentage
1	Agriculture farming	3	5	2	10	22.22
2	Agriculture and part-time employment	4	3	1	8	17.78
3	Agricuture and full-time employment	1	3	0	4	8.89
4	Agriculture and retail/business	7	4	6	17	37.78
5	Agriculture and Technical/ Skilled trades	0	5	1	6	13.33
	Total	15	20	10	45	100

Note: There is no significant relationship between variables.

Table 4: The response are categorized into five groups according to their occupation: 22.2% are depends on Agriculture farming, where 17.78% are depends on Agriculture and part-time employment,8.89% are agriculture and full-time employed,37.78% are agriculture and retail/business oriented and finally 13.33% are agriculture and technical/skilled traders.

Table 5: Constraints faced by the respondents in piggery cultivation

SI. No.	Constraints	Garret Score	Rank
1.	Existence of large number of intermediaries in marketing process	64.7	I
2.	Inefficient allocation of resources	61.3	II
3.	Breeding challenges	58.9	III
4.	High commission	56.4	IV
5.	Limited access to veterinary care	53.2	V
6.	Disease burden	50.8	VI
7.	Lower market value	48.5	VII
8.	High feed costs	47.1	VIII
9.	Delayed payments	45.9	IX
10.	Unorganized marketing system	45.6	X
11.	Inadequate of appropriate credit facilities	45.3	XI
12.	Depressed market conditions	44.7	XII
13.	Too much fluctuation in prices	44.5	XIII

Table 5: The study examined the constraints faced by respondents in marketing piggery. Using the Garrett ranking method, respondents ranked possible constraints from 1 to X (I>II>III>IV>V>VI>VII>VIII>IX>X>XI>XII> XIII). The Garrett ranking method, respondents ranked possible constraints from 1 to XIII. The highest ranked constraint was the existence of large number of intermediaries in marketing process (I) with a Garrett score of 64.7, followed by Inefficient allocation of resources (II) with a score of 61.3. The next highest ranked constraints were Breeding challenges (III) with a score of 58.9, high commission (IV) with a score of 56.4, Limited access to veterinary care (V) with a score of 53.2, and so on. Too much fluctuation in prices ranked X with a score of 44.5, while inadequate appropriate credit facilities, depressed market conditions, and unorganized marketing system ranked VII, VI, and IX, respectively, with scores ranging from 45.3 to 45.9. Delayed payments, High feed costs, and lower market value also ranked VIII, XI, and XII, respectively, with scores ranging from 45.9 to 48.5

Conclusion

The present study highlights the complex socio-economic conditions and production challenges faced by piggery farmers in Ernakulam district of Kerala. The findings reveal that a significant proportion of pig farmers operate at small and medium scales. The demographic profile shows a predominance of middle-aged farmers, with varying levels of experience, engaged in piggery as either a primary or supplementary livelihood activity Despite the sector's potential for income generation and nutritional security, pig farmers encounter numerous challenges that limit productivity and profitability. Key constraints include. inadequate veterinary services, disease outbreaks, lack of organized marketing channels, and limited access to credit and technical knowledge. Additionally, fragmented supply chains and weak market linkages further hinder the sector's growth. The study also identifies significant relationships between socio-economic factors such as education, experience, and farm size, emphasizing the need for tailored interventions. To enhance the sustainability and profitability of piggery farming, comprehensive policy measures are required. These include strengthening extension services, improving access to affordable healthcare and quality feed, establishing better market infrastructure, and providing financial support through subsidies and credit facilities. Additionally, promoting awareness about modern pig-rearing techniques and breed improvement programs can significantly boost productivity. Addressing these challenges holistically will not only improve the livelihoods of pig farmers but also contribute to the broader goals of rural development and food security in Kerala. By fostering

a more supportive ecosystem for piggery, stakeholders can unlock the sector's full potential as a viable and sustainable agricultural enterprise.

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