# Constraints faced by Pig Farmers in Different Agro-climatic Zones of Kerala

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**ABSTRACT**

This study identified the constraints faced by the pig farmers in Kerala across various zones, viz., North, South, Central, High Altitude, and Special Zone of Problematic Areas (SZPA). Data collected through observations, discussions, interviews, and structured questionnaires revealed many constraints. The constraints included technical constraints such as outdated farming techniques and disease management, inadequate government support, economic constraints such as high feed costs, social constraints such as cultural attitudes, labour availability, and marketing issues like less viable marketing channels and fluctuating prices. Notably, 94.45% of farmers reported a lack of marketing channels and of good-quality breeding stock, and the unavailability of swill feed, particularly in the SZPA Zone.

**Keywords:** Pig farming, Constraints, Kerala

## INTRODUCTION

Pig farming in Kerala is influenced by a range of factors that vary across its diverse agro-climatic zones, each presenting unique challenges and opportunities. Understanding the constraints faced by pig farmers in these regions is crucial for devising targeted interventions to enhance productivity and sustainability. Despite the significant role of pig farming in the rural economy, farmers also encounter obstacles relating to climate, housing, and resource availability. As a result, pig farming faces a range of problems like nutritional deficiencies, poor disease management, and economic pressures, which significantly impact productivity and profitability (Wang and Li, 2024). Kerala's tropical climate necessitates specific housing management to ensure optimal conditions for pigs, such as proper ventilation and sunlight exposure. Studying the constraints in pig farming is crucial for identifying strategies to enhance productivity and ensure sustainable practices, as highlighted by Mohi and Bhatti (2006). Pig farmers in Kerala face several major constraints, including a lack of knowledge about modern farming practices, frequent disease outbreaks, and inadequate government support through schemes. Additionally, high feed costs, unavailability of swill feed, social stigma on the consumption of pork and insufficient space for waste disposal contribute to additional difficulties. This study aims to identify and evaluate the constraints faced by the pig farmers across different agro-climatic zones of Kerala. By identifying the constraints, this study aims to frame policy recommendations and support strategies that can improve the productivity and thus the livelihood of pig farmers in the State.

## MATERIALS AND METHODS

The present study was conducted in 90 pig farms in different agro-climatic zones of Kerala, *viz.,* North, South, Central, High altitude, Special zone of problematic area (SZPA) and South zone (SLUB, 1997). The details of the agroclimatic factors of different zones of Kerala are presented in Table I. The responses on the constraints faced by pig farmers were collected through observation, discussion, interview and a structured questionnaire. Six farms were selected from each agro-climatic zone, based on breedable sows' numbers - small (≤6), medium (7-15) and large farms (>15) (Bengtsson and Whitakker, 1998).

**Table I: Agroclimatic Factors of Different Zones of Kerala**

| Agroclimatic Zone | Districts | Location Co-ordinates | Climatic Parameters (Average per Year) | | |
|---|---|---|---|---|---|
| | | | Temperature (°C) | Rainfall (mm) | Humidity (%) |
| North Zone | Kozhikode, Malappuram, Kannur, Kasargod | 11.2588° N, 75.7804° E | 27 | 3,000 | 80 |
| South Zone | Trivandrum, Kollam, Pathanamthitta | 8.5241° N, 76.9366° E | 28 | 2,500 | 85 |
| Central Zone | Thrissur, Ernakulam, Palakkad | 10.5276° N, 76.2144° E | 27 | 2,800 | 75 |
| High Altitude | Wayanad, Idukki | 11.7161° N, 76.2804° E and 9.9189° N, 77.1025° E | 22 | 3000 – 3500 | 70 |
| Special Zone of Problematic Areas | Alleppey, Kottayam | 9.4981° N, 76.3384° E | 28 | 3,500 | 85 |

**RESULTS AND DISCUSSION**

The total pig population of 90 farms in three herd sizes (small, medium, and large) belonging to five agro-climatic zones was 19,302, of which 8,161 (42.28%) were the piglets, 7,081 (36.69%) weaned piglets, 1,444 (7.48%) gilts, 1,232 (6.38%) sows, 1,029 (5.33%) dry animals and 368 (1.91%) boars. Of the total pigs, the number of pigs was comparatively higher in the central zone, followed by the north zone. It was also found that there were more crossbred pigs in the north zone, followed by the central zone. Further, purebred Large white Yorkshire, Duroc and Landrace pigs were more in the central zone, besides more of the indigenous pigs. The majority of rearing patterns observed in the study were intensive type of rearing (80%), followed by semi-intensive (15%) and extensive type (5%).

The constraints faced by the pig farmers in different agro-climatic zones are presented in Table II and Fig. 1. The present study observed that 94.45% of farmers across all zones reported a lack of marketing channels for quality breeding stock, besides non-availability of breeding stock and frequent outbreak of diseases, followed by lack of government support through schemes and subsidies (72.23%). Kumar and Mazhar (2020) also identified the absence of government schemes and policies as the foremost constraint for pig farmers, with 100 per cent of them highlighting it as their primary challenge in Andhra Pradesh. Like that, 65.7% of respondents in Nagaland mentioned lack of government support, followed by lack of quality piglets (60.36%), frequent outbreak of diseases (46.85%), inadequate availability of good breeding boars (45.95%), and lack of marketing facilities (45.04%) (Patra *et al.,* 2014).

In Dhemaji district of Assam, Saikia *et al*. (2019) reported that major constraints in pig

farming included higher mortality of pigs due to contagious diseases (70%) and lack of organized marketing facilities (76%). Similarly, breeding constraints of pig farming studied by Nanda *et al*. (2020) in Alwar district of Rajasthan ranked as first, with second, third and fourth constraints as non-availability of improved breeds, lower productivity of animals, non-availability of improved boars and lack of knowledge in heat detection, respectively.

**Table II: Constraints Faced by Pig Farmers in Different Agroclimatic Zones of Kerala**

| Constraints | Response of the Farmers | | | | | |
|---|---|---|---|---|---|---|
| | SZPA (n=18) | Central (n=18) | North (n=18) | South (n=18) | High altitude (n=18) | Total (n=90) (%) |
| **Technical** | | | | | | |
| Lack of farming knowledge | 0 (0) | 2 (11.11) | 3 (16.67) | 2 (11.11) | 4 (22.22) | 61.11 |
| Frequent outbreaks of diseases | 4 (22.22) | 1 (5.56) | 7 (38.89) | 5 (27.78) | 0 (0) | 94.45 |
| **Economic** | | | | | | |
| High cost of concentrate feed | 3 (16.67) | 3 (16.67) | 0 (0) | 0 (0) | 0 (0) | 33.34 |
| Non-availability of swill feed | 3 (16.67) | 0 (0) | 1 (5.56) | 0 (0) | 0 (0) | 22.23 |
| **Waste management** | | | | | | |
| Lack of space for proper waste disposal | 0 (0) | 3 (16.67) | 3 (16.67) | 1 (5.56) | 0 (0) | 38.90 |
| **Policy and Regulatory** | | | | | | |
| Government-level regulations | 1 (5.56) | 0 (0) | 1 (5.56) | 0 (0) | 0 (0) | 11.12 |
| Lack of government support | 3 (16.67) | 5 (27.78) | 2 (11.11) | 3 (16.67) | 0 (0) | 72.23 |
| **Social** | | | | | | |
| Social stigma | 0 (0) | 1 (5.56) | 1 (5.56) | 0 (0) | 5 (27.78) | 38.90 |
| Labour problem | 1 (5.56) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 00.00 |
| **Marketing** | | | | | | |
| Lack of marketing facilities | 0 (0) | 0 (0) | 0 (0) | 1 (5.56) | 4 (22.22) | 27.78 |
| Lack of marketing channels | 3 (16.67) | 3 (16.67) | 0 (0) | 6 (33.33) | 5 (27.78) | 94.45 |

*(Figures in parentheses indicate percentages within each zone)*

In this study, 61.11% of farmers mentioned that lack of knowledge about pig farming was one of the technical constraints faced by them. Kumar *et al*. (2017) also reported that difficulty in obtaining technical guidance and help from the experts (57.26%), and the non-availability of semen for artificial insemination (43.74%) were the major concerns among Tamil Nadu pig farmers. Lack of knowledge on feeding of balanced ration (76.10%) was recorded by Saikia *et al*. (2019) in Dhemaji district of Assam. Feeding

constraints like lack of knowledge of feeding balanced rations, feeding concentrates, mineral mixture and various group-wise feeding systems were reported in Alwar district of Rajasthan by Nanda *et al*. (2020).

This study identified that, in regions where swill feed was not available, farmers had to use the expensive concentrate feed, and 22.23% of farmers reported the lack of swill feed, while 33.34% reported the high cost of concentrate feed. The swill feed unavailability was found in the SZPA Zone. In contrast, Patra *et al*. (2014) found that pig farmers in Nagaland's tribal areas faced a major constraint in the form of the high cost of concentrate feed, affecting 81.08% of them and the high cost of pig feed, feed ingredients and the non-availability of balanced commercial pig feed. Kumar and Mazhar (2020) also reported high costs of concentrate and pig feed (93.5%) in the West Godavari district of Andhra Pradesh.

Kumar *et al*. (2017) studied that issues of religious taboos (51.61%), non-availability of trained labour (21.05%) and high labour cost (20.33%) were major socio-economic constraints in indigenous pig farmers of Tamil Nadu. But, in this study, social stigma was observed only in the high-altitude zone, possibly because pig farmers did all the farm activities.

The non-availability of proper veterinary health care was one of the major constraints (72.97%) among pig farmers according to Patra *et al.* (2014). Kumar *et al*. (2017) mentioned non-availability of timely veterinary care (43.21%), non-availability of veterinary medicines in nearby places (32.57%) as major constraints. Nanda *et al*. (2020) ranked the lack of veterinary services as the foremost constraint in their study at the Alwar district of Rajasthan. Kumar and Mazhar (2020) identified inadequate veterinary services (68.5%) and high cost of veterinary services (40.2%) as significant constraints in the piggery sector.

However, Kumar *et al*. (2017) mentioned transportation of live pigs (62.35%), remunerative prices (12.39%), lack of slaughter facilities (8.24%) and exploitation of middleman (14.96%) were perceived by the major marketing constraints. Similarly, Kumar and Mazhar (2020) identified a lack of organized markets (98.6%), insufficient consumer base (97.2%), limited popularity of pork (94.4%) and poor relationships with extension agencies (77.7%). Mohakud *et al*. (2020) observed that the majority of pigs in urban and peri-urban farms in Guwahati were sourced from unknown origins, posing a higher risk of disease compared to pigs obtained from known sources like government farms. Chakrabarti *et al*. (2020) stated that major challenges in pig farming were the unavailability of quality breeding boars, insufficient knowledge about balanced rations, shortages in feed and agricultural waste, limited space for proper waste disposal, a lack of knowledge about improved technology, and labour issues in Jharkhand.

**SUMMARY**

Overall, the study underscores the need for comprehensive, region-specific interventions to address these diverse constraints. Enhancing technical support, improving policy frameworks, providing economic assistance, and developing better marketing and waste management solutions are essential for boosting the productivity and sustainability of pig farming in Kerala. Marketing constraints included limited access to markets, a lack of organized marketing channels, and fluctuating pork prices.

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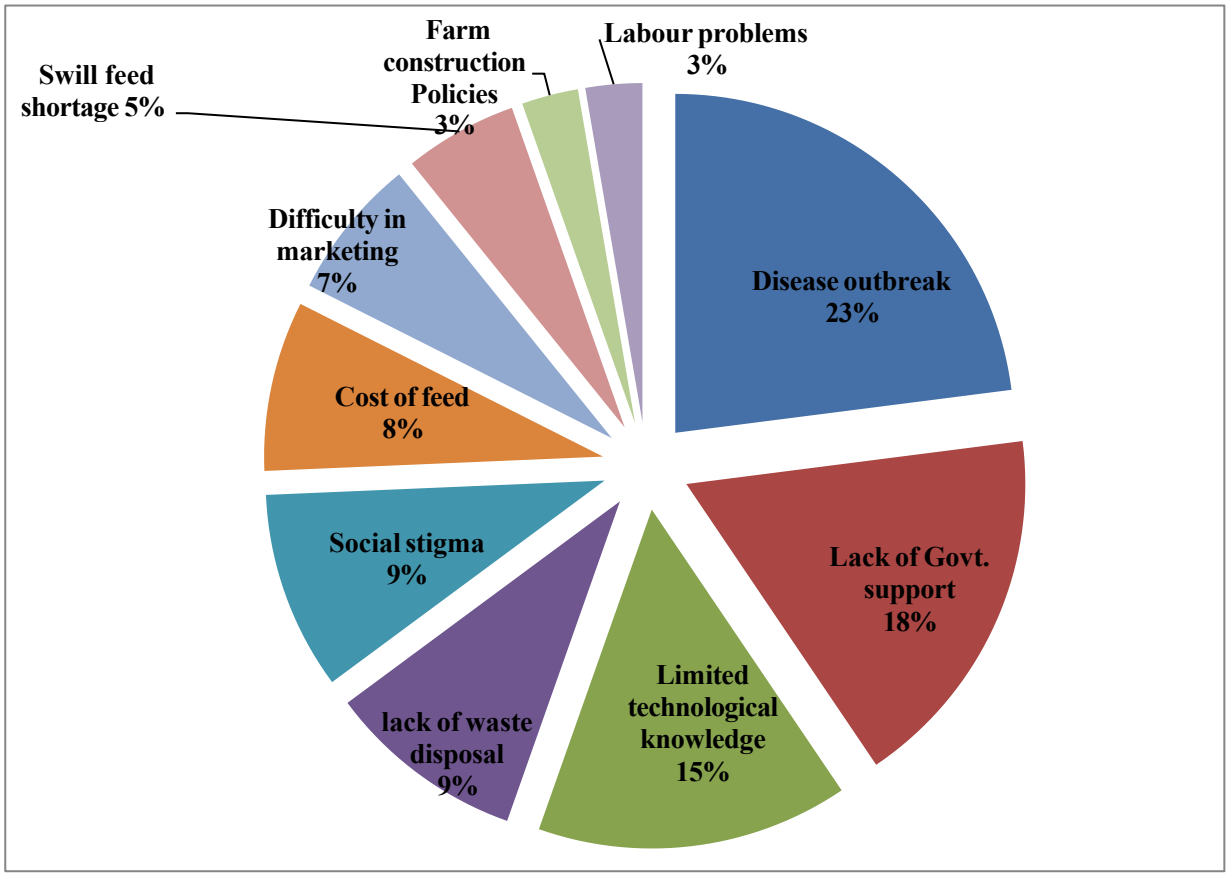


**Fig. 2: Constraints faced by Pig Farmers in Kerala**