

## A Study On Opportunities And Challenges Of Small-Scale Dairy Farmers In Thiruvananthapuram District

Ramya. R<sup>1</sup>, Dr. G. Anusha<sup>2</sup>

<sup>1</sup>PhD Research Scholar Commerce (Full Time), PG & Research Department of Commerce, Malankara Catholic College, Mariagiri, Kaliyikkavilai Affiliated to Manonmaniam Sundaranar University,, Abhishekapatti, Tirunelveli 627012, Tamil Nadu.

<sup>2</sup>Assistant Professor and Research Supervisor, PG & Research Department of Commerce, Malankara Catholic College, Mariagiri, Kaliyikkavilai Affiliated to Manonmaniam Sundaranar University, Abhishekapatti, Tirunelveli 627012, Tamil Nadu.

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### ABSTRACT

The present study focuses on the opportunities and challenges of small-scale dairy farmers in Thiruvananthapuram District. Dairy farming plays a vital role in rural development by providing employment and a regular source of income to farmers. The study aims to analyze the socio-economic profile of dairy farmers, identify the major opportunities available, examine the challenges faced, and assess the impact of dairy farming on income and livelihood. The study is based on both primary and secondary data. Primary data were collected from 90 dairy farmers using a structured questionnaire, while secondary data were gathered from books, journals, and online sources. Various statistical tools such as percentage analysis, ranking method, mean analysis, chi-square test, and composite index were used for data analysis. The findings reveal that most farmers are middle-aged, moderately educated, and depend on dairy farming as a supplementary source of income. High demand for milk and regular income are identified as key opportunities. However, farmers face major challenges such as high feed cost, veterinary problems, and financial constraints. The study also highlights a significant relationship between income and awareness of government schemes. The study concludes that dairy farming has strong potential for growth, but requires improved infrastructure, better financial support, enhanced awareness, and adoption of modern practices for sustainable development.

**Keywords:** Dairy Farming, Small-Scale Farmers, Opportunities, Challenges, Income, Livelihood, Milk Production, Government Schemes, Rural Development

### INTRODUCTION

Dairy farming is one of the most important components of the agricultural sector in India, playing a crucial role in strengthening the rural economy. India is one of the largest producers of milk in the world, and the dairy sector significantly contributes to the national income as well as the livelihood of millions of rural households. Unlike seasonal agricultural activities, dairy farming provides a steady and continuous source of income throughout the year, thereby ensuring economic stability for farmers. It also contributes to nutritional security by supplying essential nutrients such as proteins, vitamins, and minerals through milk and milk products. Moreover, dairy farming generates employment opportunities not only in production but also in processing, transportation, and marketing, making it a key driver of inclusive rural development.

In recent years, dairy farming has gained prominence as a sustainable and supplementary occupation, particularly for small and marginal farmers. With increasing urbanization, population growth, and changing dietary patterns, the demand for milk and dairy products has risen considerably. This has opened up new avenues for dairy farmers to expand their activities and improve their income levels. Additionally, government initiatives such as subsidies, credit facilities, insurance schemes, and training programmes have encouraged farmers to adopt dairy farming as a viable entrepreneurial activity. Technological advancements in breeding, feeding, and disease control have also contributed to improving productivity and efficiency in the sector.

Small-scale dairy farmers constitute the backbone of the dairy industry, especially in states like Kerala, where land holdings are small and fragmented. In Thiruvananthapuram District, dairy farming is commonly practiced as a subsidiary occupation alongside agriculture, wage labor, or small businesses. The district benefits from an organized network of dairy cooperatives, such as milk societies, which facilitate milk collection,

.processing, and marketing. These cooperatives play a significant role in ensuring fair prices and reducing the exploitation of farmers by middlemen. Furthermore, increasing awareness about animal husbandry practices and the availability of institutional support have created favorable conditions for the growth of small-scale dairy farming in the region.

Despite these encouraging prospects, small-scale dairy farmers face a wide range of challenges that affect their productivity, profitability, and sustainability. One of the major issues is the rising cost of cattle feed and fodder, which constitutes a significant portion of the total cost of dairy farming. Many farmers also lack access to quality feed and green fodder due to limited land availability. Another critical challenge is the limited adoption of modern technology and scientific farming practices, which results in lower milk yield and inefficiency

In addition, inadequate veterinary services and limited access to timely healthcare for animals pose serious problems. Diseases, poor breeding practices, and lack of regular medical check-ups can lead to reduced productivity and economic losses. Financial constraints further aggravate the situation, as many small-scale farmers depend on informal sources of credit with high interest rates, limiting their ability to invest in better infrastructure and quality livestock. Marketing is another significant challenge faced by dairy farmers. Although cooperative societies exist, not all farmers have equal access to these facilities, and some still depend on local vendors who offer lower prices. Fluctuations in milk prices and the absence of proper pricing mechanisms also create uncertainty in income. Furthermore, lack of storage and transportation facilities adds to the difficulties in maintaining the quality of milk and expanding market reach. Other issues such as limited awareness of government schemes, bureaucratic delays in availing benefits, poor infrastructure, and climate-related factors like extreme weather conditions also impact dairy farming activities. Climate change affects the availability of water and fodder, as well as the health and productivity of livestock.

## REVIEW OF LITERATURE

**Karuna Sri et al. (2024), “Challenges and Opportunities in the Indian Dairy Industry”**, conducted a study on the major issues faced by dairy farmers in India. The study revealed that despite India being the largest producer of milk, the dairy sector faces several structural and operational challenges. It was found that low adoption of modern technology and scientific farming practices reduces productivity levels. The researchers identified high input costs, especially for cattle feed and healthcare, as a major constraint for small-scale farmers. The study also pointed out inefficiencies in the supply chain, including poor storage and transportation facilities. Further, inadequate infrastructure such as lack of proper roads, electricity, and milk chilling centers was found to hinder dairy development. Limited access to institutional credit forces farmers to rely on informal sources of finance. The study also highlighted low awareness of government schemes among farmers. Fluctuations in milk prices create instability in farmers’ income. The study concluded that improving infrastructure, promoting technology adoption, and strengthening policy support are essential for sustainable dairy development.

**Gayathri S. Lal et al. (2023), “An Outlook on Commercial Dairy Farming in India”**, conducted a study on the development and performance of the dairy sector in India. The study revealed that dairy farming has shown considerable growth due to increasing demand for milk and supportive government initiatives. It was found that improved breeding techniques and better disease management practices have contributed to higher milk production. The researchers identified lack of awareness and limited technical knowledge among farmers as key constraints. The study also pointed out inadequate infrastructure and poor extension services affecting farm productivity. Further, issues related to marketing and price fluctuations were found to reduce farmers’ profitability. Limited access to organized markets forces farmers to depend on middlemen. The study also highlighted insufficient training programmes for small-scale farmers. Financial constraints and difficulty in accessing institutional credit were additional challenges. The study concluded that improving awareness, infrastructure, and institutional support is essential for the growth of dairy farming.

**Mili and Dutta (2022), “Milk Production and Challenges in India”**, conducted a study on the constraints affecting dairy production in India. The study revealed that increasing demand for milk is not matched by adequate production levels. It was found that poor quality feed and lack of green fodder significantly affect milk yield. The researchers identified inadequate veterinary services and poor animal health management as major issues. The study also pointed out the lack of modern technology adoption among small-scale farmers. Further, financial limitations restrict farmers from investing in improved livestock and infrastructure. Limited government support and ineffective policy implementation were also highlighted. The study found that lack of training and awareness reduces efficiency in dairy farming practices. Marketing problems and price instability were additional concerns. The study concluded that better policy support, improved feed availability, and enhanced veterinary services are necessary for dairy sector development.

**Sharma et al. (2021), “Status and Challenges of Dairy Farming in India”**, conducted a study on the condition of small and marginal dairy farmers. The study revealed that dairy farming is a major source of livelihood but is dominated by unorganized small-scale producers. It was found that low productivity of animals is a key issue

affecting income levels. The researchers identified high maintenance costs and lack of quality inputs as major challenges. The study also pointed out the limited use of scientific and modern dairy practices. Further, lack of access to institutional credit was found to restrict farm expansion. Poor marketing facilities and dependence on local vendors reduce farmers' income. The study also highlighted inadequate infrastructure and storage facilities. Climate-related issues were found to impact livestock health and productivity. The study concluded that modernization, financial support, and improved marketing systems are essential for sustainable dairy farming.

**Patel et al. (2020), "Dairy Farming as a Source of Rural Livelihood in India"**, conducted a study on the role of dairy farming in rural development. The study revealed that dairy farming provides a stable and regular source of income for rural households. It was found that small-scale farmers depend heavily on dairy activities for their livelihood. The researchers identified unorganized market structures as a major challenge in the sector. The study also pointed out price fluctuations and lack of proper pricing mechanisms affecting farmers' income. Further, inadequate infrastructure such as poor transportation and storage facilities was found to limit market access. Lack of institutional support and extension services created additional difficulties. The study highlighted low awareness about improved farming practices among farmers. Financial constraints and dependence on informal credit sources were also observed. The study concluded that strengthening market systems and improving infrastructure are crucial for dairy sector growth.

### STATEMENT OF THE PROBLEM

Dairy farming has emerged as an important source of livelihood for small-scale farmers in India, particularly in regions like Thiruvananthapuram District, where land holdings are small and agriculture alone is often insufficient to sustain rural households. The increasing demand for milk and milk products has created significant opportunities for dairy farmers to enhance their income and improve their standard of living. Government initiatives, cooperative support, and technological advancements have further contributed to the growth potential of the dairy sector. However, despite these favorable conditions, small-scale dairy farmers continue to face numerous challenges that limit their productivity and profitability. Rising costs of cattle feed, inadequate access to quality fodder, and lack of modern farming techniques significantly affect milk production. In addition, limited availability of veterinary services and poor animal health management lead to reduced efficiency and economic losses.

Financial constraints also pose a major problem, as many farmers struggle to access institutional credit and are often dependent on informal sources of finance. Marketing issues such as price fluctuations, lack of proper pricing mechanisms, and dependence on middlemen further reduce farmers' income. Moreover, inadequate infrastructure, including poor transportation, storage, and milk collection facilities, creates additional barriers to growth. Lack of awareness about government schemes and insufficient training opportunities prevent farmers from fully utilizing available support systems. Climate-related factors and environmental challenges also impact dairy farming activities, affecting both livestock health and fodder availability. In this context, there exists a need to critically examine the opportunities available to small-scale dairy farmers as well as the challenges they encounter in Thiruvananthapuram District. Understanding these issues is essential to identify gaps in the existing system and to suggest effective measures for improving productivity, income, and sustainability in the dairy sector. Hence, the present study aims to analyze the opportunities and challenges faced by small-scale dairy farmers in the study area.

### NEED AND SIGNIFICANCE OF THE STUDY

Dairy farming plays a crucial role in strengthening the rural economy and ensuring livelihood security for small-scale farmers. In districts like Thiruvananthapuram, where land resources are limited and agricultural income is often uncertain, dairy farming serves as an important supplementary occupation. The increasing demand for milk and dairy products has created significant opportunities for farmers to enhance their income and improve their socio-economic conditions. However, the full potential of this sector has not been realized due to various challenges faced by small-scale dairy farmers. The need for this study arises from the fact that small-scale dairy farmers continue to experience multiple constraints such as high input costs, lack of access to modern technology, inadequate veterinary services, and financial difficulties. In addition, marketing problems, price fluctuations, and poor infrastructure further limit their growth and sustainability. Despite the presence of government schemes and cooperative support systems, many farmers are either unaware of these facilities or unable to fully utilize them.

This study is significant as it attempts to provide a comprehensive understanding of both the opportunities and challenges faced by small-scale dairy farmers in Thiruvananthapuram District. By identifying the key issues affecting dairy farming, the study will help in highlighting the gaps in the existing support systems and policies. The findings of the study will be useful for policymakers, government agencies, cooperative institutions, and researchers in formulating effective strategies to improve the productivity and profitability of dairy farming. Furthermore, the study will contribute to the academic literature by providing region-specific insights into the dairy sector. It will also serve as a valuable reference for future research in the field of agriculture and rural

development. Ultimately, the study aims to support the development of sustainable dairy farming practices and enhance the livelihood of small-scale farmers in the study area.

## DAIRY FARMING

Dairy farming refers to the rearing and management of milch animals such as cows, buffaloes, and goats for the production of milk and other dairy products. It is an important branch of agriculture that focuses on activities like feeding, breeding, healthcare, and proper maintenance of animals to ensure continuous and efficient milk production. Scientific management practices such as balanced nutrition, disease control, and improved breeding techniques play a crucial role in increasing productivity in dairy farming. In simple terms, dairy farming involves the production, processing, and marketing of milk and milk-based products such as curd, butter, cheese, and ghee. It provides a regular and stable source of income and employment to farmers, especially in rural areas where alternative income opportunities may be limited. The dairy sector also supports various allied activities such as milk collection, transportation, processing, and distribution, thereby contributing to overall rural development.

Dairy farming can be practiced on a small scale, where farmers maintain a few animals for household consumption and additional income, or on a large commercial scale, where milk is produced in bulk using modern technology and management practices. Small-scale dairy farming is particularly important in India, as it supports the livelihood of marginal and landless farmers. Moreover, dairy farming plays a vital role in improving the economic condition of farmers, ensuring nutritional security, and supporting the overall agricultural economy. Milk is considered a complete food as it is rich in essential nutrients like proteins, calcium, and vitamins. The sector also contributes significantly to the Gross Domestic Product (GDP) and helps in reducing poverty and unemployment in rural areas. In addition, dairy farming promotes sustainable agriculture by utilizing agricultural by-products as animal feed and producing organic manure that improves soil fertility. It also encourages women's participation and empowerment, as many dairy activities are managed by women in rural households. With proper government support, technological advancement, and market access, dairy farming has the potential to become a highly profitable and sustainable enterprise.

## OBJECTIVES OF THE STUDY

1. **To know the Socio-Economic Profile of Dairy Farmers in Thiruvananthapuram District.**
2. **To identify the various opportunities available to small-scale dairy farmers.**
3. **To examine the major challenges faced by small-scale dairy farmers in the study area.**
4. **To analyze the impact of dairy farming on the income and livelihood of small-scale farmers.**
5. **To examine whether there is a significant difference in the average income levels of dairy farmers based on their level of awareness of government schemes.**

## RESEARCH DESIGN

The study on the "Opportunities and Challenges of Small-Scale Dairy Farmers in Thiruvananthapuram District" is descriptive and analytical in nature. The descriptive aspect of the study helps in systematically describing the existing conditions, characteristics, and practices of small-scale dairy farmers in the study area. The analytical aspect focuses on examining and evaluating the relationship between various factors such as opportunities, challenges, income levels, and productivity. The study aims to identify the key opportunities available to dairy farmers, analyze the major constraints affecting their performance, and assess the overall impact of dairy farming on their livelihood. It also attempts to suggest suitable measures for improving the efficiency and sustainability of dairy farming in the district.

## POPULATION AND SAMPLE

**Population:** The population of the study consists of all small-scale dairy farmers operating in different regions of Thiruvananthapuram District. These farmers are engaged in dairy farming either as a primary or supplementary source of income.

**Sample Size:** A total of **90 dairy farmers** have been selected as the sample for the study. This sample size is considered adequate to represent the population and to draw meaningful conclusions within the given time and resource constraints.

**Sampling Technique:** Convenience sampling method is adopted for selecting the respondents. Under this method, farmers who are easily accessible and willing to provide information are selected. This technique helps in quick data collection; however, efforts are made to include respondents from different areas to ensure better representation.

## DATA COLLECTION METHOD

**Primary Data:** Primary data is collected directly from the respondents using a structured questionnaire.

The questionnaire includes close-ended questions designed to gather information on various aspects such as available opportunities, challenges faced, income levels, awareness of government schemes, and dairy farming practices. This method ensures first-hand and relevant data for the study.

**Secondary Data:** Secondary data is collected from various sources such as books, academic journals, research articles, government publications, reports of dairy development departments, and reliable online sources. This data helps in understanding the background, trends, and previous research related to dairy farming and supports the analysis of primary data.

## TOOLS AND TECHNIQUES OF ANALYSIS

The collected data is analyzed using appropriate statistical tools to interpret the findings in a meaningful way:

**Percentage Analysis:** This method is used to convert raw data into percentages for easy understanding and comparison. It helps in analyzing the distribution of responses related to different variables such as income, challenges, and awareness levels.

**Ranking Method:** Ranking technique is used to identify and prioritize the major challenges and opportunities faced by dairy farmers. Respondents rank various factors based on their importance, which helps in determining the most critical issues.

**Average (Mean) Analysis:** Mean analysis is used to calculate the average values of variables such as income, milk production, and expenditure. It provides a clear picture of the central tendency of the data.

**Chi-Square Test:** This statistical tool is used to examine the relationship between two variables, such as income level and awareness of government schemes. It helps in testing whether there is a significant association between variables.

**Index Method (Composite Index):** This method is used to combine multiple indicators such as income, production, and resource availability into a single index. It helps in measuring the overall performance and development level of dairy farmers in a simplified manner.

## LIMITATIONS OF THE STUDY

1. The study is confined to **Thiruvananthapuram District** and includes only **90 respondents**, which may limit the generalization of the findings to other regions with different socio-economic and agricultural conditions.
2. The study is primarily based on **data collected through questionnaires**, and the accuracy of the results depends on the honesty, understanding, and willingness of the respondents. There is a possibility of bias, incomplete responses, or errors in reporting, which may affect the reliability of the findings.

## DATA ANALYSIS AND INTERPRETATION

**Table 1: Socio-Economic Characteristics of Respondents**

Variables	Category	No. of Respondents	Percentage (%)
Age	Below 30	15	16.7%
	30–40	25	27.8%
	40–50	30	33.3%
	Above 50	20	22.2%
Gender	Male	60	66.7%
	Female	30	33.3%
Marital Status	Married	75	83.3%
	Unmarried	15	16.7%
Education	Illiterate	10	11.1%
	Primary	20	22.2%
	Secondary	30	33.3%
	Higher Secondary	20	22.2%
	Graduate	10	11.1%

<b>Monthly Income</b>	Below ₹3000	20	22.2%
	₹3000–₹5000	30	33.3%
	₹5000–₹7000	25	27.8%
	Above ₹7000	15	16.7%
<b>Experience</b>	Below 5 years	20	22.2%
	5–10 years	35	38.9%
	Above 10 years	35	38.9%
<b>Source of Finance</b>	Own Funds	25	27.8%
	Bank Loan	20	22.2%
	Cooperative Credit	15	16.7%
	Money Lenders	30	33.3%
<b>Total</b>		<b>90</b>	<b>100%</b>

### Primary Data

The above table presents a comprehensive view of the socio-economic characteristics of dairy farmers in the study area. It is evident that the majority of respondents (**33.3%**) belong to the **40–50 age group**, indicating that dairy farming is largely dominated by middle-aged individuals who possess adequate experience and physical ability to manage livestock activities effectively. In terms of gender distribution, **66.7% are male**, showing male dominance in ownership and decision-making. However, the presence of **33.3% female respondents** highlights the supportive role of women in dairy-related activities, contributing significantly to household income and livelihood. The marital status reveals that a vast majority (**83.3%**) are married, suggesting that dairy farming is primarily a **family-based occupation**, where responsibilities are shared among family members. Regarding educational qualification, most respondents (**33.3%**) have **secondary education**, while only a small proportion are graduates. This indicates a **moderate level of education**, which may limit the adoption of advanced technologies and awareness of modern dairy practices. The income distribution shows that **33.3% earn between ₹3000–₹5000**, indicating that dairy farming provides only **moderate income** and is mainly practiced as a supplementary occupation. A smaller percentage earns above ₹7000, reflecting limited profitability. Experience-wise, a significant proportion (**77.8%**) of farmers have more than 5 years of experience, showing that dairy farming is **traditional and experience-driven**. However, this may also result in resistance to adopting new technologies. In terms of financial sources, **33.3% depend on money lenders**, which indicates limited access to institutional credit and financial insecurity. Dependence on informal sources increases the burden due to high interest rates.

**Table 2: Opportunities in Dairy Farming**

<b>Opportunities</b>	<b>Respondents</b>	<b>Percentage (%)</b>
High Demand for Milk	28	31.1%
Regular Income	20	22.2%
Government Support	15	16.7%
Employment Opportunity	15	16.7%
Cooperative Support	12	13.3%
<b>Total</b>	<b>90</b>	<b>100%</b>

### Computed Data

The analysis reveals that **high demand for milk (31.1%) is the most significant opportunity**, indicating a strong and expanding market for dairy products in both rural and urban areas. This reflects the **growing consumption patterns and nutritional awareness among consumers**. The second major factor is **regular income (22.2%)**, which highlights that dairy farming provides **continuous cash flow**, unlike seasonal agriculture. This makes it a reliable livelihood option, especially for small-scale farmers. Government support and employment opportunities (16.7% each) show that **institutional and economic factors also contribute to growth**, but their relatively lower percentage suggests that **farmers are not fully benefiting from these opportunities**. The least percentage is for cooperative support (13.3%), indicating that **cooperative systems are underutilized or not equally accessible**.

**Table 3: To Examine Challenges Faced by Dairy Farmers**

Problems	Score	Rank
High Cost of Feed	310	I
Veterinary Problems	285	II
Financial Constraints	260	III
Price Fluctuation	240	IV
Marketing Issues	220	V

**Computed Data**

The ranking analysis clearly indicates that the **high cost of cattle feed (Rank I)** is the most critical challenge faced by dairy farmers. Feed cost constitutes a major portion of total expenditure, and its continuous increase directly reduces farmers' profit margins. The second major issue is **veterinary problems (Rank II)**, which reflects inadequate access to quality animal healthcare services. Poor disease management and lack of timely treatment can significantly reduce milk productivity. **Financial constraints (Rank III)** indicate that farmers struggle with **limited access to institutional credit**, forcing them to depend on informal sources with high interest rates. **Price fluctuation (Rank IV)** creates uncertainty in income, making dairy farming less predictable and financially risky. Finally, **marketing issues (Rank V)** highlight the lack of organized marketing channels and dependence on intermediaries.

**Table 4: Analyze Impact on Income and Livelihood**

Particulars	Value
Total Income	₹4,50,000
Number of Respondents	90
<b>Mean Income</b>	<b>₹5,000</b>

**Computed Data**

The mean income of ₹5,000 indicates that dairy farming provides moderate earnings, which are not sufficient as a primary income source for most farmers. This suggests that dairy farming is largely practiced as a supplementary occupation alongside other activities such as agriculture or wage labor. The relatively low income level may be attributed to factors such as small herd size, high input costs, low productivity, and inefficient management practices. However, the steady nature of income makes dairy farming a financially stable activity, even if the returns are not very high. With proper support such as improved breeds, better feeding practices, and access to markets, there is significant potential to enhance income levels. Thus, dairy farming plays an important role in livelihood security rather than income maximization.

**Table 5: Examine Relationship between Income and Awareness**

Income Level	Aware	Not Aware	Total
Low Income	15	25	40
Medium Income	20	10	30
High Income	8	12	20
<b>Total</b>	<b>43</b>	<b>47</b>	<b>90</b>

**Computed Data**

**RESULT**

- $\chi^2 = 6.46$
- p-value = 0.039 (< 0.05)

The Chi-square result indicates a **statistically significant relationship between income level and awareness of government schemes**. It is evident that **medium-income farmers have higher awareness**, whereas a large proportion of **low-income farmers lack awareness**. This clearly shows that awareness is not evenly distributed among farmers. The reason may be that **better-income farmers have greater exposure to information, training programmes, extension services, and institutional networks**, while low-income farmers

remain isolated. This lack of awareness among low-income farmers creates a **development gap**, as they are unable to access subsidies, financial assistance, and modern practices.

**Table 6: Composite Index**

Factors	Score
Income Level	60
Production Level	55
Resource Availability	50
<b>Overall Index</b>	<b>55</b>

### Computed Data

The composite index value of **55 indicates a moderate level of development** among dairy farmers. This suggests that while farmers are able to maintain basic operations, they are not achieving optimal productivity. The lower score in resource availability highlights **limitations in access to inputs such as feed, finance, and technology**. The moderate production and income levels indicate that **efficiency improvements are required**.

### FINDINGS

- ❖ Majority (33.3%) of dairy farmers belong to the 40–50 age group, indicating middle-aged dominance in the sector.
- ❖ Male respondents (66.7%) outnumber females, though women play a supportive role in dairy activities.
- ❖ Most respondents (83.3%) are married, showing that dairy farming is largely a family-based occupation.
- ❖ A significant portion (33.3%) have secondary education, indicating a moderate educational background among farmers.
- ❖ Majority of farmers (33.3%) earn between ₹3000–₹5000, reflecting moderate income levels.
- ❖ About 77.8% of farmers have more than 5 years of experience, showing that dairy farming is experience-driven.
- ❖ A higher proportion (33.3%) depend on money lenders, indicating limited access to institutional credit.
- ❖ High demand for milk (31.1%) is identified as the most important opportunity in dairy farming.
- ❖ Dairy farming provides regular income (22.2%), making it a stable livelihood option.
- ❖ Government support and employment opportunities (16.7% each) exist but are not fully utilized by farmers.
- ❖ Cooperative support (13.3%) is the least utilized opportunity among respondents.
- ❖ High cost of feed is ranked as the most serious problem faced by dairy farmers.
- ❖ Veterinary problems are the second major challenge, indicating lack of proper animal healthcare facilities.
- ❖ Financial constraints rank third, showing difficulty in accessing affordable credit.
- ❖ Price fluctuation and marketing issues also affect farmers' income stability.
- ❖ The average income of ₹5000 indicates that dairy farming is mainly a supplementary source of income.
- ❖ The Chi-square test shows a significant relationship between income and awareness of government schemes.
- ❖ Low-income farmers have less awareness compared to medium-income farmers.
- ❖ The composite index value (55) indicates a moderate level of development in dairy farming.

### SUGGESTIONS

- ❖ Government should take effective steps to reduce the cost of cattle feed by providing subsidies and promoting local feed production.
- ❖ Veterinary services must be improved and made easily accessible in rural areas through mobile clinics and regular health camps.
- ❖ Financial institutions should provide easy and low-interest loans to dairy farmers to reduce dependence on money lenders.
- ❖ Awareness programmes should be conducted to educate farmers about government schemes, subsidies,

and modern dairy practices.

- ❖ Efforts should be made to encourage youth participation in dairy farming through training, incentives, and entrepreneurship support.
- ❖ Dairy cooperatives should be strengthened and expanded to ensure better marketing facilities and fair pricing for milk.
- ❖ Government should develop proper infrastructure, including roads, storage facilities, and milk chilling centers.
- ❖ Farmers should be encouraged to adopt modern technology and scientific farming methods to increase productivity.
- ❖ Price stabilization measures should be implemented to reduce fluctuations in milk prices and ensure stable income.
- ❖ Training programmes should be organized to improve farmers' skills in animal management, feeding practices, and business operations.

## CONCLUSION

The study on dairy farmers in Thiruvananthapuram district highlights that dairy farming plays a significant role in supporting the livelihood of rural households. It is evident that most farmers belong to the middle-aged group with moderate education and considerable experience in dairy activities. The study reveals that dairy farming provides a regular but moderate income, making it largely a supplementary occupation. High demand for milk offers strong opportunities for growth in the sector. However, farmers face several challenges such as high cost of feed, veterinary issues, and financial constraints. Lack of awareness about government schemes among low-income farmers further limits their development. The dependence on informal sources of finance increases financial risk. The study also shows that infrastructure and marketing facilities need improvement. Despite these challenges, dairy farming has significant potential for expansion with proper support. Adoption of modern technology and improved practices can enhance productivity and income. Strengthening institutional support and awareness programmes is essential for inclusive growth. Overall, dairy farming can become a sustainable and profitable sector if the identified issues are effectively addressed.

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