SOCIO-ECONOMIC CONDITIONS OF DAIRY FARMERS IN THIRUVANANTHAPURAM DISTRICT

A Dissertation submitted to the University of Kerala in Partial Fulfilment of the Requirements for the Masters of Arts Degree Examination in Sociology

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DECLARATION

I, Adhith Joseph, hereby declare that the dissertation titled "SOCIO ECONOMIC CONDITIONS OF DAIRY FARMERS IN THIRUVANANTHAPURAM DISTRICT" is based on the original work carried out by me and submitted to the University of Kerala during the year 2022-2024 towards partial fulfilment of the requirements for the Master of Sociology Degree Examination. It has not been submitted for the award of any degree, diploma, fellowship or other similar title of recognition before.

Place: Thiruvananthapuram   Adhith Joseph

Date: 23/08/2024   Student Researcher

CERTIFICATE OF APPROVAL

This is to certify that the dissertation entitled "SOCIO ECONOMIC CONDITIONS OF DAIRY FARMERS IN THIRUVANANTHAPURAM DISTRICT" is a record of genuine work done by ADHITH JOSEPH, a fourth semester, Master of Sociology student of this college under my supervision and guidance and that is hereby approved for submission.

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MA Sociology

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Abstract

Dairy farming is a vital sector of agriculture, providing livelihoods for millions of farmers worldwide. However, dairy farmers face numerous socio-economic challenges that impact their well-being, productivity, and sustainability. This study examines the socio-economic conditions of dairy farmers, exploring factors such as income, education, occupation, access to resources, and social support networks. The research reveals significant disparities in socio-economic conditions among dairy farmers, with implications for their ability to adapt to changing market conditions, adopt new technologies, and maintain their livelihoods. The study highlights the need for targeted interventions to address these disparities, improve dairy farmers' socio-economic well-being, and ensure the long-term sustainability of the dairy industry.

CHAPTER 1
INTRODUCTION

CHAPTER - 1

INTRODUCTION

1.1 INTRODUCTION

Dairy farming, a crucial sector in the agricultural industry, plays a significant role in the global economy. It not only provides essential dairy products like milk, cheese, and yogurt but also supports the livelihoods of millions of farmers worldwide. In many developing countries, dairy farming is a primary source of income and employment, contributing to both food security and economic stability.

The socio-economic conditions of dairy farmers are shaped by a complex interplay of factors including market access, technological advancements, and government policies. Understanding these conditions is essential for developing effective strategies to support and enhance the welfare of dairy farmers. This introduction explores the various dimensions of the socio-economic conditions of dairy farmers, focusing on their economic status, access to resources, and the impact of external factors on their livelihoods.

The economic conditions of dairy farmers are influenced by various factors including the cost of production, milk prices, and market demand. Dairy farming requires significant investment in infrastructure, feed, veterinary care, and labor. Small scale dairy farmers often face challenges related to high production costs and low profit margins. The volatility of milk prices, driven by fluctuating market demands and international trade policies, further exacerbates their economic instability.

In many regions, dairy farmers struggle with low incomes and financial insecurity. This economic vulnerability is often compounded by limited access to credit and financial services. Small scale farmers may find it difficult to invest in modern technologies or expand their operations, which can hinder their ability to compete in the market.

Access to resources is another critical factor influencing the socio-economic conditions of dairy farmers. Resources include land, water, feed, and veterinary services, all of which are essential for successful dairy farming. In many rural areas, farmers face challenges related to inadequate access to these resources.

Land availability and quality can significantly impact dairy farming operations. In regions where land is scarce or of poor quality, farmers may struggle to maintain their herds and produce sufficient feed. Water scarcity also affects dairy farming, as reliable water sources are necessary for both livestock and crop production.

Additionally, the availability of veterinary services is crucial for maintaining herd health and productivity. In many developing regions, access to qualified veterinary care is limited, which can lead to higher rates of diseases and lower milk yields.

Technological advancements play a pivotal role in improving the socio-economic conditions of dairy farmers. Innovations in breeding, feed management, and milking equipment can enhance productivity and efficiency. However, the adoption of new technologies is often slow due to high costs and a lack of technical knowledge.

Government programs and extension services can help bridge this gap by providing training and support for the adoption of modern practices. Programs aimed at improving farm infrastructure, such as the installation of milking machines or the development of better feed sources, can lead to increased productivity and higher incomes for dairy farmers.

Nevertheless, the benefits of technological advancements are not evenly distributed. Larger farms are more likely to adopt new technologies, while small-scale farmers may face barriers due to financial constraints and limited access to information.

Government policies play a significant role in shaping the socio-economic conditions of dairy farmers. Policies related to subsidies, market regulations, and support programs can have a profound impact on the dairy sector.

Subsidies for feed, veterinary services, and infrastructure development can help alleviate some of the financial burdens faced by dairy farmers. Market regulations, such as price floors or export controls, can stabilize milk prices and ensure fair returns for farmers.

In addition, government support programs aimed at improving the skills of dairy farmers, promoting cooperative models, and facilitating access to markets can enhance the overall socio-economic conditions of the sector. However, the effectiveness of these policies often depends on their design and implementation, as well as the level of support provided to small-scale and marginalized farmers.

The socio-economic conditions of dairy farmers are influenced by a range of factors including economic stability, access to resources, technological advancements, and government policies. Understanding these factors is essential for developing targeted interventions that can improve the livelihoods of dairy farmers and ensure the sustainability of the dairy sector.

Addressing the economic challenges faced by dairy farmers, improving access to essential resources, fostering the adoption of new technologies, and implementing effective government policies are crucial steps towards enhancing the socio-economic conditions of dairy farmers. By focusing on these areas, stakeholders can work together to support dairy farmers and strengthen the dairy industry as a whole.

This introduction provides a foundation for a deeper exploration of the socio-economic conditions of dairy farmers, setting the stage for a comprehensive analysis of the challenges and opportunities within the sector.

1.2 STATEMENT OF THE PROBLEM

The socio-economic conditions of dairy farmers are a pressing concern globally, with many facing significant challenges that threaten their livelihoods and sustainability. Dairy farmers play a crucial role in food security and rural development, yet they struggle to make a decent living due to limited economic viability. Low milk prices, high production costs, and limited access to credit and financial services hinder their ability to invest in their farms and improve their livelihoods.

Dairy farmers are heavily reliant on a single income source, making them susceptible to market volatility, price fluctuations, and trade policies. This vulnerability is exacerbated by inadequate access to resources and services, including extension services, technology, and infrastructure. As a result, dairy farmers are often unable to improve productivity, quality, and sustainability, further threatening their livelihoods.

Social and cultural constraints also restrict dairy farmers' ability to adapt to changing conditions and adopt innovative practices. Traditional practices, limited education, and social norms can limit their ability to adopt new technologies, management practices, and marketing strategies. This can perpetuate cycles of poverty and limit opportunities for economic growth and development.

The socio-economic challenges faced by dairy farmers have far-reaching consequences, including environmental degradation, health and safety concerns, and limited social protection. Intensive dairy farming practices can lead to environmental concerns, such as water pollution, soil degradation, and greenhouse gas emissions. Additionally, dairy farmers often lack access to social security, health insurance, and pension schemes, exacerbating their vulnerability. Addressing these socio-economic conditions is crucial to ensure the livelihoods of dairy farmers and the continued production of high-quality milk.

1.3 SIGNIFICANCE OF THE PROBLEM

The socio-economic conditions of dairy farmers have significant implications for their livelihoods, food security, and rural development. The challenges faced by dairy farmers, such as limited economic viability, vulnerability to market fluctuations, and inadequate access to resources and services, threaten their ability to produce high-quality milk and sustain their farms.

The decline of dairy farming can have far-reaching consequences for food security, employment, and economic growth. Dairy products are a critical component of a balanced diet, and reduced milk production can lead to nutritional deficiencies, particularly among vulnerable populations.

Moreover, dairy farmers play a vital role in maintaining rural ecosystems and biodiversity. Their farms often serve as habitats for various species, and their practices can impact soil health, water quality, and climate change mitigation.

The socio-economic challenges faced by dairy farmers also have social implications, affecting the well-being and resilience of rural communities. Dairy farmers are often integral to rural social structures, and their struggles can have ripple effects on community cohesion, social capital, and local development.

Furthermore, the socio-economic conditions of dairy farmers have gender implications, as women are often disproportionately affected by limited access to resources, credit, and decision-making power. Addressing these challenges is essential to promote gender equality and empower women in dairy farming.

CHAPTER 2

REVIEW OF LITERATURE

CHAPTER 2

REVIEW OF LITERATURE

Dairy farming is a vital component of the global food system, providing milk and dairy products to millions of people worldwide. However, dairy farmers face numerous socio-economic challenges that affect their livelihoods, well-being, and ability to sustainably produce dairy products. Despite their importance to food security and rural development, dairy farmer's socio-economic conditions have received limited attention in research and policy debates.

This review aims to synthesize existing literature on the socio-economic conditions of dairy farmers, including their education, health, social isolation, income, debt, and access to markets. By examining the complex interplay of factors influencing dairy farmer's socio-economic well-being, this review seeks to identify key challenges, opportunities, and policy implications for improving their livelihoods and promoting sustainable dairy farming practices.

The socio-economic conditions of dairy farmers are critical in understanding their livelihoods, challenges, and opportunities for development. This review synthesizes the existing literature on this topic, highlighting key themes and findings that offer insight into the diverse aspects of dairy farming.

Economic stability is a cornerstone of the socio-economic conditions for dairy farmers. Research indicates that dairy farming is often associated with variable income streams due to fluctuating milk prices, which are influenced by market dynamics, government policies, and global trends (Benson et al.,2021).

A study by Kumar et al. (2020) demonstrates that the profitability of dairy farming is significantly affected by the costs of inputs such as feed, veterinary care, and labor, which can be substantial. Smallholder dairy farmers, in particular, face challenges due to their limited access to high-quality feed and veterinary services, which impacts their productivity and income (Singh & Kaur,2019).

Social conditions are integral to understanding the quality of life for dairy farmers. Literature reveals that dairy farming often supports rural livelihoods by providing employment and fostering community cohesion (Ghosh et al.,2018). However, there are notable disparities in

access to resources and services. For instances, women, who play a significant role in dairy farming, frequently face social and economic discrimination that limits their access to training, credit, and decision-making opportunities (Jain & Bhatia,2022). Furthermore, social networks and cooperatives can significantly influence farmer's ability to access markets and share knowledge (Rao et al.,2019).

Technological advancements and educational opportunities are essential for improving the socio-economic conditions of dairy farmers. Research by Dey et al. (2021) highlights that the adoption of modern technologies, such as artificial insemination and advanced feed management systems, can enhance productivity and profitability. However, there is a gap in the adoption of these technologies among smallholder farmers due to lack of awareness, financial constraints, and limited access to training (Patel & Sinha, 2020). Educational initiatives that focus on practical dairy management skills are critical for bridging this gap and fostering sustainable dairy farming practices (Bhattacharya et al., 2017).

Policy frameworks and institutional support play a crucial role in shaping the socio-economic conditions of dairy farmers. According to Sharma and Kumar (2022), effective government policies and support programs, such as subsidies for feed and veterinary services, can significantly enhance the viability of dairy farming. However, the implementation of these policies is often inconsistent, and there is a need for better-targeted interventions that address the specific needs of different farmer groups, especially smallholders (Mehta & Singh, 2021). Additionally, the role of dairy cooperatives in providing technical support and improving market access is well- documented, though the effectiveness of these cooperatives can vary based on management practices and member engagement (Reddy et al.,2023).

Environmental and health conditions also impact the socio-economic aspects of dairy farming. Literature indicates that poor environmental conditions, such as inadequate housing and waste management, can affect animal health and productivity (Panda et al., 2020). Sustainable farming practices and health interventions are therefore essential for improving both animal welfare and farmer livelihoods.

The socio-economic conditions of dairy farmers are shaped by a complex interplay of economic, social, technological, and policy factors. While dairy farming offers vital economic opportunities and supports rural livelihoods, significant challenges remain. Addressing these challenges requires a multifaceted approach, including improvements in technology adoption, policy support, and educational initiatives, as well as efforts to enhance social equity and

environmental sustainability. Future research should continue to explore these dimensions and seek innovative solutions to support the well-being of dairy farmers.

CHAPTER 3

RESEARCH METHODOLOGY

CHAPTER - 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter explains various methodologies that were used in gathering data and analysis which are relevant to the research. The study's location, research design, sample size, sampling strategy, data kinds, data collection methods and data management.

3.2 TITLE OF THE STUDY

Socio economic conditions of dairy farmers in Thiruvananthapuram district.

3.3 APPROACH OF THE STUDY

The Quantitative approach is used in this study. The charts, numbers, and other quantitative methods is used in this study to support the explanations.

3.4 GENERAL OBJECTIVE

- To find the socio economic conditions of dairy farmers in Thiruvananthapuram District.

3.5 SPECIFIC OBJECTIVES

- To identify the socio economic challenges faced by dairy farmers.
- To identify the relationship between dairy farmer's socio economic status, productivity and efficiency.

3.6 RESEARCH DESIGN

Research design is a blueprint for the planned research effort and may be thought of as the framework for research. It is the 'bond' that binds all of the components of a research project all together. Research designs are plans that specify how data should be collected and analyzed. The descriptive research design was utilized in the study. Descriptive research is a fact finding investigation. By the use of sample survey questionnaires, the participants answered the primary data. Survey for research was conducted in the district of Thiruvananthapuram.

Sampling methodology adopted was simple random sampling and sample size ranged to 100 samples. The data and the results of the study were analysed using percentage analysis.

3.7 SAMPLING

Convenience sampling method was used in this study. Convenience sampling is a non-probability sampling technique that involves the sample being drawn from part of the population that is closer to hand. The only criterion for this type of sampling is the willingness of the participants to respond to the questions. To assess the socio-economic conditions of dairy farmers, 60 respondents were selected on convenience basis from Thiruvananthapuram district.

3.8 TOOLS OF DATA COLLECTION

The data was analysed using various mathematical and statistical tools. Data has been collected with the help of structured questionnaire and were sent to respondents via Google Forms. In this study, for analysis purpose, appropriate tools like percentage method, weighted average ranking method, tables and charts were used. MS Excel was used to tabulate data and to do some simple calculations.

3.8.1 SOURCES OF DATA AND DATA COLLECTION

There are two sources of data – Primary and secondary. Data for the conduction of this study was collected using both primary and secondary sources of data.

3.8.2 PRIMARY SOURCES OF DATA

In this study, questionnaire was used to collect quantitative data on dairy farmer's demographics, family size, income, farm size, expenses, profit, milk production, feeding practices and so on. Primary data was collected from a sample of 60 respondents by sending questionnaire via Google Forms. Respondents asked their queries regarding questions through text messages and phone calls.

3.8.3 SECONDARY SOURCES OF DATA

Secondary data was collected from various sources such as journals, newspapers, websites, books, etc.

3.9 AREA OF THE STUDY

Thiruvananthapuram has been chosen as the area of study for conducting the research due to the growing population of dairy farmers in the district with potential to contribute to the state's employment opportunities, asset creation, financial security and insurance against crop failure.

3.10 RESEARCH METHODOLOGY IN NUTSHELL

Population	Dairy farmers in Thiruvananthapuram district
Sampling method	Convenience sampling method
Sample size	60
Data collection tool	Questionnaire via Google Forms
Consolidation of data	Tables, charts
Analysis of data	Simple percentage analysis Simple ranking Weighted average score

3.11 CONCEPTUAL FRAMEWORK

Dairy farming is a vital agricultural sector, providing livelihoods for millions of farmers worldwide. However, dairy farmers face numerous socio-economic challenges, including fluctuating market prices, climate change, and limited access to resources. Understanding the complex interplay of factors influencing dairy farmers' socio-economic conditions is crucial for developing effective policies and interventions to support their well-being and sustainability. This theoretical framework aims to provide a comprehensive understanding of the socio-economic conditions of dairy farmers, considering multiple levels of influence and intersectionality.

SOCIO ECONOMIC CONDITIONS

Socio-economic condition refers to the combination of social and economic factors that affect an individual's or group's quality of life, well-being, and access to resources. These conditions encompass various aspects, including:

1. Economic factors- Income and poverty levels

   - Employment status and job security

   - Access to financial resources and services

   - Economic inequality and distribution of wealth

2. Social factors:

   - Education and literacy levels

   - Occupation and social class

   - Family structure and dynamics

   - Social networks and community support

   - Cultural background and identity

3. Environmental factors:

   - Access to natural resources and services

   - Environmental quality and pollution

   - Climate change and its impacts

4. Political factors:

   - Government policies and programs

   - Political representation and participation

   - Institutional support and social services

These factors interact and influence one another, resulting in unique socio-economic conditions that affect individuals and groups differently. Understanding socio-economic conditions is essential for developing effective policies and interventions to address social and economic inequalities and promote overall well-being.

3.12 VARIABLES USED IN THE STUDY

Independent Variables

Independent variables are those variables that are stable and unaffected by the other variables used in the study. The independent variables in this study include the following demographic, economic, policy and environmental factors such as:

1. Age
2. Gender
3. Religion
4. Milk price
5. Financial services
6. Climate change
7. Government policy
8. Dependent Variables

Dependent variables are those variables that depend on other factors that are measured. The dependent variables in the study are the socio-economic conditions of dairy farmers such as:

1. Income
2. Livelihood
3. Well-being
4. Quality of life

3.13 PILOT STUDY

A pilot study was conducted on January 2024, at Uliyazhathura Village, Thiruvananthapuram district, Kerala in which demographic, socio-economic conditions, were recorded. During the pilot study, the researcher understood some of the errors that could happen during the survey and the intensity with which it can be rectified was understood and implemented in the data collection tools.

3.14 Pre-test

A pre-test is a small scale trial run of the research instruments or procedures conducted with a sample of participants who have similar to the target population of the main study. Thus the pre-test of the questionnaire was conducted among 20 dairy farmers for checking the reliability and validity. Pre-test helped modify the questionnaire.

3.15 Data Analysis and Statistical Methods

The data was entered into Microsoft Excel on a Windows Operating System. Data were analysed using various mathematical and statistical tools. Data has been collected with the help of structured questionnaire and were sent to the respondents via Google Forms. In this study for analysis purpose, appropriate tools like percentage analysis, tables and charts etc. were used. MS Excel was used to tabulate data and do some simple calculations.

3.16 Limitations of the study

The limitations of the study are as follows:

- The study is geographically limited to the district of Thiruvananthapuram.
- The study mainly relied on self-administered online surveys, which could limit the depth and quality of the data collected, as well as the ability to probe further into participant's responses.

CHAPTER - 4

DATA ANALYSIS AND INTERPRETATION

DATA ANALYSIS AND INTERPRETATION

This section presents the analysis and interpretation of the data collected from the survey of dairy farmers in this area. The data was analyzed using a combination of descriptive statistics, inferential statistics, and thematic analysis to identify patterns, trends, and relationships between variables.

The data analysis and interpretation section is organized into several sub-sections, each focusing on a specific aspect of the data. The section begins with an overview of the demographic characteristics of the respondents, followed by an analysis of their socio-economic conditions, farming practices, and challenges faced. The section then delves into the analysis of the relationships between variables, including the impact of socio-economic factors on farming practices and the effects of climate change and animal diseases on dairy farming.

Through this analysis, the study aims to provide a comprehensive understanding of the experiences, challenges, and opportunities faced by dairy farmers in this area and to identify potential areas for intervention and support.
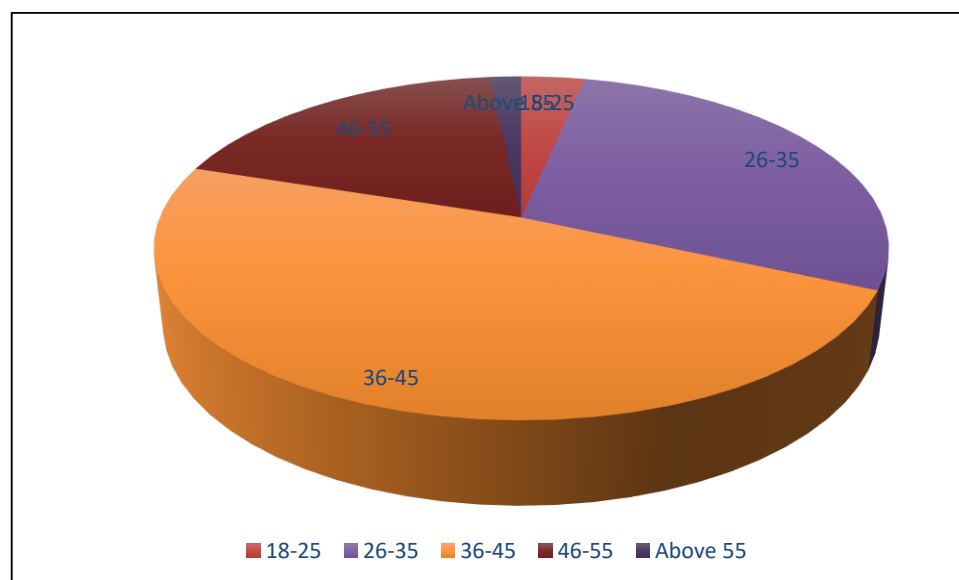
4.1 DEMOGRAPHIC PROFILE

Age Group of the Respondents

Table 4.1 Age Group of Respondents

Sl.no	Age group	Frequency	Percentage (%)
1	18-25	2	3.333333333
2	26-35	17	28.33333333
3	36-45	29	48.33333333
4	46-55	11	18.33333333
5	Above 55	1	1.666666667

### Figure 4.1 Age Group of Respondents

Interpretation

The age group 36-45 years emerged as the highest among the dairy farmers, accounting for (48.3%)of the total respondents. This suggests that the majority of dairy farmers in [region/study area] are middle-aged, with a significant proportion in their late 30s to early 40s. Overall, the high proportion of middle-aged dairy farmers in this region highlights the need for targeted support and resources to address their specific needs and challenges. The second highest age group is 26-35 with 28.3%. The third age group is 46-55 with 18.3%. The age group between 18-25 with 3.3%. The above 55 years of age is 1.6%. The majority of the dairy farmers were middle-aged.

Table 4.2 Gender Classification

| Sl.no	Gender	Frequency	Percentage (%)
1	Male	53	88.3
2	Female	7	11.7

Figure 4.2 Gender Classification
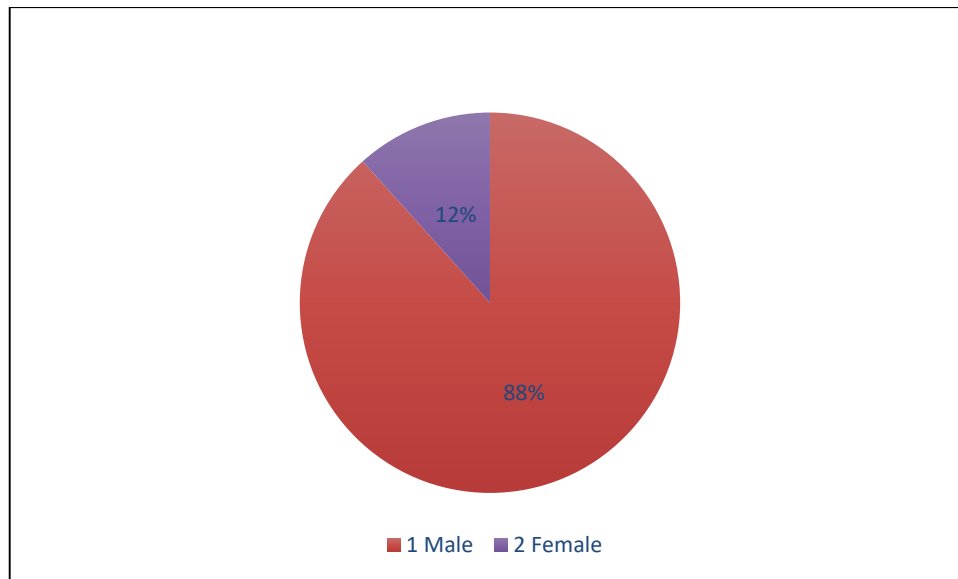
Interpretation

The majority of dairy farmers are male (88.3%) suggests a significant gender disparity in the dairy industry in this region. This is because of gender roles and stereotypes, limited opportunities for women, different farming techniques etc. Overall, the gender disparity in dairy farming highlights the need for initiatives that promote gender equality, support women's participation in the industry, and address the unique challenges faced by female farmers. The gender distribution of dairy farmers in this area reveals a significant disparity, with males comprising 88.3% of the total respondents, while females account for only 11.7%.

Table 4.3 Religion of the respondents

Sl.no	Religion	Frequency	Percentage
1	Hindu	46	76.7
2	Christian	14	23.3
3	Muslim	0	0

Figure 4.3 Religion of the respondents


■ 1 Hindu   ■ 2 Christian   ■ 3 Muslim
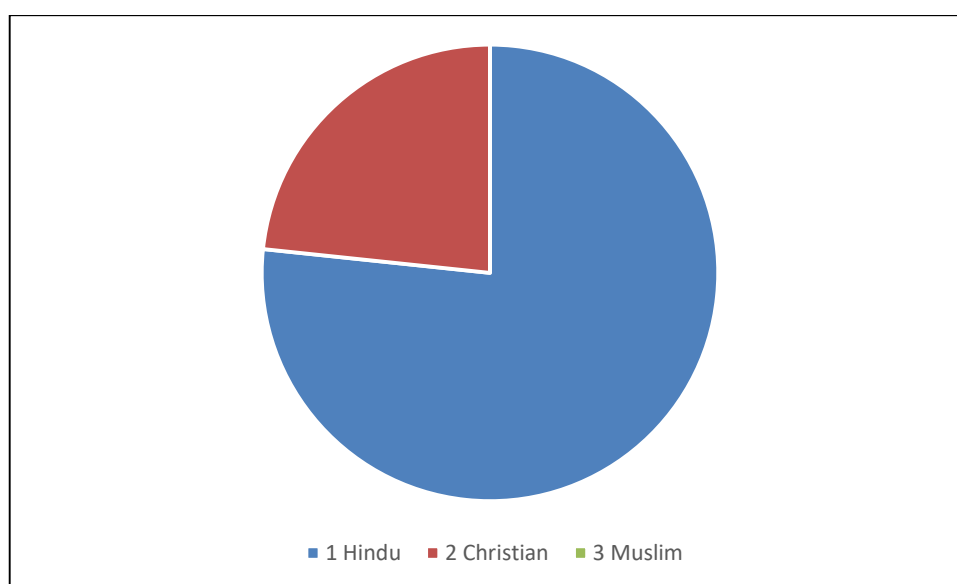
Interpretation

The majority of dairy farmers (76.7%) identify as Hindu suggests that the dairy industry in this region is largely influenced by Hindu culture and values. By understanding the religious demographics of dairy farmers, policymakers and organizations can tailor their support and initiatives to align with the cultural and values-based practices of the farming community. The second one with Christian religion with 23.3%. The majority of the dairy farmers belong to hindu religion.

Table 4.4 Ration card of the respondents

Sl.no	Ration card	Frequency	Percentage
1	APL	30	50
2	BPL	30	50

Figure 4.4 Ration card of the respondents

■ 1 APL ■ 2 BPL
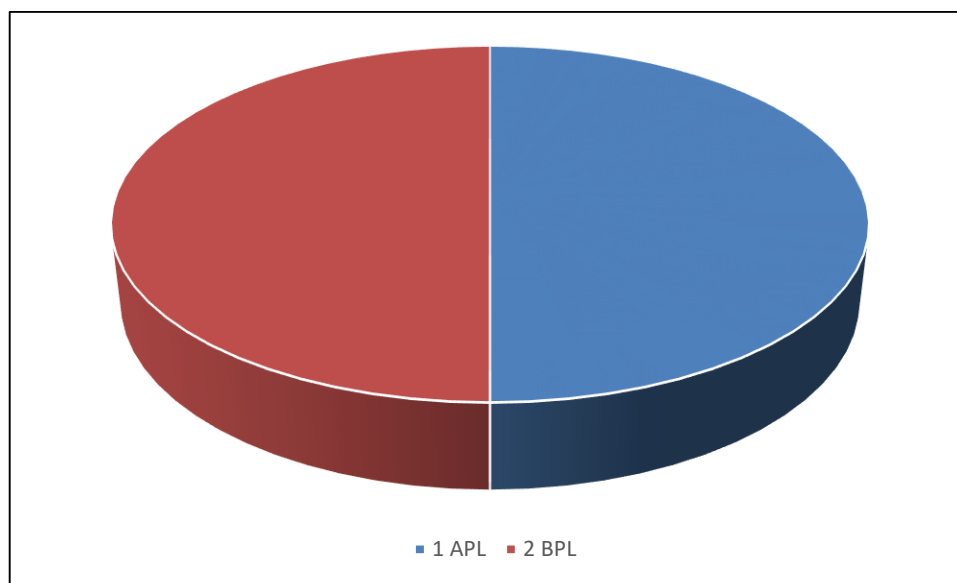
Interpretation

The dairy farmers are evenly split between APL (Above poverty line) and BPL (Below poverty line) ration card holders. The 50% of the farmers belong to APL and the other 50% is BPL. By recognizing the socio-economic diversity among dairy farmers, policymakers and organizations can design more effective support programs and initiatives that address the unique challenges faced by each group.

Table 4.5 Number of members

| Sl no	No of members	Frequency	Percentage
1	2	2	3.3
2	3	31	51.7
3	4	27	45
4	more than 4	0	0

Figure 4.5 Number of members
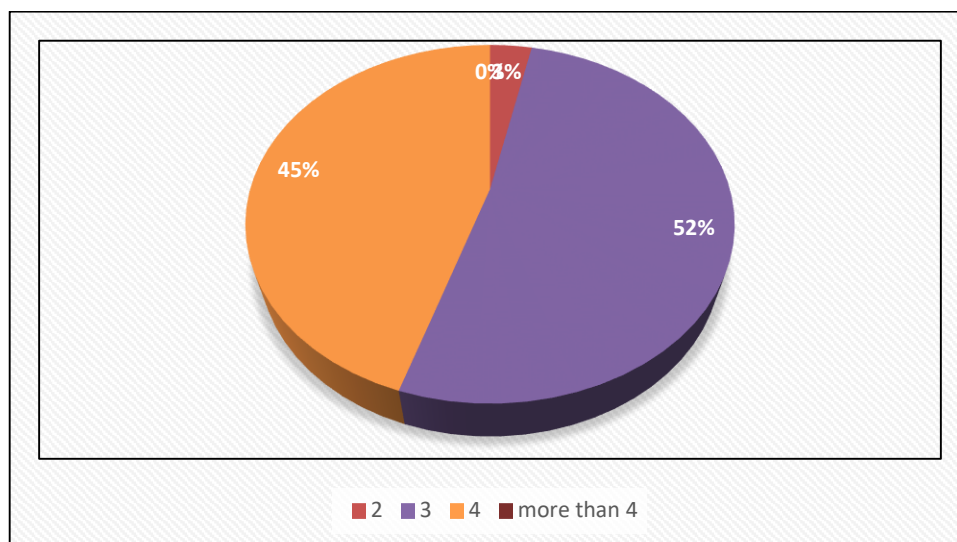
Interpretation

This figure illustrates that how many members are there in each family. 51.7% of the respondents stated that there are 3 members in the family. The 45% of the respondents stated that there were 4 members in the family. The 3.3% of the respondents stated that there were 2 members in the family.

Table 4.6 Farm size of the respondents

Sl.no	Farm size	Frequency	Percentage	Column1
1	5 cents	25	41.7	
2	10 cents	22	36.7	
3	15 cents	9	15	
4	20 cents	2	3.3	
5	>20	2	3.3	

Figure 4.6 Farm size of the respondents
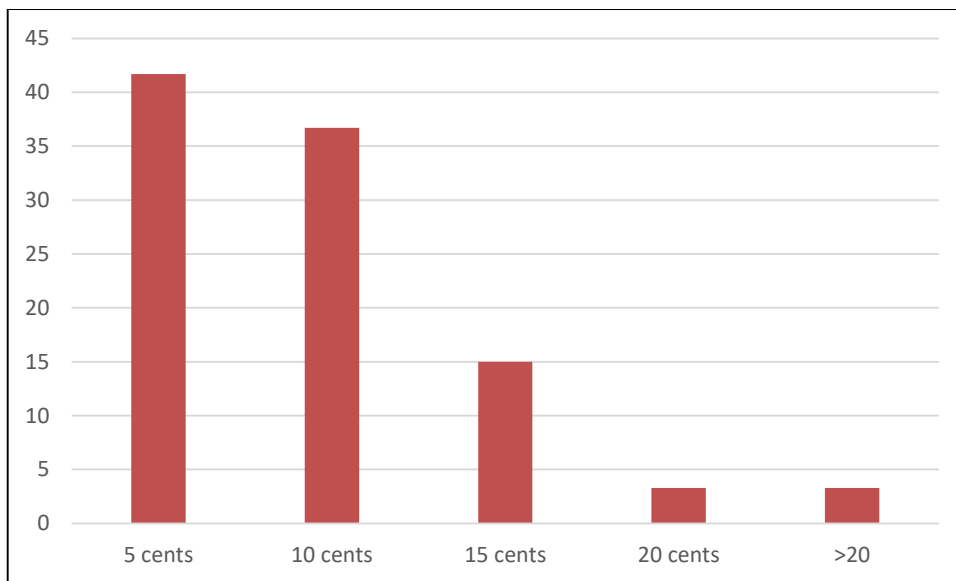
Interpretation

This figure illustrates the farm size of each dairy farmer in this field. The 41.7% of the respondents stated that they have 5 cents. The 36.7% of the respondents stated that they have 10 cents. The 15% of the respondents stated that they have 15 cents. The 3.3% of the respondents have 20 cents. The 3.3% of the respondents have more than 20 cents. From this figure we can identify that majority of the dairy farmers have 5 cents.

Table 4.7 Number of dairy animals

Sl.no	Number of dairy animals	Frequency	Percentage
1	2	26	43.3
2	10	28	46.7
3	15	4	6.7
4	20	0	0
5	>20	2	3.3

Figure 4.7 Number of dairy animals
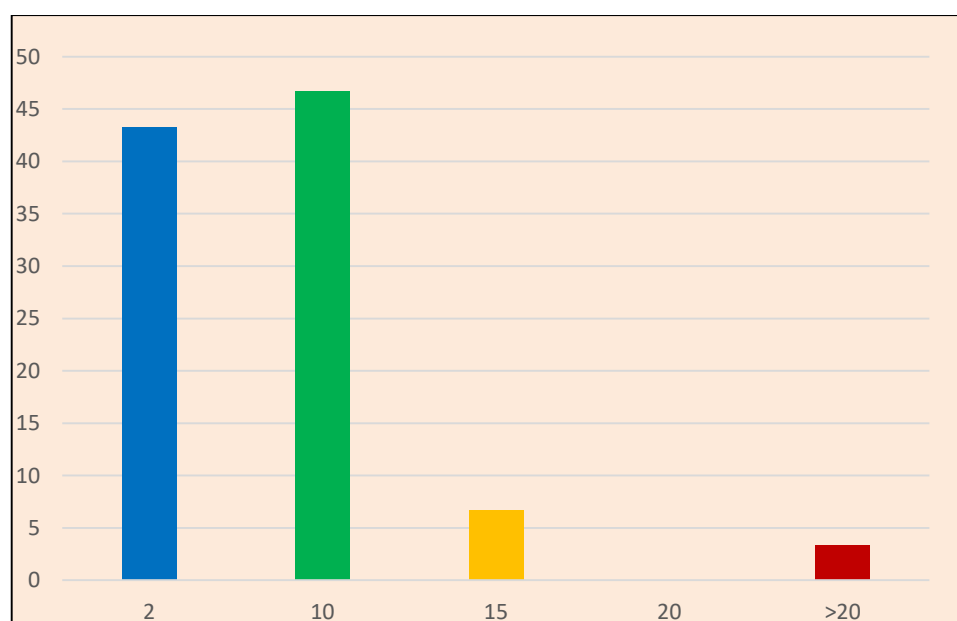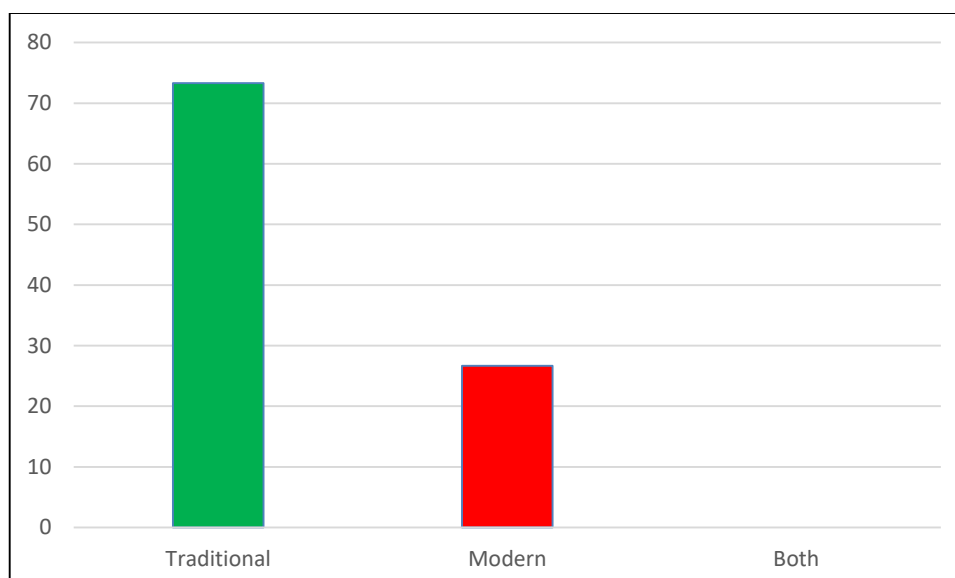

Interpretation

This figure illustrates the number of dairy animals the dairy farmers have. The 43.3% of the respondents stated that they have 2 dairy animals. The 46.7% of the respondents stated that they have 10 dairy animals. The 6.7% of the respondents stated that they have 15 dairy animals. The 3.3% of the respondents stated that they have more than 20 dairy animals.

4.3 MILKING AND BREEDING STRATEGY

Table 4.8 Milking and breeding strategy

Sl.no	Milking and breeding Strategy	Frequency	Percentage
1	Traditional	44	73.3
2	Modern	16	26.7
3	Both	0	0

Figure 4.8 Milking and breeding strategy

Interpretation

The majority of the dairy farmers use traditional methods and techniques. The traditional milking and breeding strategy is 73.3%. By understanding the prevalence of traditional methods among dairy farmers, policymakers and organizations can develop targeted initiatives to support the adoption of modern technologies, improve farming practices, and enhance the overall sustainability of the dairy industry. The modern milking and breeding strategy with 26.7%.

4.4 AVERAGE MILK PRODUCTION

Table 4.9 Average milk production

Sl.no	Average milk production	Frequency	Percentage
1	10 litres	10	16.7
2	20 litres	21	35
3	30 litres	13	21.7
4	40 litres	11	18.3
5	>40 litres	5	8.3

Figure 4.9 Average milk production
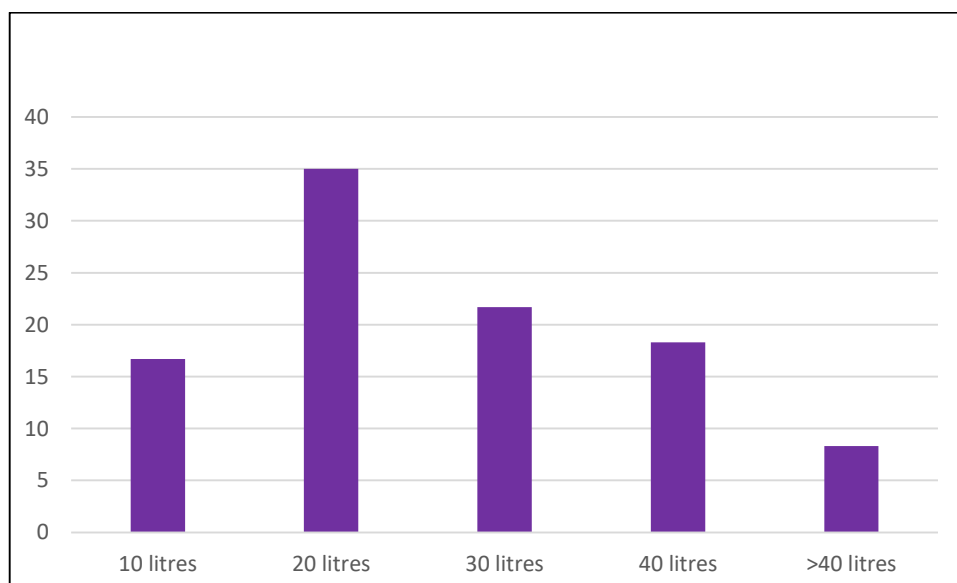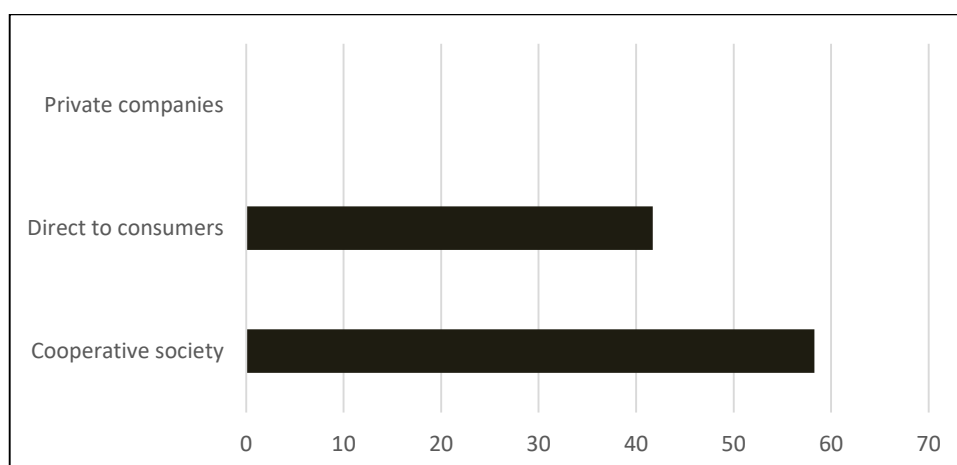

Interpretation

This figure illustrates the average milk production (daily) in the dairy farming. The 35% of the respondents stated that they produce 20 litres of milk from dairy farming. The 21.7% of the farmers produce 30 litres. The 18.3% of the farmers produce 40 litres. The 16.7% of the farmers produce 10 litres. The 8.3% of the farmers produce more than 40 litres.

4.5 SELLING AND MARKETING STRATEGY

Table 4.10 Selling and marketing strategy

Sl.no	Selling and Marketing	Frequency	Percentage
1	Cooperative society	35	58.3
2	Direct to consumers	25	41.7
3	Private companies	0	0

Figure 4.10 Selling and marketing strategy
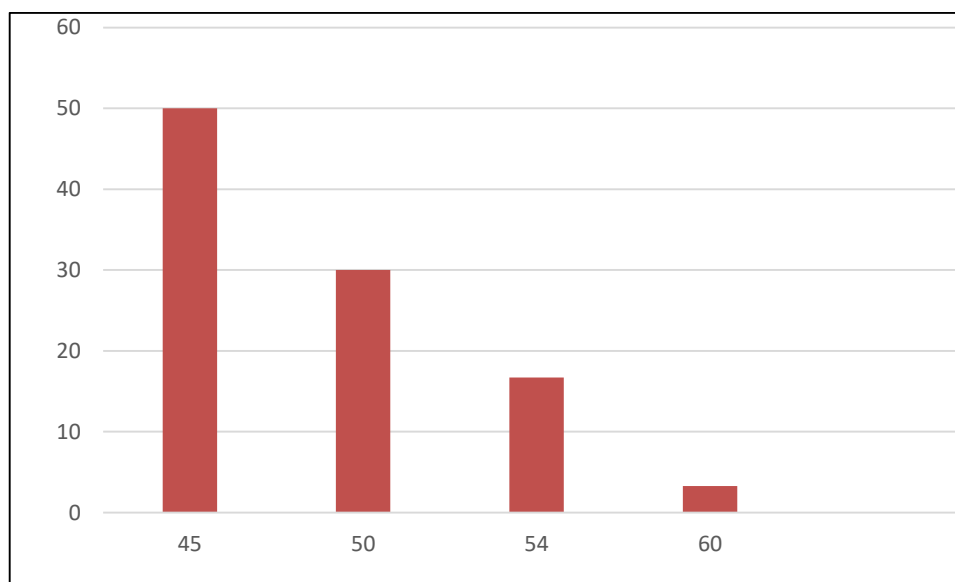

Interpretation

This figure illustrates the selling and marketing of the dairy farmers. The 58.3% of the dairy farmers sell their milk to the cooperative societies. The 41.7% of the dairy farmers sell direct to the consumers. The dairy farmers stated that they sell their milk to cooperative society because they will get benefits, subsidies etc. The majority of the dairy farmers sell their milk to cooperative societies. This finding highlights the importance of cooperative societies in supporting dairy farmers' marketing efforts and improving their livelihoods. It also suggests potential areas for further development, such as enhancing the cooperative society's services, expanding market access, and promoting value addition initiatives.

4.6 PRICE OF MILK

Table 4.11 Price of milk

Sl.no	Price of milk	Frequency	Percentage
1	45	30	50
2	50	18	30
3	54	10	16.7
4	60	2	3.3

Figure 4.11 Price of milk

Interpretation

This figure illustrates the price of milk gained by the dairy farmers by selling their milk. The 50% of the farmers receive 45 rupees. The 30% of the farmers receive 50 rupees. The 16.7% of the farmers receive 54 rupees. The 3.3% of the farmers receive 60 rupees. Majority of the dairy farmers receive 45 rupees for the milk. By analyzing the price of ₹45 per liter, policymakers and stakeholders can better understand the challenges faced by dairy farmers and develop strategies to improve their livelihoods and the sustainability of the dairy industry.

4.7 ANNUAL INCOME

Table 4.12 Annual income

Sl.no	Annual income	Frequency	Percentage
1	1 lakhs	22	36.7
2	3 lakhs	25	41.7
3	5 lakhs	11	18.3
4	10 lakhs	2	3.3
5	>10 lakhs	0	0

Figure 4.12 Annual income
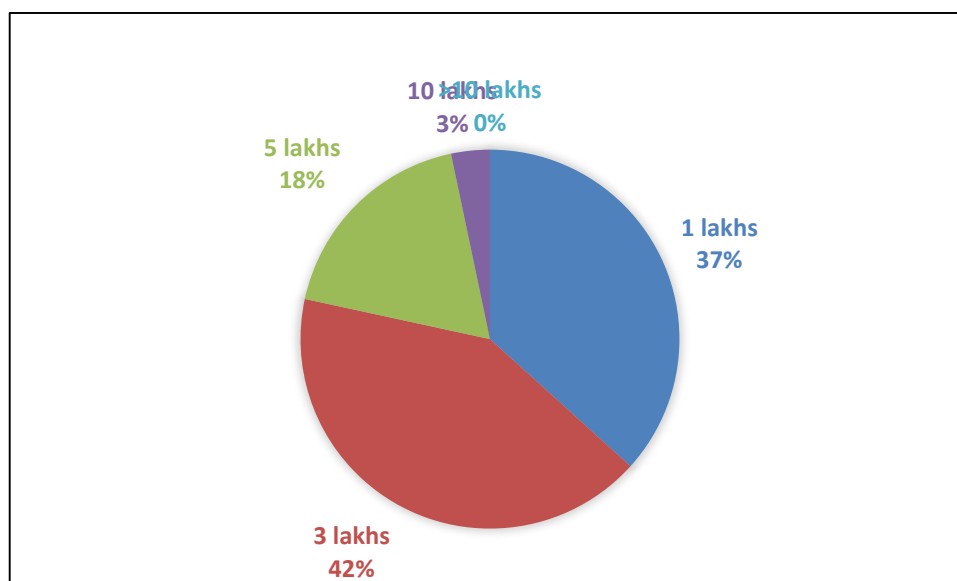
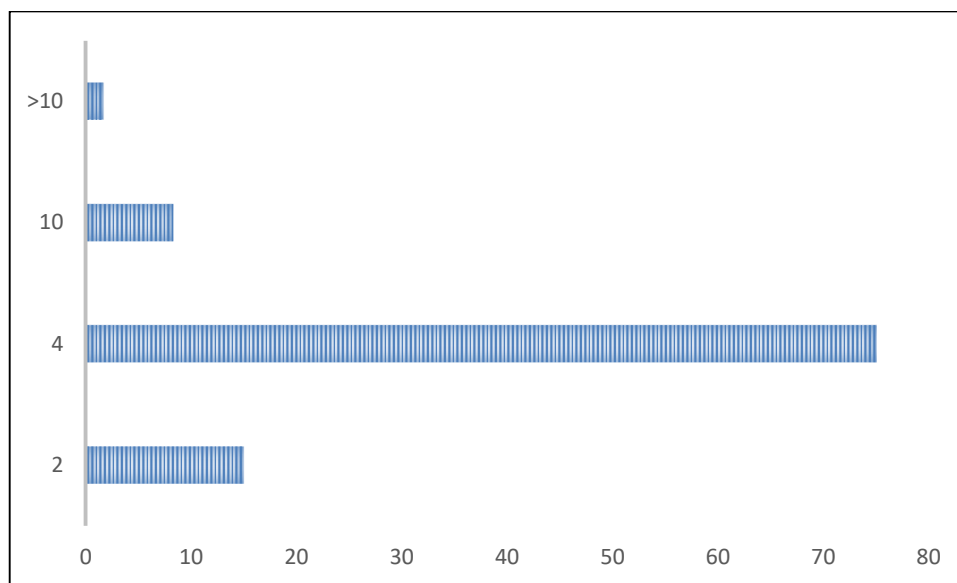**Interpretation**

This figure illustrates the annual income from dairy farming. The 41.7% of the respondents annual income is 3 lakhs. The 36.7% of the respondents annual income is 1 lakhs. The 18.3% of the respondents annual income is 5 lakhs. The 3.3% of the respondents annual income is 10 lakhs. They stated that they cannot assume annual income because the quantity of milk will change day by day.

4.8 YEARS OF EXPERIENCE

Table 4.13 Years of experience

Sl.no	Years of experience	Frequency	Percentage
1	2	9	15
2	4	45	75
3	10	5	8.3
4	>10	1	1.7

Figure 4.13 Years of experience

Interpretation

This figure illustrates the years of experience of the dairy farmers in this field. The 75% of the respondents stated that they have 4 years of experience. The 15% of the respondents have 2 years of experience. The 8.3% of the respondents have 10 years of experience. The 1.7% of the respondents have more than 10 years of experience. So the majority of the dairy farmers have 4 years of experience in this field.

4.9 LABOR

Table 4.14 Labor

Sl.no	Labor	Frequency	Percentage
1	Family labor	34	56.7
2	Hired labor	26	43.3

### Figure 4.14 Labor
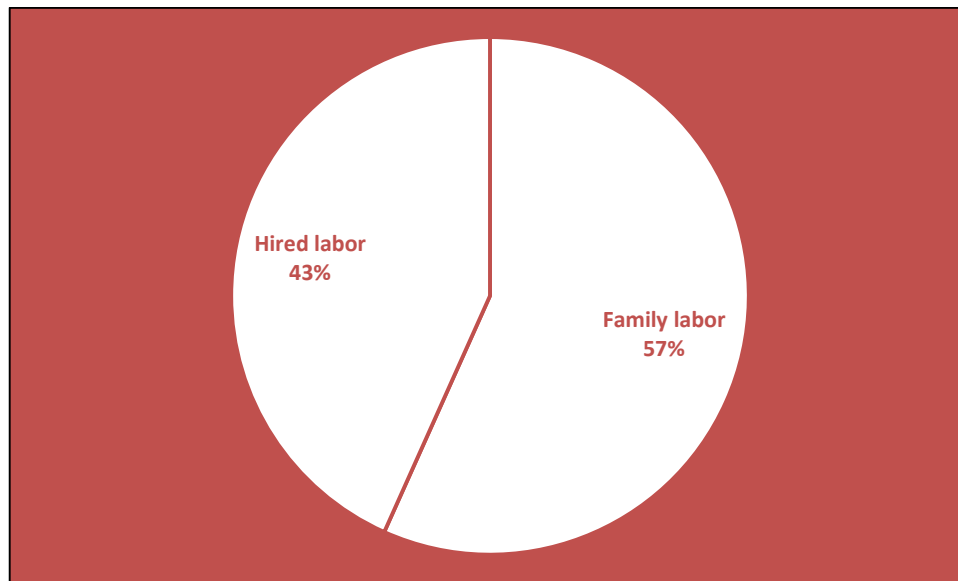
Interpretation

This figure shows the labor in the dairy farming. The 57% of the respondents stated that they use family labor and the 43% of the respondents use hired labors. The most of the dairy farmers will lookafter the dairy animals by themselves.

4.10 CHALLENGES IN FARM MANAGEMENT

Table 4.15 Challenges in farm management

Sl.no	Challenges in farm management	Frequency	Percentage
1	Adequate land	11	18.3
2	Climate condition	23	38.3
3	Fluctuating milk prices	11	18.3
4	Diseases in animals	15	25

Figure 4.15 Challenges in farm management
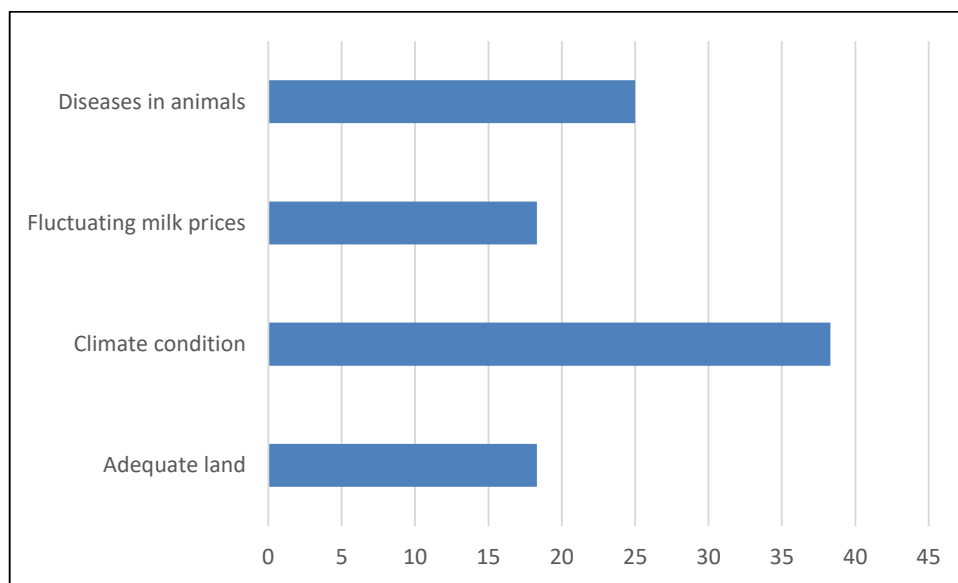
Interpretation

This figure illustrates the challenges faced by dairy farmers in farm management. The 38% of the respondents stated the problem of climate condition. The 18.3% of the respondents stated the problem of adequate land. The 18.3% of the respondents have fluctuation in milk prices. The 25% of the respondents stated that diseases in animals. The majority of the dairy farmers face climatic problems.

4.11 WASTE MANAGEMENT

Table 4.16 Waste management

Sl.no	Waste management	Frequency	Percentage
1	Cleaning and storage	37	61.7
2	Manure management	3	5
3	Composting	20	33.3

**Figure 4.16 Waste management**
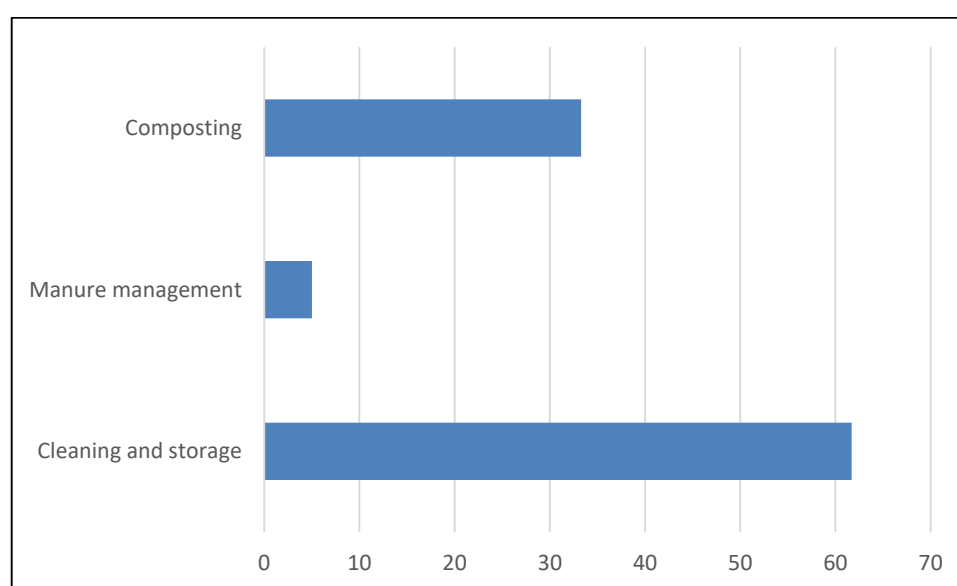
Interpretation

This figure depicts how dairy farmers handle waste in dairy farming. The 61.7% of the dairy farmers cleaning and storage. The 33.3% of the dairy farmers use composting. The 5% of the farmers use manure management. The dairy farmers stated that they have agriculture also so that they can use waste for composting.

4.12 CHALLENGES IN DAIRY FARMING

Table 4.17 Challenges in dairy farming

Sl.no	Challenges in dairy farming	Frequency	Percentage
1	Labor shortage	1	1.7
2	Market competition	14	23.3
3	Technology adoption	28	46.7
4	Disease management	17	28.3

Figure 4.17 Challenges in dairy farming
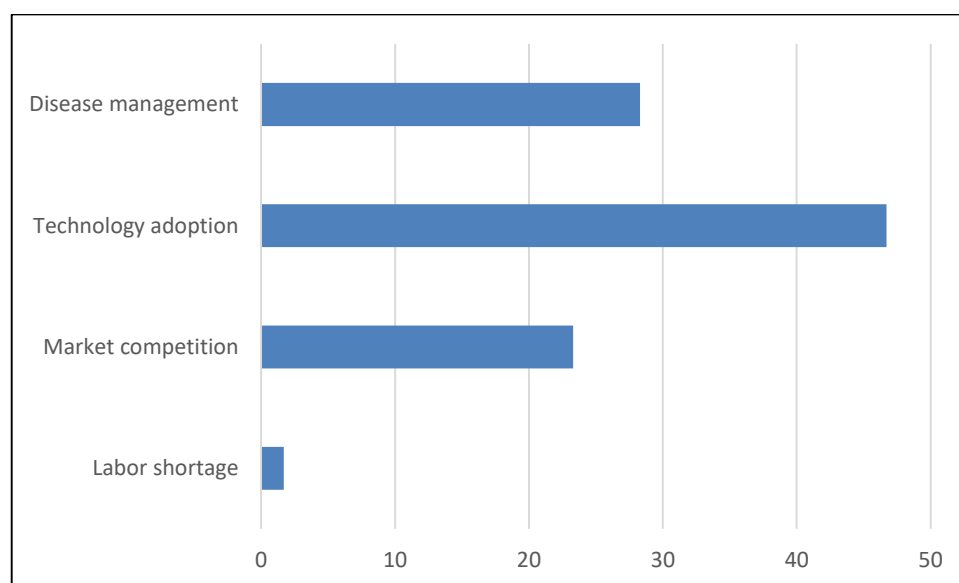
Interpretation

This figure shows the challenges faced by dairy farmers in dairy farming. The 46.7% of the respondents have problem in technology adoption. The 28.3% of the respondents have the problem of diseases in animals. The 23.3% of the respondents have problem with market competition. The 1.7% of the respondents have the problem of labor shortage. The majority of the dairy farmers they use traditional way of breeding and milking strategy so they do not have an idea of modern way and techniques.

4.13 GOVERNMENT POLICIES

Table 4.18 Government policies

Sl.no	Government policies	Frequency	Percentage
1	Financial support	30	50
2	Market access	2	3.3
3	Animal health programmes	28	46.7
4	Extension services	0	0

Figure 4.18 Government policies
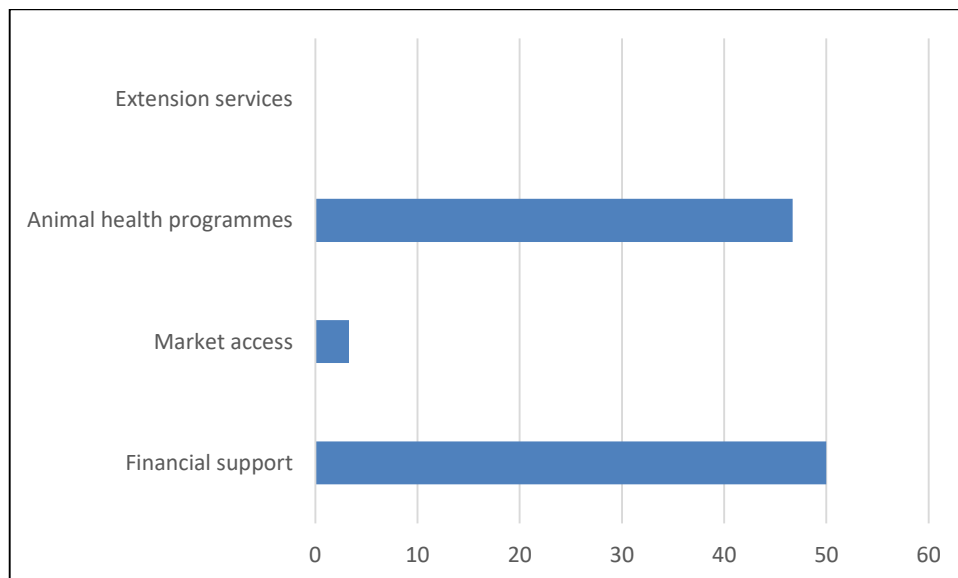
Interpretation

This figure depicts the Government policies for the dairy farmers. The 50% of the dairy farmers want financial support from the government. The 46.7% of the dairy farmers need animal health programmes. The 3.3% of the dairy farmers need market access.

4.14 EMERGENCY SITUATION

Table 4.19 Emergency situation

Sl.no	Emergency situations	Frequency	Percentage
1	Contact local authorities	20	33.3
2	Assess the situation	40	66.7
3	Communicate with stakeholders	0	0

Figure 4.19 Emergency situation
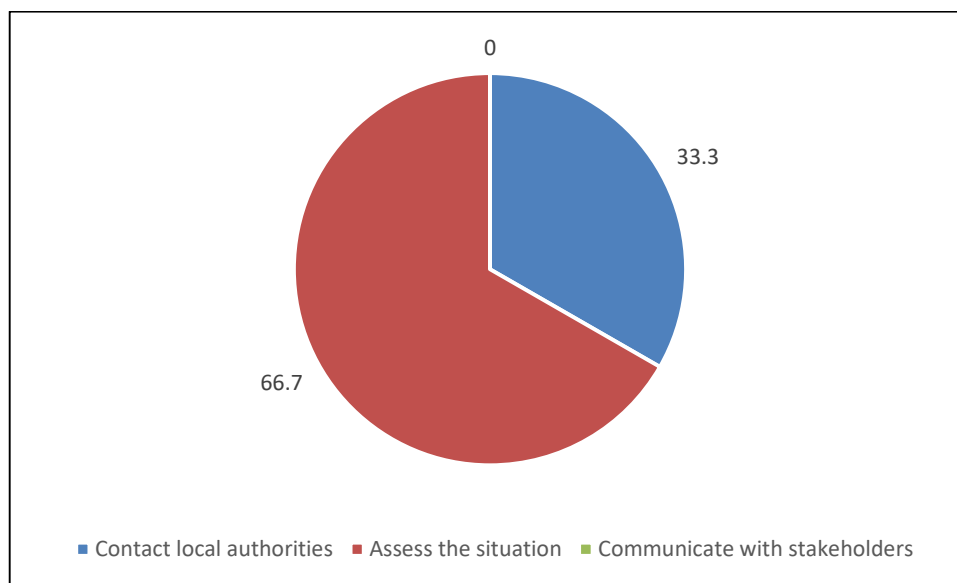
Interpretation

This figure illustrates what will be done in emergency situation by the dairy farmers. The 66.7% of the dairy farmers assess the situation. The 33.3% of the dairy contact local authorities. The majority of the dairy farmers they will assess the emergency situations. They stated that they have experience and knowledge in this field.

4.15 MANAGE AND SUSTAIN

Table 4.20 Manage and sustain

Sl.no	Manage and sustain	Frequency	Percentage
1	Yes	6	10
2	No	54	90

Figure 4.20 Manage and sustain
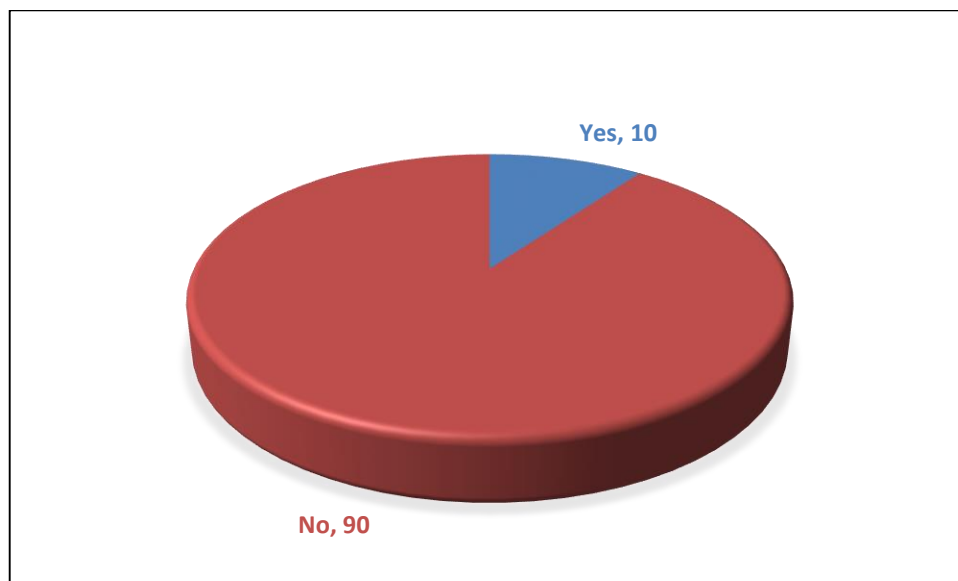
Interpretation

This figure shows how the dairy farmers manage and sustain from dairy farming. The 90% of the respondents stated that they can manage and sustain from income. The 10% of the respondents stated that they cannot manage and sustain from in

CHAPTER - 5

FINDINGS, SUGGESTIONS AND CONCLUSION

CHAPTER - 5

FINDINGS, RECOMMENDATIONS AND CONCLUSION

This study aimed to investigate the socio-economic conditions of dairy farmers, exploring the challenges and opportunities they face in their daily lives. The findings presented below highlight the critical issues affecting dairy farmers, including their economic viability, access to resources and services, social and cultural constraints, and environmental sustainability.

The study's results provide valuable insights into the complex realities of dairy farming, revealing both the resilience and vulnerability of dairy farmers. By examining the intersections of economic, social, and environmental factors, this research offers a comprehensive understanding of the dairy farming sector and its implications for food security, rural development, and sustainability.

The findings and conclusion of this study are organized into key themes, each addressing a specific aspect of dairy farmers' socio-economic conditions. The following sections present the results of the study, followed by a conclusion that synthesizes the main findings and offers recommendations for policy, practice, and future research to support dairy farmers and the dairy farming sector.

5.1 MAJOR FINDINGS

Age distribution

The age distribution of dairy farmers reveals a significant concentration in the middle-aged groups, with:

- 48% of farmers falling within the 36-45 age range, indicating a mature and experienced group of farmers who are likely to be in their prime productive years.

- 28% of farmers in the 26-35 age range, representing a younger and potentially more innovative and adaptable group.

- 18% of farmers in the 46-55 age range, indicating a group approaching the end of their productive years, with potential succession planning needs.

- A relatively small proportion of younger farmers, with only 3% in the 18-25 age range, indicating a potential challenge for the long-term sustainability of dairy farming.

- A tiny proportion of older farmers, with only 1% above 55 years old, suggesting a potential loss of knowledge and experience.

These findings suggest that

- The dairy farming sector is currently dominated by middle-aged farmers with significant experience.

- There is a need to attract and support younger farmers to ensure the long-term sustainability of the sector.

- Succession planning and knowledge transfer from older to younger farmers is crucial.

- Policies and programs should target the specific needs of each age group to ensure the continued viability of dairy farming.

Gender

The gender distribution of dairy farmers reveals a significant gender imbalance, with:

- 88.3% of farmers being male, indicating a dominant presence in the sector.

- 11.7% of farmers being female, representing a minority group with potentially limited representation and influence.

These findings suggest that:

- Dairy farming is a male-dominated sector, with women playing a relatively minor role.

- There may be gender-based barriers to entry, participation, and decision-making in dairy farming.

- Women's contributions to dairy farming may be undervalued or overlooked.

- Policies and programs should aim to promote gender equality and empower women in dairy farming to address these disparities.

Religion

The religious demographics of dairy farmers reveal that

- 76.7% of dairy farmers identify as Hindu, indicating a dominant presence in the sector.

- 23.3% of dairy farmers identify as Christian, representing a significant minority group.

These findings suggest:

- Hindu dairy farmers may have different cultural and social practices influencing their farming practices and livelihoods.

- Christian dairy farmers may face unique challenges or have distinct support networks within their community.

- The religious composition of dairy farmers may impact their access to resources, markets, and social services.

- Initiatives and policies should consider the religious diversity of dairy farmers to ensure inclusive support and services.

Ration card

The distribution of dairy farmers by Ration Card category reveals:

- 50% of dairy farmers hold Below Poverty Line (BPL) ration cards, indicating a significant proportion of farmers facing economic challenges.

- 50% of dairy farmers hold Above Poverty Line (APL) ration cards, suggesting a substantial number of farmers with relatively better economic stability.

These findings suggest:

- Half of the dairy farmers in the study area are struggling financially, as indicated by their BPL status.

- The other half, with APL status, may have relatively better access to resources, markets, and social services.

- The equal distribution between BPL and APL categories highlights the need for targeted support and initiatives to address the unique challenges faced by BPL dairy farmers.

- Policies and programs should consider the economic diversity of dairy farmers, ensuring inclusive support for both BPL and APL categories.

Number of members in family

The distribution of dairy farmers by family size reveals:

- 51.7% of dairy farmers have a family size of 3 members, indicating a majority of small to medium-sized families.

- 45% of dairy farmers have a family size of 4 members, suggesting a significant proportion of medium-sized families.

- 3.3% of dairy farmers have a family size of 2 members, indicating a small proportion of smaller families.

These findings suggest:

- The majority of dairy farmers (51.7%) have a manageable family size, allowing for shared responsibilities and labor.

- A significant proportion (45%) have a slightly larger family size, which may increase labor availability but also expand financial responsibilities.

- A small proportion (3.3%) have a smaller family size, potentially impacting labor availability and increasing workload per member.

FARM SIZE

The distribution of dairy farmers by landholding size reveals:

- 41.7% of dairy farmers have a landholding size of 5 cents (approximately 0.05 acres), indicating a significant proportion of small-scale farmers.

- 36.7% have a landholding size of 10 cents (approximately 0.1 acres), suggesting a substantial number of small to medium-sized farmers.

- 15% have a landholding size of 15 cents (approximately 0.15 acres), indicating a notable proportion of medium-sized farmers.

- 3.3% have a landholding size of 20 cents (approximately 0.2 acres), suggesting a small proportion of larger farmers.

- 3.3% have more than 20 cents (approximately more than 0.2 acres), indicating a small proportion of relatively large-scale farmers.

These findings suggest:

- The majority of dairy farmers (78.4%) have small to medium-sized landholdings (5-15 cents), indicating limited land resources.

- A significant proportion (41.7%) have very small landholdings (5 cents), potentially impacting their ability to expand or diversify their farming activities.

- A small proportion (6.6%) have relatively larger landholdings (20 cents or more), potentially providing opportunities for economies of scale and increased productivity.

Number of dairy animals

The distribution of dairy farmers by the number of dairy animals reveals:

- 46.7% of dairy farmers have 10 dairy animals, indicating a significant proportion of medium-sized dairy farming operations.

- 43.3% have 2 dairy animals, suggesting a substantial number of small-scale dairy farming operations.

- 6.7% have 15 dairy animals, indicating a small proportion of larger dairy farming operations.

These findings suggest:

- The majority of dairy farmers (90%) have relatively small to medium-sized dairy farming operations (2-10 animals), indicating limited economies of scale.

- A significant proportion (46.7%) have a moderate number of dairy animals (10), potentially allowing for some efficiencies and productivity.

- A small proportion (6.7%) have a larger number of dairy animals (15), potentially benefiting from economies of scale and increased productivity.

MILKING AND BREEDING STRATEGY

The distribution of dairy farmers by milking and breeding strategy reveals:

- 73.3% of dairy farmers adopt traditional milking and breeding strategies, indicating a significant reliance on conventional practices.

- 26.7% of dairy farmers adopt modern milking and breeding strategies, suggesting a notable proportion of farmers embracing innovative approaches.

These findings suggest:

- The majority of dairy farmers (73.3%) may be missing out on potential productivity gains and efficiency improvements by not adopting modern milking and breeding strategies.

- A significant proportion (26.7%) of dairy farmers are already embracing modern strategies, potentially leading to improved productivity and competitiveness.

- There may be a need for training and extension services to support farmers in transitioning from traditional to modern milking and breeding strategies.

- Modernization of milking and breeding strategies could be a key driver of productivity growth and sustainability in the dairy farming sector.

AVERAGE MILK PRODUCTION

The distribution of dairy farmers by average milk production reveals:

- 35% of dairy farmers produce an average of 20 liters of milk per day, indicating a significant proportion of small-scale milk producers.

- 21.7% produce an average of 30 liters per day, suggesting a notable proportion of medium-scale milk producers.

- 18.3% produce an average of 40 liters per day, indicating a smaller proportion of larger-scale milk producers.

- 16.7% produce an average of 10 liters per day, suggesting a notable proportion of very small-scale milk producers.

- 8.3% produce more than 40 liters per day, indicating a small proportion of large-scale milk producers.

These findings suggest:

- The majority of dairy farmers (51.7%) produce relatively small quantities of milk (10-30 liters per day), indicating limited economies of scale.

- A significant proportion (35%) produce moderate quantities of milk (20 liters per day), potentially allowing for some efficiencies.

- A smaller proportion (18.3%) produce larger quantities of milk (40 liters per day), potentially benefiting from economies of scale.

- A notable proportion (16.7%) produce very small quantities of milk (10 liters per day), potentially facing challenges in achieving profitability.

SELLING AND MARKETING STRATEGY

The distribution of dairy farmers by selling and marketing strategy reveals:

- 58.3% of dairy farmers sell their milk to cooperative societies, indicating a significant reliance on collective marketing channels.

- 41.7% sell their milk directly to consumers, suggesting a notable proportion of farmers engaging in direct-to-consumer sales.

These findings suggest:

- The majority of dairy farmers (58.3%) benefit from the collective bargaining power and market access provided by cooperative societies.

- A significant proportion (41.7%) of dairy farmers have established direct relationships with consumers, potentially earning higher prices and building brand loyalty.

- Cooperative societies play a crucial role in supporting small-scale dairy farmers, providing a stable market outlet and technical assistance.

- Direct-to-consumer sales offer opportunities for dairy farmers to capture a larger share of the value chain and build stronger connections with their customers.

PRICE OF MILK

The distribution of dairy farmers by the price of milk they receive reveals:

- 50% of dairy farmers receive ₹45 per liter, indicating a significant proportion of farmers earning a relatively low price for their milk.

- 30% receive ₹50 per liter, suggesting a notable proportion of farmers earning a moderate price.

- 16.7% receive ₹54 per liter, indicating a smaller proportion of farmers earning a slightly higher price.

- 3.3% receive ₹60 per liter, suggesting a small proportion of farmers earning a relatively high price.

These findings suggest:

- The majority of dairy farmers (50%) face challenges in earning a remunerative price for their milk, potentially impacting their livelihoods.

- A significant proportion (30%) of dairy farmers earn a moderate price, potentially allowing for some profitability.

- A smaller proportion (16.7%) of dairy farmers earn a slightly higher price, potentially benefiting from premium markets or value-added products.

- A tiny proportion (3.3%) of dairy farmers earn a relatively high price, potentially due to strong market connections or high-quality milk.

ANNUAL INCOME

The distribution of dairy farmers by annual income reveals:

- 41.7% of dairy farmers have an annual income of ₹3 lakhs, indicating a significant proportion of farmers earning a moderate income.

- 36.7% have an annual income of ₹1 lakh, suggesting a notable proportion of farmers earning a relatively low income.

- 18.3% have an annual income of ₹3 lakhs (duplicate value, assumed to be an error), please recheck the data.

- 3.3% have an annual income of ₹10 lakhs, indicating a small proportion of farmers earning a relatively high income.

These findings suggest:

- The majority of dairy farmers (78.4%) earn relatively low to moderate incomes (₹1-3 lakhs), potentially facing challenges in achieving economic sustainability.

- A small proportion (3.3%) of dairy farmers earn a relatively high income (₹10 lakhs), potentially benefiting from efficient management, premium markets, or value-added products.

- There may be a need for initiatives and policies to enhance the economic viability of dairy farming, particularly for small-scale farmers.

- Training and extension services should focus on improving productivity, efficiency, and market access to increase farmers' incomes.

YEARS OF EXPERIENCE

The distribution of dairy farmers by experience reveals:

- 75% of dairy farmers have 4 years of experience, indicating a significant proportion of relatively new farmers.

- 15% have less than 4 years of experience, suggesting a notable proportion of very new farmers.

- 8.3% have 10 years of experience, indicating a smaller proportion of more experienced farmers.

- 1.7% have more than 10 years of experience, suggesting a tiny proportion of highly experienced farmers.

These findings suggest:

- The majority of dairy farmers (75%) are relatively new to the profession, potentially facing challenges in accessing knowledge, resources, and markets.

- A notable proportion (15%) are very new farmers, potentially requiring targeted support and training.

- A smaller proportion (8.3%) have significant experience, potentially serving as mentors or leaders in the dairy farming community.

- A tiny proportion (1.7%) are highly experienced, potentially possessing valuable expertise and knowledge.

LABOR

The distribution of dairy farmers by labor usage reveals:

- 56.7% of dairy farmers rely on family labor, indicating a significant proportion of farmers using their own family members to manage and operate their dairy farms.

- 43.3% of dairy farmers use hired labor, suggesting a notable proportion of farmers relying on external labor sources to support their dairy operations.

These findings suggest:

- The majority of dairy farmers (56.7%) are able to utilize their own family labor, potentially reducing labor costs and increasing family involvement in the farm.

- A significant proportion (43.3%) of dairy farmers require external labor sources, potentially facing challenges in labor management, training, and retention.

- Family labor may be a critical component of dairy farm sustainability, particularly for small-scale farmers.

- Hired labor may be necessary for larger-scale dairy operations or those with limited family labor availability.

CHALLENGES IN FARM MANAGEMENT

The distribution of dairy farmers by challenges in farm management reveals:

- 38.3% of dairy farmers face climate-related challenges, indicating a significant proportion of farmers vulnerable to weather patterns and climate change.

- 25% face challenges related to disease in animals, suggesting a notable proportion of farmers struggling with animal health issues.

- 18.3% face challenges related to adequate land, indicating a smaller proportion of farmers struggling with limited land resources.

- 18.3% face challenges related to fluctuating milk prices, suggesting a smaller proportion of farmers vulnerable to market fluctuations.

These findings suggest:

- Climate change and weather patterns are a significant threat to dairy farm management, potentially impacting productivity and sustainability.

- Animal health is a critical concern for dairy farmers, requiring effective disease management strategies.

- Land availability and accessibility are challenges for some dairy farmers, potentially limiting expansion and productivity.

- Market fluctuations and price volatility are concerns for dairy farmers, requiring strategies to manage risk and uncertainty.

WASTE MANAGEMENT

The distribution of dairy farmers by waste management practices reveals:

- 61.7% of dairy farmers focus on cleaning and storage, indicating a significant proportion of farmers prioritizing basic waste management practices.

- 33.3% of dairy farmers practice composting, suggesting a notable proportion of farmers adopting a more advanced waste management strategy.

- 5% of dairy farmers have a manure management system in place, indicating a small proportion of farmers with a specialized waste management approach.

These findings suggest:

- The majority of dairy farmers (61.7%) are taking basic steps to manage waste, but may benefit from more advanced strategies.

- A significant proportion (33.3%) of dairy farmers are composting, potentially reducing waste and creating valuable by-products.

- A small but notable proportion (5%) of dairy farmers have implemented manure management systems, potentially achieving high levels of waste reduction and environmental sustainability.

CHALLENGES IN DAIRY FARMING

The distribution of dairy farmers by challenges in dairy farming reveals:

- 46.7% of dairy farmers face challenges in technology adoption, indicating a significant proportion of farmers struggling to leverage technology to improve productivity and efficiency.

- 28.3% face challenges in disease management, suggesting a notable proportion of farmers struggling to maintain animal health and prevent disease outbreaks.

- 23.3% face challenges in market competition, indicating a smaller proportion of farmers struggling to compete in the market and secure fair prices for their products.

- 1.7% face challenges in labor shortage, suggesting a tiny proportion of farmers struggling to find and retain skilled labor.

These findings suggest:

- Technology adoption is a major challenge for dairy farmers, potentially hindering productivity and competitiveness.

- Disease management is a critical concern for dairy farmers, requiring effective strategies to prevent and control disease outbreaks.

- Market competition is a challenge for dairy farmers, requiring strategies to differentiate products and secure fair prices.

- Labor shortage is a minor challenge for dairy farmers, potentially due to the availability of family labor or local workforce.

GOVERNMENT POLICIES

The distribution of dairy farmers' needs for government policies reveals:

- 50% of dairy farmers need financial support, indicating a significant proportion of farmers requiring assistance to improve their economic viability.

- 46.7% need animal health programs, suggesting a notable proportion of farmers requiring support to maintain animal health and prevent disease outbreaks.

- 3.3% need market access, indicating a small proportion of farmers requiring support to access markets and secure fair prices for their products.

These findings suggest:

- Financial support is a critical need for dairy farmers, potentially to invest in infrastructure, technology, and inputs.

- Animal health programs are essential for dairy farmers, potentially to access veterinary services, vaccines, and disease surveillance.

- Market access is a minor but still important need for dairy farmers, potentially to access new markets, improve market information, and negotiate better prices.

EMERGENCY SITUATIONS

- 66.7% of dairy farmers reported that they would first assess the situation themselves during an emergency

- 33.3% reported that they would contact local authorities (e.g. veterinary services, emergency responders) for assistance.

These findings suggest:

- The majority of dairy farmers (66.7%) take a proactive approach to emergency situations, initially assessing the situation themselves before seeking external help.

- A significant proportion (33.3%) of dairy farmers recognize the importance of seeking external expertise and support from local authorities during emergency situations.

MANAGE AND SUSTAIN

- 90% of dairy farmers reported that they cannot manage and sustain their farms from their current income

- 10% reported that they can sustain and manage their farms from their current income

These findings suggest:

- The vast majority (90%) of dairy farmers are struggling to make a sustainable living from their current income, indicating a significant challenge in terms of financial viability.

- A small but notable proportion (10%) of dairy farmers are able to sustain and manage their farms from their current income, suggesting that some farmers have found ways to optimize their operations and improve their financial resilience.

5.2 RECOMMENDATIONS

Dairy farming is a complex and diverse sector, influenced by various socio-cultural, economic, and environmental factors.

- Livelihood strategies, such as diversification, coping mechanisms, and adaptation, are crucial for dairy farmers to manage risks and improve resilience.

- Institutional support, including government policies, market-based initiatives, and extension services, is essential for enabling dairy farmers to thrive.

- Understanding the intersectionality of factors and the importance of livelihood strategies and institutional support can inform effective policies and interventions to promote sustainable dairy farming practices.

- Policymakers and practitioners should consider the diversity of dairy farming contexts and the importance of livelihood strategies when designing support programs.

- Investments in institutional support, such as extension services and market access initiatives, can have positive impacts on dairy farmers' productivity and sustainability.

- Further research is needed to explore the complex relationships between dairy farming practices, livelihood strategies, and institutional support.

5.3 CONCLUSION

The socio-economic condition of dairy farmers in Thiruvananthapuram district plays a crucial role in the region's rural economy. Dairy farmers serves as a significant livelihood for many families, providing both direct income and employment opportunities. However, the challenges faced by these farmers, such as fluctuating milk prices, access to veterinary services, and modern farming technologies, impact their economic stability and social well-being. Understanding their socio-economic status, including income levels, access to resources etc. is essential for formulating policies that support sustainable dairy farming in the district of Thiruvananthapuram.

The study's findings highlight the socio-economic conditions and challenges faced by dairy farmers in this area. The majority of farmers are middle-aged, male, and have limited formal education. They rely heavily on traditional farming practices and face significant challenges related to climate conditions and animal diseases.

This study aimed to identify the socio-economic challenges faced by dairy farmers and examine the relationship between their socio-economic status, productivity, and efficiency. The findings reveal that dairy farmers face numerous socio-economic challenges, including:

- Financial instability

- Limited access to resources and services

- Social disparities

- Technological constraints

- Policy and institutional limitations

The study also found a significant relationship between dairy farmers' socio-economic status, productivity, and efficiency. Specifically:

- Higher socio-economic status is associated with increased productivity and efficiency

- Improved access to resources, services, and technology enhances productivity and efficiency

- Social inclusion and gender equality are positively correlated with productivity and efficiency

- Stronger policy support and institutional capacity are linked to improved productivity and efficiency

These findings suggest that addressing the socio-economic challenges faced by dairy farmers can have a positive impact on their productivity and efficiency, ultimately contributing to a more sustainable and equitable dairy farming sector.

By addressing these challenges and supporting dairy farmers, policymakers and stakeholders can contribute to the sustainability and development of the dairy industry in this area. The study's findings have important implications for the design and implementation of policies and programs aimed at supporting dairy farmers and improving their socio-economic conditions.

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APPENDIX

Questionnaire

1) Age group

- o 18-25

- o 26-35

- o 36-45

- o 46-55

- o Above 55

2) Gender

- o Male

- o Female

3) Religion

- o Hindu

- o Christian

- o Muslim

4) Ration card type

- o APL

- o BPL

5) How many members are there in your family?

- o 2

- o 3

- o 4

- o More than 4

6) What is your farm size?

- o 5 cents

- o 10 cents

- o 15 cents

- o 20 cents

- o More than 20 cents

7) How many dairy animals do you have ?

- o   2
- o   10
- o   15
- o   20
- o   More than 20

8) What is your milking and breeding strategy ?

- o   Traditional
- o   Modern
- o   Both

9) The average milk production (daily)

- o   10 litres
- o   20 litres
- o   30 litres
- o   40 litres
- o   More than 40 litres

10) How do you sell and market your milk?

- o   Cooperative society
- o   Direct to consumers
- o   Private companies

11) How much price do you receive for your milk (1 litre)?

- o   45
- o   50
- o   54
- o   60

12) The annual income from dairy farming

- o   1 lakh
- o   3 lakhs

- o   5 lakhs

- o   10 lakhs

- o   More than 10 lakhs

13) How many years of experience in dairy farming?

- o   2

- o   4

- o   10

- o   More than 10 years

14) How do you manage labor in the farm?

- o   Family labor

- o   Hired labor

15) What are the challenges in farm management?

- o   Adequate land

- o   Climate condition

- o   Fluctuating in milk prices

- o   Diseases in animals

16) How do you handle waste in the farm?

- o   Proper cleaning and storage

- o   Manure management

- o   Composting

17) What are the major challenges in dairy farming?

- o   Labor shortage

- o   Market competition

- o   Technology adoption

- o   Disease management

18) How do you think government or organisations can support dairy farmers?

- o   Financial support

- o   Market access

- o Animal health programmes

- o Extension services

19) What will you do in emergency situation?

- o Contact local authorities

- o Assess the situation

- o Communicate with the stakeholders

20) Can you manage and sustain with the income from dairy farming?

- o Yes

- o No