



## **Problems Faced by the Dairy Farmers in Palakkad District of Kerala, India**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

**Aims:** The dairy industry in India is instrumental in providing cheap and nutritional food to the vast population of India and also generates huge employment opportunities for people in rural areas. Milk is the largest product from the agriculture and allied sector in India in terms of value at Rs.6.5 lakh crore. It contributes around 26 per cent of total agriculture's Gross Domestic Product (GDP). The Kerala currently represents the twelfth largest dairy market in India. The livestock population in Kerala was 38.36 lakh in the year of 2019 [1]. Dairying is a major subsidiary occupation for the farmers of Kerala. But present-day dairying is faced with a number of challenges. The study was conducted to explore various constraints associated with dairy farming as perceived by the farmers.

**Objective:** To identify the problems faced by dairy farmers in Palakkad district of Kerala.

**Methodology:** The primary data for this study were collected using a structured interview schedule from 200 active dairy farmer respondents from four selected dairy co-operatives in the Palakkad district.

**Results:** The temperature variation was the major factor behind the milk production problems. Because Kerala's highest temperature was always recorded in the Palakkad district. But none of the dairy farmers were facing difficulties with milk procurement. All of them were satisfied with the procurement facilities and arrangements. Low accessibility to veterinary services and a lack of sufficient labour were the main problems faced by the selected dairy farmers. Out of 200 dairy

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farmers, none of them were affected by the floods of 2018 and 2019. The quantity of milk procured by the dairy co-operative society, transportation, profit from the sale of milk, and labour services were mainly affected due to the COVID 19 pandemic. The lack of availability of schemes and support is one of the main problems faced by the respondents. Lack of knowledge about banking services and functions related to subsidies was also one of the problems that existed among them.

**Conclusion:** From the study, it became evident that dairy farming activities in Kerala, though growing are crippled by a range of problems. The appointment of a trained Artificial insemination, Veterinary First Aid worker, creation of labour groups and continuous monitoring of the progress of schemes and services can solve the problems faced by dairy farmers up to a limit. Finally, this will result in the widening of our country's dairy sector.

**Keywords:** Dairy co-operatives; milk procurement; milk production; schemes and support.

## 1. INTRODUCTION

India is an agriculture-based economy with the majority of the working population in the country still engaged in agriculture and related activities directly or indirectly. In India, 54.6 per cent of the population is engaged in agriculture and allied activities [2]. The government allocated 2.83 lakh crore rupees for agriculture and allied activities and irrigation in the 2020-21 budget [3]. Thus, progress in the agriculture plays a significant role in the development of the country's economy. The dairy industry in India is instrumental in providing cheap and nutritional food to India's vast population and generates huge employment opportunities for people in rural areas. Milk is the largest product from the agriculture and allied sector in India in terms of value at Rs.6.5 lakh crore. It contributes around 26 per cent of total agriculture Gross Domestic Product (GDP). India's milk production was 187.7 million tonnes in 2018-19, registering a growth rate of 6.5 per cent over the previous year. The percapita availability of milk has reached a level of 394 grams per day during 2018-19 [3].

Dairying is of great importance to the livelihood of farmers in Kerala. The state currently represents the twelfth largest dairy market in India. The dairy co-operatives are functioning to support dairy farmers in the processing and selling of milk and milk products. The common need of milk producers is to obtain a fair price for their milk and this is fulfilled through collective marketing by dairy co-operatives. The increasing trend of dairy co-operatives shows the importance of dairy

cooperatives among dairy farmers. In this situation, it is important to evaluate the problems faced by the farmers in dairying. It will help to the upliftment of the dairy farmers [4].

## 2. MATERIALS AND METHODS

The first four dairy co-operatives with highest quantity of milk procurement during 2019-2020 in Palakkad district were selected by the researcher. This study is based on both primary and secondary data. The primary data was collected by using a structured interview schedule and the secondary data were collected from the published books, reports, articles, and annual reports.

The primary data were collected from 200 active dairy farmer respondents from four selected dairy co-operatives in the Palakkad district using a simple random sampling method. The collected data were analysed by using index methods.

The formula is as follows:

$$\text{Index} = \frac{\sum_{i=1} \sum_{j=1} S_{ij}}{\sum \text{Max}S_j}$$

$i$  = Respondents

$j$  = Problems/constrain

$S_j$  = Score of  $j^{\text{th}}$  factor

$S_{ij}$  = Total score of  $j^{\text{th}}$  factor of the  $i^{\text{th}}$  respondent

$\text{Max.}S_{ij}$  = Maximum score for the  $j^{\text{th}}$  factor

Based on the index obtained, the results were compared to a standard derived:

Scores obtained	Problems/Constrains category
0-33.3	High
33.3-66.6	Moderate
66-100	Nil

### 3. RESULTS AND DISCUSSION

#### 3.1 Milk Production

Milk production is an important factor in dairy farming. The profitability of dairy farming is decided based on milk production. Table 1 specifies the problems faced by the farmers in milk production. The climatic issues were the major problems in milk production. The climatic variation was the major factor behind the milk production problems. Because the highest temperature in Kerala was always marked in the Palakkad district [5].

#### 3.2 Milk Procurement

Milk procurement is an important function of the dairy co-operative societies. The Table 2 specifies the problems that are faced by dairy farmers in milk procurement. But none of the dairy farmers were facing difficulties in milk procurement. All of them were satisfied with the procurement facilities and arrangements.

#### 3.3 Other Problems

The Table 3 lays down the other basic problems faced by the dairy farmers. This includes non-availability of labour, delayed payments from DCS, low productivity of cattle, lack of crossbreed animals, lack of sufficient veterinary services. Out of these, low accessibility to veterinary services and lack of sufficient labour were the main problems faced by the selected dairy farmers. All payments for dairy-related dealings were up to date and, they had not faced difficulties in the availability of crossbreed cattle. So, it was a benefit for the dairy farmer to manage the financial and farm requirements. The flood of 2018 and 2019 had not affected the respondents.

#### 3.4 Impact of COVID 19 in Dairy Farmers

The COVID 19 affected all the respondents. The Table 4 described the effect of COVID 19 on

dairying. The quantity of milk procured by the dairy co-operative society, transportation, profit from the sale of milk, and labour services were mainly affected due to the COVID 19 pandemic. The availability of labour services was very less due to lockdowns. And the Milma had stopped the milk procurement for two days. It leads to the wastage of large quantities of milk and a decrease in income from milk sales. The availability of veterinary services and food stock were moderately affected due to the COVID 19 pandemic. The milk production, dairy farm structure, animal strength, and local milk sales were not affected by COVID 19.

#### 3.5 Constraints Experienced by Farmers in Availing Schemes and Support from Dairy Co-operatives and Government Policies

The lack of availability of schemes and support is one of the main problems faced by the respondents. This situation discourages people to enter into dairy farming. Table 5 outlines various constraints faced by dairy farmers in availing schemes and support from the dairy co-operative society and government. The procedural time delay to avail benefits and slow responses was the major difficulties faced by the dairy farmer. Lack of knowledge about banking services and functions related to subsidies was also one of the problems that existed among them. So, the government and dairy co-operative societies must evaluate the loopholes in all these schemes and take the necessary actions to solve these problems.

Table 6 reveals the major problems faced by the dairy farmers in dairying. The problems related to milk production and procurement, pre and post-flood effect in milk production and procurement, the impact of covid-19 in dairy farmers, constraints experienced by farmers in availing schemes, and support from dairy co-operatives and government policies are analyzed through this section.

**Table 1. Problems related to milk production**

Problems	Index	Opinion
The climatic variation highly affected the quantity of milk production.	100	High
The cattle diseases highly affected milk production.	49	Moderate
The lack of nutrition leads to a decrease in the level of milk production	33	Nil
The irregular milking frequency negatively affected milk production.	33	Nil
Genetic problems are the main reason for reducing milk production.	33	Nil

**Table 2. Problems related to milk procurement**

<b>Problems</b>	<b>Index</b>	<b>Opinion</b>
The dairy farmers faced a Lack of hygienic and sanitization measures in the dairy co-operatives.	33	Nil
The milk procurement was reduced due to a lack of transportation facility	33	Nil
The staff are not properly recording the milk supply details	33	Nil
The DCS doesn't have any milk storage facilities	33	Nil
The societies don't have a proper milk testing mechanism	33	Nil

**Table 3. Other problems**

<b>Problems</b>	<b>Index</b>	<b>Opinion</b>
The non-availability of labour is the major problem faced by dairy farmers.	69	High
The delayed payments from dairy co-operatives affect the investments in dairying.	33	Nil
The non-availability of crossbreed animals affects the productivity of dairying.	33	Nil
The Lack of sufficient veterinary services affected the health of cattle.	75	High

**Table 4. Level of the effect of COVID 19 on the dairy farming sector**

<b>Particulars</b>	<b>Index</b>	<b>Opinion</b>
The COVID 19 negatively affected milk production from dairying.	33	Nil
The COVID lockdown affected milk transportation to DCS	100	High
The COVID 19 affects the physical structure of the farm	33	Nil
It affected the veterinary services for cattle	49	Moderate
It leads to the death of cattle	33	Nil
It affected the local milk sale of dairy farmers.	33	Nil
It affected the quantity of milk procured by the dairy co-operative society	100	High
The Profit from the sale of milk was reduced during COVID 19 period.	100	High
The lack of Food Stock was the main problem faced in the dairying.	52	Moderate
The availability of Labour services was reduced during COVID 19.	74	High

**Table 5. Constraints experienced by farmers in availing schemes and support from dairy co-operatives and Government policies**

<b>Statements</b>	<b>Index</b>	<b>Opinion</b>
The dairy farmers had to attend many procedures to avail the benefits.	100	High
The respondents received inadequate support from the dairy co-operative society/Government.	54	Moderate
The effectiveness of the schemes was reduced due to the slow responses from the DCS and Government.	81	High
The lack of knowledge about banking activities was the major problem faced by the dairy farmers to avail subsidies.	49	Moderate
The fodder seeds supplied were not of good quality.	33	Nil

**Table 6. The composite index of problems faced by the dairy farmers**

<b>Problems</b>	<b>Index</b>	<b>Opinion</b>
Problems related to milk production	49.8	Moderate
Problems related to milk procurement	33	Nil
Level of effect of COVID-19	60.8	Moderate
Constraints faced in availing schemes	63	Moderate

#### 4. CONCLUSION

The present study concluded that the temperature had highly affected the quantity of milk production. The non-availability of labour and the lack of sufficient veterinary services were also faced by dairy farmers. The flood of 2018 and 2019 didn't affect the dairy farmers. But COVID-19 lockdown affected milk transportation to dairy co-operatives and it affected the quantity of milk procured by the dairy co-operative society. It finally leads to a decrease in profit from the sale of milk. The appointment of a trained Artificial insemination, Veterinary First Aid worker, the creation of labour groups and continuous monitoring of the progress of schemes can solve the problems faced by dairy farmers up to a limit. Finally, this will result in the widening of our country's dairy sector.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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