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EXAMINING DAIRY FARM CONSTRAINTS: INVESTIGATING THE CHALLENGES AND LIMITATIONS FACED BY TAMIL NADU DAIRY FARMERS

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Article Info

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Abstract

This study investigates the constraints faced by dairy farmers in the Erode, Tirupur, and Coimbatore districts of Tamil Nadu, India. Through face-to-face interviews with 60 respondents, the research uncovers the varying levels of limitations experienced by these farmers in their dairy farming activities. The findings reveal that the majority of the respondents face medium-level constraints, while others experience high or low levels of limitations. Key constraints identified include the unavailability of green fodder year-round, high costs of cattle feed and mineral mixtures, and a lack of community grazing land. In terms of breeding challenges, respondents identified the distance to artificial insemination centers and hospitals as the most significant constraint. Additionally, healthcare management for dairy animals revealed that the vulnerability of crossbred animals to diseases, lack of knowledge about disease prevention, and high costs of medicine were the most critical constraints faced by the farmers. Infrastructure limitations, such as the lack of available labor, insurance facilities, and distance to dairy cooperative societies, were also cited as significant constraints. Financial challenges, including the high cost of crossbred dairy animals, non-availability of capital and loans at the proper time, and high interest rates, were also reported to be major constraints faced by the respondents. Marketing challenges included unremunerative prices for milk, distance to milk societies, and exploitation by middlemen or milkmen. Lastly, socio-psychological constraints, like a lack of purchasing power and risk-bearing capacity, were identified as significant limitations for the dairy farmers in Tamil Nadu. The study recommends the creation of mobile veterinary units and capacity building for farmers through government and extension institutions to address these issues.

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Introduction

Dairy farming has been a vital aspect of the agricultural sector for centuries, providing essential products for human consumption and contributing significantly to the economy. In India, dairy farming has a rich history, with the country being the largest milk producer globally, accounting for over 22% of the world's total milk production (FAO, 2020). One of the significant contributors to this success is the Tamil Nadu state, which ranks among the top ten milk-producing states in India (DADF, 2019). However, despite the substantial contribution of the dairy sector to the state's economy, there are several constraints and challenges faced by Tamil Nadu dairy farmers that need to be addressed to ensure sustainable growth and development.

The importance of the dairy sector in Tamil Nadu's economy is evident in its contribution to the state's Gross State Domestic Product (GSDP) and employment generation. The dairy sector contributes about 4% to the state's GSDP (DADF, 2019). Furthermore, the sector plays a crucial role in ensuring food security and providing nutritional requirements for the population. In this context, understanding the various constraints and challenges faced by Tamil Nadu dairy farmers becomes crucial to ensure the sector's sustainable growth and development. The constraints faced by Tamil Nadu dairy farmers can be broadly categorized into three categories: institutional, technological, and socio-economic constraints. Institutional constraints refer to the issues related to the institutional framework within which dairy farming operates, such as policies, regulations, and support services. Technological constraints encompass the challenges associated with the adoption of modern technologies and practices in dairy farming. Socio-economic constraints refer to various social and economic factors that affect the dairy farming sector's functioning, such as the availability of resources, infrastructure, and market access. In this article, we aim to provide a comprehensive analysis of these constraints and challenges faced by Tamil Nadu dairy farmers, drawing on relevant literature and empirical evidence. Institutional constraints have been a significant concern for dairy farmers in Tamil Nadu, as they directly impact the functioning and growth of the sector. One of the critical institutional constraints is the inadequate implementation of policies and programs aimed at promoting the dairy sector (Kumar et al., 2018). For instance, several government schemes and initiatives have been launched to increase milk production and enhance the productivity of dairy animals. However, the effective implementation of these schemes remains a challenge due to factors such as lack of awareness among farmers, inadequate funding, and bureaucratic hurdles (Kumar et al., 2018). Another critical institutional constraint faced by Tamil Nadu dairy farmers is the lack of access to formal credit sources, which significantly impacts their ability to invest in modern technologies and practices (Sekar et al., 2019). The majority of dairy farmers rely on informal credit sources, such as moneylenders and relatives, which often charge exorbitant interest rates and entail high transaction costs (Sekar et al., 2019). The lack of access to formal credit sources is primarily due to the inadequate coverage of institutional credit agencies in rural areas and the stringent eligibility criteria for availing loans (Sekar et al., 2019). Technological constraints are another critical challenge faced by Tamil Nadu dairy farmers, which hinder their productivity and competitiveness. Despite the increasing adoption of modern technologies and practices in the dairy sector, the majority of dairy farmers in Tamil Nadu continue to rely on traditional practices and low-yielding breeds (Kumar et al., 2018). This is primarily due to the lack of awareness and knowledge about modern technologies, high initial investment costs, and inadequate training and extension services (Kumar et al., 2018). Moreover, the inadequate availability of quality feed and fodder is a significant technological constraint faced by Tamil Nadu dairy farmers (Sekar et al., 2019). The majority of dairy farmers rely on crop residues and locally available feed, which are often of poor quality and insufficient to meet the nutritional requirements of dairy animals (Sekar et al., 2019). This constraint directly impacts the productivity of dairy animals and the quality of milk produced, further affecting the farmers' income and profitability. Socio-

economic constraints are another critical category of challenges faced by Tamil Nadu dairy farmers. One of the significant socio-economic constraints is the small and fragmented landholdings, which limit the scope for economies of scale in dairy farming (Kumar et al., 2018). The majority of dairy farmers in Tamil Nadu own less than two hectares of land, which restricts their ability to invest in modern technologies and practices and access formal credit sources (Kumar et al., 2018).

Another critical socio-economic constraint is the lack of market access and inadequate infrastructure, which significantly impact the dairy farmers' income and profitability (Sekar et al., 2019). The majority of dairy farmers in Tamil Nadu sell their milk to local milk cooperatives or private traders, which often results in low and volatile prices (Sekar et al., 2019). Moreover, inadequate infrastructure, such as transportation, cold storage, and processing facilities, further exacerbates the challenges faced by dairy farmers in accessing remunerative markets (Sekar et al., 2019).

Tamil Nadu dairy farmers face several constraints and challenges, spanning across institutional, technological, and socio-economic dimensions. Addressing these constraints is crucial for ensuring the sustainable growth and development of the dairy sector in the state. This article aims to provide a comprehensive analysis of these constraints based on relevant literature and empirical evidence, laying a foundation for further research and policy interventions in this area.

Materials and Methods

The ex-post facto research design was followed in this study. Out of 38 districts in Tamil Nadu, Erode, Tirupur and Coimbatore districts were selected purposively as dairying is the major activity along with agriculture. One revenue taluk from each of these districts was randomly selected and one village was selected randomly from these three taluks. From these three selected villages, twenty dairy farmers having more than two dairy animals (cattle/buffalo/both) at the time of enquiry were chosen randomly with the help of local Veterinarian / members of village dairy cooperative, which constituted a total of 60 respondents for the study. A schedule consisting of all anticipated constraints was constructed to identify the constraints being faced by the farmers in accordance with objectives of the study and it was pre tested and the data were collected through face to face interview technique. Thereafter, all the constraints were categorized under six major heads *viz.*, feeding management, breeding management, health care, infrastructural, financial, marketing and socio-psychological constraints. The Statistical measures such as percentage analysis and rank order methods were employed to derive conclusions.

Results and Discussion 1. Distribution of farmers according to the constraints perceived by them in dairying

Table1. Distribution of farmers according to the constraints perceived by them in dairying

N = 60s

Sl.No	Category	Frequency (f)	Percentage (%)
1.	Low (<28.62)	8	13.33
2.	Medium (28.63 – 41.87)	32	53.34
3.	High (> 53.93)	20	33.33

Mean = 32.25 SD =6.62

Table 1 explained that majority (53.34 %) of the respondents were found to have medium level of constraints followed by high (33.33 %) and low (13.33 %) level constraints in dairying farming activities. The trend from

medium to high level of constraints indicated that over and above three fourth of the dairy farmers are struggling a lot to pursue their farming operations. This is in line with the findings of Chaudhary and Panwar (2004).

2. Category wise constraints faced by dairy farmers dairy farming practices

Table.2 Category wise constraints faced by dairy farmers dairy farming practices

N=60

Sl.No	Type of constraints	Mean Percent Score (MPS)	Rank
A	**Feeding management**		
1	Unavailability of green fodder round the year	72.80	I
2	Lack of community grazing land	61.33	III
3	High cost of cattle feed and mineral mixture	62.53	II
4	Lack of knowledge about balanced diet	59.60	IV
5	Lack of clean water	48.40	V
B	**Breeding management**		
1	Unable to detect heat	42.21	V
2	Distance to AI centre/Hospital	81.30	I
3	Poor conception rate of AI	67.25	III
4	Problem of abortion	51.30	IV
5	Infertility problem	78.60	II
C	**Health care**		
1	Lack of knowledge about disease prevention	64.20	II
2	Non availability of veterinary service at the needy hour	26.20	V
3	High cost of medicines	62.25	III
4	Vulnerability of cross bred animals to diseases	70.75	I
5	Difficulty in following correct and timely vaccination schedule	57.55	IV
D	**Infrastructural constraints**		
1	Dairy co-operative society is far away from home	69.50	III
2	Lack of availability of labour	87.65	I
3	Lack of land and irrigation facilities for fodder production	57.66	V
4	Distance to Veterinary Hospital	59.40	IV
5	Lack of Insurance facility	76.45	II
E	**Financial constraints**		
1	High cost of cross breed dairy animal	78.20	I

2	Non availability of capital and loan at proper time	69.50	II
3	High cost of treatment	59.33	IV
4	High interest rates on loan	65.00	III
5	Delayed payment / incentives from milk co-operatives	55.21	V
F	**Marketing constraints**		
1	Un remunerative price for milk	70.75	I
2	Distance to the milk societies	64.75	II
3	Exploitation by middle man / milk man	62.50	III
4	Problems of transportation	59.30	IV
5	Lack of awareness in marketing strategy	55.45	V
G	**Socio-psychological constraints**		
1	Lack of purchasing power	77.20	I
2	Lack of time due to busy in domestic / agricultural work	48.55	V
3	Less risk bearing capacity of the farmers	62.30	II
4	Lack of training	57.65	III
5	Lack of information sources	51.00	IV

MPS = Mean Per cent Score

It could be inferred from Table 2 that unavailability of green fodder round the year, high cost of cattle feed and mineral mixture and lack of community grazing land were the top three constraints in feeding management of dairy cattle as perceived by the respondents with the mean per cent score of 72.80, 62.53 and 61.33 respectively. With regard to breeding management, they considered the distance to AI centre/Hospital as the most important constraint (81.30) followed by infertility problem (78.60) and poor conception rate of AI (67.25). Problem of abortion (51.30) and unable to detect heat symptoms (42.21) were least bothered.

With regard to the health care management of dairy animals, the respondents reported that the vulnerability of cross bred animals to diseases was the most critical constraint (70.75) followed by their lack of knowledge about disease prevention (64.20) and high cost of medicine (62.25).

Lack of availability of labour (87.65), lack of insurance facility (76.45) and distance to dairy co-operative societies were the top three constraints under infrastructural constraints. With regard to financial constraints, high cost of cross breed dairy animal (78.20) was the prime one followed by non availability of capital and loan at proper time (69.50) and high interest rate (65.00).

Regarding marketing, un remunerative price for milk (70.75), distance to the milk societies (64.75) and exploitation by middle man / milkman (62.50) were the most important constraints as perceived by the respondents. Lack of purchasing power (77.20) and less risk bearing capacity (62.30) were the most important constraints under socio psychological domain.

Conclusion

The findings of the study has led to the conclusion that majority of the respondents were found to have medium level of constraints followed by high and low level constraints in dairying farming activities. The trend from medium to high level of constraints indicated that over and above three fourth of the dairy farmers are struggling

a lot to pursue their farming operations. Creation of mobile veterinary units, capacity building of farmers in the areas of feed formulation, heat detection, disease prevention, value addition and marketing strategies should be undertaken by the extension institutions to make the dairying as a lucrative one so as to achieve the motto of "doubling the farmer's income".

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