

Financial Inclusion in the Dairy Sector: A Review of Empirical and Conceptual Literature

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Abstract- Financial inclusion has emerged as a crucial enabler for the growth and resilience of dairy farmers in India. Despite the availability of several institutional schemes, research indicates persistent gaps in awareness, accessibility, and utilization among rural dairy households. This paper synthesizes conceptual and empirical literature exploring financial schemes, credit support, and infrastructural interventions targeting dairy farmers. The review highlights major trends, policy implications, and research gaps, providing direction for further study. It concludes that while financial frameworks are robust, actual penetration remains uneven.

Keywords- Financial Inclusion, Dairy Farmers, Government Schemes, Rural Finance, Maharashtra, Agricultural Credit

I. INTRODUCTION

The dairy sector plays a vital role in India's rural economy, contributing significantly to nutritional security, employment generation, and livelihood sustainability. As dairy farming increasingly shifts from subsistence activity to organized enterprise, financial inclusion becomes a key determinant of growth and modernization. Access to credit, subsidies, and insurance enables dairy farmers to adopt technology, manage risks, and improve productivity.

In Maharashtra, dairy farming is highly decentralized, involving small and marginal farmers who often face financial vulnerabilities. Government agencies at both central and state levels have introduced multiple schemes to support dairy development. However, the extent of awareness, accessibility, and impact of these schemes varies widely across regions. Reviewing existing literature provides insights into these disparities and the effectiveness of financial interventions.

This paper systematically reviews empirical and conceptual studies focused on financial inclusion in the dairy sector. By synthesizing past research, it identifies major trends, gaps, and structural issues that influence financial outcomes for dairy farmers. The review also highlights the need for more targeted frameworks and improved scheme implementation.

II. IMPORTANCE OF THE STUDY

The study is important because financial inclusion determines the success of dairy enterprises, particularly among small farmers who lack capital for expansion. Literature suggests that access to financial resources directly influences productivity, revenue, and sustainability. Therefore, a consolidated review of existing studies helps understand institutional inefficiencies and opportunities for improvement.

Secondly, Maharashtra holds a prominent position in dairy production, yet many farmers remain outside formal financial systems. Reviewing available schemes and their effectiveness helps policymakers and researchers identify structural challenges and refine financial interventions. This study also bridges the gap between policy frameworks and ground-level realities.

III. OBJECTIVES

1. To review empirical and conceptual literature related to financial inclusion in the dairy sector in India.
2. To identify major government financial schemes supporting dairy farmers and assess their documented outcomes.
3. To highlight gaps in existing research and provide directions for future studies.

IV. SCOPE OF THE STUDY

The study focuses on financial inclusion and examines literature related to credit access, subsidies, institutional support, insurance, and government schemes for dairy farmers across India, with emphasis on Maharashtra. It covers conceptual, empirical, and policy-based literature published over the past two decades. The scope is limited to secondary data and does not include primary field observations.

However, financial access often remains restricted due to bureaucratic barriers and limited awareness.

In many regions, dairy farmers rely on informal borrowing due to the complexities of bank procedures. Studies show that formal finance enables farmers to adopt modern equipment, expand production capacity, and withstand market fluctuations. Thus, financial inclusion strengthens the overall sustainability of dairy operations.

V. FINANCIAL INCLUSION IN DAIRY FARMING

Financial inclusion in dairy farming refers to the availability, accessibility, and effective utilization of financial services such as credit, subsidies, insurance, and digital finance. Literature highlights that dairy farmers require consistent financial support to invest in livestock, feed, technology, and infrastructure.

Furthermore, institutional schemes by NABARD, DAHD, and state governments aim to improve dairy infrastructure, veterinary services, fodder systems, and processing facilities. When effectively accessed, these schemes boost income and reduce vulnerability. The literature indicates that financial inclusion is not merely economic but also social empowerment for rural dairy households.

VI. MAJOR SCHEMES FOR DAIRY FARMERS IN INDIA AND MAHARASHTRA

Table 1: Key Financial Schemes Supporting Dairy Farmers

Sr. No.	Scheme Name	Implementing Agency	Coverage/Support
1	Dairy Entrepreneurship Development Scheme (DEDS)	NABARD	Subsidy for dairy units, milking machines, cold storage
2	Kisan Credit Card (KCC)	Central Govt. & Banks	Working capital for dairy farm operations
3	National Programme for Dairy Development (NPDD)	DAHD	Infrastructure for milk procurement & processing
4	Animal Husbandry Infrastructure Development Fund (AHIDF)	Central Govt.	Loans with 3% interest subvention for dairy infra
5	Rashtriya Gokul Mission	DAHD	Breed improvement and indigenous cattle development
6	Distribution of Indigenous Milch Cattle	Maharashtra Govt.	Livestock provision at subsidized rates
7	Chief Minister Animal Health Scheme	Maharashtra Govt.	Veterinary services, vaccination support
8	Breed Multiplication Farms (BMF)	Maharashtra Govt.	AI services and breed development

9	Govardhan Govansh Seva Kendra Yojana	Maharashtra Govt.	Support for cow shelters and dairy units
10	Fodder Development Scheme	Maharashtra Govt.	Subsidized fodder seeds and cultivation support

VII. RESEARCH METHODOLOGY

The study follows a qualitative, descriptive, and exploratory research design to review existing empirical and conceptual literature on financial inclusion in the dairy sector. Secondary data from 2015–2024 was sourced from academic journals, government publications, NABARD and NDDDB reports, and credible online databases such as Google Scholar, JSTOR, and ResearchGate. A systematic literature review method was applied using keywords such as financial inclusion, dairy farmers, livestock finance, agricultural credit, subsidies, and NABARD schemes. A total of 20 relevant studies were selected based on predefined inclusion criteria such as relevance, academic rigor, and authenticity.

The selected literature was examined using thematic analysis, allowing the identification of recurring patterns relating to scheme awareness, accessibility, infrastructure development, financial challenges, and economic outcomes for dairy farmers. Secondary statistical datasets from national and state-level institutions supported contextual understanding. As the research relies entirely on published sources, no primary data collection was undertaken. The methodology provides a comprehensive synthesis of existing scholarship but does not establish causal relationships due to its qualitative and interpretive nature.

VIII. REVIEW OF LITERATURE

Table 2: Review of 20 literature

Sr. No.	Source / Title	Year	Review
1	NABARD Annual Report	2021	Highlights the role of subsidies in dairy modernization and credit penetration gaps.
2	World Bank Dairy Sector Study	2020	Emphasizes financial constraints among small dairy farmers and dependence on informal credit.
3	Kumar & Singh, Journal of Rural Finance	2019	Found low awareness of financial schemes among dairy households despite availability.
4	Patil & Jadhav, Indian Journal of Dairy Science	2022	Reported positive impact of subsidies on upgrading dairy equipment.
5	Meena et al., Agricultural Economics Review	2018	Shows financial access improves milk productivity and farm income.
6	Rajput et al., Livestock Economics Review	2023	Indicates socio-economic factors influence dairy scheme utilization.
7	Sharma, Rural Development Quarterly	2017	Lack of institutional support leads to underutilization of credit schemes.
8	Chaudhari, Dairy Sector Review	2021	Financial inclusion remains uneven across states due to regional disparities.

9	Singh & Rao, Journal of Agricultural Policy	2020	Highlights policy-level challenges in implementing dairy subsidy schemes.
10	Ghosh & Pandey, Microfinance Journal	2019	Microfinance significantly improves resilience of dairy households.
11	Sawant & Kolekar, Maharashtra Dairy Review	2021	Farmers in Maharashtra benefit from AHIDF, but awareness remains low.
12	Patange, Journal of Cooperative Management	2018	Dairy cooperatives play a major role in spreading financial literacy.
13	Gupta et al., Asian Journal of Agriculture	2020	Investments in cold storage enhance income stability.
14	Indian Dairy Board Report	2022	Notes increasing dependence on formal finance among commercial dairy units.
15	Manjule & Wagh, Livestock Research Review	2019	Breed development schemes improve productivity but require timely fund release.
16	Krishnan & Joseph, Agricultural Banking Review	2017	Banks view dairy farmers as low-risk borrowers if supported by schemes.
17	FAO Dairy Sector Report	2020	Infrastructure gaps hinder dairy modernization in rural areas.
18	Narayan, Livelihoods Study	2021	Financial inclusion leads to social empowerment of dairy households.
19	Khedekar, Cooperative Development Review	2022	Cooperatives help bridge financing gaps but require digital modernization.
20	Pawar & Patil, Dairy Policy Journal	2023	Maharashtra needs localized financial schemes based on district characteristics.

IX. FINDINGS BASED ON REVIEW

1. Literature shows that financial inclusion significantly improves dairy farmers’ income, productivity, and sustainability but remains uneven across regions.
2. Many studies highlight limited awareness of government schemes, leading to low scheme utilization among small farmers.
3. Credit support from banks and NABARD has positively influenced modernization of dairy farms.
4. Subsidy-based schemes such as DEDS and NPDD show high impact when implemented effectively.
5. Dairy cooperatives play a crucial role in enhancing financial literacy and scheme awareness.
6. Infrastructure gaps, including cold storage and processing units, remain a major challenge across rural areas.
7. Socio-economic factors such as education and landholding influence access to financial schemes.
8. Microfinance and SHGs support emergency financial needs but are insufficient for large investments.
9. Scheme utilization is higher in organized and cooperative-linked dairy clusters.
10. Research consistently reveals bureaucratic delays and rigid procedures as barriers to scheme access.

X. SUGGESTIONS

1. Government agencies should strengthen awareness campaigns in rural areas through cooperatives and digital platforms to increase scheme utilization.
2. Banking procedures must be simplified to allow easier and quicker access to credit for small dairy farmers.

3. Specialized dairy financing cells should be established in districts to guide farmers on schemes, documentation, and technical assistance.
4. Public-private partnerships should be encouraged to develop infrastructure such as cold storage and milk processing units.
5. Local-level needs assessments must be conducted before implementing schemes to ensure relevance and impact.

XI. CONCLUSION

The literature review indicates that while financial schemes for dairy farmers are well-structured, actual accessibility remains limited due to low awareness and procedural barriers. Financial inclusion significantly enhances productivity, income, and sustainability when effectively utilized, highlighting a positive relationship between institutional support and dairy farm development.

Furthermore, infrastructure development and credit-based schemes play a major role in improving dairy operations, especially in Maharashtra's rural regions. However, gaps in financial literacy and uneven scheme dissemination hinder widespread benefits. Strengthening local implementation mechanisms and enhancing policy outreach are essential for maximizing scheme impact.

Overall, the review suggests that financial inclusion in the dairy sector is both an economic and social necessity. With targeted interventions, improved access mechanisms, and stronger cooperative networks, dairy farmers can achieve long-term growth and stability. Continued research and policy refinement will further strengthen India's dairy ecosystem.

XII. LIMITATIONS OF THE STUDY

1. The study is based purely on secondary data and does not include primary field insights.
2. Literature availability varies across regions, leading to unequal representation of different states.
3. Some financial schemes are newly introduced, and limited studies exist to evaluate their long-term impact.

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