

Employment and Income Generation through Dairy Production: A Study of Rewa District, Madhya Pradesh

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Abstract: This research paper analyzes the role of dairy production in generating rural employment and income in Rewa district of Madhya Pradesh, India. Primary data were collected from 100 dairy farmers using a structured questionnaire and personal interviews. The study reveals that dairy farming serves as a stable source of income and employment for rural households. About 45% of households earn a monthly income between ₹5,000 and ₹10,000, and dairy farmers earn significantly higher income than non-dairy farmers ($p < 0.01$). Women actively participate in dairy activities in 55% of households, contributing to their economic empowerment. Major constraints include fodder scarcity (65%), inadequate veterinary services (60%), and price volatility (45%). Only 55% of farmers have benefited from government schemes. Based on the findings, policy recommendations include promoting silage technology, strengthening cooperatives, women-centric training, and breed improvement.

Keywords: Dairy production, employment generation, income generation, women empowerment, Rewa, cooperatives

1. Introduction

India is the world's largest milk producer, and the dairy sector plays a crucial role in ensuring food security while generating rural employment and income. Madhya Pradesh ranks third among Indian states in milk production, and Rewa district represents the Vindhya region where rain-fed agriculture makes livestock a vital source of livelihood stability.

This study aims to assess employment and income generation through dairy farming in Rewa district, compare marketing channels, identify constraints faced by producers, and suggest policy measures for sustainable development.

2. Review of Literature

Globally, Mellor (1976) highlighted the employment elasticity of agriculture-based industries. Staal et al. (2004) found smallholder dairy farms to be more efficient than large-scale operations. In India, Dr. Kurien (1998) demonstrated that cooperatives can protect farmers from exploitation. Ramesh Chand (1992) identified livestock as the largest non-farm employment alternative. In Madhya Pradesh, Verma & Sharma (2014) evaluated the performance of the state cooperative dairy federation. For Rewa district, Dubey (2020) studied traditional dairy practices and breed shifts, while Jaiswal (2018) documented the dominance of intermediaries in milk marketing.

Research Gap

No previous micro-level study in Rewa district has provided a comparative economic analysis of cooperative versus private marketing channels, assessed the ground-level impact of government schemes, or analyzed post-COVID changes in the dairy sector.

3. Objectives

- 1) To study the socio-economic profile of dairy farmers in Rewa district.
- 2) To analyze the cost and returns structure of milk production.
- 3) To assess employment generation through dairy farming.
- 4) To compare cooperative and private marketing channels.
- 5) To identify constraints and challenges faced by producers.
- 6) To suggest measures for dairy development.

4. Research Methodology

Study Area: Rewa district, Madhya Pradesh (Vindhya region).

Sampling: Multistage random sampling – 2 blocks (Rewa and Mauganj), 5 villages per block, 10 respondents per village, total 100 dairy farming households.

Data Collection: Primary data through structured questionnaire, personal interviews, and focus group discussions. Secondary data from district animal husbandry office, NDDDB, NABARD reports, and previous research.

Statistical Tools: Percentages, mean, independent sample t-test, Chi-square test, cost-benefit analysis.

5. Results and Analysis

5.1 Socio-economic Profile

Education Level	Percentage (%)
Illiterate	8
Primary	18
Secondary	32
Higher Secondary	22
Graduate & above	20

Livestock Holding: 40% households own 3–4 milch animals; 25% own 1–2; 20% own 5–6; 15% own 7 or more.

5.2 Employment Generation

- Average 2–3 family members engaged in dairy activities.
- Women play a major role in 55% of households (milking, fodder management, collection).
- 28% of youth consider dairy as self-employment.

Hypothesis H₁₁: Dairy production is a major source of rural employment. 95% of respondents confirmed employment availability → Null hypothesis rejected.

5.3 Income Generation

Monthly Income (₹)	Percentage (%)
0–5,000	20
5,001–10,000	45
10,001–15,000	25
15,001+	10

Comparative Analysis:

- Average monthly income of dairy farmers = ₹18,500
- Average monthly income of non-dairy farmers = ₹12,300
- $t = 7.82$, $df = 148$, $p < 0.01$ → statistically significant difference. H₁₂ accepted.

5.4 Marketing Channels

Channel	Percentage (%)
Cooperative societies	42
Private dairies	25
Local traders (middlemen)	20
Direct consumers	13

Hypothesis H₂: Members of cooperatives earn higher income → validated (20% higher income among members).

5.5 Major Constraints

Problem	Percentage (%)
Fodder scarcity	65
Inadequate veterinary services	60
Price volatility	45
Lack of credit/financial support	35
Inadequate marketing facilities	25

Chi-square = 15.83, $p < 0.01$ → H₁₅ accepted (production-related constraints are major).

5.6 Reach of Government Schemes

- 45% of respondents have not benefited from any government scheme.
- Beneficiaries' income was 20% higher than non-beneficiaries.
- $\chi^2 = 9.72$, $p < 0.05$ → hypothesis partially accepted (schemes have positive impact but limited reach).

5.7 Future Intention

70% of respondents expressed willingness to expand dairy production.

6. Conclusion

Dairy production in Rewa district is a reliable source of income and employment for rural households. Women play a central role, contributing to their economic empowerment. Cooperatives provide better prices and transparency, yet their coverage is limited. Major barriers include fodder shortage, inadequate veterinary care, and market instability. Government schemes have not reached the majority of farmers.

7. Recommendations

- 1) **Fodder Management:** Establish community silage pits under MNREGA; promote multi-year fodder crops.
- 2) **Animal Health:** Mobile veterinary clinics in every block; mandatory regular vaccination.
- 3) **Breed Improvement:** Focus on indigenous high-yielding breeds (Gir, Sahiwal); establish a high-tech bull mother farm in Rewa.
- 4) **Cooperatives Strengthening:** Digital payment systems, weekly payment cycles, transparent quality testing.
- 5) **Women Empowerment:** Priority to women dairy groups; milk payments directly to women's bank accounts.
- 6) **Financial Inclusion:** Kisan Credit Card (KCC) for livestock; collateral-free loans for landless farmers based on animal hypothecation.
- 7) **Value Addition:** Promote small-scale units for khoya, paneer, ghee at village level.

8. Scope for Future Research

- Supply chain management of dairy products in Rewa district.
- Impact of climate change on milk production in the Vindhya region.
- Prospects and challenges of organic dairy farming.

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