

POLICY BRIEF 03

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Reviving the Dairy Industry in West Bengal: From Subsistence to Prosperity

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Highlights

National Position: West Bengal has a substantial milch-animal base, but its milk output share remains comparatively modest, pointing to a productivity and commercialization gap.

Growth Challenge: Recent milk-production growth has improved, but the pace of long-term expansion remains below the national average, limiting West Bengal's ability to strengthen its position in India's growing dairy sector.

Subsistence-Led Dairying: Dairy farming in West Bengal remains dominated by smallholders who treat it as a supplementary or subsistence activity, rather than a fully commercial enterprise, limiting its contribution to rural incomes and the state economy, unlike in leading dairy states.

Feed Cost Crisis: High balanced feed and fodder costs emerge as the most critical production constraint, universally acknowledged by producers, eroding farm margins and preventing profitable scaling at lower input prices.

Low Milk Price Barriers: Inadequate milk price realization is a central profitability hurdle, stemming from fragmented markets and weak bargaining power, which discourages investment in expansion or improvements.

Breed Divide Exposed: Local cattle are largely retained for household consumption with uneconomic returns, while crossbred animals support commercial orientation through significantly higher milk yields and overall farm earnings.

Yield-Profit Link Critical: Milk yield rate from crossbred cattle surpasses local breeds by over 2.5 times, underscoring breed upgradation as the most effective lever for economic viability.

Lower Productivity: The gradual reduction in its share of West Bengal reflects lower productivity per animal and slower growth than the national average, underscoring the need for stronger interventions in breed improvement, fodder management, and dairy infrastructure to restore competitiveness.

Knowledge and Service Shortfalls: Constraints like poor feeding and healthcare knowledge, year-round fodder scarcity, and limited awareness/extension of Primary Dairy Cooperative Societies (PDCS) continue to hinder productivity and adoption of best practices.

Gender Insensitivity and Production Loss: States with dominant dairy farming have witnessed especially sharp increases in women's involvement in both own-use and market-oriented livestock activities. Yet much of this work remains informal, unpaid, and weakly connected to market power or income control.

Policy Shift Imperative: Transform dairy through targeted strategies: PDCS-led fodder cultivation, genetic improvement for higher yields, expanded milk unions and private supply chains for better pricing, and widespread promotion of support schemes to foster commercial growth.



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Context

Dairy and livestock activities are important supplementary livelihood activities in the rural socio-economic framework, providing important sources of income (Toor & Kaur, 2022; Gautam & Jha, 2022; Pathade et al., 2022). Almost 70 percent of rural households in India keep some form of livestock alongside their main employment (Birthal et al., 2002; Gupta, 2018). The livestock sector accounted for about 31% of total agricultural Gross Value Added (GVA) and contributed about 5.5% to India's national economy in terms of GVA (Government of India, 2025). For the dairy sector, the program 'Operation Flood', popularly known as the 'White Revolution', launched in 1970 by the National Dairy Development Board (NDDB), and its success made India's dairy sector a world leader (Sharma, 2015). During 2024-25, India produced about 247.87 million tons of milk, accounting for about 25 percent of global milk production (Government of India, 2026; World Population Review, 2026), and ranked first worldwide in milk production. Because livestock activities are largely home-based and compatible with domestic responsibilities, the sector is also increasingly portrayed as a pathway to women's economic empowerment though significant structural hurdles remain (Kumar, 2026).

India's milk production in 2024-25 remained concentrated in a few major states, with Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat, Maharashtra, Punjab, Andhra Pradesh, Karnataka, Bihar, Haryana, Tamil Nadu, West Bengal, and Telangana together contributing more than 90 percent of national output. Major milk-producing states have strong resource endowments and infrastructure, while eastern states like West Bengal lag in dairy development. The government has initiated various dairy development programs in these states, and although milk production has increased considerably over the years, productivity has not yet improved.

One main reason for this low productivity is that dairying is not practiced commercially in the State. West Bengal's contribution is far below Uttar Pradesh, Rajasthan and Madhya Pradesh. This gap reflects weaker resource endowments, limited infrastructure, and the absence of large-scale commercialization in the state's dairy economy. In this context, a booster policy is needed to improve the profitability and long-term viability of dairy farming, particularly in West Bengal. This policy document highlights the problems and prospects of the dairy sector in West Bengal, including inefficiencies in dairy farming and constraints on milk production, and offers policy suggestions to help the sector evolve from a survival-oriented activity into a more remunerative, commercial livelihood for farmers.

Dairy of West Bengal in the National Scenario

West Bengal's dairy sector, when placed against the national backdrop, reveals both its potential and its limitations. Table 1 and Figure 1 show that West Bengal occupies a relatively intermediate but structurally weaker position in India's dairy landscape when compared with the top 10 milch-animal-holding states. The state commands 5.48% of the country's milch-animal population, which is larger than the shares of Karnataka (4.21%), Andhra Pradesh (3.77%), and Tamil Nadu (3.73%), yet its share of total milk production is only 3.21%, far below almost all of them: Karnataka (5.61%), Andhra Pradesh (5.63%), and Tamil Nadu (4.62%), even though their animal bases are smaller. This clear divergence indicates that West Bengal's average productivity of milk per milch animal is relatively lower than these states and also lower than the leading dairy-producing states such as Uttar Pradesh (18.29% animals, 15.66% milk), Rajasthan (10.15% animal, 14.82% milk), Madhya Pradesh (9.27% animal, 9.12 milk), Bihar (7.93% animal, 5.41% milk), Gujarat (7.46% animal, 7.78% milk), and Maharashtra (6.61% animal, 6.71% milk), where the animal-share and milk-share are much more closely aligned or even reversed in favour of milk output.

Over the 20-year period, West Bengal's milk-production growth (CAGR) is 3.78%, the second-lowest among the top 10 listed states in terms of milch population, just above Andhra Pradesh's 3.32% but below the national average of 5.05%. In contrast, states, Rajasthan (7.72%), Madhya Pradesh (7.31%),

Karnataka (6.54%), Gujarat (5.40%), Bihar (5.33%), Maharashtra (4.75%), and Tamil Nadu (4.46%) have all recorded significantly higher long-term growth, suggesting that West Bengal's historical expansion of milk output has been sluggish among the major dairy states. This slower growth implies

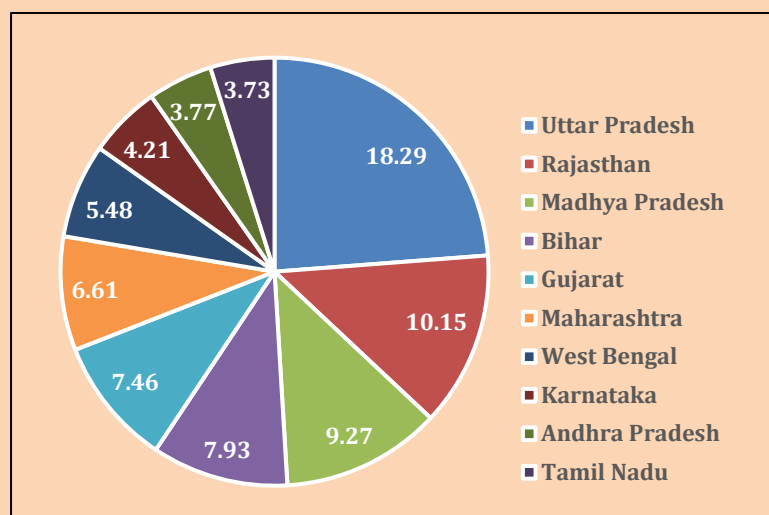


Figure 1: Top 10 States as per Share of Total Milch Animals
(Source: Livestock Census, 2019)

that, over the past two decades, the state has not been able to capitalize effectively on its sizable bovine base to raise yield or scale organized dairying at the same pace as the top states.

Compared with the other major dairy states, West Bengal behaves like a high-animal, low-efficiency, lagging state, but not an insignificant one, because it has more milch animals than three of the top states (Karnataka, Andhra Pradesh, Tamil Nadu), yet converts that base into a much smaller share of national milk. This structural inefficiency, as reflected in Table 1, suggests weaker linkages between

livestock holdings and commercial milk marketing, lower average herd productivity, and possibly a higher proportion of low-yield local breeds compared with the more commercialized systems in Rajasthan, Gujarat, Uttar Pradesh, and Maharashtra. At the same time, from its 20-year figure, indicating that West Bengal has not been stagnant but has simply grown more slowly than the other dynamic dairy states.

Table 1: Dairy position of West Bengal in National Comparison

States	Share of Milch Animals (%)	Share of Milk Production (%)	20-Year Growth (CAGR) of Milk Production (2004-05 to 2024-25)
Uttar Pradesh	18.29	15.66	4.37
Rajasthan	10.15	14.82	7.72
Madhya Pradesh	9.27	9.12	7.31
Bihar	7.93	5.41	5.33
Gujarat	7.46	7.78	5.40
Maharashtra	6.61	6.71	4.75
West Bengal	5.48	3.21	3.78
Karnataka	4.21	5.61	6.54
Andhra Pradesh	3.77	5.63	3.32
Tamil Nadu	3.73	4.62	4.46
All India	100.00	100.00	5.05

Source: Livestock Census, 2019 and Basic Animal Husbandry Statistics 2025, MoFAHD, DAHD, GoI

Over the past two decades, West Bengal's share of national milk production has declined sharply, from around 4.10% in 2004–05 to nearly 3.21% in 2024–25 (Figure 2). This downward trend reflects the state's relative weakening in national contribution, whether in milk production or sectoral performance. Although a marginal recovery has been observed since 2022–23, the improvement appears insufficient to offset the long-term downward trajectory. The persistence of this decline suggests that West Bengal has not kept pace with faster-growing states, and its comparative position has declined steadily.

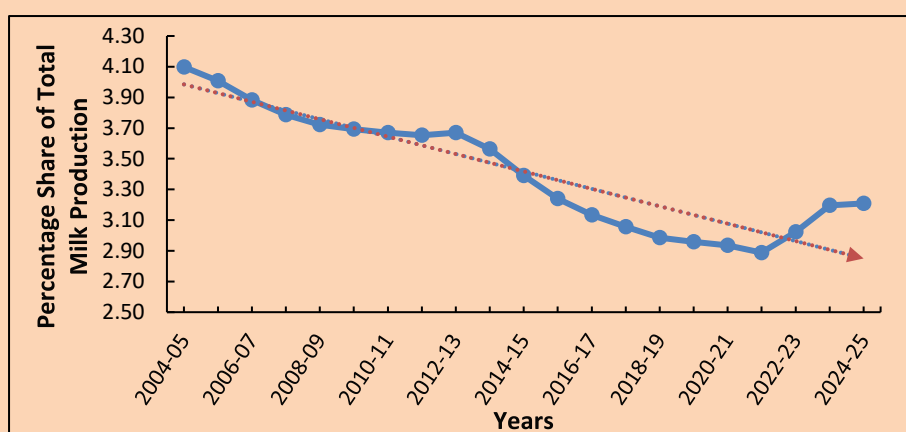


Figure 2: Percentage Share of Total Milk Production during 20 Years of West Bengal

(Source: Basic Animal Husbandry Statistics 2025, MoFAHD, DAHD, GoI)

The gradual reduction in its share reflects lower productivity per animal and slower growth than the national average, underscoring the need for stronger interventions in breed improvement, fodder management, and dairy infrastructure to restore competitiveness. One key underlying reason for this pattern is lower returns from economic activities, particularly in

agriculture and allied sectors, where productivity growth has lagged, and diversification has been limited. This structural issue has constrained the state's ability to sustain its earlier share.

Dairy Economics in West Bengal

The persistent weakness in West Bengal's contribution to national milk production (Figure 2) highlights a fundamental gap between the state's livestock base and its actual milk output. This structural underperformance reflects persistent economic inefficiencies at the farm level, where low productivity per animal has constrained the competitiveness of the dairy sector compared with leading dairy-producing states. The contrast also points to differences in production efficiency, farm management, and the development of organized value chains. As shown in Table 2, field survey findings on costs and returns further illustrate the economic challenges faced by dairy farmers. The imbalance between production costs and returns often results in inadequate or negative margins, limiting farmers' capacity to expand dairy activities, invest in productive assets, and respond effectively to changing market conditions.

Table 2 breaks down milk production into per-day/per-animal and per-litre metrics, highlighting variable costs' dominance (97-98% of total expenses), with fodder (46%) and labour (48%) as the main drivers, while fixed costs remain negligible (Rs. 1.20-3.95 daily). For local breeds, the average yield of just 2.13 litres per animal per day inflates per-litre variable costs to Rs. 55.23, fodder alone at Rs. 25.91 (47% of variables) and labour at Rs. 27.30, against gross returns of Rs.32.53 (milk Rs.31.00 plus Rs.1.53 from dung), concluding in a net loss of Rs. 23.90 per litre (total cost Rs. 56.43). This economic unviability occurs because low milk yields cannot offset the fixed daily costs of feeding and caring for the animal, worsening smallholders' financial distress, particularly as feed prices rise and as the share of local cattle shrinks, as shown in Figure 2.

In contrast, crossbreeds demonstrate economic viability with 5.43 litres daily yield, over 2.5 times higher reducing per-litre variable costs to Rs. 26.73 (fodder slashed to Rs. 12.56 via scale economies, veterinary to Rs.0.53 versus Rs. 0.77), total costs to Rs.27.46, and delivering a net profit of Rs. 7.23 per litre against Rs.34.00 milk sales plus Rs. 0.69 dung income. This breed-specific polarity is trapping farmers in losses through inflated unit costs and low throughput, versus crossbreeds' profitability via input efficiencies and higher marketable surplus, which explains West Bengal's productivity deficit relative to national leader states, where breed upgradation has driven yield revolutions.

Table 2: Cost and Return of Milk Production

Particulars	Per Day		Per Litre	
	Local Breed	Cross Breed	Local Breed	Cross Breed
Costs				
Fodder	55.27	68.22	25.91	12.56
Labour	58.25	70.97	27.30	13.06
Veterinary Cost	1.64	2.86	0.77	0.53
Other	2.66	3.19	1.25	0.59
Total Variable Cost	117.83	145.23	55.23	26.73
Total Fixed Cost	2.55	3.95	1.20	0.73
Total Cost	120.38	149.18	56.43	27.46
Milk Yield (litre/animal/day)	2.13	5.43	2.13	5.43
Sale of Milk	66.13	184.73	31.00	34.00
Other Income (Cow dung)	3.25	3.75	1.53	0.69
Total Income	69.39	188.48	32.53	34.69
Net Income (Total income -Total cost)	-50.99	39.30	-23.90	7.23

(Source: Primary survey)

These insights prescribe a multi-pronged strategy: prioritizing artificial insemination and crossbreeding programmes to elevate average yields toward at least 5 and more litres, subsidizing quality fodder and labour-saving technologies as interim support for local-breed-reliant smallholders, bolstering veterinary infrastructure and fostering cooperatives for organized procurement and by-product (e.g., dung manure). Such interventions could arrest the declining share trajectory, accelerate CAGR, and reposition West Bengal competitively, aligning its livestock base with output potential like that of top states.

Constraints of the Dairy Sector

The survey of milk producers in West Bengal (Table 3) identifies the same problems as the cost-return study (Table 2). These problems help explain why the state's share of milk in India has declined over many years (Figure 2). The biggest issue is feed costs. Feed makes up almost half of the total cost, about 46-47%, which is Rs. 25.91 per litre for local breeds and Rs. 12.56 per litre for crossbreeds. Farmers also face a fodder shortage. Because of these costs and shortages, net returns are very poor: a negative Rs. -23.90 per litre for local breeds and only ₹7.23 per litre for crossbreeds. These factors make milk production unprofitable and keep West Bengal trapped in low growth.

Market and output problems keep West Bengal stuck in low growth. Farmers reported low milk yield as a major issue. This matches Table 2, where local breeds produce only 2.13 litres per day compared to 5.43 litres for crossbreeds. Such low yields raise costs and prevent farmers from achieving economies of scale. At the same time, most farmers specify that the low milk prices are the biggest problem for investment in the dairy farming. These low prices reduce investment incentives and reflect weak, unorganized value chains. Unlike Gujarat's strong cooperative system, West Bengal's market remains fragmented. Thus, production and market problems make it hard to sustain local-breed dominance. As a result, West Bengal's national share has fallen by almost 22% during past 20 years.

Service and human capital problems add to the difficulties that milk producers face in West Bengal. High medicine costs are a major issue, which aligns with the veterinary expenses as shown in Table 2. Access to veterinary services is also very poor. Farmers also report limited knowledge of feeding and healthcare practices as an important constraint and a lack of nutritious feed, highlighting management problems at the farm level. In addition, inadequate finance prevents farmers from moving to crossbreeding or investing in better infrastructure.

Although women feed animals, collect fodder, clean sheds, process milk, and care for small ruminants, making them central to livestock production systems across rural India, the structure of livestock value chains remains deeply gendered. While women contribute a substantial share of labour, men continue to dominate higher-value activities such as marketing, asset ownership, access to credit, and engagement with extension systems through commercialization as well as the income generated.

Together, these barriers, mainly high feed costs, gender domination, weak markets, poor feed management and healthcare services, and limited finance, create a cycle that keeps farmers stuck in low productivity and low returns. This explains why West Bengal has fallen behind in national milk production. To break this cycle, policies must focus on fodder security, better breeds, veterinary extension, financial inclusion, and cooperative-led price systems. These steps can help improve productivity, stop the decline, and bring West Bengal closer to the national dairy growth path.

Table 3: Various Constraints faced by the Milk producers in West Bengal

Particulars	Percentage of Milk Producers*				
	SD	D	N	A	SA
High Feed cost	0	1	15	70	14
Non-Availability of Fodder	0	10	26	55	9
High price of milch animal	0	8	57	30	5
Low average milk yield of the milk animals	1	21	29	28	21
Low milk price	0	1	24	33	42
High cost of medicines	0	7	25	46	22
Lack of nutritious feed for quality milk production	0	10	46	38	6
Poor knowledge about feeding and healthcare	0	10	25	41	24
Lack of finance to invest in dairy business for quality milk production/ Inadequate finance	2	4	42	39	13
Lack of veterinary services in villages for quality milk production	7	61	10	14	8

(Source: Field Survey; * SD- Strongly Disagree, D-Disagree, N-Neutral, A- Agree, and SA-Strongly Agree)

Conclusion

West Bengal's dairy sector shows both potential and persistent weakness. The state has a large base of milch animals, yet inefficiencies have reduced its national role and kept rural households tied to fragile subsistence. Falling shares, unequal returns between local and crossbreeds, and many farm-level problems together make a strong case for urgent change. The main challenge is low yields and high input costs that prevent small farmers from turning a profit. The way forward is to combine several initiatives to improve breeds, ensure a steady fodder supply, strengthen market links, build farmers' skills, and expand financial support. Cooperative models, which have worked well in other states, can help farmers get fair prices. Better infrastructure and inclusive extension services are also needed to make dairying a reliable source of income.

Livestock remains one of the few sectors where women can participate relatively easily, especially in contexts where mobility constraints and social norms restrict access to non-farm work. The challenge, therefore, is to improve the quality, productivity, and returns from that participation. If these steps are taken, dairying can drive growth in West Bengal. It can protect farmers from risks and use the state's

resources more effectively and strengthen India's milk sector. Most importantly, it can secure stable and dignified livelihoods for rural producers. The time for action is now, and the benefits could be transformative.

Policy Recommendations

The policies should move beyond treating dairy as a residual household activity and instead support a more productive and commercial rural dairy ecosystem. A few priorities stand out from the evidence.

- Reduction of fodder costs is essential to enhance the earnings from milk production. But under the market mechanism, it is nearly impossible to control fodder costs directly. In these circumstances, the best strategy is to develop feed and fodder cultivation through the initiative of the Primary Dairy Cooperative Society (PDCS) and other governmental or non-governmental organizations.
- Increasing the yield rate of milch animals is another important issue that should be considered. The main problem with low milk yield is the poor quality of cattle breeds. The government should take steps to provide high-yielding breeds through genetic improvement of milch animals.
- An efficient marketing system with effective supply chain management of milk in the village can solve the problem of the lower market price of milk. Policies are needed to increase the number of milk unions and primary milk societies at the village level, with greater operational efficiency across the state's districts. The state's northern region, especially the hilly areas, needs special focus, as milk unions are currently not operating in most districts there.
- To promote increased quality participation of women in dairy, women need stronger ownership rights over livestock assets and direct access to institutional credit. Extension systems, producer organisations, and dairy cooperatives must become gender responsive. Labour-saving investments, including fodder systems, improved water access, and mechanized feeding technologies, are essential to reduce women's time poverty. Finally, childcare services and rural care infrastructure must become integral components of the dairy industry.
- Another important policy could be to encourage the operation of private milk producer companies at the village level, which can be very fruitful in developing the supply chain management of produced milk.
- Policies are needed to promote the benefits of dairy support schemes to milk producers, and the smooth implementation of such schemes is required immediately in the village.

Policy-Oriented Highlights

- **Control feed and fodder cost escalation through local fodder development.**
- **Increase in milk yield, particularly for the local breed milch.**
- **Expand scientific advisory support on breeding, feeding, and animal health.**
- **Improve milk procurement, pricing, and supply chain efficiency.**
- **Improve the quality, productivity, and returns from women's participation through ownership rights over livestock assets and direct access to institutional credit.**
- **Strengthen cooperative institutions and PDCS outreach at the village level.**

References

- Birthal, P.S., Joshi, P.K. & Kumar, A. (2002). Assessment of Research Priorities for Livestock Sector in India. Policy Paper No.15. ICAR-National Institute of Agricultural Economics and Policy Research. New Delhi
- Gautam, P. K., & Sujeet Kumar Jha. (2022). "Status of Livelihood Security of Dairy Households in Bundelkhand: A Comparative Analysis". *Journal of Experimental Agriculture International* 44 (10):209–14. <https://doi.org/10.9734/jeai/2022/v44i1030897>
- Government of India (2026). *Basic Animal Husbandry Statistics 2025*. Department of Animal Husbandry & Dairying. <https://dahd.gov.in/sites/default/files/2026-02/BAHS2025.pdf>
- Gupta, S. (2018). Livestock sector in India – Significance for Small and Marginal Farmers. *The Journal of Rural and Agricultural Research*, 18(2), 7–12.
- Kumar, A. (2026). The Paradox of a 'Women-Friendly' Sector. Business Standard, September 1, 2026. https://www.business-standard.com/opinion/columns/the-paradox-of-a-women-friendly-sector-126090101597_1.html
- National Dairy Development Board. (n.d.). Milk production in India. NDDB. Retrieved April, 2026, from <https://www.nddb.coop/>
- Pathade, S. S., Singh, B. P., Chander, M., Bardhan, D., Verma, M. R., & Singh, Y. P. (2022). Potential of Livestock Production Systems: Explaining Employability and Milk Productivity through Multivariate Typology. *The Indian Journal of Animal Sciences*, 92(7), 902-907
- Sharma, V. P. (2015). Determinants of Small Milk Producers' Participation in Organized Dairy Value Chains: Evidence from India. *Agricultural Economics Research Review*, 28(2), 247–261. <https://doi.org/10.5958/0974-0279.2016.00004>
- Toor, J. S., & Kaur, N. (2022). Analysis of employment and income generation through dairy farming in rural Punjab. *The Journal of Research ANGRAU*, 50(2), 147–153. <https://epubs.icar.org.in/index.php/TJRA/article/view/133403>
- World Population Review (2026). *Milk Production by Country 2026*, [Milk Production by Country 2026](#)



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