

## INDIA'S UNIQUE DAIRYING MODEL – ECONOMY

India's low-cost, cooperative-led dairying model ensures global price competitiveness, but its dependence on cheap labour and low productivity poses long-term sustainability challenges.

### Overview and Global Leadership

**World's Largest Milk Producer** – India accounts for 24.76% of global milk output, making it the top milk-producing nation globally.

**Rising Production** – Milk production has increased from 146.31 million tonnes in 2014–15 to 239.30 million tonnes in 2023–24, reflecting robust sectoral growth.

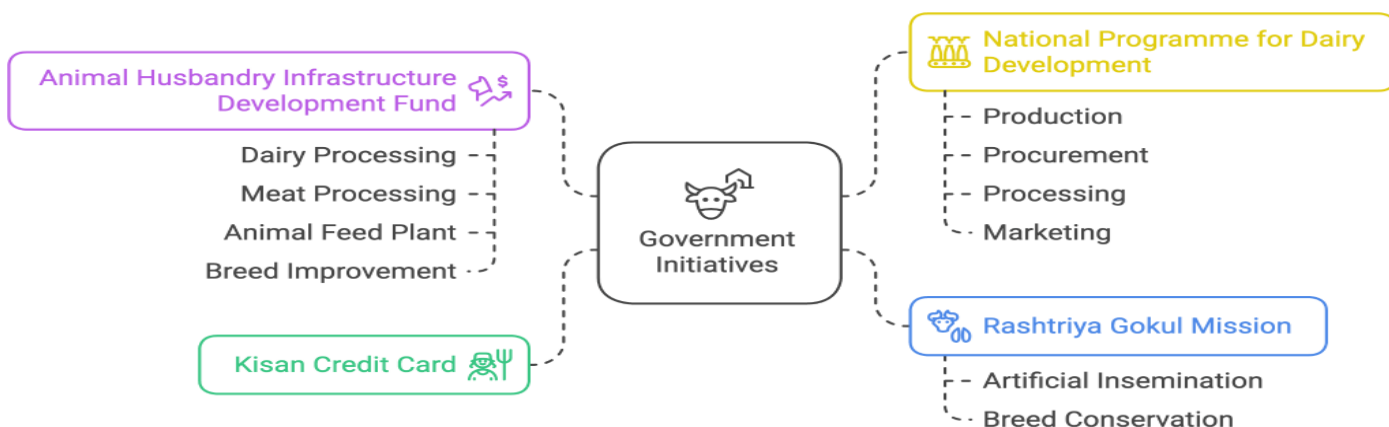
**Economic Significance** – Dairy is India's single largest agricultural commodity, contributing around 5% to the national GDP and providing livelihoods to more than 8 crore farmers across rural areas.

**Sectoral Growth Rate** – The livestock sector has grown at a compound annual growth rate (CAGR) of 7.9% between 2014–15 and 2020–21, outperforming the overall agricultural sector growth.

**Per Capita Milk Availability** – Per capita availability of milk increased to 471 grams per day in 2023–24, significantly above the world average of 322 grams per day, enhancing nutritional security.

**Major Producing States** – Uttar Pradesh, Rajasthan, and Madhya Pradesh are the largest milk-producing states, contributing a substantial share to India's national output.

### Government Initiatives for Livestock and Dairy Development



### Structural Weaknesses

**Breed Productivity Gaps** – Productivity of indigenous and crossbred cows remains low at 1.64 tonnes/year, compared to advanced dairy nations like the EU (7.3 tonnes/year) and the US (11 tonnes/year), highlighting a yield gap.

**Land and Fodder Constraints** – India lacks extensive pasture lands, unlike countries such as New Zealand; dependence on crop residues and purchased feed raises production costs.

**Labour-Intensive Nature** – Dairy operations involve feeding, milking, bathing cattle, and cleaning sheds, which are mostly performed by unpaid family labour. Rising rural education and alternate employment opportunities may reduce availability of this labour.

**Climate Vulnerability and Market Volatility** – Extreme heat, droughts, and seasonal variability reduce milk yields and increase costs, while market fluctuations affect income stability for farmers.

**Slowing Production Growth** – While growth rates were around 6% in earlier years, the sector slowed to 3.78% in 2023–24, with buffalo milk production declining by 16%.

**Post-Harvest Losses** – Inadequate cold-chain facilities, chilling centres, and processing infrastructure lead to wastage of milk and dairy products.

## Significance of the Dairy Sector

**Economic Contribution** – Dairy is India's largest agricultural commodity, providing employment to over 8 crore farmers and contributing 5% to GDP.

**Nutritional Security** – Milk is a key source of high-quality protein, calcium, and vitamins, improving dietary diversity and addressing malnutrition, particularly among children and women.

**Export Potential** – India is emerging as a major exporter of dairy products such as skimmed milk powder, butter, and ghee, primarily to Asian and African countries.

**Women's Participation** – About 35% of members in dairy cooperatives are women, highlighting the sector's role in promoting gender-inclusive economic development and empowerment.

## Government Initiatives for Livestock and Dairy Development

The government has launched multiple programs aimed at improving breed quality, promoting artificial insemination and in-vitro fertilization, enhancing animal nutrition, supporting cold-chain infrastructure, and facilitating market access through cooperative models.

## Way Forward

**Boost Productivity** – Intensify breed improvement programs using AI, IVF, and indigenous genetics. Enhance animal feed and nutrition to improve milk yield and quality.

**Strengthen Infrastructure** – Expand cold chains, chilling centres, and organized milk collection and storage facilities to reduce post-harvest losses.

**Expand Cooperative Reach** – Bring more farmers under organized frameworks to reduce inefficiencies and ensure better price realization. Encourage local-level cooperatives to strengthen market linkages and reduce middlemen.

**Risk Mitigation** – Promote climate-resilient breeds and preventive animal health measures including vaccination drives. Establish stable pricing frameworks to shield farmers from market volatility.

**Enhance Inclusivity** – Target interventions to empower women and increase their participation in decision-making within cooperatives. Support training programs to build skills and promote entrepreneurship in rural dairy farming.

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