

From Participation to Leadership: Advancing Women's Entrepreneurship in India's Livestock Sector

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ABSTRACT

Animal husbandry is one of the most feminized sectors of Indian agriculture and serves as a major source of livelihood, nutrition, and income for rural households. Women play a pivotal role across the livestock value chain, particularly in dairy farming, goat and sheep rearing, backyard poultry, and piggyery. Women contribute substantially to livestock feeding, fodder collection, shed cleaning, animal healthcare, milking, processing, and marketing. Despite their significant contribution, they continue to face structural constraints related to ownership of productive assets, institutional credit, veterinary and extension services, improved technologies, markets, and decision-making. This paper examines the emerging role of women-led Farmer Producer Organizations (FPOs), Women's Dairy Cooperative Societies (WDCS), Self-Help Groups (SHGs), and gender-responsive government programmes in strengthening women's participation in livestock-based enterprises. Women-led FPOs and cooperatives facilitate collective procurement, aggregation, processing, value addition, marketing, technical support, and access to institutional finance. Initiatives such as DAY-NRLM, National Livestock Mission, Rashtriya Gokul Mission, Agriculture Infrastructure Fund, Kisan Credit Card, and Nandini Sahakar, along with interventions by ICAR-CIWA, have expanded opportunities for women's entrepreneurship and leadership. The convergence of SHGs, FPOs, cooperatives, community-based extension systems, and digital technologies is creating new pathways for women-led livestock enterprises. Strengthening asset ownership,

financial and digital inclusion, leadership, climate-smart practices, women-friendly technologies, insurance, incubation, and market linkages will be critical. A coordinated gender-responsive institutional ecosystem is essential to transform women into recognized livestock entrepreneurs, producers, and decision-makers, thereby promoting inclusive, resilient, and sustainable growth of India's animal husbandry sector.

INTRODUCTION:

Status of Women Entrepreneurship in Animal Husbandry

Animal husbandry provides one of the most accessible avenues for rural women's entrepreneurship because livestock enterprises require relatively less land while generating regular income throughout the year. Women entrepreneurs are increasingly establishing enterprises in dairy farming, milk processing, goat and sheep farming, backyard poultry, piggery, fodder production, feed manufacturing, livestock input supply, artificial insemination services, veterinary para-professional services, and value-added milk, meat, and egg products (Tanuja *et al.*, 2026).

The ICAR–National Academy of Agricultural Research Management (ICAR-NAARM) identifies livestock farming, dairy enterprises, poultry farming, livestock marketing, primary processing, and allied agribusinesses as important emerging sectors for women agripreneurs. However, women entrepreneurs continue to face challenges including limited ownership of productive assets, inadequate access to institutional finance, restricted mobility, heavy unpaid care responsibilities, poor market linkages, low participation in formal producer organizations, and limited representation in leadership positions (Pankaj *et al.*, 2023). Strengthening access to finance, incubation support, technology, digital platforms, mentorship, and markets is therefore essential for developing sustainable women-led livestock enterprises.

Women-led Farmer Producer Organizations (FPOs)

Farmer Producer Organizations (FPOs) have emerged as an effective institutional mechanism for strengthening women's participation in livestock value chains. Women-led FPOs facilitate collective procurement of livestock inputs, aggregation of milk and livestock products, processing, value addition, collective marketing, technical support, enterprise development, and access to institutional credit.

The Central Sector Scheme for the Formation and Promotion of 10,000 Farmer Producer Organizations actively promote women's participation. Every FPO is required to have at least one-woman member on its Board of Directors. Under the scheme, 1,175 FPOs comprise entirely women shareholders, while 1,084 FPOs have 50–99% women membership. States such as Odisha, Jharkhand, Bihar, Maharashtra, Telangana, Andhra Pradesh, and Kerala have made significant progress in promoting women-led livestock FPOs through the convergence of the National Rural Livelihoods Mission (NRLM), State Rural Livelihood Missions (SRLMs), National Livestock Mission (NLM), Agriculture Infrastructure Fund (AIF), and strong Self-Help Group (SHG) networks.

Women-led livestock FPOs are increasingly involved in dairy value chains, goat producer companies, backyard poultry enterprises, feed production, milk collection centres, livestock input supply, and value-added dairy products

(Panda *et al.*, 2026). Many have diversified into milk processing, meat processing, branded livestock products, digital marketing, fodder enterprises, and livestock input services, thereby strengthening women's bargaining power, market access, and participation in institutional decision-making.

Comparative Status of Women-led Livestock FPOs Across Major States

State	Major Livestock Activities	Institutional Support
Odisha	Dairy, goat, Mission poultry, duck	Shakti, OLM, NRLM
Jharkhand	Goatery, poultry, piggery	JSLPS
Bihar	Dairy, goat, poultry	JEEViKA
Maharashtra	Dairy, sheep, goat	Dairy cooperatives, FPOs
Telangana	Dairy, sheep, goat	SERP
Andhra Pradesh	Dairy, goat, poultry	SERP, Pashu Sakhi
Gujarat	Dairy, milk processing	Dairy cooperatives (Amul model)
Rajasthan	Goat, sheep, camel	NRLM, pastoral programmes
Karnataka	Dairy, sheep, poultry	State Mission Livestock
Tamil Nadu	Dairy, poultry	TANUVAS, SHGs
Kerala	Dairy, goat, duck	Kudumbashree

Women Cooperatives in Animal Husbandry

The cooperative movement has played a significant role in promoting women's participation in livestock-based enterprises, particularly in the dairy sector. Women's Dairy Cooperative Societies (WDCS) have strengthened women's control over milk income, improved financial inclusion,

enhanced household decision-making, and facilitated access to veterinary services, artificial insemination, feed supply, capacity-building programmes, and direct payment of milk proceeds into women's bank accounts. However, women continue to be under-represented in cooperative leadership despite their dominant role in livestock production.

The National Cooperative Development Corporation (NCDC) promotes women cooperatives by providing financial assistance for dairy, poultry, livestock farming, fisheries, processing, storage, and value addition. Up to March 2023, NCDC had sanctioned ₹5,714.81 crore to women-promoted cooperative societies. In addition, the Nandini Sahakar Scheme, launched in 2021, supports women cooperatives with at least 50% women membership by providing project-based financial assistance for infrastructure development, working capital, credit linkage, interest concessions, and enterprise support. The scheme covers dairy, animal husbandry, poultry, fisheries, food processing, and other cooperative enterprises, thereby promoting women-led entrepreneurship and strengthening cooperative-based livestock value chains.

Gender-responsive Policies and Institutional Support

India has increasingly adopted gender-responsive approaches to livestock development by recognizing women as farmers rather than merely agricultural labourers. Gender concerns are being integrated into livestock extension, entrepreneurship promotion, climate-resilient livestock systems, nutrition-sensitive agriculture, and capacity-building programmes. ICAR–Central Institute for Women in Agriculture (CIWA) has pioneered several genders-responsive interventions, including scientific dairy management, backyard poultry production, goat farming, livestock-based agripreneurship, women-



friendly livestock technologies, and gender-sensitive community-based livestock extension models. CIWA has also developed drudgery-reducing technologies, such as revolving milking stools and rotary goat feeders, to improve women's occupational health and productivity. Community-based livestock extension has expanded under the Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM), which promotes women para-extension workers such as Pashu Sakhis, Krishi Sakhis, and Drone Sakhis. Between 2022–23 and 2024–25, approximately 2.58 crore women farmers received training in agroecology and livestock management, 2.5 lakh community resource persons, including Pashu Sakhis, were trained, and nearly 800 women-led producer companies were promoted.

Women-centric Schemes and Programmes

Several government programmes directly support women in livestock-based livelihoods and entrepreneurship:

- Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM): Supports women Self-Help Groups (SHGs) engaged in dairy farming, goat rearing, backyard poultry, piggyery, and other livestock enterprises through credit linkage, enterprise development, capacity building, producer collectives, and community livestock resource persons.
- National Livestock Mission (NLM): Promotes breed improvement, fodder development, entrepreneurship, poultry, sheep, and goat development, with women, SHGs, FPOs, and producer companies as eligible beneficiaries.
- Rashtriya Gokul Mission: Supports indigenous cattle development, artificial insemination, breed improvement, and dairy productivity, thereby benefiting women dairy farmers.
- Agriculture Infrastructure Fund (AIF): Provides concessional financial assistance for milk chilling units, storage facilities, processing units, cold chains, and value-addition infrastructure. As of February 2025, 8,190 projects worth ₹2,377 crore had been sanctioned to women beneficiaries.
- Kisan Credit Card (KCC) for Animal Husbandry: Extends affordable institutional credit to livestock farmers, including women, under the Modified Interest Subvention Scheme.

Emerging Opportunities

The future of women-led entrepreneurship in animal husbandry lies in expanding women-led dairy FPOs, goat producer companies, livestock producer collectives, digital livestock advisory services, climate-smart livestock production, precision livestock farming, organic dairy production, nutraceutical products, livestock start-ups, AI-enabled animal health services, and value-added milk, meat, and egg enterprises.

Realizing this potential will require greater ownership of productive assets, improved access to finance and insurance, gender-responsive extension services, women-friendly technologies, digital inclusion, leadership development, incubation support, and stronger market linkages.

CONCLUSION

Women constitute the backbone of India's animal husbandry sector, contributing significantly to livestock production, household nutrition, and rural livelihoods. However, persistent gender disparities in asset ownership, access to institutional services, leadership opportunities, and control over income continue to limit their full economic potential. Recent initiatives—including women-led FPOs, dairy cooperatives, SHGs,

the Nandini Sahakar Scheme, National Livestock Mission, Agriculture Infrastructure Fund, Kisan Credit Card, and ICAR-CIWA's gender-responsive interventions—have significantly strengthened women's participation in livestock entrepreneurship and collective enterprises. Continued investment in women's financial inclusion, technological empowerment, institutional leadership, and market integration will be essential for achieving inclusive, resilient, and sustainable growth in India's animal husbandry sector.

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