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"Reconcile land system changes with planetary health"

Dairy entrepreneurship yatra: A pathway to participatory learning and inclusive agricultural governance in India

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Abstract

India's dairy sector, the largest globally, is projected to exceed 216 million metric tonnes by 2025, sustaining millions of rural livelihoods. Yet, it faces persistent productivity challenges, including poor feeding, breeding, and animal health practices, along with limited use of data and climate-resilient technologies. These issues are worsened by inadequate farmer awareness and training in sustainable methods. Gender disparities further constrain progress, as women make up nearly 70% of the workforce but are often excluded from decision-making and ownership. Addressing these interconnected challenges requires inclusive, climate-smart, and gender-sensitive approaches. Participatory learning methods such as peer-to-peer exchanges, hands-on field immersion, and community dialogue have proven more effective than traditional classroom-based instruction, especially for farmers and grassroots entrepreneurs aiming to adopt and apply improved dairy practices in their local contexts. The Climate Smart Dairy project in Tamil Nadu, supported by Kumaraguru Institutions and Environmental Defense Fund (EDF), implemented an 8-week preparatory programme that integrated classroom instruction, field exposure, and personalized mentoring. Building on this foundation, the Dairy Entrepreneurship Yatra (DEY) was developed as a 15-day experiential learning journey for 40 selected farmers and rural entrepreneurs, including eight women. DEY facilitated cross-regional learning through structured visits to 11 leading institutions and model dairy enterprises across Karnataka, Maharashtra, Gujarat, and Rajasthan. The Dairy Entrepreneurship Yatra offered valuable insights into region-specific innovations and scalable practices. In Karnataka, integrated farming systems with low-cost dairy sheds and focused fodder development led to higher diversified income per acre. Maharashtra highlighted cost-effective productivity gains through dry Total Mixed Ration and natural ethnoveterinary treatments. Medium and large farms in Maharashtra and Gujarat showed how genetic improvement could enhance yields and profitability. Gujarat's strong cooperative system ensured greater market profit sharing

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for farmers. Rajasthan demonstrated innovative value addition through camel milk cheese and sheep wool-based products, creating niche business opportunities. Women participants shared that traveling outside their villages expanded their confidence and inspired new roles in dairy entrepreneurship. The journey affirmed that participatory, experiential learning fosters "seeing is believing," encouraging farmers to adopt productivity-enhancing innovations through peer exposure and shared experience.

Keywords: Climate smart dairy, entrepreneurship, farmer awareness, participatory learning