



Integrated Approach to Enhance Milk Quality, Dairy Animal Productivity, and Milk Consumption by Vulnerable Household Members in Rural Nepal

Background

Dairy is Nepal's second most important agricultural value chain, contributing 63% to livestock GDP. However, productivity is low, with cattle and buffaloes producing 737 kg/year and 880 kg/year of milk, respectively, compared to global averages of 2,699 kg/year and 1,913 kg/year. Milk availability is 79 kg per capita, below the global average of 116.4 kg. Nepal imports around NPR 2 billion (USD 17 million) in dairy products annually due to low productivity caused by poor genetics, inadequate feeding, and limited healthcare and access to technology and training.

Nepal's agricultural extension system struggles with poor information flow, an undertrained workforce, and low staff motivation, hindering technology adoption. Immediate solutions are needed beyond ICT. Milk quality suffers due to inadequate knowledge, poor sanitation, and lack of incentives for clean production. Collection centers do not encourage quality, leading to low-quality milk and health concerns from unregulated antibiotic use. The project aims to provide farmers with decision-support tools, improve access to quality fodder, reduce production costs, and offer price incentives for high-quality milk. This will boost productivity, improve milk quality, and increase milk intake among vulnerable groups like women and children, enhancing diet quality and reducing foodborne illness risks.

Goals

To strengthen Nepal's dairy sector by enhancing productivity and quality, promoting farmer economic development, and increasing milk consumption among vulnerable households.

Objectives

- Improve dairy productivity through better access to technologies, farm management tools, and increased feed and fodder supply.
- Improve milk quality by encouraging Good Hygienic Practices (GHP) with price incentives for farmers, further stimulating the delivery of quality milk to collection centers.
- Identify and overcome barriers to milk consumption among vulnerable household members.

Partners

Heifer Project Nepal (HPN), Nepal Agriculture Research Council (NARC), University of Florida

Duration

September 2023- September 2025

Working Areas

Nawalpur, Palpa, Bardiya, Kapilvastu, Arghakhanchi, Rupandehi

Expected Key Results

- Improved access to Information and Communication Technologies (ICT) for farmers.
- Improved fodder supply and reduced milk production costs, leading to higher quality milk production, increased demand, and improved incomes and livelihoods for farmers, while benefiting the dairy industry.
- Price incentives will encourage the production of high-quality dairy products.
- Greater availability of hygienic milk.
- Improved nutrition knowledge within households, especially for women and children, leading to increased consumption of milk and animal-sourced foods.
- Positive impacts on child growth, maternal health, and adolescent nutrition.
- **Local Capacity Development:** The project will provide training to dairy farmers, women, adolescent girls, agro-vets, community animal health workers, and dairy cooperative members in dairy processing and packaging. Four graduate students from Nepali universities will engage in research while receiving mentoring. Professors will collaborate with the project team to deepen their understanding of the dairy sector. The project will also enhance the capacity of livestock research institutions.
- **Gender and Youth:** A Gender Equality and Youth Inclusion plan will be developed based on recommendations from the Gender and Social Inclusion (GESI) Assessment conducted in Phase I. The project will empower both male and female farmers, improving access to information and resources. GESI sessions will be incorporated into staff training to promote gender equality and meaningful female participation.
- **Future Livestock Systems and Resilience:** The project will establish a sustainable forage system with high-yielding varieties for year-round availability, reducing production costs and enhancing competitiveness. Decision-making tools will help farmers respond to external challenges, and energy recycling from animal manure will support sustainable forage production and manure management.
- **Enabling Environment:** Partnerships will be formed with key stakeholders like the Central Dairy Cooperative Association, Nepal Dairy Association, Dairy Development Corporation, and others to foster a supportive dairy environment. Policy recommendations will be made through workshops with policy-level stakeholders, and project outcomes will be shared at scientific conferences and multi-stakeholder meetings.

Cross Cutting Themes

Alignment with SDGs

This project directly contributes to four United Nations Sustainable Development Goals (SDGs): No Poverty (1), Zero Hunger (2), Gender Equality (5), and Life on Land (15). It also indirectly aligns with Good Health and Well-being (3) and Responsible Consumption and Production (12).

