

Western Dairy Research Collaboration

Research Strategy & Priorities

The western provincial dairy organizations (BC Dairy, Alberta Milk, SaskMilk, and Dairy Farmers of Manitoba) have agreed to take a collaborative approach to investment of producer dollars in dairy research. This western research strategy will aim to enhance the sustainability of the dairy industry by funding applied and basic research, leveraging the expertise of local and national academic institutions, and responding to the evolving needs of the industry.

Approach

The western research Producer Working Group (two producer representatives from each province), along with staff, will review projects for merit, industry relevance, and alignment with research priorities. The following core goals will guide the implementation of the research strategy:

1. Increase the value of research to producers through targeted knowledge translation and transfer (KTT) activities.
2. Work collaboratively with research partners to leverage producer dollars invested in research.
3. Maximize impact of innovation and benefits for producers by identifying and addressing key industry challenges and gaps through targeted research project funding.



Intake Process

1. Funding Consortia

The Western Dairy Research Collaboration are members of the Agriculture Funding Consortium in AB and the Agriculture Development Fund in SK. These organizations bring a number of industry and government funders to the same table, optimizing funding leveraging through one intake process. They will also accept proposals from out-of-province.

This option is **recommended for proposals that do not have any other tentative or secured co-funding**, as we require some level of matching funds based on project budget.

Timeline: February - pre LOI pitches to our working group; April - LOIs due; July/August full proposals due (if invited); December - funding announcement

2. Direct Application

The Western Dairy Research Collaboration will also accept full proposals that align with our research priorities directly. This option is **recommended for proposals that have tentative or secured co-funding**, as we require some level of matching funds based on project budget.

Timeline: Open intake. We encourage researchers that are targeting this option to participate in the February pre LOI pitch or submit a project concept, to receive feedback before submitting a full proposal.

Contact Kira Hames at khames@albertamilk.com to receive the full proposal template.

3. Targeted Calls

The Western Dairy Research Collaboration will issue targeted calls for research proposals based on industry challenges and emerging needs. There is no set timeline for targeted calls; timeline, requirements and funding availability will be communicated to researchers at the time the call is announced.

Please contact Dairy Research and KTT Specialist for the Western Dairy Research Collaboration, Kira Hames, for any questions, proposals or feedback regarding research or KTT. Kira is the primary point of contact for all the western dairy provincial organizations.

RESEARCH PRIORITIES

Dairy Farm Sustainability (Economic, Social and Environmental)

Develop sustainable feed crop varieties and management practices that enhance productivity and efficiency.

1. Forage breeding in existing and new crop varieties for improved yield, resistance, conservation, quality and digestibility.
2. Management practices to optimize the efficiency of production, harvest and conservation of forages and other feed produced on farm.
3. Crop rotation systems and complex forage mixtures adapted to region and soil type

Manage and reduce the water footprint of dairy farms.

1. Maximize efficiency of water use on dairy farms.
2. Develop practices and technologies to maintain soil moisture, limit water erosion and decrease water use.
3. Identify opportunities to recover and reuse water and devise low cost on-farm water recapture and treatment technologies.

Develop soil management strategies to improve soil health.

1. Improve soil quality and retention, including managing the soil microbiome.
2. Optimize management practices for manure, nutrients and pesticides in various cropping systems.
3. Develop strategies to measure and enhance on-farm carbon sequestration.

Develop strategies to improve dairy farm efficiency, productivity and profitability.

1. Advance dairy farm economic performance, understanding industry impacts and reducing the cost of production.
2. Assess short- and long-term economic impacts of adopting new strategies, practices and technologies, and better understand the barriers to adoption of recommended practices.
3. Develop strategies to harness datasets generated on-farm and industry wide for the analysis of trends and associations with improved profitability.

RESEARCH PRIORITIES

Animal Health, Care and Welfare

Develop effective solutions to prevent and manage diseases while supporting the responsible stewardship of antimicrobial use.

1. Monitor current and emerging diseases and develop effective practices to reduce negative impacts, costs and overall prevalence of diseases on farm.
2. Sustainably reduce the use of antimicrobials and increase availability of effective alternative treatments while maintaining farm biosecurity and cattle health/welfare.
3. Develop control strategies and health management practices to proactively prevent disease occurrence on farm.
4. Advance knowledge to improve prevention, early detection and treatment of lameness, as well as improve other welfare indicators (i.e. hock lesions).

Identify and improve feeding and management practices to promote long term health and performance.

1. Continuously improve calf housing and management for long term health and performance.
2. Optimize transition period feeding and management practices to reduce metabolic disorders.
3. Develop diet formulation and feeding strategies to optimize milk production and composition
4. Develop strategies to optimize dairy herd inventory, considering factors such as productive longevity and replacement costs.

Develop strategies and tools to improve genetics and reproduction performance.

1. Continuously advance the genetics of Canadian dairy cattle to improve fertility, productive longevity, feed efficiency, and climate and disease resilience.
2. Evaluate alternative breeding strategies that ensure reproductive efficiency and optimal management of calves destined for purposes other than dairy production.
3. Identify tools and management practices to improve fertility and reproductive efficiency.

RESEARCH PRIORITIES

Milk Quality, Composition and Processing

Develop tools and practices to improve management of udder health

1. Develop udder health monitoring systems, easy to use on-farm diagnostic tools, well defined clinical treatment protocols and improved practices to prevent and control mastitis.
2. Develop control strategies and udder health management practices to proactively prevent mastitis occurrence on farm.
3. Develop alternative tools and practices to reduce antimicrobial use.

Advance the understanding and management of milk quality and composition on farm

1. Identify factors on farm that impact milk quality and better understand and manage the interactions between farm management, environment and microbial flora (including IBC and SCC).
2. Better understanding of the impact of microbes and hygienic practices on milk and dairy products compositions and quality, as well as human health.
3. Better understanding of the impact of cattle genetics, water profile, feeds and feeding on milk composition/processing properties and improve the ability to monitor milk composition and quality continuously.
4. Identify and control factors that impact milk composition, protein quality, and fatty acid profile, improving the quality and value of milk.

Pursue opportunities to advance value added dairy products and valorize processing byproducts

1. Develop strategies to valorize or reduce processing byproducts.
2. Identifying opportunities for value added products and new processing markets.