




Investments in Dairy Research : Building Partnerships for Innovation

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Dairy Research for a
Healthy World.

A decorative graphic at the top of the slide features several white, glossy spheres of varying sizes connected by thin white lines, resembling a molecular structure. Below this, a thick, white splash of milk or cream runs horizontally across the width of the slide, set against a blue background with faint, larger-scale molecular patterns.

Dairy Farmers of Canada Who we are?

- * Non- profit organization.
- * The voice of Canadian dairy farmers.
- * Represent Canada's farmers living on 12,529 dairy farms.
- * Foster the viability of Canadian dairy farmers and promote dairy products and their health benefits.
- * Dairy farmers fund its operations, including promotional activities.



DFC Research Investments

Annual budget: ~\$2,000,000

Three Research Programs:

- * Human nutrition and health (ESAC)
- * Milk production (PESAC)
- * Dairy genetics and genomics (DairyGen)

When possible, DFC policy is to finance research with a contribution of at least 50% in matching funds (via partners)



Human Nutrition Research

Expert Scientific Advisory Council (ESAC) Program

- * Funding since 1980's, formalized process in 1990 with creation of ESAC.
- * In 1996, partnership with Natural Sciences and Engineering Research Council (NSERC). Funding on 50:50 basis of selected projects.
- * Annual competition: Letters of Intent and Full Proposals
- * Peer-review committee: Comprised of 10-12 members with expertise in medicine, dietetics, nutrition, food science, health policy and epidemiology.
- * Investigator-led research (Canadian academic institutions).
- * Memorandum of Agreement: ownership of intellectual property lies with investigators, including decisions re publishing data, etc...
- * Funding for a maximum of 2 years.

www.dairynutrition.ca/researchfunding



Human Nutrition Research

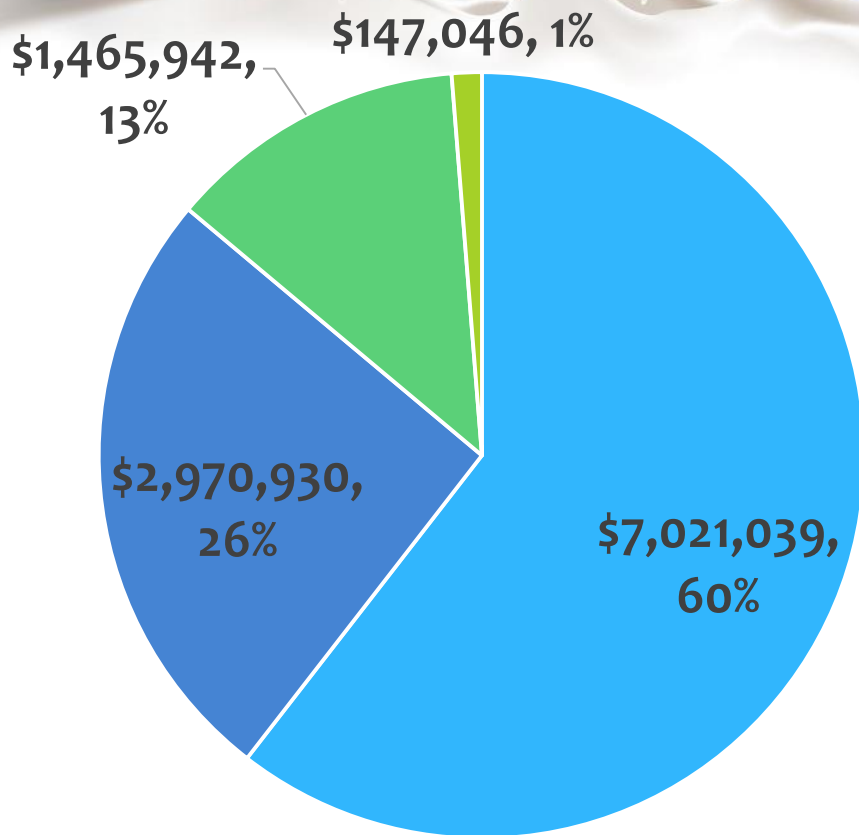
- * Nutritional and health implications for Canadian dairy products and relevant to Canadian dairy farmers.
- * Bring innovative and competitive dairy products with health benefits to the market.
- * Feature or have implications for dairy products in their entirety, demonstrate technological innovation and use a multidisciplinary approach, whenever possible, to address fundamental and applied research questions.
- * Applied human randomized, controlled trials and in vivo mechanistic studies are of particular interest.



Dairy Research Cluster

- * *Canadian Agri-Science Clusters Initiative*
 - under the *Growing Canadian Agri-Innovations Program* which is part of the “*Growing Forward*” *Agricultural Policy Framework*
- * Enable key industry-led agricultural organizations to mobilize a critical mass of scientific and technical resources to support innovation strategies for enhanced profitability and competitiveness.
- * Initial support was for 3 years with possibility of renewal, starting in 2010 until March 31, 2013.
- * Government (AAFC) funding on a 3:1 ratio basis.

Budget Cluster 1: ~ \$ 12 million over 3 years



■ Growing Forward
Cultivons l'avenir

■ Dairy Farmers of Canada
Les Producteurs laitiers du Canada

■ Canadian Dairy Commission
Commission canadienne du lait

■ Natural Sciences and Engineering Research Council of Canada
Conseil de recherches en sciences naturelles et en génie du Canada



Dairy Research Cluster 1: Human Nutrition and Health

Dairy Research Cluster 1 – Human Nutrition and Health Theme

- * Total Budget: 2 million/year
- * Matching partners: AAFC and CDC (3: 1 ratio)
- * 35 projects
- * Three Priority Areas:
 - * cardiovascular health
 - * healthy weight and body composition
 - * optimal nutrition, development and maintenance
- * January 1, 2010 to March 31, 2013

www.dairyresearch.ca

\$12 million

invested in
dairy research

The Canadian
Dairy Research
Cluster 2010-2013:
Research for a
Healthy World

112

scientists

14

research
institutions

212

students
and research
professionals

4

research
stations

48

dairy production
and human nutrition
research projects

www.dairyresearch.ca



Dairy Farmers
of Canada



Canadian Dairy
Commission

Commission
canadienne du lait





Human Nutrition Research: Some Success Stories

- * Sodium Reduction in Cheese
- * Vitamin D Fortification in Milk Products
- * Dairy Products in Bone Health (CaMOS)



Dairy Research Cluster 2

Total Budget= \$18,789,402 over 5 years (2013-2018)

- * Agriculture and Agri-Food Canada= \$12,000,000 (63,9%)
- * DFC= \$5,370,301 (28,6%)
- * Canadian Dairy Network= \$669,101 (3,5%)
- * Canadian Dairy Commission= \$750,000 (4%)

100 scientists from 15 universities, 8 national research centres and partners

65 graduate students and postdoctoral fellows



Dairy Research Cluster 2

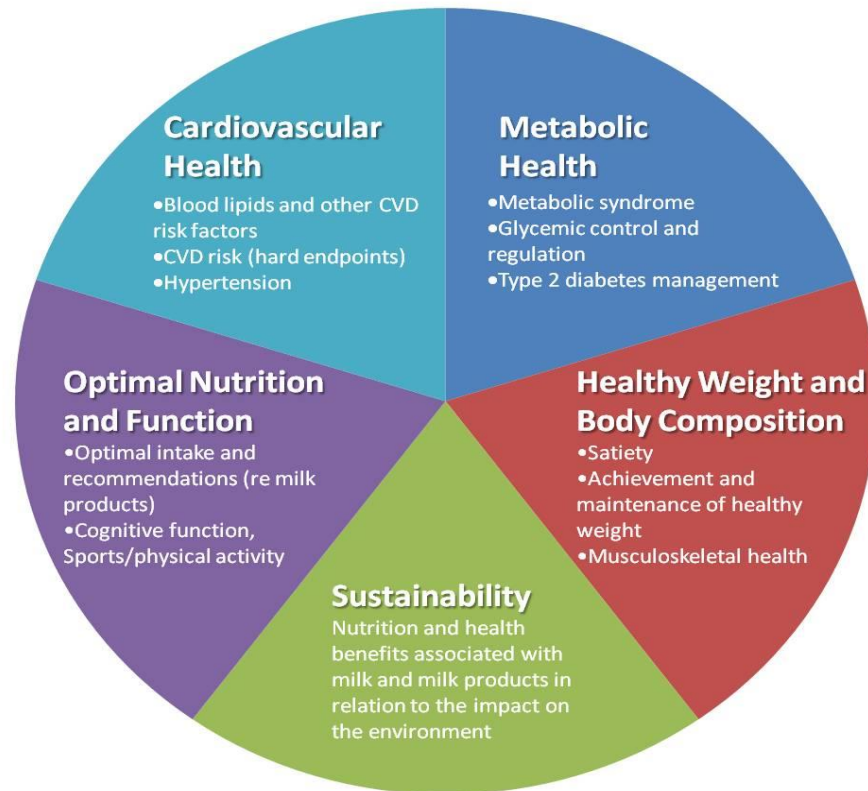
Three research themes:

- * **Human Nutrition and Health**
 - 7 research programs/projects
- * **Sustainable Milk Production**
 - 12 research programs/projects
- * **Dairy Genetics and Genomics**
 - 4 research programs/projects



23 research programs/projects

Dairy Research Cluster 2 Priorities: Human Nutrition and Health





Human Nutrition and Health : Research Programs

- *Dairy fat and cardiovascular health.**
- *Milk products and novel milk products on satiety, food intake and metabolic control (glycemia).**
- *Dairy and risk of diabetes in vulnerable populations: a novel biomarkers-based approach.**



Human Nutrition and Health : Research Projects

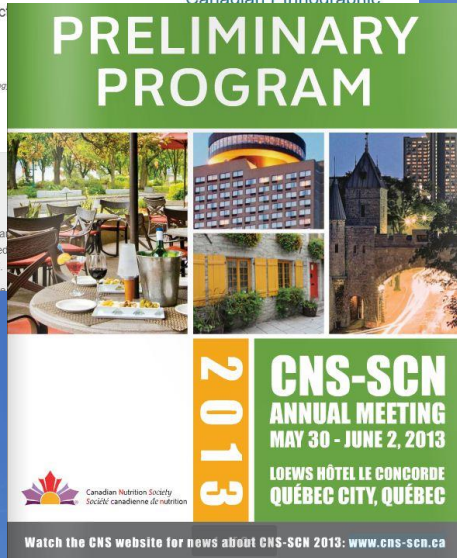
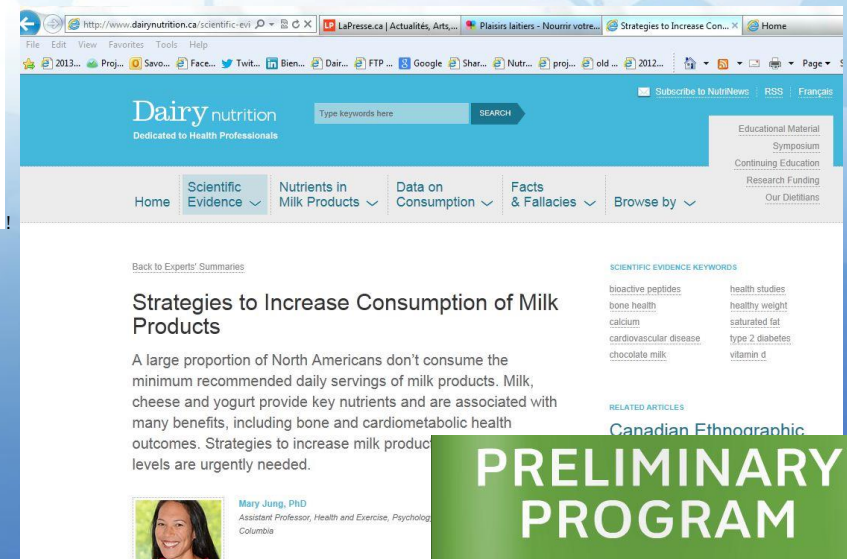
- *Effects of milk and fermented dairy products on intestinal and adipose tissue inflammation, and obesity-linked cardiometabolic diseases.**
- *Association between dietary intakes and cardiovascular risk of Canadians.**
- *Role of high dairy diet on bone health outcomes in pregnant women and their offspring in early life .**
- *Dose-response study re dairy and bone health in youth and their families.**

Knowledge and Technology Transfer

Activities

- * Cluster 2 focuses on KTT for 23 projects.
- * Coordinate actions, evaluate projects re KTT potential and develop strategies.
- * Establish a coordinated effort where feasible- national/provincial.





Information: www.dairyresearch.ca

Dairy Research for a Healthy World.



Opportunities and Challenges

Opportunities:

- * Access to larger pool of funds to be able to carry out more complex and longer-term projects and programs.
- * Brings together networks of best scientific knowledge in Research Centres and Academia.
- * Capacity building, training of highly qualified personnel (HQP).
- * Concerted effort to transfer knowledge to stakeholders .
- * Practical and applied with outcomes aimed to innovate.

Challenges:

- * Administration, via government, is complex - does not follow real research cycles and a lot of documentation .
- * Playing catch up with KTT - Lack of nationwide effort and program uptake.
- * Requires more effort on part of PI to co-ordinate multiple co-investigators and collaborators.



Conclusions

- *Private-public partnerships such as the *Canadian Agri-Science Clusters Initiative* present a unique opportunity to drive the food for health agenda forward.
- *Private-public partnership ***are possible***
- *Private-public partnerships ***are ideal*** (win-win situation)

THANK YOU!