2024

# PROACTION® AND SUSTAINABILITY PROGRESS REPORT

DAIRY FARMERS OF CANADA

VALUE OF PROACTION

MARKETING OUR PROMISE

CODE OF PRACTICE UPDATES

MEASURING GHG REDUCTIONS

SUSTAINABILITY INITIATIVES

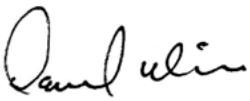
# Message from the President of Dairy Farmers of Canada

On behalf of Dairy Farmers of Canada (DFC), I am pleased to present the 2024 proAction® and Sustainability Progress Report.

Over the last year, it has been inspiring to see the proAction and sustainability initiatives evolve, improve and work more closely together. While proAction is mandatory, and the work towards reaching net-zero greenhouse gas emissions by 2050 is based on voluntary collective action, the two initiatives are closely linked. Both are important for farmers to leverage as we continue to strive for improvements in our herd management, environmental stewardship, farm efficiency, and sustainability goals.

The DFC team is also continuing to use the latest research to identify and carefully consider synergies that will ensure the best results for farmers. The outlook for 2025 and beyond is positive with a strong, national vision across both proAction and sustainability.

Thank you to all the farmers, experts, researchers and industry partners who have contributed to the progress described in this report.



**David Wiens**
**President,** Dairy Farmers of Canada

# Sustainability Committee Chair Message

I am honoured to share some words on behalf of the Sustainability Committee, which, in 2024, evolved from a working group to a committee composed of farmers from each region, supported by technical staff – an important acknowledgement of the evolving value of sustainability and the work we are doing.

In 2024, we finished the Life Cycle Assessment (LCA) of Canadian milk production's environmental footprint in 2021. Completed with a critical review for the first time, the LCA highlights the sector's progress and outlines opportunities for further improvement.

We are currently working on a Shared Action Plan to support nationwide coordination, collaboration and action on dairy sustainability, with a focus on progression towards the net-zero goal. Farm-level support will lay the foundation for any future success across the broader sector.

We look forward to collaboration across the value chain to support improvements, knowing that this will be the key to a prosperous, more sustainable future.

**Bart Rijke**
**Chair of the Sustainability Committee**

## Sustainability

**Canadian dairy farmers are focused on improving sustainability in these areas:**

- **Livestock Management**
- **Feed Production**
- **Manure Management**
- **Energy, Infrastructure and Transportation**
- **Land Management**

*Funded by the Government of Canada under the Sustainable Canadian Agricultural Partnership, a federal-provincial-territorial initiative.*



Sustainable Canadian Agricultural Partnership

DAIRY FARMERS OF CANADA

Canada

# proAction Committee Chair Message

2024 was another great year for proAction. Implementing the Code of Practice into the program was a big focus and deep discussions on feasibility across different committees resulted in a decision to pilot Animal Care changes on farm. This will ensure a strong program with clear requirements, that have been tested for viability on farms across Canada.

In highly pathogenic avian influenza (HPAI), we saw a new threat posed to the health of both animals and farmers. It is a real-life demonstration of the importance of proAction, highlighting the relevance and value of the requirements under proAction's Traceability and Biosecurity modules.

Last fall saw a first for the program: DFC using proAction by name in a marketing campaign! Dairy farmers' hard work and dedication to high standards of milk quality, animal care, and environmental stewardship were highlighted as one of the reasons why Canadians should choose the Blue Cow logo.

The past year has shown that dairy farmers have made a strong commitment to on-farm improvement through proAction, which is something to celebrate. We look forward to another rewarding year ahead!

V. Morrison

**Vicky Morrison**
**Chair** of the proAction Committee

**It's thanks to the robust requirements of proAction that consumers can be confident that the Canadian milk used in their favourite dairy products was produced under some of the world's most stringent standards.**

*Building trust in Canadian dairy*

## On-farm excellence adds up

As the national quality assurance program for the Canadian dairy sector, proAction provides the framework for Canada's high standards of dairy farming. Designed to evolve as new best practices are identified, proAction is based on continuous improvement and incorporates the latest applicable research and technological innovations.

### Under proAction, farmers demonstrate excellence in six distinct areas:

- Milk Quality
- Traceability
- Food Safety
- Biosecurity
- Animal Care
- Environment

## 2024 proAction statistics

**5,050** on-farm validations

**4,692** Canadian dairy farmers conducted their own proAction review and provided the information through a self-declaration process

**9,082** farmers registered

**99.7%*** of farms registered with proAction which demonstrates their commitment to the program

### Validators

**42** active validators

### Cattle assessors

**36** active assessors

**4,736** cattle assessments completed on farms

* The 0.3% difference is attributed to new farm operations in the process of implementing the proAction requirements, or existing farm operations in the process of updating their practices and showing their corrective actions to comply with the proAction requirements.

# Why proAction?

## Highlighting the value and impact of the proAction program for Canadian dairy farmers

The expectations of the Canadian dairy industry are changing at every level of the supply chain, from farmers, to processors, retailers and the public. Major brands are striving to appeal to consumer values, while at the same time, addressing issues and reputational risks for their businesses. The "triple bottom line" of people, profit and the planet has become a core driver for food business and companies are looking for assurance to support their efforts. The way farmers produce milk and manage cows, farms and farm staff is also changing rapidly. Coupling this with increased competition for shelf space, change is the new reality across the supply chain.

proAction offers the opportunity to respond positively; enabling the industry to define and differentiate Canadian milk from competitors by providing a consistent level of quality assurance across the country. Quality assurance programs are no longer a "nice to have" in livestock agriculture, but a must-have. Canadian dairy farmers are well positioned, as they have been implementing the stringent standards of proAction for many years, and their collective effort forms the backbone of the Blue Cow Logo and the Canadian dairy industry.

proAction is also recognized by other organizations and bodies as a respected, relevant and meaningful program. In December 2023, DFC maintained Canadian Food Inspection Agency (CFIA) recognition, verifying that the Food Safety module continues to be technically sound, and the overall registration system, which supports all modules, continues to be effectively implemented while meeting government requirements. DFC also continues to hold recognition for the Animal Care module with the National Farm Animal Care Council (NFACC).


**Change is the new reality across the supply chain and proAction offers the opportunity to respond positively.**

## What is the impact of proAction on farmers and the dairy industry?

1. **Risk mitigation and market protection:** proAction assures the industry that farmers have a means to address current, new and/or unexpected matters if they arise. proAction demonstrates that the industry is committed to upholding standards while holding each other accountable and remaining dedicated to continuous improvement. It provides assurance to consumers and customers that Canadian dairy farmers are meeting expectations and that plans are in place to act on situations that do not align with standards. The standards go above and beyond base regulations to provide assurance across the program's six modules: Milk Quality, Food Safety, Animal Care, Traceability, Biosecurity, and Environment.

2. **Marketing and market access:** According to third-party research, the Blue Cow Quality Milk Logo is one of the most recognized and trusted brand certifications in Canada. As the program that stands behind the Blue Cow Quality Milk Logo, proAction demonstrates the sector's commitment to high standards. Canadian advertisements are regulated, meaning that any claims made in ads or endorsements must be substantiated with evidence to support them. proAction provides the evidence that any standards-based market claims made in DFC advertising are true.

3. **On-farm management:** proAction is designed to help farmers manage risks and strive for continuous improvement. Implementing the requirements should help reduce errors, improve animal health and welfare, encourage beneficial environmental practices, and strengthen farm personnel communication and consistency.

### Listen to the DFC|PLC: Paths to On-Farm Excellence podcast

**DFC has created a podcast channel, Paths to On-Farm Excellence, which hosts around 60 podcasts in French and English featuring farmers, experts, researchers and industry partners discussing important topics related to current research, animal care, environmental sustainability, animal health, and more.**

**Find and listen to the podcasts on regular podcast services by searching "DFC PLC" or scan the QR code.**

Apple Soundcloud Spotify

# Marketing our Promise

## DFC's Blue Cow Quality Milk Logo: a sign of dairy excellence

proAction has helped form the backbone for DFC's marketing campaigns, as it offers the proof points for on-farm standards behind the Blue Cow Quality Milk Logo. The logo is a strong and powerful asset for DFC and the dairy industry, but its strength relies on the key pillars of proAction: namely, a commitment to food safety, animal care, and sustainability. In 2024, for the first time, DFC campaigns directly focused on proAction and its values, telling consumers about the program through the testimonials of real dairy farmers, and shining a light on all the hard work that farmers do to feed Canadians day in and day out.

## Every Canadian Dairy Farm has an Environmental Farm Plan

In the summer, DFC's "Every Canadian Dairy Farm has an Environmental Farm Plan" campaign highlighted dairy farmers' unique environmental farm plans and that they also draw from proAction's 57 environmental practices, showing that Canadian dairy farmers hold themselves to high standards. The message resonated with Canadians, reaching 14.4 million consumers, and the Blue Cow Quality Milk Logo reached an all-time high consumer recognition level of 90% in September.

**Watch the "Every Canadian Dairy Farm has an Environmental Farm Plan" campaign videos here:**

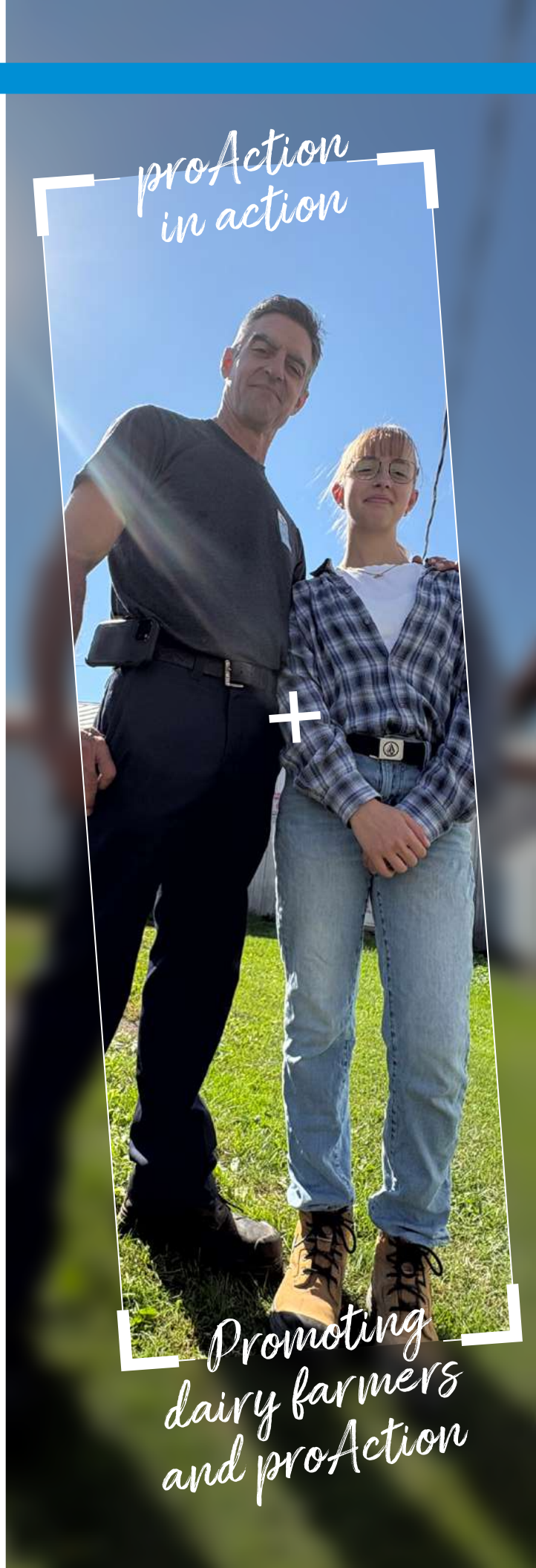

youtu.be/6xJK1itNGY0


youtu.be/rhxm6oBpCI8

**Our message resonated with Canadians,**

**14.4M**
**consumers reached**

**90%**
**awareness**



## It's in Everything We Do

DFC's fall marketing campaign, "It's in Everything We Do," directly focused on proAction by highlighting the six modules of the program. Key messages noted that all Canadian dairy farmers uphold the 82 requirements of proAction to produce safe, high-quality food that adheres to best practices for food safety, animal care, and environmental sustainability. This campaign helped advance farmer credibility, trustworthiness and relevance with consumers, and stakeholders to protect and promote the interests of dairy farmers.

### Watch the "It's in Everything We Do" campaign videos here:

youtu.be/Avgo3UBPhx8

youtu.be/PECmc775JYI

## I Do That

What's more, last year's "I Do That" campaign on regenerative agriculture was honoured in October 2024 with the Yves Boutonnat International Milk Promotion Trophy by the International Milk Promotion group for the best generic advertising campaigns in key areas of innovation, nutri-marketing, and marketing communication. This campaign built upon the success of DFC's award-winning "Net Zero by 2050 – We're In" campaign, showing consumers the regenerative agriculture actions farmers are taking through proAction's Environment module to help further the sector's progress towards sustainability targets.

### Watch the "I Do That" campaign videos here:


youtu.be/3xD2PKZ0sBE

youtu.be/n-TSXj05hdU

## Consumer outreach

While the proAction logo doesn't appear in every ad DFC makes, it provides background support. This includes the "Ask a Dairy Expert" and recipe sections on DFC's website, where a rotation of various key messages relating to the environment, animal care, standards, nutrition and proAction are presented to consumers. In 2024, there were over 2.6 million recipe page views, with 60% of visitors being exposed to these messages. DFC has also integrated these messages into its Nutrition site, WhatYouEat.ca, that had over 60,000 visits in 2024 alone.

To increase understanding of dairy farming practices and milk production, and to address common misconceptions, DFC hosted 13 virtual farm tours for over 1,000 nutritional science, agriculture and sustainability students from Canadian universities. These tours focus on teaching important topics like animal care, environmental practices, and standards – including a specific segment dedicated to proAction.

### Our message resonated with Canadians:

**2.6M** page views in 2024

**60%** exposed to our "Did You Know?" campaign

**60,000** visitors

DAIRY FARMERS OF CANADA

HERE FOR TOMORROW

# Partnering for a Sustainable Future

DFC's Here for Tomorrow Partnerships Program supports a range of innovative sustainability projects being undertaken in various regions across Canada. These partnerships aim to further solidify the dairy sector's long-standing commitment to environmental stewardship and responsible farming practices.

## ALUS

ALUS, an environmental organization that helps provide alternative land use services, has collaborated with DFC to create resilient, nature-positive landscapes on dairy farms across Canada by establishing carbon-sequestering areas. In 2023-24, DFC's investment in ALUS' New Acre pilot project expanded nature-based agricultural solutions on dairy farms in Alberta, Ontario and Quebec. This partnership helps rural communities address local environmental issues and supports the dairy sector's goal of working towards net zero by 2050.

## Cleanfarms

Through Cleanfarms, Canadian dairy farmers have recycled more than 664,000 kg of agricultural plastics since the inception of our partnership.

**664,000 kg**
**of on-farm material has been recycled thanks to the Cleanfarms partnership.**

## Ducks Unlimited Canada

DFC joined forces with Ducks Unlimited Canada for five forage conversion projects initiated in spring 2024 and four new winter wheat projects in fall 2024 on dairy farms in Manitoba. Forage conversion programs are also advancing on multiple sites, including new hay planting, sod-seeding, and in Alberta, two winter wheat projects planted in fall 2023 have been harvested, with two new winter cereal projects underway. In Ontario, construction has begun on a wetland restoration project following the completion of the final project concept. In 2024 a total of 410 acres of winter cereals were planted, along with 452.06 acres of forage.

**Ducks Unlimited Canada partner projects have resulted in**

**1,175.65 acres**
**of wetlands saved over the duration of the three-year partnership, with**

**129.38**
**of those acres saved in 2024.**

## Tree Canada

In 2024, DFC and Tree Canada announced a project to plant trees on dairy farms across the country. The program provides technical support and regional resources to assist with completing mass seedling plantings on dairy farms. Planting trees on farms can help protect soil, improve air and water quality, and enhance wildlife habitat.

### Interested?

Farmers interested in finding out if they qualify for a tree planting project can contact Tree Canada today: CLittle@treecanada.ca

**6,570**
**trees have been planted on dairy farms in 2024.**


## FCC's Dairy Sustainability Incentive Program

DFC renewed its partnership with Farm Credit Canada (FCC) and Lactanet to offer a second year of the Dairy Sustainability Incentive Program for eligible FCC customers. Criteria to qualify for the incentive includes a combination of herd sustainability metrics and proAction Environmental questionnaire results.

Program incentive payments are based on a portion of FCC lending and, new in 2024, successful applicants were eligible for additional incentives sponsored by Starbucks Canada.

In April 2024, DFC and Starbucks Canada launched a new collaborative effort to help advance sustainability in the dairy sector, with Starbucks Canada committing funding to support Canadian dairy farmers' ongoing sustainability efforts. The partnership included three exciting projects, one being the collaboration with FCC and Lactanet for FCC's Dairy Sustainability Incentive Program. Starbucks provided additional funding in two new categories, Top Achieving and Most Improved, further recognizing the sustainability successes of Canadian dairy farmers.

**The 2024 program year closed at the end of the December, and the overall results from FCC are:**

**197** Canadian dairy farmers accessed the Sustainability Incentive Program

**33%** increase in farms receiving an incentive over 2023

Many participating farmers also received one or more Starbucks incentives

Total program payout =
**$651,800**


# Working Towards a More Sustainable Tomorrow

**Canadian dairy farmers are naturally committed to sustainability and the environment. The development of projects, partnerships and research continue to help drive sustainability efforts. Here's a look at a selection of updates that contribute to DFC's sustainability efforts.**

## Sustainability committee

The DFC Board of Directors approved a new Sustainability Committee in October 2024, replacing the former Sustainability Working Group. The new composition includes a farmer representative from each region of Canada and a DFC board member as Chair. DFC and provincial staff contribute as non-voting members. The purpose of the Sustainability Committee is to support nationwide coordination and collaboration on dairy sustainability, focused on the implementation of initiatives and projects that support DFC's net zero by 2050 target.

## Sustainability alliance

DFC senior staff and the Dairy Processors Association of Canada (DPAC) developed a proposed governance model for a Canadian Dairy Sustainability Alliance (CDSA). The aim of the CDSA would be to develop a united approach and advance, measure and communicate continuous improvement in the environmental sustainability of the dairy value chain. DFC and DPAC both sought feedback from their members on the proposal and plan to adjust accordingly and move forward in 2025.

## DFC support for the IDF Paris manifesto

DFC was proud to endorse the International Dairy Federation's (IDF) Paris Dairy Declaration on Sustainability, signed as part of the IDF World Dairy Summit in Paris, France in October 2024.

The Declaration, signed by the IDF and the Food and Agriculture Organization of the United Nations, with support from DFC, aims to reinforce commitments to a sustainable transformation of the dairy sector. It emphasizes the critical role of dairy in sustainable food systems from socio-economic, environmental, and public health perspectives, while urging the international community to adopt sustainable practices tailored to local needs. DFC President, David Wiens, present at the signing of the Paris Dairy Declaration on Sustainability, praised Canadian dairy farmers for their progress and highlighted the importance of collaboration within the global dairy community to achieve shared sustainability goals.

## 3-NOP

In 2024, the CFIA announced the approval of 3-Nitrooxypropanol (3-NOP) as a new livestock feed ingredient aimed at reducing methane emissions from cattle. While this product has yet to be adopted on any farms in Canada, DFC was pleased to see the regulatory pathway open for innovative feed ingredients with environmental claims that can help contribute to the dairy sector's ability to meet its net zero by 2050 goal.

# Measuring Success

## *Cool Farm Tool* pilot project measures on-farm GHG emissions

As the Canadian dairy industry works towards reaching net-zero GHG emissions by 2050, DFC has launched a pilot project to test an on-farm GHG emissions calculator – the *Cool Farm Tool*. The project is designed to determine if the *Cool Farm Tool* is a user-friendly, accurate, sustainability calculator for Canadian dairy farmers.

The purpose of the *Cool Farm Tool* is to help a farmer measure their individual farm's carbon footprint, understand their environmental impact and identify best practices to lower their emissions.

### On-farm pilot project

DFC launched the pilot in 2024, together with provincial associations, who recruited over 40 farmer volunteers along with *Cool Farm Tool* advisors in each region to provide technical support. Currently, the advisors are working with the farmers to collect data, create GHG emissions assessments, and develop continuity plans to support progress.

### Next steps

DFC will evaluate aggregate results from the *Cool Farm Tool* assessments, seek feedback from participants, and review the pilot results. The end goal is to have a national on-farm GHG tool, or suite of tools, that farmers can use to help measure progress towards the collective net-zero goal.

## Funding for the future

**In 2024, DFC secured an investment of more than**

**$8.5M over 5 years**

**from Agriculture and Agri-Food Canada (AAFC) for the two projects below that will enable continued support to dairy farmers.**

## Sustainability and proAction

DFC has secured up to

**$5M in funding over 5 years**

to advance sustainability projects and public trust in the dairy industry, leveraging the proAction quality assurance program and supporting DFC's ambitious goal of working towards net zero by 2050 collectively.

## Traceability and DairyTrace

DFC will also be receiving up to

**$3,572,786**

**in funding over 5 years**

to build on existing tools and strengthen both the Traceability module of proAction and DairyTrace to help protect and enhance animal health, public trust, and sustainability.

DFC is very pleased with the strong support provided by the Government of Canada under the Sustainable Canadian Agricultural Partnership, a federal-provincial-territorial initiative.

# Sustaining Progress

## 2024 module highlights

**One of the principles behind all proAction modules is continuous improvement. The proAction program continues to evolve to incorporate new practices reflecting the latest research and technological advancements, while also seeking opportunities to streamline. Here is a summary of the work that progressed in the modules in 2024.**

## Food Safety

- Updated Feeds Regulations were published in Canada Gazette, Part II (CGII) on July 3, 2024. DFC is currently assessing the impact on proAction.
- The Food Safety Technical Committee worked with the Animal Care Technical Committee to update three food safety requirements impacted by the Code of Practice for the Care and Handling of Dairy Cattle.
- The committee reviewed opportunities to streamline requirements and brought recommendations to the proAction Committee.
- The Food Safety Technical Committee worked with the Biosecurity Technical Committee to discuss antimicrobial use and resistance.

## Animal Care

- The Animal Care Technical Committee conducted extensive discussions on the cattle assessment requirement and possible improvements.
- DFC extended the contract with Holstein Canada for cattle assessment services until end of 2026.
- The Animal Care Technical Committee completed draft requirements to align proAction with the Code of Practice for an on-farm pilot.

## Traceability

- The Traceability Technical Committee received, reviewed and submitted additional comments about concerns from the "What We Heard" report from CFIA on Part XV of Health of Animals Regulations.
- The committee worked with DairyTrace on the Canadian Roundtable for Sustainable Beef project, exploring equivalency and other opportunities.

## Biosecurity

- The Biosecurity Technical Committee considered options to simplify or streamline completion of the Biosecurity Risk Assessment Questionnaire.
- The committee worked with the Animal Care Committee to update two biosecurity requirements impacted by the Code of Practice.
- The committee also worked with the Food Safety Technical Committee to discuss antimicrobial use and resistance.

## Environment

- The Environment Technical Committee continued to work on opportunities to improve the Environmental Questionnaire and scoring by collaborating with DFC's sustainability team and industry partners.
- Results from the Environmental Questionnaire continue to be analyzed to strengthen an understanding of the most common practices on Canadian dairy farms and identify areas for improvement.

## Building on the foundation of traceability

### Four years of collecting data!

Since DairyTrace launched in 2020, dairy farmers and dairy affiliates have been building the foundation of the national dairy cattle traceability program, so that it is ready and available to help protect the Canadian dairy herd. In Quebec, SimpliTrace has been administering the same services to farmers for decades.

In 2024, DairyTrace projects focused on working jointly with DFC and industry partners, specifically Animal Health Canada, the Canadian Food Inspection Agency, and provincial Chief Veterinary offices, to assist with animal health surveillance and disease management.

After four years of traceability data collection, DairyTrace has matured to focus on data completeness and integrity as well as value-added benefits from traceability. DairyTrace has started building on the current infrastructure of its traceability database to provide metrics, ensure data integrity and accuracy. DairyTrace is also incorporating tools that will help connect the industry and provide benefits across the dairy value chain. The DairyTrace Customer Services team has been working hard to identify potential data inconsistencies and reaching out to verify details. These projects will help to close the loop on traceability as animals continue to move through the value chain during their lifetimes.

## Highlights of DairyTrace reporting during 2024

**650,626**
**dairy tag activations birth events**
were reported, ensuring full traceability from birth to death.

Nearly
**217,000**
**move-out events**
were voluntarily reported as best practice.

**56%**
**reduction in reissued tags**
due to tag loss compared to 2020.

Annual total number of all events reported:
**1,345,645**

**Customer service highlights:**

**9,500**
inbound client calls

**6,400**
emails received

**72,536**
events entered

# Continued Excellence

**Building further on the program's objective of continuous improvement, 2024 had two areas of focus to ensure the delivery of a robust quality assurance program: the conclusion of a third-party audit and intensive work on incorporating the updated Code of Practice into the Animal Care module.**

## Third-party audit

The three-year third-party audit project was completed in 2024. The project involved audits of DFC, all provincial offices, IT controls, and a sample of validators across the country. The project generated lessons learned and identified areas for improvement that will be made to strengthen the credibility and rigour of the program's operations. The value of the auditing project was recognized by the proAction Committee, and DFC has decided to continue with third-party audits in 2025. The team is in the process of designing a longer-term auditing approach.

### Program recognitions maintained from:

- Canadian Food Inspection Agency for the Food Safety module and proAction implementation
- National Farm Animal Care Council for the Animal Care module
- Unilever as Canadian milk is declared in accordance with Unilever's Sustainable Agriculture Code

## Animal Care Code of Practice

The updated *Code of Practice for the Care and Handling of Dairy Cattle* was released on March 30, 2023.

Developed through the NFACC process, the update to the Code of Practice involved extensive industry collaboration, public consultation, and a dedicated Code Committee and Scientific Committee.

Since its release, DFC and the proAction committees have been working diligently to incorporate the new requirements into the proAction program.

Throughout 2024, the Animal Care Technical Committee discussed the new requirements over two in-person meetings and 13 virtual meetings, totalling more than 100 hours in committee meeting time. The Food Safety and Biosecurity Technical Committees also met to discuss changes to their respective module requirements. DFC combined the results of all of the committee discussions and developed a draft farmer reference manual, validation protocol, and other supporting documents.

Due to the large volume and complexity of changes, the proAction Committee determined a full on-farm pilot was critical to ensure the successful implementation, including clear requirements, consistent validation, and buy-in from Canadian farmers. This decision impacted implementation timelines, as a pilot takes time, so DFC is targeting to implement the package of new requirements in April 2027.

Together with provincial organizations, DFC launched the on-farm pilot in December 2024 and it will run until spring 2025. DFC will seek feedback from farmers, provincial staff, validators and veterinarians, and the proAction committees will evaluate the results and consider revisions needed.

DFC is confident that the April 2027 implementation of the new *Code of Practice for the Care and Handling of Dairy Cattle* will provide the best chance for successful implementation of the new requirements that will benefit farmers, the Canadian dairy industry, and consumers.

# Protecting Canadian Dairy Farms against Highly Pathogenic Avian Influenza (HPAI)

## Biosecurity and traceability are important to protect farms against infectious diseases.


**Canada's dairy sector has two powerful tools to mitigate risks to animal and human health: robust traceability databases and DFC's proAction program.**

### On-farm biosecurity

With the emergence of Highly Pathogenic Avian Influenza (HPAI) as a new disease affecting dairy cattle in the US in 2024, heightened biosecurity measures on dairy farms have become even more important and relevant. proAction's Biosecurity module helps farmers begin to prepare and protect herd health by implementing best management practices to prevent the introduction of disease into, and spread within Canadian dairy herds. This module helps farmers work with veterinarians to manage risks and focus on disease prevention and management. In addition, DFC has developed a series of resources for farmers specific to HPAI to help prevent the disease on Canadian dairy farms. HPAI resources are available at dairyfarmersofcanada.ca/en/farmer-resources/HPAI.

### DairyTrace and proAction: Helping farmers work together to prevent and manage on-farm risks

Dairy farmers have built up valuable systems that mitigate risks to animal and human health. Here in Canada, the dairy sector has two powerful tools to leverage: robust traceability databases and DFC's proAction program. These are supported by the farmers who do the hard work reporting to the databases for traceability and implementing biosecurity best management practices (BMPs). The connections dairy farmers have built together will make it easier to trace and manage a disease outbreak.

### How traceability helps Canadian dairy farmers

In conjunction with the proAction Traceability module, DairyTrace, the national cattle traceability database for dairy farmers outside of Quebec, and SimpliTrace, the database in Quebec, make it easier to trace an animal's past and current locations, setting up the industry for rapid response times in the event of an emerging disease emergency. Through the Traceability module of proAction, dairy farmers had been diligently identifying their animals and reporting move-in data, imports, exports, and tag activations and retirements, setting up DairyTrace for national success much like the SimpliTrace program, which has been in place in Quebec for decades.

Through these two modules of proAction – Traceability, partnered with DairyTrace and SimpliTrace, and Biosecurity – farmers can decrease the risk of introducing disease to their herds.

# Life Cycle Assessment

DFC has commissioned a Life Cycle Assessment (LCA) of Canadian milk production every five years since 2011. The LCA measures the environmental impact of producing one litre of milk across three indicators – carbon footprint, land use, and water consumption – from the production of farm inputs to transportation of milk, to the processor. The 2021 LCA uses data collected in 2021, prior to the sector committing to net zero by 2050.

Though the LCA results show that the industry's carbon footprint is generally declining – nine per cent lower in 2021 than 2011 – the total GHG emission proportion from manure management increased due to changes in manure management systems, identifying a key area of focus for the future.

In Canada, the use of irrigation varies significantly between regions and climates, and is more prevalent in Western regions. Moreover, increases in irrigation volumes occurred during periods of lower precipitation and drought since previous LCAs were conducted.

While progress continues to be made in several areas, it is important to note that progress is typically dynamic rather than linear when working with living things and nature, particularly given the increasing impacts of climate change.

## Moving forward

The 2021 LCA results provide valuable insights that will help guide and strengthen DFC's *Net-Zero Strategy* and *Best Management Practices Guide for Mitigating Emissions on Dairy Farms*. As dairy farmers work towards achieving net zero, they can continue to drive progress by improving herd genetics, maintaining animal health and comfort, optimizing feed production, promoting soil health, and fine-tuning manure management strategies. These LCA results will help identify the most effective practices DFC and the Canadian dairy industry can support dairy farmers to adopt to further reduce GHG emissions and enhance the environmental sustainability of milk production.

**Milk production accounts for about 1% of Canada's total greenhouse gas (GHG) emissions.[1]**

**Producing one litre of milk in Canada emits less than ½ as much GHG emissions as the global average.[2]**

Note: There can be differences in data and models between various studies, but the Food and Agriculture Organization of the United Nations (FAO) benchmarking is useful to understand environmental performance of milk trends throughout different regions of the world.

## Key findings

### Carbon footprint

The LCA results show that the carbon footprint of a litre of milk is generally declining

**-9%**
**lower in 2021 than in 2011.**

Due to increased production efficiencies, **enteric emissions** (the GHG emissions from cattle) have decreased.

**-13%**
**in 2021 than 2011.**

However, the proportion of emissions from manure management has increased, largely due to transitioning from solid manure management systems to liquid systems.

### Land use

has decreased

**-21%**
**in 2021 than 2011**

due to greater efficiency throughout production, such as feed efficiency of cows.

### Water consumption

The share of water per litre of milk needed in the barn for cleaning and animal-drinking purposes was reduced in the 10-year interval by 18% and 27%, respectively. However, total water consumption was 42% higher in 2021 mainly due to in-field use, as precipitation challenges led to increased irrigation volumes.

[1] Environment and Climate Change Canada (2024). National Inventory Report, 1990–2022: Greenhouse Gas Sources and Sinks in Canada. Available online at: canada.ca/ghg-inventory

[2] FAO (2019). Climate change and the global dairy cattle sector. Available at: fao.org/3/CA2929EN/ca2929en.pdf

# Building the Business Case for Sustainable BMPs

## Creating a business model for supporting on-farm sustainability actions

As the Canadian dairy industry works towards its commitment to reducing GHG emissions, lowering its carbon footprint, and enhancing the sustainability of dairy farms, the implementation of sustainable BMPs to advance the net-zero strategy must make sense at the individual farm level.

That's why DFC is exploring different business model options to financially support Canadian dairy farmers in the adoption and implementation of sustainable BMPs that will contribute to working towards net zero by 2050.

### Two projects underway

Led by DFC's Sustainability Committee, two connected projects began in 2024 and will continue in 2025.

- **Net-Zero Strategy Business Model Designs**
  This project will develop and test a scalable business model that creates a robust financial and operational framework to implement sustainable dairy production practices on-farm (with investment from the dairy industry value chain).
- **On-Farm Testing of the Business Model**
  This project will select one (+) beneficial BMP from the DFC *Net Zero BMP Guide* to test and evaluate the efficacy of the business model and the data collection process for parameters necessary to calculate GHG emission reductions and compliance with value chain requirements.

### Why build a business model?

**Building a business model will create a standardized financial and operational framework to assess and support the implementation of on-farm sustainable BMPs.**

**The information collected through the project will help Canadian dairy farmers:**

- **Identify and implement appropriate BMPs for their farms based on feasibility, return on investment, and environmental contributions**
- **Collect data required to calculate GHG emission reductions**
- **Comply with value chain sustainability standards**

## Bringing a Canadian dairy perspective to the world

The sixteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 16), held in Cali, Colombia from October 21 to November 1, 2024, was the first biodiversity COP since the adoption of the Kunming-Montreal Global Biodiversity Framework (KMGBF) at COP 15 in 2023, where DFC sent its inaugural delegation.

With 23,000 delegates from governments, businesses and environmental groups, COP 16 was the largest biodiversity COP to date. A key moment was the first-ever Food Day, organized by the Food and Agriculture Organization of the United Nations, highlighting agrifood systems' role in achieving global biodiversity targets.

### Canadian dairy representation

DFC sent a delegate to COP 16, where they participated in a panel discussion hosted by Ducks Unlimited Canada on land and water conservation. DFC highlighted the role of dairy farmers in advancing biodiversity, the value of cross-sector partnerships, and the need for economic tools, financial incentives, and science-based indicators aligned with on-farm realities. In collaboration with the Canadian Federation of Agriculture, DFC emphasized the biodiversity efforts of Canadian dairy farmers and agriculture, highlighting the importance of representing farmers' voices in global biodiversity discussions.

### Why it matters:

**Representation of Canadian dairy farmers in global biodiversity discussions is important to emphasize to policymakers, government officials, environmental organizations, financial institutions, and other stakeholders that agriculture is a pivotal driver of biodiversity.**

*Agriculture's role in biodiversity*

# Research and Innovation

## Investing in scientific research to foster innovation in the Canadian dairy sector

Canadian dairy farmers are committed to supporting research to increase farm efficiency and sustainability, enhance animal health and care practices, and strengthen the role of dairy in human nutrition and health.

DFC invests $2 million annually in human health and nutrition, and dairy production research, as well as administers research programs targeting the investment priority areas and outcomes of the National Dairy Research Strategy.

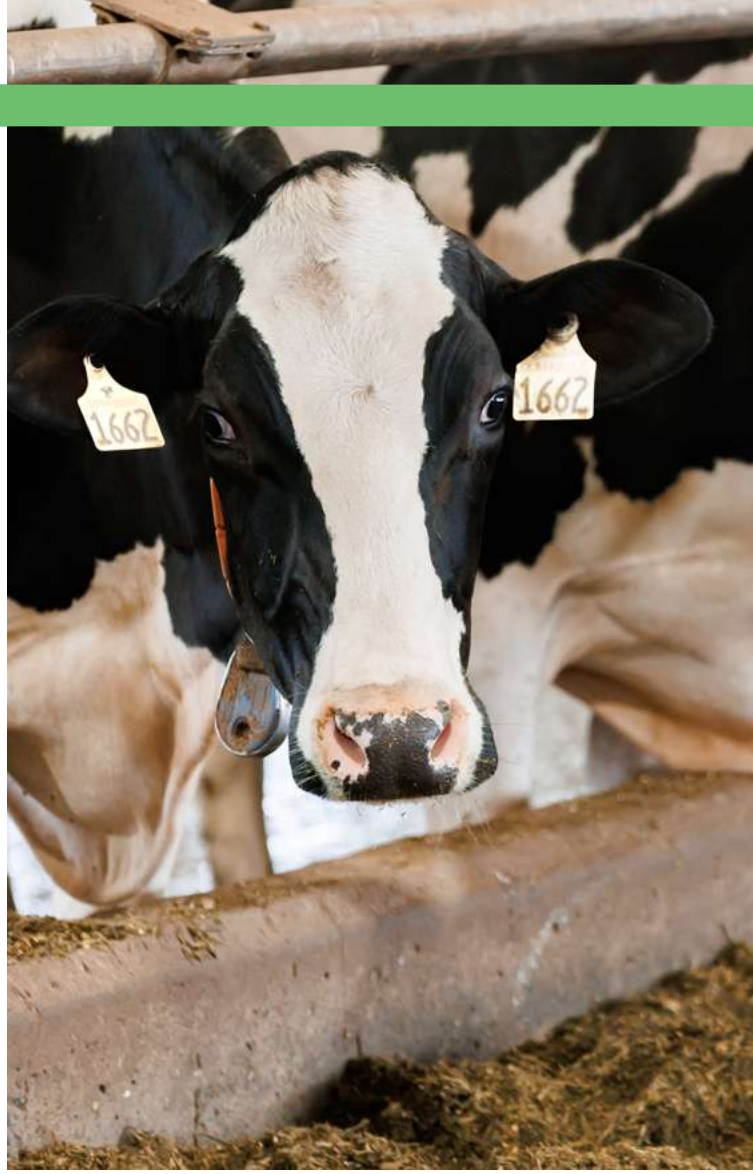
**Learn more about DFC research at dairyfarmersofcanada.ca/en/dairy-research**

### National Dairy Research Strategy

The (2022-2027) National Dairy Research Strategy was developed through extensive consultations and identifies research priorities under the three following areas: dairy farm sustainability, animal health care and welfare, and dairy in human nutrition and health. Research outcomes contribute science-based information that underpins fact-based communications, on-farm programs like proAction, policy and regulation, as well as Knowledge Transfer (KT) activities that translate research results into improved on-farm production and management practices.

### Dairy Research Cluster 4

2024 marks the second year of the Dairy Research Cluster 4 for a sustainable dairy sector, running through March 2028. This five-year, $13 million partnership with DairyGen partners (including Semex, Holstein Canada and Lactanet), Novalait, DFC, and the federal government, supports research projects to improve the environmental, economic and social sustainability of the Canadian dairy sector. Cluster 4 projects primarily target GHG reduction and carbon sequestration, along with antimicrobial use and resistance, animal health, and genetic improvement. This research will play an integral role in contributing to the dairy industry's goal of achieving net-zero emissions by 2050. Full details on Dairy Research Cluster 4 activities are available on DFC's website.



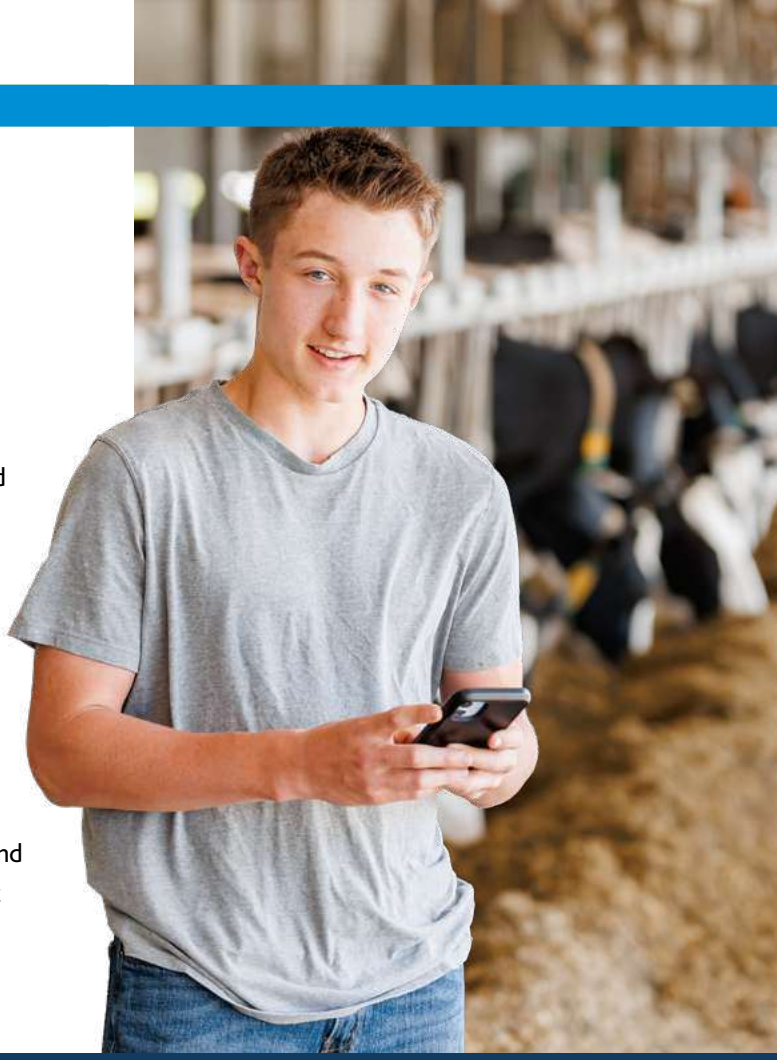

## 2024 Research Highlights


The 2024 *Dairy Farmers of Canada's Research Highlights* report features information on DFC's 2024 research investments, progress and developments from ongoing projects.

The 2024 report focuses on human nutrition and health research highlights from a selection of projects, including dairy's protective effects on Type 2 diabetes, dairy's role in bone health, and modeling the economic and health burden of low dairy consumption.

# Knowledge Sharing

## Science-based information for Canadian dairy farmers



The National Knowledge Transfer in Dairy Production project, funded by DFC and delivered by Lactanet, aims to accelerate the awareness and adoption of best practices and innovations on Canadian dairy farms. The objective is to provide nationwide access to free science-based information, as well as efficient tools and qualified expertise for dairy farmers and on-farm stakeholders.

As part of this project, a three-part webinar series focused on Sustainability was held in March 2024. These webinars were designed for dairy farmers who want to understand the net-zero target for dairy, and practices they can use to reduce their carbon footprint. Two other webinars, one for farmers on calf housing and management, and a second training webinar for dairy advisors addressing common questions about the new Code of Practice, were also held later in the year. All recordings are available on the temporary home of the Canadian Dairy Hub.

**The National Knowledge Transfer in Dairy Production project focuses on transferring free science-based knowledge from DFC-funded dairy production research and support proAction needs and sustainability goals.**

## Canadian Dairy Hub

The Canadian Dairy Hub aims to be a one-stop shop for Canadian dairy farmers and their advisors for KT information. This hub is designed for users to "learn, act and improve" with the access to free science-based, practical expertise to accelerate awareness and adoption of innovation, new scientific knowledge and practices.

**The website offers webinars, factsheets, videos and dates of in-person workshops delivered across the country, covering the four following key topics:**

- **Sustainability**
- **Animal welfare and adaptation to the Code of Practice**
- **Animal health**
- **Reproduction and management**


Scan the QR code to check it out.

### What's next?

Watch the Canadian Dairy Hub for the latest events and resources in 2025!

- Webinars on transition and reproduction
- Workshops on calf management
- Farmer testimonial videos

DAIRY FARMERS OF CANADA

2024

# PROACTION AND SUSTAINABILITY PROGRESS REPORT

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