

# Pan-Canadian Smart Farm Network

Advancing Ag Tech Solutions  
& Sustainability Across Canada



Learn more  
[oldscollege.ca/smartfarmnetwork](https://oldscollege.ca/smartfarmnetwork)



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**SMART**  
**Farm**

## Pan-Canadian Smart Farm Network

The Pan-Canadian Smart Farm Network supports Canada's agriculture sector to enhance efficiency, sustainability, and resilience in response to emerging opportunities and challenges. The network fosters collaboration among researchers, producers, industry partners, and stakeholders nationwide to drive innovative projects that address critical issues in ag tech development and adoption. It facilitates knowledge exchange and capacity building at Canada's smart farms, and serves as a platform for real-world testing and validation of new technologies.

Smart farms within the Pan-Canadian Smart Farm Network are commercial-scale farms where technologies, practices, digital tools, or philosophies are implemented to improve overall productivity and sustainability of food production. These smart farms have a mandate to share unbiased knowledge and findings with the public and support technology developers.

### Guiding Principles

The network exists to accelerate the development and adoption of technologies and practices in Canadian agriculture, and ensure the sector has the skills and tools they need to be global leaders in sustainable food production.

#### Collaboration

Collaboration is at the core of all activities within the network. Open communication and co-operation among all stakeholders allow the sites to connect, create linkages, make referrals, and work together to share best practices and lessons learned across several different sectors of agriculture – including livestock, cropping and greenhouse production – and growing regions.

#### Validation & Demonstration

The network focuses on providing infrastructure and expertise to validate, iterate, and demonstrate ag tech innovations in real-world farming conditions.

#### Science-Based & Unbiased

The network upholds the principles of being science-based and unbiased in all of its activities.

#### Innovation & Adoption Support

The network provides a supportive environment for start-up development, validation, scaling, and demonstration of ag technologies and practices to encourage innovation towards a sustainable agriculture industry.

#### Knowledge Creation & Transfer

The findings and best practices learned from smart farm activities are shared with stakeholders to foster knowledge transfer and promote the development and adoption of technologies and practices that work for producers across several ag sectors and growing regions.

#### Advocacy & Information

The network of experts and stakeholders serve as advocates and sources of information in the field of ag tech development, utilization and adoption.



## Network Sites & Expertise

The Pan-Canadian Smart Farm Network currently encompasses six regions across four provinces with access to 15,000+ acres. Each member offers specific site assets and infrastructure to foster future research projects and collaboration to enhance smart ag technologies. Learn about the various locations, technology, expertise, equipment and more of each site by visiting [oldscollege.ca/smartfarmnetwork](http://oldscollege.ca/smartfarmnetwork).



### Olds College of Agriculture & Technology

- Central Alberta
- Central Saskatchewan
- 3,600 acres
- Crop and livestock production, environmental stewardship, cereal breeding, technology integration, and data science/utilization.



### Lakeland College

- East Central Alberta
- 3,700 acres
- Agriculture and crop research, livestock production (cattle, dairy and bison), livestock health and wellness, forage and grazing, precision farming, and environmental research.



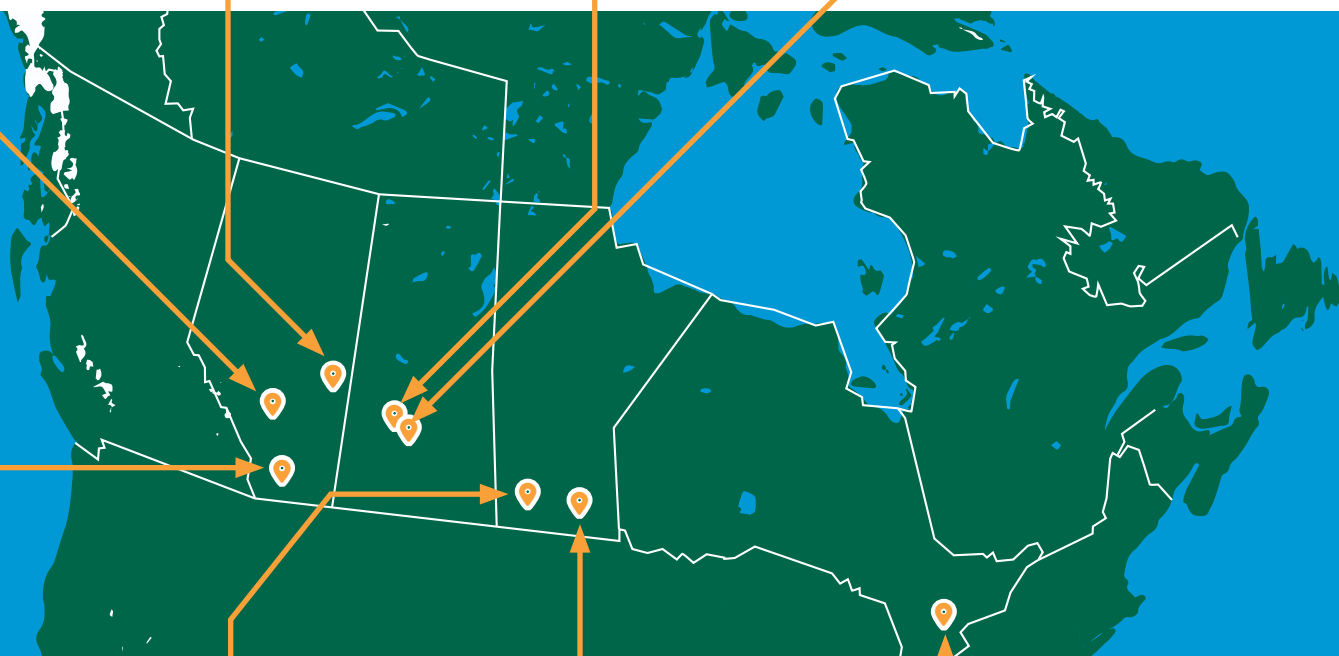
### Discovery Farm Langham

- Central Saskatchewan
- 180 acres
- Research projects, demonstration events and tours to connect farmers and industry for knowledge transfer.



### University of Saskatchewan Livestock & Forage Centre of Excellence (LFCE)

- Central Saskatchewan
- 7,200 acres
- Forage development, grazing management, environmental sustainability and livestock production (cattle and bison).



### Lethbridge College

- Southern Alberta
- 385 acres
- Integrated food production systems, irrigation science and post-harvest technology.



### Enterprise Machine Intelligence Learning Initiative (EMILI)

- Southern Manitoba
- 5,500 acres
- Full-scale commercial production agriculture environment to test, validate and demonstrate digital ag technologies to a variety of technical and non-technical audiences.



### Manitoba Beef & Forage Initiatives (MBFI)

- Southern Manitoba
- 1,400 acres
- Support the advancement of the beef cattle and forage industries.



### Discovery Farm Woodstock

- Southwestern Ontario
- 330 acres
- Research projects, demonstration events and tours to connect farmers and industry for knowledge transfer.

## What's Next

As the “development” phase of the Pan-Canadian Smart Farm Network comes to a close in early 2024, members and key stakeholders are working to define how the network will operate, what it can achieve, and how the network will access the resources it needs to continue accelerating technology innovation and adoption in the ag sector.

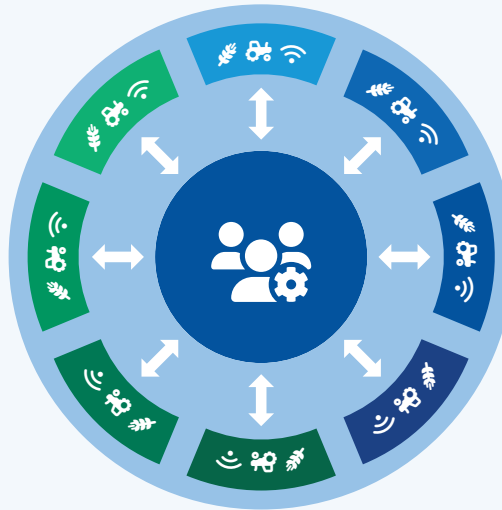
This next “acceleration” phase of the Pan-Canadian Smart Farm Network is expected to launch in 2024.

### Proposed Operational Model: Acceleration Phase

The “acceleration” phase of the Pan-Canadian Smart Farm Network proposes to adopt a **hub and spoke model**:

#### **HUB** the network integrator – an individual or small team of individuals

- Building advocacy with government and other stakeholders.
- Fundraising and managing project funds and approvals.
- Developing and maintaining communication and information sharing pathways.
- Supporting or leading knowledge transfer events.
- Onboarding and mentoring new participants and sites.
- Identifying and acting upon network-wide partnership opportunities.
- Managing expansion activities.
- Defining and refining the guiding principles or rules of engagement for network members.



#### **SPOKES** the individual smart farms

- Developing and maintaining a sustainable smart farm operational model.
- Supporting the development of funding proposals.
- Engaging with stakeholders.
- Conducting projects and evaluations.
- Sharing information for knowledge mobilization.

### Proposed Funding Model: Acceleration Phase

- Operational hub is functioning, acting as the integrator role for network sites and activities.
- Project-specific funding is available through the hub for sites collaborating on projects. The hub would manage a pool of funds with industry or project partners expected to cover a portion of project specific costs.
- Funding for network sites to participate in network activities, such as personnel involved in information sharing and travel costs, is available either through the hub or directly from the individual sites.
- Funding for network sites to invest in critical pieces of equipment is available either through the hub or directly from the individual sites.
- Regular reports and project evaluations are delivered to stakeholders through the hub.

The total annual expenses for hub operations, network activities and network-specific projects across 10 sites is estimated to be \$2 million annually from 2024 to 2028.

The Pan-Canadian Smart Farm Network members collaborate on project funding proposals through a variety of funding calls. Network members also engage with sponsors, donors and industry stakeholders to secure investments for hub operations, network activities and projects.

### Expected Benefits to Canada

Based on achieved outcomes at individual network sites and the collective impact of the network to date, the “acceleration” phase of the Pan-Canadian Smart Farm Network is expected to generate significant benefits and impacts for the Canadian agriculture sector. Through activities at an expected 10 network sites encompassing all of the major growing regions and production practices in Canada, the network expects to:

- Engage with and support via projects a broad range of companies and innovators (500+ over five years).
- Validate emerging technologies and practices via projects and demonstration activities (200+ over five years).
- Lead and contribute to a diverse set of knowledge mobilization activities (100+ events or activities each year reaching a collective audience of 100,000+).
- Identify, build and support training to develop diverse, highly and broadly qualified personnel (100 new training opportunities with 1,000 individuals trained each year).
- Accelerate the adoption of effective technologies and best practices that enhance the productivity and sustainability of food production in Canada (increased adoption rates and/or better understanding of return on investment of new technologies or practices).
- Contribute to economic growth and job creation in Canada (200+ jobs created per year).

Contact Olds College Centre for Innovation to discuss working with or supporting the growing network.

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