CFCRA Preparation for new Agriculture & Agri-Food Canada (AAFC) Cluster Program 2023-2028

REQUEST FOR LETTERS OF INTENT (LOI)

Deadline: Wednesday, November 10, 2021 (11:59 PM EST)

Background
The Canadian Field Crop Research Alliance (CFCRA) is a not-for-profit entity founded in 2010 with an interest in advancing the productive capacity of field crops in Canada, particularly soybean, corn, wheat, barley, and oat. The CFCRA is comprised of provincial farm organizations and industry partners, including: Atlantic Grains Council, Grain Farmers of Ontario; Producteurs de grains du Québec; Manitoba Crop Alliance; Manitoba Pulse & Soybean Growers; Saskatchewan Pulse Growers; Prairie Oat Growers Association; SeCan Association; and FP Genetics.

Since 2018 the CFCRA has been managing an $8.3 million National Soybean Cluster, a $2.2 million National Oat Project, and a $3.7 million National Corn Project under the Canadian Agricultural Partnership (CAP) AgriScience Program. The CFCRA has also been involved in the eastern Canadian components of the National Wheat Cluster and the National Barley Cluster. These national research initiatives focus on providing farmers with enhanced genetics for high-yielding, low input, disease-resistant varieties, implementing new support tools in breeding programs, and improving agronomic tools and practices needed to improve farm and sector profitability across Canada in a sustainable manner.

As the Canadian Agricultural Partnership comes to an end in March 2023, the CFCRA has begun planning for a new Cluster under the Next Policy Framework (NPF). In preparation for this new Cluster, the CFCRA is requesting Letters of Intent (LOI) from researchers to identify research projects and collaborations that would address the CFCRA research priorities and strategic goals of lowering greenhouse gas (GHG) emissions, expanding value-added crop production, and creating a competitive, sustainable and profitable farming sector to provide significant benefits to Canada in years to come.

Overall, research projects should have the goal of widespread use of final results by well-defined stakeholders along the grains value chain and end use markets, while maximizing economic benefit to Canadian farmers.

A New Cluster Approach
In preparation for the development of a large-scale multi-crop national research initiative beyond March 2023, the CFCRA has developed a new strategic approach to guide its vision for a future Cluster under the NPF. The tagline of the new CFCRA Cluster will be Farm Productivity and Profitability in a Changing Environment. The new CFCRA Cluster will include research on three common rotational crops (soybean, corn, oat) and will have linkages to the national wheat and barley initiatives as well, with the approach of addressing unique needs of each crop to ensure that each one can thrive in a diverse crop rotation on Canadian farms that can improve whole farm profitability over time. These five grain and oilseed crops are...
commonly used in crop rotations throughout Canada, providing on-farm crop diversity and access to diverse markets, providing resilience to production and price risks for farmers, facilitating diverse domestic and export value chains, and providing environmental and economic benefits for Canada.

**Government Targets for the Next Policy Framework (NPF) – Cluster Themes**

Agriculture & Agri-Food Canada has released **three draft Themes** which must be directly addressed by Cluster research under the NPF. These Themes are:

1. **Climate Change & Environment**: a new Cluster must address climate change and environmental sustainability to position the sector in contributing to the Government of Canada’s 2030 and 2050 climate targets (outlined in Canada’s Economic Strategy Tables, and the Strengthened Climate Plan).
   **Research under this theme should focus on:**
   - Profitably reducing GHG emissions via increased nutrient use efficiency (particularly nitrogen)
   - Reducing GHG emissions and/or sequestering carbon by strategically improving profitable opportunities for increasing cropping diversity on farm
   - Improving adaptation to climate change, including tolerance/resistance to biotic and abiotic stresses

2. **Economic Growth**: a new Cluster must help drive ambitious economic growth (as outlined in documents such as the Barton Report).
   **Research under this theme should focus on:**
   - Contributing value to Canada, economic growth, farm profitability and improving market share
   - Increasing farming system productivity
   - Ensuring Canadian competitiveness in global and domestic markets for value-added products
   - Developing new or improved products and production systems that are responsive to market trends and link farmgate value to market value
   - Demonstrating market and production resilience through profitable crop diversity to meet market demands with a long-term view
   - Appropriately incorporating emerging technologies such as artificial intelligence (AI), Big Data, or innovative “-omics” technologies for profitable and sustainable farming systems long-term

3. **Sector Resilience**: a new Cluster must should undertake research aimed at improving sector resilience in response to market and societal pressures
   **Research under this theme should focus on:**
   - Improving sector resilience in response to market and societal pressures

Each research project must directly address one of these Cluster Themes. **Letters of Intent must identify which Theme their research best fits into and must explain how their research addresses that Theme.**
Research Priorities
The CFCRA has developed a list of Research Priorities that it would like to see addressed through a new Cluster under the NPF. This list of research priorities is not comprehensive to the target crops, but rather identifies strategic priorities that the CFCRA has identified as key to address through a national Cluster program. Please review Appendix A - CFCRA Cluster Overview & Research Priorities that is included in the Request for LOI package, as Letters of Intent must explicitly address one or more of the priorities.

Wheat & Barley
While the CFCRA has a strong interest in eastern Canadian barley and eastern Canadian wheat research, it is important to note that we are coordinating with the Canadian Barley Research Coalition (CBRC) and the Canadian Wheat Research Coalition (CWRC) in these efforts. The CBRC, CWRC and CFCRA have been working closely together to develop new Cluster research that will be functional and will ensure the long-term competitiveness of the barley and wheat value chains across Canada under the NPF.

It is expected that research pertaining to eastern Canadian barley and eastern Canadian wheat will be submitted through LOI Calls initiated by the CBRC and the CWRC, respectively. For more information please contact Lauren Comin, President, CWRC at lcomin@albertawheatbarley.com for questions pertaining to a new Wheat Cluster, and Gina Feist, Executive Director, BMBRI at gfeist@bmbri.ca for questions pertaining to a new Barley Cluster.

For research projects addressing multiple crops that include more than just corn, soybean and/or oat, please contact Matthew Czerwinski, Project Manager, CFCRA to discuss your project in more detail before completing a Letter of Intent.

Letter of Intent Application Guidelines:

Purpose of Letter of Intent
1. For researchers to express an interest in participating in a new CFCRA Cluster under the NPF
2. For the CFCRA to evaluate proposed research activities based on:
   • An ability to fit into a Cluster Theme and address CFCRA Research Priorities
   • An ability to demonstrate significant benefit to the field crop sector in Canada
   • Scientific merit and contribution

Applicant Eligibility
• Eligible applicants include researchers in Canadian academic institutions, not-for-profit research institutions, federal and provincial government research organizations, and the private sector
• All applicants must demonstrate the capacity to conduct sound science. Applicants must also be able to outline how they will address CFCRA commercialization principles, encouraging transparent, non-exclusive and broad-based distribution of results and new technologies, with the goal to maximize economic benefit to Canadian farmers and the value chain
Collaboration

- Teams with complementary expertise are encouraged to tackle specific research targets together. Furthermore, collaboration should be sought between projects within the Cluster where scientific approaches and discoveries can be applied across different crop species.
- Where relevant, research projects should demonstrate linkage or coordination with others (regionally, nationally, and internationally). For example, pre-breding and genomic tool development should show coordination with breeding programs to ensure the usability of tools being developed.

Research Area Eligibility

- Letters of Intent must explain which Cluster Theme the research best fits into.
- Letters of Intent must align with one or more research priority described in Appendix A - CFCRA Cluster Overview & Research Priorities
  - CFCRA supports the use of novel cutting-edge technologies (e.g., high throughput phenotyping, gene editing (CRISPR), etc.) to achieve the proposed research outcomes. Public trust and freedom to operate must be considered in using these approaches. Researchers will have to demonstrate clear IP plans at the LOI stage and be able to comment on Technology Readiness Level (TRL) (https://www.ic.gc.ca/eic/site/080.nsf/eng/00002.html)
  - CFCRA will not support general standalone surveillance projects. Surveillance work that feeds directly into broader research projects remains eligible.
- Research projects can be a maximum of 5 years in length, from April 1, 2023 to March 31, 2028.

Metrics

- Researchers submitting a Letter of Intent must estimate the impact of their proposed project on the sector and identify metrics that would enable quantification of the value of the research upon completion. Please refer to Appendix B - Sample Metrics for examples of metrics to consider in your research.

Additional Funding

- Researchers are strongly encouraged to include additional outside funding sources (confirmed or pending) in their Letters of Intent as the AAFC funding program is expected to be very competitive. Additional funding sources could include, but are not limited to, provincial government funding or other industry partner funding beyond the core CFCRA member groups.

Equity, Diversity and Inclusion (EDI)

- Researchers should be prepared to demonstrate how equity, diversity and inclusion is considered in their research projects (at the full proposal stage).
Funding Principles
To help guide the assessment of project applications, in addition to scientific merit, the following five core principles will be considered by the CFCRA and AAFC:

1. Strategic value of the project to Canada
2. Whole value chain and supply chain perspectives
3. Inclusion of measurable results-based outcomes
4. Effective knowledge transfer and adoption (communicating the costs and benefits)
5. Diversity, collaboration, and partnerships

Letter of Intent Application Information Session
The CFCRA will hold a live (virtual) information session on Tuesday, October 5, 2021 to highlight specific LOI components that require particular emphasis. The CFCRA will also elaborate on its expectations of research submitted in a Letter of Intent. The webinar will be recorded and will be made available to those who cannot attend the live information session in October. More details on the Information Session will be provided following the launch of the Call for Letters of Intent.

Expected Timeline for the Full Application Process (subject to change)

- The development of a new CFCRA Cluster will take place in two stages: i) the Letter of Intent, and ii) the Full Proposal stage
- Letter of Intent Information Session: Tuesday, October 5, 2021
- Letter of Intent submission deadline: Wednesday, November 10 (11:59PM EST). Late submissions will not be considered
- Successful applicants will be notified in early February 2022 and will be asked to provide a full proposal for further consideration
- Full proposals will be due in late March 2022.
- Full proposals will undergo a robust peer-review process prior to final selection for inclusion in a Cluster application to AAFC
- Following peer-review, proposals and budgets will be further refined based on reviewer and/or funder feedback to create the strongest possible application package to AAFC
- Application package will be submitted to AAFC for funding sometime in Fall 2022
- Decisions made by the CFCRA will be final

Submission Details

Letter of Intent submission deadline: Wednesday, November 10, 2021 (11:59PM EST)

Please submit completed Letters of Intent in Microsoft Word format using the ‘CFCRA LOI Template’ file by email to Matthew Czerwinski, Project Manager, CFCRA at mczerwinski@gfo.ca

All submitted Letters of Intent will receive an email confirming receipt within 2-3 business days.
Funding Organizations’ Contact Information
If you are unsure whether your research idea would fit the parameters of a new CFCRA Cluster, please contact the most relevant funding partner research contact, below. For any other inquiries, please contact Matthew Czerwinski at mczerwinski@gfo.ca, or 905-730-4145.

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<th>Organization</th>
<th>Contact</th>
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