The **BioMass Canada Cluster (BMC)** is calling for Letters of Intent (LOI) from those wishing to contribute to our application to the AgriScience Program Renewal (2023-2028). BMC was established in 2018 by BioFuelNet Canada with financial support from [Agriculture and Agri-Food Canada’s AgriScience Program](https://agriculture.canada.ca/en/about-our-department/key-departmental-initiatives/canadian-agricultural-partnership) and industrial partners. BMC’s overall objective is to enhance the contribution of Canadian agriculture to the growing Canadian bioeconomy. To this end, BMC’s mandate during the second period of operation will be: To mobilize Canada’s agricultural biomass resources for commercially viable bioenergy and bioproduct production by de-risking and commoditizing agricultural biomass in all regions of Canada, while mitigating and adapting to developing changing climate conditions.

The Cluster is currently comprised of 10 research activities all focused on improving/developing technologies for producing, processing and distributing feedstocks from agricultural biomass resources, for low-carbon bioenergy, biofuels and other bio-based products. In order to build on its significant achievements in the last five years, BMC welcomes R&D proposals for activities to be included in BMC’s AgriScience Partnership Program Renewal proposal, for research to be conducted during the period April 1, 2023-March 31, 2028.

The three major priority areas (may be subject to change following formal AAFC announcement), and their relative importance that are being considered by the Canadian Agricultural Partnership’s AgriScience Program for the next round of funding are as follows:

1. **CLIMATE CHANGE & ENVIRONMENT (30-40%):** Address climate change and environmental sustainability, to help position the sector in contributing to the Government of Canada’s 2030 and 2050 targets. This should focus on GHG emissions reductions and carbon sequestration, as well as other environmental considerations including soil health, water quality, air quality, biodiversity and plastics.
2. **ECONOMIC GROWTH (40-50%):** Focus on emerging technologies to address labour challenges, create more value-added products and increase productivity. Research proposed should aim to improve productivity, develop new or improved products and/or production systems. Proposal selection will consider: enhancement of emerging sectors vs established commodities; participation of value chain partners and potential impact relative to cost.
3. **SECTOR RESILIENCE (20%):** Proposed research should be aimed at improving sector resilience in response to market and societal pressures, including mental health, and to build ongoing resilience into the agricultural sector. These sectors include:
	* Antimicrobial resistance;
	* Plant health;
	* Alternative production systems; and
	* Artificial Intelligence (AI) and big data in agriculture.

**WHO CAN APPLY?**

* Researchers at Canadian Universities/colleges
	+ Government scientists in Canada
	+ Other public research institutions
	+ Private sector researchers in Canada (with restrictions)

**SUBMISSION**

Please complete the LOI form below and submit the completed document to Dr. Xiaomin Zhou at **xiaomin.zhou@mcgill.ca** no later than **January 24, 2022**.

**PLEASE NOTE**:

1) Incomplete forms will not be reviewed;

2) Each Principal Applicant can submit only one form

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| **SECTION 1: RESEARCH TITLE**Please provide an informative and concise title |
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| **SECTION 2: RESEARCH OBJECTIVE**Briefly explain the overall intent of your research activity. What does your research activity aim to achieve? **(Max. 100 words)** |
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| **SECTION 3: RESEARCH ACTIVITY RATIONALE (Explain the “why” and “how”)**Briefly identify which AAFC and industry priority(ies) this research will address. Outline the issue(s)/gap(s)/opportunity that your research activity aims to address. Provide a high-level summary to demonstrate how you will do this. **(Max. 500 words)** |
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| **SECTION 4: RESEARCH ACTIVITY OBJECTIVES AND ROLE(S)/INTERACTIONS WITH COLLABORATORS, INCLUDING INDUSTRIAL PARTNER(S)** Using concise **point form** text to outline the objective(s), the key scientific and other interaction activities between you, collaborators, and your industrial partner(s), and clearly identify the roles of each in achieving the objectives. **(Max. 200 words)** |
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| **SECTION 5: EXPECTED OUTCOMES OF THE RESEARCH ACTIVITY (DELIVERABLES/EXPECTED RESULTS/IMPACTS)**. **(Max. 500 words)**1. Using **point form** text to identify the expected deliverables and results, and how these related to the proposed objectives; indicate how these expected outcomes will contribute directly to further development of the biomass industry in Canada.
2. Propose a plan for commercializing or facilitating industrial uptake of the project deliverables.
3. Identify the benefits to producers.
4. Please indicate how the expected research outcomes contribute to the AgriScience Program’s Priority Areas and BMC’s mandate.
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| **SECTION 6: RESEARCH TEAM** |
| **Principial Investigator** |
| Name: |       |
| Position: |       |
| Organization: |       |
| Email: |       |
| Phone number: |       |
| **Co-investigators** (Please include these co-investigators in your email submission to show that they have seen the LOI) |
| Name: |       | Name: |       |
| Position: |       | Position: |       |
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| **Co-investigators** (Please include these co-investigators in your email submission to show that they have seen the LOI) |
| Name: |       | Name: |       |
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| **SECTION 7:** **CONTINUITY**Are you currently a member of the Biomass Cluster: **Yes** [ ]  **No** [ ] If the answer is “**No**”, please go to the **Section 8** directly.If the answer is “**Yes**”:1. Using **point form** text to explain the most significant outcomes of your research in 1st round Biomass Cluster funding and its connection to the new proposed research. The significance of the outcome is measured in terms of research impact. Examples of impactful outcomes are development of a new set of technologies/techniques, useful data, products, equipment, tools and processes that would contribute directly to the economic growth of the farming community, climate change, environmental sustainability, and the resiliency of the sector **(Max. 250 words)**.
2. If you are proposing new research for the second cycle of Biomass Canada funding, please briefly explain how the proposed new research will serve to integrate the overall second cycle research effort **(Max. 200 words)**.
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| **SECTION 8: ESTIMATED DURATION AND PROPOSED BUDGET** |
| **Expected duration of the proposed research (5 years or less: April 1,2023-March 31, 2028):**  |
| Total requested funding from the program (including industry matching) | **$**      /year X       years=**$**      |
| Industry matching sources (based on first round protocols - minimal 30%: 20% cash and 10% in-kind, however, could be subject to change by AAFC**): $** |
| **Partner 1:** |  | Cash [ ]  | In-kind [ ]  | Interest confirmed [ ]  |
| **Partner 2:** |  | Cash [ ]  | In-kind [ ]  | Interest confirmed [ ]  |
| **Partner 3:** |  | Cash [ ]  | In-kind [ ]  | Interest confirmed [ ]  |
| **Partner 4:** |  | Cash [ ]  | In-kind [ ]  | Interest confirmed [ ]  |
| **Partner 5:** |  | Cash [ ]  | In-kind [ ]  | Interest confirmed [ ]  |
| **Partner 6:** |  | Cash [ ]  | In-kind [ ]  | Interest confirmed [ ]  |