

Value Chain Sustainability **Program Description**

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1.0 Purpose, Objectives and Process

1.1 Purpose

The Value Chain Sustainability research and innovation program is designed to contribute to the competitiveness and profitability of the agriculture and forestry sectors through decreased cost of production and/or increased value of products.

Alberta Innovates Bio Solutions (AI Bio) will invest up to \$ 3.0 million to support research and innovation in the area of “Value Chain Sustainability,” with additional funding on a project by project basis from Alberta Innovates – Energy and Environmental Solutions (AI-EES), the Alberta Livestock and Meat Agency (ALMA), Foothills Research Institute (FRI), and the Alberta Crop Industry Development Fund (ACIDF). Collectively, this group is known as “The Funders.”

1.2 Participating Funding Partners and Their Mandates

AI Bio is pleased to launch this targeted call in collaboration with the above funders. Each of these funders will fund projects on a project by project basis depending upon the mandate of their organization. All of the funders are aligned with the overarching objectives of the program, but may also have specific areas of interest.

AI Bio, through this program and other initiatives, is committed to stimulating growth and diversification of Alberta’s agriculture, forest and life sciences sectors, and contributing to the economic, environmental and social outcomes for Albertans. AI Bio has five strategic priority areas: Value Chain Sustainability, Advancing the Bioeconomy, Quality Food for Health, Industry Challenges and Emerging Opportunities, and Prion and Protein Misfolding Diseases. This targeted call falls under the Value Chain Sustainability umbrella. There is intent to contribute to the well-being of Albertans through continuing to support research that will lead to the development of market driven attributes and sustainable systems. <http://bio.albertainnovates.ca/>

AI-EES is a catalyst for developing innovative ways to convert our natural resources into market-ready, environmentally responsible energy and managing the sustainability of Alberta's water systems. AI-EES is the lead agency for energy and environmental research and innovation in Alberta, bringing together decision makers from government and industry, as well as research and technology organizations, to develop solutions for the biggest challenges facing our sector. AI-EES’s strategic areas include Energy Technologies, Renewable and Emerging Resources, Environmental Management, and Water Resources.

ALMA is a catalyst for stimulating new thinking, new ideas and new approaches to enhance the reputation, competitiveness and profitability of Alberta’s livestock and meat industry, and to build relationships among the various stakeholders in the industry. In addition to the current targeted priorities of Cow-Calf and Forage and Quality Food for Health, ALMA’s overarching priorities for the Research and Development Program are

healthy animals, healthy food, production efficiency and mitigating regulatory burden in the livestock industry. Proposals in the Value Chain Sustainability call for proposals should target production efficiency and enhanced value in meat products to increase competitiveness (increased food safety, animal welfare, and animal production systems to improve market access). Funding will be directed to develop and deliver technologies, solutions and knowledge to improve the competitive position of Alberta's livestock and meat industry.

The **Foothills Research Institute (FRI)** is an internationally recognized leader in developing innovative science and knowledge for integrated resource management on the forest landscape. It is a unique community of partners tied to the land and its people through a common concern for the welfare of the land and its resources. Foothills Research Institute works toward sustainable forest land use and looks at the impact of industrial use on the local ecology, economy, society, and culture. Research supported by FRI is both applicable and practical and searches for answers to specific forest land management questions. It seeks to 1) understand and reduce the collective footprint of forest users on the local area and to 2) identify ways to measure ecological, social and economic sustainability. FRI also ensures that innovative sustainable forest land management knowledge and applications are demonstrated to forest managers and practitioners, the public at large, and others with a stake in the sustainability of forest landscapes. FRI places a high priority on the transfer of technology and knowledge to stakeholders to support sustainable forest landscape management. The following 5 theme areas are the focus of FRI Initiatives: landscape dynamics - programs that focus on landscape changes over space and time due to natural (mountain pine beetle) and human disturbances (roads, cut blocks); wildlife; water; forest communities and data, information and knowledge management.

The **Alberta Crop Industry Development Fund Ltd. (ACIDF)** works with Alberta's crop industry organizations to support crop-related industry development and research. The ACIDF priorities in this call-for-proposal are to support projects and initiatives that improve farm profitability, lower cost per unit of crop production, improve value of crops produced, and lower production risk. Projects and initiatives that attract significant private investment into cereal crop plant breeding, develop solutions and practices to improve cropping systems and associated agronomy, development/adaptation of technology to improve margins, and improving market qualities of crops produced are being sought. Industry involvement and investment will be key selection criteria. The highest priority will go to those proposals with a strong market focus that increase the competitiveness and profitability of Alberta farmers within the theme of "Value Chain Sustainability."

1.3 Background

There is a global opportunity to increase global demand for agriculture and forestry derived products that are economically viable, socially acceptable, energy efficient and ecologically sustainable. Forestry and agriculture are two major contributors to Alberta's economy and have been challenged to balance productivity with long term stewardship of natural resources. Prosperity in these sectors contributes to economic stability of the value chain, as well as rural development. In order to adapt to economic challenges facing the agriculture and forestry industries, these sectors must reinvigorate themselves by embracing new technologies, novel products and services.

AI Bio, along with the funding partners, has identified value chain sustainability as a strategic priority.

A number of reference documents were consulted to provide direction to the Value Chain Sustainability targeted call and to ensure alignment with the needs of Albertans and Alberta's industries. These include:

- Water for Life – Alberta's Strategy for Sustainability (2003), and Water for Life – A Renewal (2008)
- Getting Value from Every Fibre (2007)
- Land Use Framework (2008)
- Bringing Technology to Market (2008)
- Making the Food Health Connection, An Alberta Framework for Innovation (2008)
- Alberta's Health Research and Innovation Strategy (2010)
- Canada's Agri-Food Destination (2011)
- The Future of Food and Farming: Challenges and Choices for global Sustainability (2011)
- Shaping Alberta's Future: Report of the Premier's Council for Economic Strategy (2011)
- Alberta Competitiveness Council: Moving Alberta Forward (2011)
- Alberta Research and Innovation Plan (2011)
- Other Government of Alberta ministry research strategies and plans

1.4 Objectives

The objective of the Value Chain Sustainability targeted call is to support conceptual research (including proof of concept), applied research and pilot studies in the area of value chain sustainability, within a company facility, a public institution, and/or a combination of the two.

This research and innovation program is designed to:

- Accelerate research that will lead to the introduction of new, innovative and competitive traits and attributes into the Canadian and global market place.
- Support research and innovation that enhances sustainability of system management practices in agriculture and forestry.

Key long-term outcomes for this program are improved competitiveness, profitability and sustainability of Alberta's agriculture, forest, and related life sciences sectors; and an efficient lab-to-industry innovation pipeline that results in economic, social or environmental benefits for Albertans.

For more information, please view the Alberta Innovates Bio Solutions Business Plan found on the AI Bio website, <http://bio.albertainnovates.ca/>, or contact the AI Bio Program Manager.

Areas of interest include:

1. Research pertaining to novel trait and/or attribute development to produce innovative products, address market issues and meet consumer demands for agriculture and forest products. Research should support the advancement of competitiveness and sustainability of Alberta's forest, crop, livestock and food industries.

Some examples are:

- a) Identify hybrid and superior selections of indigenous forest and agriculture plant material.
 - b) Combine advanced genetics and biotechnology tools to transform genetic material for specific market and/or environment-driven traits.
 - c) Produce livestock with specific verifiable attributes to meet consumer demands (i.e. food safety, traceability, reduced use of antibiotics, and animal welfare).
2. Research and innovation addressing system and productivity management that emphasizes the protection of forest and agricultural resources against environmental stresses and the optimization of production systems to maximize yield and quality or contribute to social license to operate.

Some examples are:

- a) Selection and development of forest species and agriculture crops resistant to pests (weeds, pathogens and insects) and/or development of pest management systems.
- b) Select and develop re-vegetation materials and solutions for reclamation of boreal forest, abandoned industrial sites and peat land (i.e. natural disturbance emulation).
- c) Develop agronomic packages that optimize market-driven traits (i.e. food, feed and bio-industrial products) and yield.
- d) Develop integrated land management systems to optimize production and reduce environmental stresses.

The following items are beyond the scope of the program:

- Scale up of new technologies beyond pilot studies
- Marketing activities
- Commercialization activities
- Research into consumer demands and preferences

Guiding Principles:

- **Aligned:** Proposals should bring value to Alberta and align with the program purpose and objectives.
- **Rigor and Due Diligence:** LOIs and invited full proposals will be subject to rigorous evaluation.
- **Collaboration:** LOIs and invited full proposals should identify opportunities for effective collaboration to ensure best use of resources, highly qualified personnel and infrastructure. Ideally, project teams should include the appropriate expertise in all aspects of the project
- **Leveraging:** LOIs and invited full proposals should identify opportunities to maximize project financing through leveraging and industry engagement.
- **Knowledge Translation:** The proposed research and innovation must clearly demonstrate how the research knowledge will be translated into practice, policies, products, or programs.
- **Competitive Solutions/Jurisdictional Advantage:** Investments will be made in projects that provide a competitive or jurisdictional advantage to Alberta and demonstrates opportunities through advancing innovation in value chain sustainability.

1.5 Process and Deadlines

Grants will be typically up to a maximum of \$500,000, in total, for up to 3 years, for eligible expenses. Projects will commence in 2012 and be completed by May 2015.

LOIs are invited from organizations wishing to participate in the program. On-line forms can be found on the AI Bio website at <http://bio.albertainnovates.ca/funding/vcs/>. Each LOI must be electronically submitted by **September 12, 2:00 p.m., MDT, any applications received after this time will not be accepted.** LOIs will be reviewed and assessed for alignment with the program purpose and objectives and evaluated using the pre-established measurement criteria described in Section 2.8. Notification of decisions will be provided to all applicants by **October 17, 2011.**

Applicants who submit successful LOIs will be invited to submit a full proposal, which will be due **November 17, 2011 at 2:00 p.m. MST. Any full proposals received after this time will not be accepted.** Full proposals forms will be electronically submitted, with a hard copy including signatures provided to the Program Manager (identified at the end of the document). The full proposal will undergo an evaluation using pre-established measurement criteria described in Section 2.9. Notification of decisions will be provided to all applicants soon after **February 17, 2012.**

For electronic submission of LOIs and invited full proposals, save a copy of the proposal by clicking on the save button on the top right corner of the application form. This will save the proposal in pdf format. Each proposal must then be submitted through email by using the submit tab on the form. This will generate an automatic email to virginia.chavez@albertainnovates.ca with the proposal attached in '.xml' format. Attach your saved proposal in pdf format to this email. Invited full proposal applications must also provide a hard copy of the proposal to the Program Manager. To submit a hard copy of the full proposal, print off a copy of the saved file and obtain appropriate signatures. The hard copy of the proposal, including signatures, must be provided to the AI Bio Program Manager and must be received by 4:30 p.m. on November 24, 2011.

2.0 Timelines for Project Submission

The following steps and deadlines are planned:

- **August 12, 2011:** Program announcement.
- **September 12, 2011 2:00 p.m. MDT:** Deadline for LOI submission, using the guidelines in Section 2.1.
- **September 13 – October 16, 2011:** Review of the LOIs submitted and identification of the projects for which full proposals will be requested.
- **October 17, 2011:** Request for submission of full proposals.
- **November 17, 2011 2:00 p.m. MST:** Deadline for full proposal submissions. Hard copy with signatures to be received by the Program Manager no later than 4:30 p.m. on November 24, 2011.
- **November 18, 2011 – February 10, 2012:** Due diligence process completed.
- **After February 17, 2012:** All applicants notified of funding decisions.

2.1 Guidelines for Submission of Letter of Intent and Full Proposal

- **Format:** LOI and invited full proposal submissions are to be made through email using the submit button on the application form. Full proposal submissions must be followed up with a hard copy including all necessary signatures. The Funders will maintain the confidentiality of the material submitted. LOIs must be received by AI Bio by **September 12, 2011 at 2:00 p.m. MDT**. Electronic submissions of invited full proposals must be received by **November 17, 2011 at 2:00 p.m. MST**. The hard copy of the full proposal with signatures must be received by **November 24, 2011 at 4:30 p.m. MST**.
- **Forms:** LOI and full proposal forms can be found at the AI Bio website at <http://bio.albertainnovates.ca/> under Funding Programs.

2.2 Eligible Applicants

- Expected applicants include qualified researchers or a team of researchers within private industry, academic institutions, provincial research centres, federal research centres, and non-profit research establishments. The research must have a strong Alberta connection, with preference given to those projects that are led by an Albertan researcher.

2.3 Eligible Expenses

Category	Eligible Expenses
Personnel – Project team	<ul style="list-style-type: none"> • Additional manpower required to deliver program outcomes, at usual annual salary rates. • Time for specific activities on the project for project team members and consultants may be acceptable as in-kind contribution. • Salaries of ongoing employees of an institution are not eligible, other than as an in-kind contribution.
Travel	<ul style="list-style-type: none"> • Travel to project sites. • Travel to present to or discuss project with stakeholders. • Travel for information dissemination purposes.
Capital Assets/Equipment	<ul style="list-style-type: none"> • Equipment directly required for the project, as specified in the program description documents, up to 15% of the overall project costs.
Supplies	<ul style="list-style-type: none"> • Cost of supplies directly required for the project.
Communication, Dissemination, Linkage	<ul style="list-style-type: none"> • Cost of communicating to knowledge partners, funders, etc. • Cost of publishing if appropriate.
Overhead	<ul style="list-style-type: none"> • Indirect overhead is not an allowable expense. • Incremental administrative expenses, directly required to achieve project outcomes, are eligible.

2.4 Funding Sources

Applicants are encouraged to obtain other sources of financial and/or in-kind support for the project from groups, organizations or companies that are likely to benefit from the results of the proposed research and innovation. Information should be provided in the application form regarding other sources of support, including those applied to or otherwise contacted for assistance.

The Funders will require written confirmation of partner contributions in support of full proposals. Upon completion of the project, the applicant is required to provide confirmation of receipt of partner contributions, including details of the contribution (e.g. copy of cheque or deposit slip).

Applicants who are invited to submit a full proposal must confirm funds by **February 10, 2012**. If the applicant is unable to secure the funds identified in the proposal, the applicant must disclose this information to the AI Bio Program Manager.

2.5 Progress Reports and Financial Reporting

If successful in obtaining funding, the Funders will require the applicant to submit progress and financial reports every 12 months, as per the schedule contained in the contract to the Funders. A final report will be required within three months of project completion.

2.6 Intellectual Property Principles

Intellectual property owned by the applicant must be managed by the applicant.

2.7 Confidentiality

The Funders are committed to keeping application details confidential and are subject to the protection and disclosure provisions of the Freedom of Information and Protection of Privacy (FOIP) Act. External experts who act as reviewers must sign a confidentiality agreement.

Alberta Innovates Bio Solutions may wish to share select proposals with other potential co-funders but will seek the applicant's consent prior to sharing the LOI or full proposal.

Personal information is collected pursuant to Section 33(c) of the Freedom of Information and Protection of Privacy Act as it relates directly to and is necessary for the Alberta Value Chain Sustainability program. Should you have any questions about the collection of this information, you may contact Ms. Joan Unger, Director of Operations, AI Bio at 780-422-5737.

2.8 Letter of Intent Evaluation Criteria

LOIs will be evaluated using the following mandatory criteria and if the LOI does not meet all the criteria, no further rating will be conducted.

Mandatory Criteria	Yes	No
LOI is received on-time.		
LOI is complete as per the on-line LOI template.		
LOI is submitted by an eligible applicant.		
Objectives are clearly outlined and fit within the program purpose and areas of interest.		
Deliverables are clearly outlined and fit within the program purpose and areas of interest.		
Outcomes are clearly outlined and fit within the program purpose and areas of interest.		
There is a clear indication of industry support for the project. This support could be in a variety of forms (e.g. financial support, in-kind, letters of support, etc.)		
There is an Alberta connection.		
Applicant is not directly affiliated with any of the funding bodies.		

LOIs meeting all of the mandatory criteria will then be evaluated by AI Bio using the criteria identified below. The Funders will evaluate proposals based upon their individual mandates and areas of interest.

No.	Desired Criteria	Max Score
1	Quality of Proposal: Project Overview, Objectives and Deliverables are achievable. The project design will lead to the desired outcomes and deliverables. Appropriate literature indicates that the project builds on current science and is potentially new and innovative.	50
2	Expected Benefits of the Project: Specific economic, social, and/or environmental benefits to the agricultural, forestry or food industry, consumers and Alberta, are clearly described and the project has the support of benefactors.	20
3	Budget: The Budget is reasonable and has leveraging from other sources, including cash or in-kind from industry or other funding organizations.	15
4	Project Team: Project Team members are committed and there is evidence of collaboration. The organization has the capacity (resources and infrastructure) to ensure the success of the project.	15
	Total Score (Maximum 100)	100

LOIs of interest to any of the funders will be invited to submit a full application.

2.9 Full Proposal Evaluation Criteria

Full Proposals will be evaluated using the following mandatory criteria and if the proposal does not meet all the criteria, no further rating will be conducted.

Mandatory Criteria	Yes	No
The Full Proposal is received on-time		
The Full Proposal is complete as per the template		

Processes for review are established and include both internal and external peer review. Each proposal will be evaluated by AI Bio using the criteria identified below. The Funders will evaluate proposals based upon their individual mandates and areas of interest.

No.	Desired Criteria	Max Score
1	Quality of the Proposal: The project addresses a significant challenge. The objectives, deliverables and outcomes are measurable. The project utilizes sound science and methods. The project builds on the current body of science and has the potential to be new and innovative.	25
2	Timelines: The major steps and timelines associated with the project are clearly outlined, and there is a high probability that the project will be completed in the timelines outlined.	10

No.	Desired Criteria	Max Score
3	Expected Benefits of the Project: The project will lead to innovations supporting value chain sustainability. The proposal clearly outlines the economic, social, and/or environmental benefits to Alberta's agricultural, forestry or food industry, consumers and Albertans. The benefits are clearly described, and the project has the support of benefactors.	10
4	Knowledge Translation Plans: The knowledge translation plans are clear and achievable and will lead to the extension of new knowledge and/or will lead to the development of new products, practices, programs, etc. The Knowledge translations partners are engaged in the project.	15
5	Intellectual Property: Intellectual Property is clearly outlined and effective strategies are in place.	5
6	Challenges/Risks: Potential challenges and risks are identified and mitigation strategies are in place.	5
7	Budget: The project can be completed within the budget outlined and those projects that are leveraged with funds from industry or other organizations are valued more highly, and the funding has been fully secured.	15
8	Project Team: Project Team members are committed and there is evidence of effective collaboration. The team has the capacity (resources and infrastructure) to ensure the success of the project.	15
	Total Score (Maximum 100)	100

For more information please contact:

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