



GenomeCanada

## Request for Applications 2014 Large-Scale Applied Research Project Competition

### *Genomics and Feeding the Future*

#### 1. Overview

Through the process of developing sector strategies, Genome Canada and the six regional Genome Centres recently brought together industry, academic, and government representatives in order to map out how the sectors could further benefit from the transformative power of genomics and related disciplines and so make a larger contribution to the Country's economy and well-being of Canadians. Building upon the input from the Agri-Food<sup>1</sup> and Fisheries and Aquaculture<sup>2</sup> sector strategies, Genome Canada is seeking proposals for large-scale research projects that focus on the application of genomics<sup>3</sup> in the agri-food and fisheries/aquaculture sectors to address challenges and opportunities related to global food safety, security and sustainable production<sup>4</sup>, and thereby contribute to the Canadian bioeconomy and well-being of Canadians.

The impending increases in the world's population and the corresponding increased demand for food against a backdrop of increasing climate variability that will have profound impacts on the productive capacity of both the oceans and agricultural lands is a major challenge for humanity in the 21<sup>st</sup> century. Presently nearly 1 billion of the world's population are chronically undernourished. Population growth will continue to increase in regions of the world that lack the potential to implement major changes in food production. Canada's aquaculture and agricultural sectors have important opportunities to be part of the solution to the global challenge of food security since Canada has a privileged supply of fresh water, unpolluted oceans and productive farm lands. The projected doubling of world food demand by 2050, as well as an increased demand for high quality protein (fish and meat) will require an unprecedented increase in productivity and more effective delivery systems that reduce food waste and spoilage to meet the global demands for food security, food safety and sustainable production. To date the world

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<sup>1</sup> The Opportunity for **Agri-Food** genomics in Canada: Ours for the Making.  
[http://www.genomecanada.ca/medias/PDF/EN/Agri\\_Food\\_EN.pdf](http://www.genomecanada.ca/medias/PDF/EN/Agri_Food_EN.pdf)

<sup>2</sup> Canadian **Fisheries & Aquaculture** how genomics can address sector challenges.  
[http://www.genomecanada.ca/medias/PDF/EN/Fisheries\\_and\\_Aquaculture\\_EN.pdf](http://www.genomecanada.ca/medias/PDF/EN/Fisheries_and_Aquaculture_EN.pdf)

<sup>3</sup> The term genomics is defined here as the comprehensive study, using high throughput technologies, of the genetic information of a cell or organism, including the function of specific genes, their interactions with each other and the activation and suppression of genes. For purposes of describing Genome Canada's mandate it also includes related disciplines such as bioinformatics, epigenomics, metabolomics, metagenomics, proteomics and transcriptomics.

<sup>4</sup> Food safety addresses the production, process, storage, handling and preparing of food and food products in ways that do not cause injury or illness in those that are consuming it. Food security is "...when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life", according to a definition from the World Food Summit of 1996. <http://www.who.int/trade/glossary/story028/en/>

has largely relied on traditional food production practices to increase productivity. For example, the green revolution through selection and management practices resulted in India and China becoming self-sufficient in wheat. However, the traditional practices of species improvement is moving towards the top end of the well-known S-shaped improvement curve and while increases in productivity will continue to be realized, they will not meet the required 3-5% increases in productivity a year to address the global food security challenge. The knowledge of the genetic make-up and gene functions of plants, livestock, fish and other species, and how these genes interact, has been increasing dramatically over the last 10 years. The application of this knowledge to agricultural and aquatic productivity has been largely untapped, as well as the potential applications related to better tools for assuring food safety and sustainability of production. Genomics and genomics-related technologies in both the agri-food, and fisheries/aquaculture sectors can play a strong role in supporting and enhancing food safety, security and sustainable production both in Canada and globally and Canada is well positioned to be a global leader in providing solutions in this area.

Canada's agri-food and agriculture sector is one of the foundations of the national economy, accounting for just over eight per cent of the country's total Gross Domestic Product (GDP) and directly employing 2.1 million people in 2011. The sector is a major driver of exports, valued at \$40.3 billion in 2011. In addition, commercial (sea and freshwater) fisheries, aquaculture and processing contributed \$6.4 billion in outputs (landings, production and processing), over 80,000 jobs and \$3.9 billion in exports in 2010 with a positive trade balance of \$1.5 billion to the Canadian economy.

A country such as Canada with its well-developed research infrastructure and large scale investments in genomics is now ready to move to the next steps and be a world leader in the application of this science to food production, food safety and sustainability of our food systems. Continued investment in advances enabled by genomics will position the agri-food and fisheries/aquaculture sectors to seize the aforementioned opportunities. It is recognized that the challenges facing the agri-food and fisheries/aquaculture sectors are global in nature and that the solutions can be facilitated by international collaborations.

## **2. Objectives**

The 2014 Large-Scale Applied Research Project Competition aims to support projects focused on using genomic approaches within the agri-food and fisheries/aquaculture sectors to address challenges and opportunities related to global food safety, security and sustainable production, and thereby contribute to the Canadian bioeconomy and the well-being of Canadians.

Applicants must demonstrate how their proposal holds a high potential for attaining concrete deliverables by the end of the funding period. Proposals that make a strong case that those deliverables will be subsequently translated into significant social and/or economic benefits within as short a time-frame as possible after the end of the project are particularly encouraged, taking into consideration what is reasonable for the different research areas in these sectors.

To ensure that the objectives of the RFA are met, all applications must address the evaluation criteria established for the competition, i.e., quality of the research proposal, social and economic benefits, and management and financial competency (see Appendix 1). Only those proposals demonstrating the highest degree of overall excellence will be funded.

### 3. Funding Available and Term

- There is approximately \$30 million available for this competition from Genome Canada with an additional \$5 million from Western Grains Research Foundation (WGRF).
- At least 60% of the requested funding for eligible costs for each project must be obtained through co-funding from other sources.
- Genome Canada will provide support for projects ranging in total size from \$2 million to \$10 million. The Genome Canada investment cannot exceed more than 40% of the total investment in the project by all parties; the remaining 60% must be secured through co-funding. (Note that projects with a total size that exceeds \$10 million will be considered as long as the Genome Canada contribution does not exceed \$4 million)
- Successful projects will be awarded funding for a term of up to four years.

### 4. GE<sup>3</sup>LS

While genomics and its tools has the potential to have significant social and economic impact in the agri-food and fisheries/aquaculture sectors there remain potential barriers to the adoption and uptake of the outcomes from this research. In this competition, the applied GE<sup>3</sup>LS<sup>5</sup> research should assist in the effective translation of research results into practice and policy, and the uptake of genomic-based applications related to food safety, security and sustainable production. GE<sup>3</sup>LS research may be conducted in two forms:

- **Large-scale GE<sup>3</sup>LS research projects:** These investigate in a comprehensive, innovative and interdisciplinary manner pressing national and/or international factors affecting genomics advances within the agri-food and fisheries/aquaculture sectors. Project outputs should be of a scope and depth to make a significant contribution to the potential uptake of genomic applications, while also making significant theoretical and/or methodological contributions to the study of genomics science, technology and innovation. It is expected that large-scale GE<sup>3</sup>LS research projects will demonstrate active engagement with the genomics scientific community and/or potential end-user communities in the planning of the research as well as its conduct, and that their findings hold a reasonable potential of contributing to, or affecting change in, practices or policies within these communities. This may entail sustained interactions with other large-scale projects and/or their integrated GE<sup>3</sup>LS components funded through this competition.
- **Integrated GE<sup>3</sup>LS research:** *All other projects must include an integrated GE<sup>3</sup>LS research component.* The overarching objective of integrated GE<sup>3</sup>LS research is to investigate the relevant factors affecting the advancement of the genomics research proposed and to support throughout all aspects of research projects (including research management and oversight) collaboration between genomic scientists and GE<sup>3</sup>LS

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<sup>5</sup> The acronym GE<sup>3</sup>LS stands for “Genomics and its Ethical, Environmental, Economic, Legal and Social aspects”. However, it should be understood broadly as genomics-related research endeavors and related activities undertaken from the perspective of the social sciences and humanities. Therefore, it is not strictly limited to disciplines that make-up the acronym but rather encompasses all those that rely on quantitative and qualitative methodologies to investigate genomics in society, and help establish a basis to inform applications, practices and policies. In the context of this RFA, it can also include approaches from a wide range of disciplines including but not limited to: development studies, environmental sciences, food studies, geography, innovation studies, political sciences, and population studies.

researchers. Integrated GE<sup>3</sup>LS research should be closely related to the overall project's objectives, deliverables and potential social and/or economic benefits. The scope should be more targeted than in large-scale GE<sup>3</sup>LS research, but the depth of the investigation must be sufficient to provide findings that can be applied to the project, as well as the broader sector. Moreover, the nature of the research outputs should have the potential to assist in the likely successful uptake of the project's deliverables.

Following the funding decisions on this competition, Genome Canada will determine if additional mechanisms are required to maximize the GE<sup>3</sup>LS research and the overall social or economic benefits that can be realized through its translation. For example, to the extent that integrated GE<sup>3</sup>LS research components across different projects and/or stand-alone GE<sup>3</sup>LS research projects are using similar research approaches, are addressing the same sector or are focused on the same overarching objectives (safety, security, sustainability), additional support may become available to facilitate exchanges or the establishment of networks, so that through GE<sup>3</sup>LS research collaboration, it may have a greater impact.

## **5. Eligible Research Areas**

To be eligible for this competition, proposals must:

- respond to the objectives of the competition;
- include genomic approaches as essential components in terms of importance to the overall outcomes of the project;
- be of a scale and scope such that they are able to address challenges requiring a genomics approach, be internationally competitive and have the potential for major impact.

This competition provides an opportunity for research teams to propose large-scale projects that would be part of even larger national and international research initiatives, as long as other eligibility criteria are met.

The competition also provides an opportunity for Canadian research teams, in partnership with their international collaborators, to propose projects that address challenges that are relevant both in the Canadian context and also to Canada's international development priorities<sup>6</sup> by providing sustainable, genomic-based solutions to problems of agriculture and fisheries/aquaculture in developing countries. For example, research on how plants can better respond to abiotic and biotic stresses has the potential for considerable impact on global food security with applications in Canada and the developing world. In such collaborations, Genome Canada funds would flow to Genome Canada eligible institutions within Canada (see Guidelines for more details) while research to be carried out in a developing country would be funded through co-funding sources.

Projects funded through this competition must focus on genomic approaches within the agri-food and fisheries/aquaculture sectors to address challenges and opportunities related to global food

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<sup>6</sup> <http://www.acdi-cida.gc.ca/prioritythemes>

safety, security and sustainable production. Topics of applied research that could be addressed include, but are not limited to, the following:

- meeting the demands of population growth and maintaining global competitiveness by increasing production efficiencies using genomic based approaches;
- improving the health of crops, livestock and fish including increased resilience to abiotic and biotic stresses such as disease, drought and temperature extremes, and better management of pests and invasive species;
- adapting production to accelerated climate change;
- production systems that will lessen the footprint on the environment;
- development and implementation of cost-effective genomic tools that meet the needs of users;
- food supply chains that are more efficient and less susceptible to spoilage and waste;
- environmental sustainability of farmed fish species, ensuring wild species conservation and protection of ecosystem biodiversity;
- achieving the safety and quality attributes demanded by the market including those related to human health through the production of food with enhanced nutrition, functional attributes and safety (e.g., in regards to infectious disease transmission, food allergenicity, and toxicity)(NOTE: the main focus of the proposal must be on food, not human health); or,
- exploring translational pathways including social, political, regulatory, policy or economic factors that would accelerate the responsible uptake of genomics-based applications in the agri-food or the fisheries/aquaculture sectors, and investigating strategies that can foster receptivity.

Integrated GE<sup>3</sup>LS research topics that could be addressed in this competition include, but are not limited to, the following:

- exploring the effect of international trade and market access to exports of Canadian agriculture commodities;
- exploring the effects of national policies and/or regulations on sector competitiveness and productivity;
- investigating the influence of consumers' values and beliefs on food choices and thereby on food production (e.g., acceptance of genetically engineered foods); or,
- effectiveness of regional, national and/or international sustainable production practices on food safety and security.

## 6. Social and/or Economic Benefits

All applications must describe, with supporting evidence, the deliverable(s) that will be realized **by the end of the project**. Proposals that make a strong case that those deliverables will/can be subsequently translated into significant social and/or economic benefits within as short a time-frame as possible after the end of the project are particularly encouraged, taking into consideration what is reasonable for the different research areas in these sectors.

Applications must include a plan which explains the next steps of how the deliverables from the research will be transferred, disseminated, used, and/or applied to realize the social and/or economic benefits. Once funded, the project teams will be required to further elaborate on this plan as time goes on so as to provide a more substantive business case that will describe the path forward to ensure that the proposed deliverables and benefits are realized in the stated timeframe and within the approved budget. The Research Oversight Committees (see 9.2) will assess this plan on an on-going basis.

See **Appendix 1** for more details on all review criteria.

## 7. End-User Engagement

All projects must clearly demonstrate end-user engagement in the development and execution of the research plan in order to help ensure receptor uptake of the research. “End-users” in the context of this RFA can be defined as those who are able to use the information generated through research to make informed decisions on issues, policies, programs and product development. Examples of end-user organizations include breeders’ groups, industry and industry associations, government departments and regulatory agencies, and producer organizations. Individuals from these types of organizations should be included on the project team.

End-users must be clearly integrated into the project team in the form of either/or a project team member, collaborator and/or member of the management team. Co-funding would clearly demonstrate end-user interest in the project’s potential deliverables, although it is not a requirement for an end-user organization to contribute to the co-funding required.

## Competition Timeline

**Requests for support of projects must be submitted to Genome Canada through a Genome Centre. The competition timeline outlined below includes both Genome Canada and Genome Centre deadlines. Please contact your Genome Centre for further information on their process and internal deadline dates.**

|                    |   |
|--------------------|---|
| August 11, 2014    | Registration due date - Genome Centres            |
| August 18, 2014    | Eligible registrations submitted to Genome Canada |
| September 17, 2014 | Deadline for pre-applications to Genome Centres   |
| November 17, 2014  | Deadline for pre-applications to Genome Canada    |

|                    |   |
|--------------------|---|
| Late January, 2015 | Applicants notified of results of pre-application           |
| March 13, 2015     | Deadline for full applications to Genome Centres            |
| April 13, 2015     | Deadline for full applications to Genome Canada             |
| Late May, 2015     | Review committee meets (including meetings with applicants) |
| Late June, 2015    | Decisions by Genome Canada and Partners (if applicable)     |
| Late June, 2015    | Notification of Decision                                    |

## 8. Application Process

Genome Canada will work with its partners (if applicable) throughout the competition process. Applicants are required to apply for funding through their regional Genome Centre. The application process is comprised of three steps: Registration, Pre-Application and Full Application.

### 8.1. Registration

A brief Registration form will be used to provide early guidance on elements such as who is applying, what they are planning to do, research areas including integrated GE<sup>3</sup>LS, expected deliverables, approximate budgets and suggested reviewers. This will allow for screening for eligibility by the Genome Centres and facilitate the early selection of reviewers for the peer review process. Information from eligible Registrations (i.e., name of project leader(s), lead institution, title of project, research areas and keywords) will be posted on the Genome Canada website to facilitate the identification of areas of potential synergy between applications from across the country so that applicants can consider engaging with other researchers on a common project. This will also make possible the exchange of required information between project teams and Genome Canada supported genomics technology innovation centres.

### 8.2. Pre-Application

For the **Pre-Application**, applicants will be asked to submit a short description of the following:

- the proposed research, including an integrated GE<sup>3</sup>LS research plan;
- expected deliverables of the research;
- the potential social and/or economic benefits of the research; and,
- how the team will engage end-users in the project.

Pre-applications will be reviewed in a two stage process. The first stage involves an initial review that will be done “at-home” by a College of Reviewers who will evaluate the Pre-Applications, focussing on the quality of the research plan and the potential for social and/or economic benefits. College reviewers will provide a rating for the quality of the research proposal and potential for social and/or economic benefit, and the mean score for each of these

categories will be calculated separately. Only those Pre-Applications with an equivalent of a mean rating of “B” for each category will be considered further. A list ranking the Pre-Applications, based upon the mean of the scores for both criteria (quality of the research proposal and social and/or economic benefits) will be prepared. It is expected that only the top 60-70 Pre-Applications in the ranking list will be considered in the second stage of Pre-Application review.

The second stage will involve review by a Pre-Application Review Committee (PARC) with broad expertise in research including GE<sup>3</sup>LS, technology development, research management and the translation of research results in the areas of agri-food and fisheries/aquaculture. This committee will consider the College reviews and make a final recommendation to Genome Canada on which Pre-Applications should be invited to submit a Full Application.

The proposals will again be checked for eligibility to the program. Only the most competitive Pre-Applications will be invited to submit full applications. It is expected that approximately 30 Pre-applications will proceed to the full application stage. Information from approved Pre-applications (i.e., name of project leader, lead institution, title of project, research areas and keywords) will be posted on the Genome Canada Website to further facilitate the exchange of information between project teams and Genome Canada supported genomics technology innovation centres.

### **8.3. Full Application**

Those applicants successful at the Pre-Application stage will be asked to submit a full application. Full applications must address the evaluation criteria established for the competition, i.e., quality of the research project, social and/or economic benefits, management and financial competency. A final check for eligibility will be carried out. A multidisciplinary committee of experts, with expertise in assessing all of the review criteria, will be established to review applications. The review committee will meet with and interview representatives from each project through a face-to-face meeting. Only those proposals demonstrating the highest degree of overall excellence will be funded.

**The evaluation processes may be adjusted where warranted by the complexity of proposals received or other relevant factors. Any changes will be communicated through [Genome Canada’s website](#) and through the Genome Centres.**

## **9. Project Management and Oversight**

### **9.1 Project Managers**

All approved projects must have a dedicated project manager. Project managers coordinate administrative and reporting requirements and support the project’s scientific enterprise.

### **9.2. Research Oversight Committees**

All Genome Canada funded projects will have a Research Oversight Committee (ROC) constituted by, and reporting to, the Genome Centre(s). The ROC reports to the Genome Centre on the progress being made by the project and makes recommendations to the funders

regarding continued funding, as well as providing advice and guidance to the research team to help ensure that the project achieves its stated objectives and milestones. The membership of the ROC must be completely independent from the project, with no real or perceived conflicts of interest and should be composed of experts who will work with the Genome Centre and the funders to maximize the successful outcomes of the project.

## 10. Co-Funding

Genome Canada requires that at least 60% of the requested funding for eligible costs for each project be obtained through co-funding from other sources. The Genome Centres, working with the applicants, are responsible for securing co-funding. Co-funding for this competition must be for research activities that are an integral part of the Genome Canada approved project and must be for eligible costs specifically requested in the Genome Canada budget form in order to be considered as an eligible co-funding source. See the **Guidelines for Funding Research Projects** for more details.

## 11. Programmatic Partnerships

To enhance its program in genomics, a strategic partnership has been established between Genome Canada, and the Western Grains Research Foundation (WGRF) on this RFA. To be eligible for WGRF partnership funding applicants must satisfy the requirements for the competition as outlined in the RFA, as well as any additional requirements put forth by the partner organizations. For more details on this funding opportunity, please see **Appendix 2**

## 12. Contacts

|                  |                            |                     |  |
|------------------|----------------------------|---------------------|--|
| Andy Stone       | Genome Atlantic            | (902) 421-5645      | <a href="mailto:astone@genomeatlantic.ca">astone@genomeatlantic.ca</a>           |
| Micheline Ayoub  | Genome Québec              | (514) 398-0668 x251 | <a href="mailto:mayoub@genomequebec.com">mayoub@genomequebec.com</a>             |
| Alison Symington | Ontario Genomics Institute | (416) 673-6594      | <a href="mailto:asymington@ontariogenomics.ca">asymington@ontariogenomics.ca</a> |
| Chris Barker     | Genome Prairie             | (306) 668-3587      | <a href="mailto:cbarker@genomeprairie.ca">cbarker@genomeprairie.ca</a>           |
| Gijs Van Rooijen | Genome Alberta             | (403) 210-5253      | <a href="mailto:vanrooijen@genomealberta.ca">vanrooijen@genomealberta.ca</a>     |
| Gabe Kalmar      | Genome British Columbia    | (604) 637-4374      | <a href="mailto:gkalmar@genomebc.ca">gkalmar@genomebc.ca</a>                     |

## Appendix 1. Evaluation Criteria

Proposals submitted to Genome Canada are evaluated via a rigorous independent peer review process to assess their research merit and potential for social and/or economic benefits for Canada, as well as to ensure that sound management and financial practices are implemented. Excellence and innovation at the very highest of international standards must be demonstrated for funding to be awarded.

### Eligibility Criteria

Each proposal will be reviewed for eligibility at each stage of the application process. The following criteria will be used:

Does the proposal:

- respond to the objectives of the Genome Canada competition;
- include genomics approaches as essential components in terms of importance to the overall outcomes of the project;
- is of a scale and scope such that it is able to address challenges requiring a genomics approach; and,
- is internationally competitive and has potential to have a major impact?

If considered eligible, the proposal will be reviewed using the criteria described below:

### Review Criteria

The review criteria fall into three categories:

- 1) Research Proposal;
- 2) Social and/or Economic Benefits; and,
- 3) Management and Finance

Note that the descriptive phrases which follow the criteria below are not all-inclusive.

#### 1. Research Proposal

*Including Research on Ethical, Environmental, Economic, Legal and Social Aspects of Genomics (GE<sup>3</sup>LS)*

- Research Context and Originality
  - To what extent does the proposed research lead, extend and/or complement national and international work in the area?
  - To what extent does the proposed research reflect creative and original thinking?
  - To what extent is the research relevant to the end-users identified?
- Research Plans
  - How appropriate are the methods and approaches proposed (including handling of data and resources) in terms of the research objectives?
  - How feasible is the research, given the projected resources and timelines?

- Research Expertise
  - How appropriate is the expertise and track record of the research team in terms of realizing the research goals?
  - How well will different types of expertise be integrated?
- Research Support
  - How suitable are the available facilities, equipment and services (including services to be provided by Genome Canada's GIN Nodes and/or other technology service providers)?
- Specific criteria related to Integrated GE<sup>3</sup>LS research (in addition to the GE<sup>3</sup>LS aspects which are included in the criteria above):
  - Does the GE<sup>3</sup>LS research address the most salient aspects of the project and is it closely related to the overall project's objectives, deliverables and potential social and/or economic benefits?
  - Is the integrated GE<sup>3</sup>LS research plan closely aligned with, and complementary to, the overall project milestones?
  - Is the GE<sup>3</sup>LS research plan sufficiently robust and systematic to advance generalizable knowledge in relevant academic fields?

## **2. Social and/or Economic Benefits**

- Deliverables
  - To what extent have the applicants identified appropriate deliverables in terms of their potential to have impact on food safety, security and/or sustainable production?
  - What is the likelihood that the deliverables will be achieved by the end of the funding period?
- Expected Benefits
  - How significant are the anticipated benefits described in terms of their potential of contributing to food safety, security and/or sustainable production?
  - Will the benefits be realized within a short time-frame after the end of the project, taking into consideration what is reasonable for the different research areas in these sectors?
- Strategy for realizing benefits
  - How persuasive is the strategy set out by the applicants for realizing benefits from their research?
  - How strong is the plan for knowledge translation and development of benefits, i.e., how well does the plan explain the next steps of how the deliverables from the research will be transferred, disseminated, used, and/or applied to realize the social and/or economic benefits?
  - How closely aligned is the plan for knowledge translation with the GE<sup>3</sup>LS research and the overall deliverables and outcomes of the project?
- Expertise for realizing benefits

- How appropriate is the expertise and track record of the team that will further develop and implement the strategy for realizing benefits?
- To what extent are likely end-users involved in the project and the strategy to realize benefits?
- If the strategy includes commercialization, to what extent has appropriate technology transfer expertise been included?

### **3. Management and Finance**

- Management plans and expertise
  - How well does the management plan cover project governance, accountabilities of personnel and finance, and processes for decision-making on research direction and strategy for realizing benefits?
  - How realistic is the project schedule given the likely need to “ramp-up” activities at the front end?
  - How credible is the management plan in terms of coordination of current and future partnerships?
  - How appropriate are the plans for making the research results accessible to the research community?
  - Are the proposed arrangements with Genome Canada’s GIN Nodes or other technology service provider sufficiently articulated to ensure that the provider is able to complete the requested service(s) in the timeframe required by the applicant?
  - To what extent do the project leaders have experience in managing large-scale projects involving research and the application of results?
  - How appropriate are the plans to ensure that an adequate number of highly qualified personnel (HQP) (i.e., support personnel such as technicians and trainees such as post-doctoral fellows), are available to meet the needs of the proposed research through recruitment and/or training?
- Budget and expenditure controls
  - How reasonable is the proposed budget in terms of the anticipated level of effort and deliverables?
  - To what extent are the budget and proposed expenditures well-documented and eligible per the guidelines?
  - To what extent does the proposal provide assurance that expenditures from a funded project would be closely and critically monitored?
- Financing from co-funders
  - To what extent is the proposed co-funding plan well-documented, eligible and feasible?
  - Does the proposed co-funding directly support the objectives of the project?
  - How likely is it that the project will be able to secure at least 75% of the co-funding for eligible costs at time of the release of funds?



## **Appendix 2. Partnership with Western Grains Research Foundation**

### **Description**

**Western Grains Research Foundation (WGRF)** will partner with Genome Canada to support high quality genomics research leading to the development of new crop varieties, products or management practices that will benefit western Canadian farmers, as part of Genome Canada's 2014 Large-Scale Applied Research Project Competition on Genomics and Feeding the Future.

### **Background**

WGRF is a farmer funded and directed non-profit organization investing in agricultural research that benefits western Canadian producers. For over 30 years the WGRF Board has given producers a voice in agricultural research funding decisions. WGRF manages an Endowment Fund and the wheat and barley variety development check-off funds, investing over \$7 million annually into breeding and field crop research. WGRF brings the research spending power of all farmers in Western Canada together, maximizing the returns they see in crop research.

To be eligible for WGRF funding, projects must:

- benefit and provide high potential impact for western Canadian field crop producers;
- focus on significant western Canadian field crop(s)
- demonstrate strong integration with an applied research program;
- align with the WGRF research priority areas of:
  - Variety development of a significant Canadian field crop
  - Agronomy
  - Crop Risk
  - Crop utilization
  - Post-harvest management
- demonstrate a clear path to commercialization or uptake by the end user .

WGRF may consider support of international research projects that benefit Canadian researchers or western Canadian crop producers.

Proposals must also address the eligibility criteria as outlined in the RFA.

### **Funds Available**

WGRF has allocated up to \$5 million to Genome Canada's 2014 Large-Scale Applied Research Project Competition on Genomics and Feeding the Future to fund individual projects on a 1:1 funding basis with Genome Canada that have been deemed relevant to WGRF and which fall above the Genome Canada cut-off for fundable applications.

Approval of funding for the Partnered Project(s) will be granted by Genome Canada's Board of Directors and the WGRF's Board of Directors.

### **Relevancy Review**

WGRF will have access to pre-applications and full-applications submitted to Genome Canada to assess the alignment of applications with WGRF's specific research priority areas (see above). Relevance review will occur prior to review of the full application. Only proposals deemed eligible by the WGRF will be considered for this partnership funding.

### **Contact:**

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