Outline

• Introduction and Roles of Research Intelligence staff
• Growing Forward 2 Overview
• Research Strategy
• Areas of Focus
• Program Development and Delivery
• Budget and knowledge transfer
• Closing remarks and timelines
Transformation - Research Intelligence Staff

• Director of Transformation – Patty Rosher
• Manager – Dr. Patti Rothenburger
• Research and Development Specialist:
  • Ag Genetics – Dr. Chami Amarasinghe
  • Ag Resources – Kim Wolfe
  • Livestock – Dr. Getahun Gizaw
  • Food and Agri- Product Processing – Vacant
  • Innovation – Vacant
• Client Service Coordinator – Monika Menold
Growing Forward 2

- Agri-Research & Development Initiative (ARDI)
- Capacity Knowledge Development (CKD)
- On-Farm
- Grain Innovation Hub (GIH)

Growing Innovation Suite of Programs
Growing Forward 2

- Leverage funding opportunities through partnerships:
  - Commodity association
  - Regional collaboration through Prairie provinces
  - National cluster opportunities
  - Western Grains Research Foundation
  - Genome Canada
Investment in Research & Innovation

- Cereal Crops: 18%
- Oilseed Crops: 12%
- Nutraceuticals: 19%
- Manure Management: 2%
- Livestock: 14%
- Forage Crops: 5%
- Horticulture & New Crops: 5%
- Food Processing & Development: 8%
- Other: 2%
- Hemp: 7%
- Pulse Crops: 5%
- Soil Sustainability: 3%

Source: Agri-Food Research and Development Funding Initiative 1997-2014
Livestock: 26%
Crop/Forage: 31%
Agri-Food/Functional Food: 13%
Environmental: 8%
BioProducts: 6%
Research Capacity Building: 10%
Knowledge Transfer: 3%
Hospitality Grants: 1%
Other: 2%

Source: GF2 Growing Innovation + Grain Innovation Hub Activity (Dollars Approved)
GF2: Growing Innovation Results

**HQP positions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>10</td>
</tr>
<tr>
<td>2014-15</td>
<td>50</td>
</tr>
<tr>
<td>2015-16</td>
<td>90</td>
</tr>
<tr>
<td>2016-17</td>
<td>30</td>
</tr>
</tbody>
</table>

**Graduate students**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>10</td>
</tr>
<tr>
<td>2014-15</td>
<td>15</td>
</tr>
<tr>
<td>2015-16</td>
<td>30</td>
</tr>
<tr>
<td>2016-17</td>
<td>15</td>
</tr>
</tbody>
</table>
GF2: Growing Innovation Results

New technology, processes, practices, products evaluated/assessed/demonstrated

New technology, processes, products adopted

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>250</td>
<td>2013-14</td>
<td>20</td>
</tr>
<tr>
<td>2014-15</td>
<td>150</td>
<td>2014-15</td>
<td>0</td>
</tr>
<tr>
<td>2015-16</td>
<td>400</td>
<td>2015-16</td>
<td>180</td>
</tr>
<tr>
<td>2016-17</td>
<td>250</td>
<td>2016-17</td>
<td>10</td>
</tr>
</tbody>
</table>
GF2: Growing Innovation Results

Training events

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>100</td>
</tr>
<tr>
<td>2014-15</td>
<td>40</td>
</tr>
<tr>
<td>2015-16</td>
<td>60</td>
</tr>
<tr>
<td>2016-17</td>
<td>20</td>
</tr>
</tbody>
</table>

Training event participants

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>2500</td>
</tr>
<tr>
<td>2014-15</td>
<td>100</td>
</tr>
<tr>
<td>2015-16</td>
<td>1500</td>
</tr>
<tr>
<td>2016-17</td>
<td>2200</td>
</tr>
</tbody>
</table>
Research Strategy

• Focus research programming on strategic priorities for the department and industry

• Centralized leadership and streamlined administration of provincially controlled funding

• Strategic approach – transparent, accountable, quantifiable, affordable and supported by industry and public

• Inter-jurisdictional scan across Canada
Research and Innovation

• The 41st Throne Speech states through the Canadian Agricultural Partnership (CAP)
  • Manitoba and Canada
  • Invest $176 million over 5 years in Manitoba agriculture
  • CAP resources to fund research and innovation projects – Emerging market opportunities and improve environmental outcomes.

• Seamless transition from GF2 to CAP
  • Research and innovation programming is essential
Areas of Focus

1) Grain Innovation
2) Livestock Production
3) Agri-Resource Management
4) Processing and Value Added
5) Economic and Market Analysis
6) Other
Grain Innovation

This area will focus on innovation in Manitoba’s grain sector including:

- Crop breeding, production and handling technologies and practices to increase productivity and reduce production risk
- Grain utilization innovations that increase the value and expand demand for Manitoba grain
Grain Innovation

Projects may relate to:

• Crop genomics, breeding and production systems
• Monitoring, detection, and assessment of pests, weather and soil conditions in grain crops to reduce production risk
• Pesticide resistance in grain crops
• Production, storage, and transportation of grains
• Food market quality attributes
• Feed grains
• Sustainable plant protein
Livestock Production

This area will focus on improved productivity, containment and solutions to emerging threats; and new and improved product attributes in livestock industries

Projects may relate to:
• Monitoring, detection and assessment of animal diseases and pests
• BMP - animal welfare, disease management, production, health risks
• Animal genomics and breeding
• Animal and forage production systems
• and animal destruction/disposal.
• Feeding systems
• Herd health
• Sustainable protein
• Manure management
Agri-Resource Management

This area will focus on climate change resilience through investments in new technologies and practices

Projects may relate to:
- Agri-ecosystem functionality
- BMP discovery and development
- Carbon sequestration
- Clean technologies
- Climate change mitigation
- Greenhouse gas emissions
- Grasslands and pollinators
- Nutrient management
- Residue Management
- Renewable energy
- Water management
Processing and Value-Added

Primary research projects that contribute to the advancement of the food and agri-product processing sector through the development of new products, co-stream utilization, and improved productivity.

Projects may relate to:
- biomass
- food distribution infrastructure
- industrial development opportunities
- waste stream management
- energy efficiency
- food safety systems and technologies
Economic and Market Analysis

This will include research that mitigates risk for the agriculture, agri-food and agri-product sector and aids in market development by advancing knowledge in risk mitigation, market intelligence, industry benchmarking, economic impact, labour markets, and consumer behaviour.

Projects may be related to:
- benchmarking industry/business practices
- business risk models
- consumer/public attitudes
- labour markets
- market intelligence including engagement surveys
Other research and development projects that enhance the growth, competitiveness and sustainability of the agriculture sector

Projects may be related to:
• artificial intelligence
• bioinformatics
• food health
• precision agriculture
Funding Streams

Basic/Applied Research and Development Projects
• No total project funding cap
• Capital purchases are ineligible
• Rental rate of owned/purchased equipment will be considered

Innovation Capacity Building Initiatives
• Fund the purchase of capital equipment, personnel and/or capacity building initiatives within Manitoba.
• No total approved project funding cap
• Equipment may make up 100% of total app
Application Process

- Competitive process for both funding streams
- Applications must be submitted no later than the intake deadline announced by the program administrator
- Project duration may be single or multi-year (consecutive)
Proposed Application Process – Year 1

- Application Form Ready 2 weeks
- Full Proposal Deadline January 8, 2018
- Technical Review and Assessment Process
- Funding Decisions Communicated April – May 2018
Proposed Application Process – Year 2 - 5

- Letter of Intent: March to mid April
- Invitation to Full Proposal: End of June
- Full Proposal Deadline: Mid August
- Technical Review and Assessment Process: Co-funders
- Funding Decisions: December

Feedback
Application Form

- Available on website/emailed out in 2 weeks

- Completed applications submitted via the Manitoba Agriculture website, using the approved template

- Program applicants must describe the purpose, objectives and outcomes of the project on the program’s application form
Application Form

• A detailed budget must be included that outlines each category of expense. The budget must include all funds leveraged from all sources

• Letter of support from a co-applicant or collaborator confirming project funding must accompany application form
Eligible applicants

- Farmers
- Agri-processors
- Industry organizations
  - Includes agribusinesses
- Industry service providers
  - Academic and research institutions
  - Co-applicant required (farmer, agri-processor, industry organization) or non-research service provider
Cost Share

• Maximum government contribution of cost share: 50% total approved costs

• Applicant’s contribution in the form of cash, in-kind contribution or a combination of both

• Industry organizations with project applications that align with program criteria
  • Do not have a check-off or
  • Cannot meet the matching funding requirement, may contact the program administrator to discuss alternative funding options
Budget

• Detailed budget of expenses by category

• Budget revisions and line item reallocations up to 10 percent
  • Greater than 10% approval requires a budget reallocation request

• For multi-year projects, an updated budget and work plan is required at the beginning of each fiscal year
Eligible and ineligible costs

- Terms and conditions will have appendices that outline eligible and ineligible costs associated with a project

- Detailed budget
In-kind contributions

- Eligible costs can include in-kind contributions
  - Essential to the success of an approved project
  - To a maximum value of 25% of the total approved eligible costs

- The program will not consider allowable in-kind contributions for reimbursement
  - Until the project or project milestone is complete; and
  - All eligible costs have been incurred, paid, submitted and approved

- In-kind contributions will be included as part of the total project cost calculation only
Project Outputs and Outcomes

Possible outputs may include:

- Number of published scientific papers
- Number of highly qualified personnel trained
- Number of new technologies (products, practices, processes and systems) developed, assessed, adopted
- Number of knowledge transfer events

Increased emphasis will be placed on achieving performance outcomes and impacts.
Knowledge Transfer/Communication Plan

Scientific
- Scientific Papers
- Posters
- Conferences
- Thesis

Extension
- Technical bulletin
- Newsletters
- Workshops
- Field days
- Brochures

Social Media
- Twitter
- Facebook
- Website

Joint
- Government
- Collaborators
- Co-funders
Reporting

• Reporting and project communications will be outlined in the contribution agreement

• Interim and final reporting
  • Standardized forms
Project Assessment

Technical reviewer(s) will review all applications, evaluating each according to weighted criteria, which includes:

• Project description and alignment with department objectives and goals
• Project outcomes
• Financial risk assessment
• Delivery risk assessment
• Client experience/project management
• Performance deliverables
Project Assessment

- Technical Review
- Committee Review
- Final Approval
Application Decision Notification

- Applicants will receive a decision letter from the program administrator

- Successful applicant
  - Contribution agreement
  - Based on the project and financial risk identified by the program administrator
As you leave here today think about how you will utilize the information presented today and implement it over the next few weeks as you await for the application form and release of the Terms and Conditions for CAP
Summary

• **Funding for 2018/19**
  - Application forms available in 2 weeks
  - Full proposal deadline January 8, 2018
  - Possibility of another proposal in-take for 2018/19

• **Funding for 2019/20**
  - LOI accepted March-April 2018

• Feedback forms will assist us with planning
Summary

• Preparation of proposals for January 8, 2018 based on information communicated today

• Read the terms and conditions

• Questions
  Research Manager – Dr. Patti Rothenburger (204) 822-2856

Research and Development Specialist:
  • Ag Genetics – Dr. Chami Amarasinghe (204) 823-2854
  • Ag Resources – Kim Wolfe (204) 871-4373
  • Livestock – Dr. Getahun Gizaw (204) 823-0744
Questions ???
Developing a strong research proposal

• Describe the need/issue facing Manitoba;
• Explain the research plan and specify expected results and project outcomes;
• Well thought out and detailed budget;
• Demonstrate the capability to successfully complete the work and transfer the knowledge; and
• Be precise, concise, easily understood and compelling
Success of your proposal

1) How relevant is your project idea; and

2) How compelling was your proposal
Always remember....

Just like the three keys to real-estate are location, location, location, the three keys to successfully submitting a research proposal are...
Best practices

Do your homework. Read the guidelines and understand the research program priorities. Review what other research has been done in this area.

Start early. Allow time to plan, outline, write, revise, receive input, revise again and polish.
Best practices

- Planning. Start with a brief outline, and develop your thoughts outside of the constraints of a template or application form.
  - Input from others
  - Complete prescribed form or on-line template.
• Be Manitoba-centric. How does Manitoba’s unique climate, soil types, and topography affect the ‘Needs’ you have identified and the work you will do?

• Consider Murphy’s Law. Things can and do go wrong. In your proposal, identify the potential risk factors facing your project, their likelihood and potential impact.
Best practices

• **Brevity is a virtue.** Concise proposals illustrate the thought and time spent on your proposal.

• **Consider the reviewer.** Provide the reader with complete information to understand and assess your proposal.
Best practices

- Include an abstract or summary.
  - This is your first chance to make a good impression.
  - Summarizes your proposal in a couple of paragraphs, and can be used several ways by the funding agency.
Example A:

Project Objective – Optimizing Two Cell Manure Storage

Some hog producers in South East Manitoba have two-cell hog manure earthen manure storage (EMS) systems. This project will evaluate various pump-out approaches to assess if two-cell EMS can help manage nutrient imbalances in their farms.
Example B:

Project Objective – Optimizing Two Cell Manure Storage

Some hog farms, particularly in SE MB, with insufficient spread acres need cost-effective ways to redistribute Phosphorus (P). This project will generate BMP’s for manure agitation/pumping at hog farms with two-cell earthen manure storage systems. It will quantify dry matter and nutrient levels (P, N, K and micro-nutrients) and characterize how the solids and nutrient concentrations change hourly throughout the pump-out based on three pump-out approaches. This information will help reduce the volume of hog manure to be hauled.
Quality Control when writing a proposal:
Best practices

Building the budget

- Ensure your budget is reasonable.
- Calculate your budget figures carefully
- Support your request with details
- Read and follow the instructions
- Reallocation
Which is the preferred budget

**Budget A:**
- $5,500 for lab analysis

**Budget B:**
- $5,500 for sample delivery and lab analysis,
  - Lab analysis expense - $5,000
    - 250 samples @ $18 per sample analysis
    - 250 sample collection jars @ $2 per jar
  - Sample delivery to lab expense - $500
    - Courier costs to lab (20 trips @ $25 per trip)

$5,500 for sample delivery and lab analysis, which includes:
- Lab analysis expense - $5,000
  - 250 samples @ $18 per sample analysis
  - 250 sample collection jars @ $2 per jar
- Sample delivery to lab expense - $500
  - Courier costs to lab (20 trips @ $25 per trip)

The preferred budget is Budget B.
The researcher will provide a written final report that can be accessed through the MB Ag and commodity group website. A detailed technical presentation that includes the specifics necessary to define the project and its results will be made to the Research Council.
Knowledge Transfer and Communication

• We will inform Agrologists and crop producers of the changes in yield that this project found compared to the yield of check varieties.

• We will produce a full research report that can be downloaded from the MB Ag and the commodity groups web sites, as well as a one-page fact sheet.

• We will promote the report and highlight the findings through a news release, which will be sent to members of the Canadian Farm Writers.

• An article will be published in a peer-reviewed research journal, as well as in a Western Canadian trade magazine such as Grain News.
Example B

Knowledge Transfer and Communication

• We will present our findings at two events, scientific conference “ASA & CSSA: November 4-7, 2018, Baltimore, MD”, field day planned for Date, or crop producer meeting XYZ with date.

• The success of our communications plan will be monitored by tracking web statistics, the number of media requests for interviews about the project, publishing records, and recorded attendance at presentations.

Identifies the target audience, what our goal is, the reports we will use, where it will be published, and how we will measure the success of our communications plan.