



Agricultural
Institute of Canada

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Pre-Budget Submission

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Recommendations:

Recommendation 1: That the government of Canada identify potential areas for growth in specific international markets, invest strategically and align research and funding programs accordingly.

Recommendation 2: That the government of Canada take steps to encourage more cross-sectoral support for emerging innovations that are in their infancy, including incentives for early adoption by users (producers, for example).

Recommendation 3: That the government make expanding broadband and rural internet service a priority.

Recommendation 4: That in order to foster more innovation and encourage cross-sector collaboration, the government of Canada remove duplication and needless administrative burdens.



About the Agricultural Institute of Canada

Founded in 1920, the Agricultural Institute of Canada (AIC) is a unifying voice for cross-sectoral research and innovation in Canada.

Our mandate is to advocate on behalf of agricultural research. This includes disseminating information, promoting careers in our sector and creating international linkages.

For nearly 100 years, AIC has responded to the needs of its members in service to the agricultural community, playing a central role as a source of credible information for the Canadian agriculture and agri-food sector.

We are one of Canada's foremost advocates for agricultural research and innovation as well as an important tool to facilitate the dissemination of agricultural research and innovation to industry stakeholders.

Economic Impact of Agricultural Research

Agricultural research and innovation has the potential to be a key engine of economic growth, job creation and productivity, ultimately strengthening Canada's position internationally. In 2016, this was recognized by the federal government's Advisory Council of Economic Growth, in what is now known as the Barton Report. This report singled out the agricultural sector, noting that it has the potential for sustainable growth. It also set a lofty goal: that Canada rise from the 5th largest exporter of agricultural products to the 2nd.

Canada can rise to meet this challenge, head on, if strategic investments are made in the agricultural research and innovation sectors. But it requires the government giving researchers, industry and producers the tools they need to succeed. It also requires the government better recognizing the importance of the sector by making it a priority – in budgetary discussions, policy making, public recognition, etc.

AIC – together with the Canada Foundation for Innovation – released a report about Canada's Agricultural Innovation System. This report notes that unless we capitalize on our strong innovation potential, Canada's agricultural production will be unable to meet the world's growing demand and sustain momentum in today's changing global trade environment. The findings are available in Appendix 1.



Identify Areas for Growth Internationally, Invest Strategically

According to Agriculture and Agri-Food Canada, more than half of the value of our primary agricultural products in Canada is exported; and in some industries it is a far higher percentage (i.e. 90% of canola is exported and 95% of our pulses are exported).

The 2017 federal budget set the ambitious goal of increasing Canada's agri-food exports to \$75 billion by 2025. If we are to meet this goal, steps need to be taken to identify areas for growth internationally and make strategic investments that align to these priorities.

Evidence shows that investment in agricultural research has a high benefit to cost ratio, estimated from 10 to 1 to 20 to 1. However, budgetary expenditures earmarked for agricultural innovation represent a disproportionately low percentage of Canada's GDP – 0.046% – and steadily declining over the past 30 years.

By making strategic investments in agricultural research now, we can give producers the tools they need to meet the global demands of the future; both supporting Canadian exports and strengthening Canada's economy and productivity.

Given that:

- There is great potential for growth in key areas internationally as a result of new markets opening up and free trade agreements that have been recently signed or are being negotiated;
- Agricultural research has a high benefit to cost ratio, which could lead to development of new products that appeal to foreign markets; and
- The federal government, through Budget 2017 and the Barton Report, note the importance of our agricultural sector to Canada's economy and productivity.

The Agricultural Institute of Canada is recommending that the Government of Canada identify potential areas for growth in specific international markets, invest strategically and align research and funding programs accordingly.

Support for Emerging Innovations, Encourage Early Adoption

Agricultural research innovations have the potential to change the way we cultivate and produce agricultural and agri-food products across the country. Researchers throughout Canada are developing ways to improve efficiency and output, mitigate the effects of climate change, and more.

Supporting emerging innovations, including at the research and development stage, will ensure that the maximum impact is felt further down the line. This could include start-up funding, recognition of the role that academia play, and more.

Cost is almost always an issue and being an early adopter of a technology is always more expensive. Other obstacles, such as the lack of access to broadband and high-speed internet in rural regions, are also present. To put it simply: if there is no internet access in rural communities, the producers are often unable to use these new innovations and less likely to invest in them.



Government incentives – both for the lab to develop, and the producer to adopt – have the potential to greatly improve the quality and quantity of our agricultural products.

Given that:

- Early investment can help bring emerging innovations to market sooner, ultimately helping our agricultural sector be more efficient, productive and grow our economy;
- Incentives for the early adoption of technologies would allow them to be used by more producers; and
- The lack of access to rural broadband and high-speed internet is stalling the application of agricultural innovations on the producer level.

The Agricultural Institute of Canada is recommending that the Government of Canada take steps to encourage more cross-sectoral support for emerging innovations that are in their infancy, including incentives for early adoption by users.

The Agricultural Institute of Canada is recommending that the Government of Canada make expanding rural broadband and high-speed internet a priority.

Removing Administrative Burdens

If Canada's agricultural sector is to meet the goals outlined in the Barton Report and Budget 2017, an enabling regulator environment and science-based policy framework is needed. A whole-of-government approach to innovation (and its associated support – financial or otherwise) is needed.

In some cases, duplication and needless administrative burdens (commonly referred to as red tape) is impeding the development and use of agricultural technologies.

The Agricultural Institute of Canada recommends that in order to foster more innovation and encourage cross-sector collaboration, the Government of Canada remove duplication and needless administrative burdens.



Appendix 1

AIC – Canada Foundation for Innovation

In collaboration with the Canada Foundation for Innovation, AIC released a report about Canada's Agricultural Innovation System. In broad terms, the report notes that unless we capitalize on our strong innovation potential, Canada's agricultural production will be unable to meet the world's growing demand and sustain momentum in today's changing global trade environment.

Recommendations and Key Findings of this report are below.

An Overview of the Canadian Agricultural Innovation System

RECOMMENDATIONS



Unless we capitalize on our strong innovative potential, Canada's agricultural production will be unable to meet the world market's growing demand and sustain momentum in today's changing global trade environment.

Meeting Canada's long-term challenges of a competitive global economy and enhance job growth requires:

- An inclusive demand-driven innovation system supported by a science-based policy framework, an enabling regulatory environment, and governance structures that promote continuous technological progress while encouraging the adoption of innovations at the farm level.
- A combination of funding mechanisms, including matching investment strategies, to suit the particular needs and characteristics of our sector and to ensure all types of research are adequately supported.
- An attractive climate for private investment in agriculture to increase the number of innovative companies willing to capitalize on our research capacity, stimulating Canada's competitiveness and enhancing job growth.
- Participatory research approaches that engage all stakeholders in research projects and knowledge transfer activities, ensuring that new knowledge and technologies respond effectively to end-users' needs.
- Guidance and career counselling information, investments in education through grants, scholarships and infrastructure, and Canada-wide strategies to raise the profile of agricultural innovation to help address human resource challenges in the sector.



KEY FINDINGS

Agricultural innovation has the potential to be a key engine of economic growth and job creation, strengthening Canada's competitive position internationally.

- Canada's agriculture and agri-food system plays a critical role in an economy increasingly dominated by manufacturing and service industries, generating \$113.8 billion – 6.6 % of Canada's GDP.
- Canada's agricultural sector provides one in eight jobs in Canada, employing over 2.3 million people.
- Our agricultural sector reports a compound annual growth greater than that of the healthcare and life-science sector.
- Canada is now the fifth-largest global exporter of agri-food products generating export sales of \$55 billion.
- A rapidly-growing world population, rising income in developing countries and favourable global market trends are expected to raise demand for agricultural products worldwide.
- Growth in the sector relies on agricultural innovation to drive productivity gains and provide a basis for building a more globally competitive and sustainable economy.

Funding

- Very large marginal benefit-cost ratios reflect substantial and continued underinvestment in R&D.
- The public sector continues to be the largest source of funding for Canada's agriculture R&D.
- Budgetary expenditures financing the Canadian agricultural innovation system represented 0.046% of Canada's total GDP in 2015, steadily declining over the past three decades.
- The private sector appears to either under-invest or decrease their investments in agriculture R&D due to low short-term returns on investment or insufficient incentives.

Knowledge Creation, Dissemination and Adoption of Innovation

- Despite ranking 8th worldwide in scientific production of agricultural research, Canada's number of patents has progressively dropped over the last decade.
- Food processing companies are less innovative than other types of manufacturing enterprises.
- The lack of a common analytics platform and rural broadband often prevents farmers and producers from realizing the full potential of large-scale research.
- Industry groups have increasingly taken the leading role in extension activities.
- Canadian farmers still rely on their own experience and experimentation rather than third-party advice to implement a new technology or process.

Human Capital

- Skilled labour shortages in agriculture are potentially undermining Canada's research capacity.
- The sector counted 26,400 unfilled jobs that reflected a cost to the sector of \$1.5 billion in lost revenues.
- The number of post-secondary agriculture graduates has grown consistently. These rates, however, remain insufficient to meet the future demand for skilled labour.