Agri-food Innovation Council

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Conseil de l'innovation agroalimentaire

Brief to the House of Commons Standing Committee on Agriculture and Agri-Food

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About AIC

Founded in 1920, the Agri-Food Innovation Council (AIC) is a unifying voice for cross-sectoral research and innovation in Canada. AIC advocates on behalf of more than 45 Canadian organizations from across the agri-food system.

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

AIC is one of Canada's foremost advocates for agri-food research and innovation as well as an important tool to facilitate its dissemination to industry stakeholders.

The Agri-Food Innovation Council was previously known as the Agricultural Institute of Canada. In 2019, our organization rebranded to better reflect our nature and work.

We are funded through memberships and activities. All of our funding is Canadian.

The importance of research and innovation in agri-food

Research and innovation can play a significant role in increasing the productivity and competitiveness of food processing, particularly as part of a post-pandemic economic recovery strategy. The COVID-19 pandemic has exacerbated existing weaknesses in the sector. Agri-businesses and manufacturers are increasingly facing liquidity issues, while research-oriented companies have seen a drop in growth and capital. Meanwhile, food tech and other high-growth companies have cut non-essential expenditures to cope with a tight working capital environment.

As a key driver of growth, Canada's strong innovative potential can significantly enhance the competitiveness and productivity of food processing and its agri-food sector as a whole. It can also improve Canada's ability to meet its food security, sustainability, and environmental goals.

Benefit-cost ratios for R&D in agriculture alone are estimated to range from 10:1 to 20:1. Despite this high return on investment, and to echo Mr. William Greuel's opening remarks to the House of Commons Standing Committee on Agriculture and Agri-Food on December 1st, 2020, Canada lags in public and private research and innovation expenditures, ranking in the middle of OECD countries.

Over the last three months, AIC has heard from its members and stakeholders on how to improve the conditions for effective research and innovation in agri-food. As it relates to food processing, AIC believes the government could take action by facilitating the adoption of automation and encouraging the commercialization of research.

Facilitating the adoption of automation

AIC concurs with *Food and Beverage Canada* (FBC) and the *Conseil de la transformation alimentaire du Québec* (CTAQ)'s respective briefs to the House of Commons Standing Committee on Agriculture and Agri-Food, both published on December 17th, 2020, that increased adoption of automation in food and beverage manufacturing could increase productivity and help address labour shortages. Within the context of the COVID-19 pandemic, automation would also reduce the risk and impact of outbreaks on the continuous flow of agri-food products.

Specific to meat processors, Fawn Jackson of the *Canadian Cattlemen's Association* pointed to the shortage of slaughter capacity in Eastern Canada, which could be addressed by increasing the supply of labour. Over the last five years, owing to a steady decline in capacity, annual federally inspected utilization increased from 71% in 2015 to 98% in 2019. In 2020, utilization averaged 100%.

Ms. Andrea Brocklebank of the *Beef Cattle Research Council* noted to AIC that the automation of repetitive tasks in plants could mitigate existing labour shortages, reduce the risk of worker injury, facilitate the transition of labour to value-added jobs, and create more meaningful employment through new product line options.

Barriers contributing to a slow rate of adoption of technology in the industry include:

- The adoption of new technology is a capital-intensive activity. Capital expenditures to maintain a plant's existing assets are significant on their own. Meat processors, notably small and medium-sized ones, can find it challenging to free up the funding on their own to encourage the adoption of new or existing technology.

- Assuming capital can be made available for its adoption, the installation and maintenance of new technology must demonstrate that it can perform routine tasks (e.g., splitting carcasses) without slowing down production lines. It must also be able to adapt to environments that are cold, wet and humid.

Changes to Cost Capital Allowance rules in 2019 provided a positive step in the right direction. However, given existing liquidity pressures, the government should provide additional incentives that accelerate the adoption of automation in food processing by helping industry overcome the large upfront capital investments. Eligibility should not hinge on criteria such as job creation but on the ability for food processors to increase their productivity by alleviating existing and forecasted labour shortages.

AIC recommends that the government create a funding program to facilitate the adoption of automation technology for food manufacturers.

Encouraging the commercialization of research

A strong Canadian innovation ecosystem is an important element to help increase processing capacity in agri-food. It can also reduce reliance on foreign intellectual property and limit the risk of promising Canadian startups getting acquired too early at discontinued valuations.

While Canada enjoys a strong reputation for the quality of its research in the sector, it would benefit from increasing the rate of commercialization of its research into innovative products and processes. This could be facilitated by:

Increasing the number of incubators and accelerators in the sector. Researchers often do not have the entrepreneurial knowledge or experience needed to bring their research to market. As Dr. Michael Trevan of the *University of Manitoba* noted to AIC, processes and funding are required to bring innovation out of the R&D community and help overcome financial and skills barriers.

To that end, incubators and accelerators in agri-food (e.g., *Creative Destruction Labs*, *District Ventures Kitchen*, *Bioenterprise*, *Saskatchewan Food Industry Development Centre*) can provide earlier stage companies with guidance, cross-sectoral connections, mentorship, and access to capital and funding. This form of assistance can be significant in stimulating the sector's entrepreneurship and improving an entrepreneur's odds of successfully bringing innovation into the marketplace. Incubators also play an important role in bringing together agriculture with other key sectors, as Dr. Paul Hoekstra of *Grains Farmers of Ontario* noted to AIC.

Unfortunately, compared to sectors such as information and communication technology, only a handful of incubators and accelerators currently focus their efforts on Canada's agri-food system.

AIC recommends that the government, in collaboration with industry, incentivize the expansion of incubators and accelerators to stimulate entrepreneurship in agri-food.

Attracting new sources of private funding. Agri-food research and innovation are underserviced by private investments. While there have been noticeable changes in recent years, antiquated perceptions and limited knowledge of investment opportunities have historically put the sector at a disadvantage for attracting investments.

With institutional investors such as pension funds having moved away from venture capital as an asset class, angel investors have tried to make up the difference. Pockets of angel investors exist, particularly where incubators and accelerators are present, but can only invest in a fraction of available opportunities.

The effectiveness of agri-food research and innovation depends on investments and support from public and private sources. The federal government has an important role to play to promote a favourable climate for investment.

AIC recommends that the government, in collaboration with industry, actively attract private investments in agri-food research and innovation by promoting opportunities, success stories, and incentives for investment.

Providing tailored government support to SMEs. Due to the limited availability of federal funds to support agri-food research and innovation, resources should be allocated where the greatest impact will be felt. Areas of interest include strengthening SME capacity, increasing industry access to processing and product development expertise and infrastructure, and making additional efforts to ensure existing funding programs cover the entire value chain.

Ms. Kelley Fitzpatrick of *NutriScience Solutions* noted to AIC that while government funding is generally effective at funding R&D, more could be done to support agri-food ventures looking to market innovative products and processes. Currently, SMEs often have to contend with a slow and burdensome process when applying for funding. Moreover, programming in its current form is also limited in its ability to provide direct funding to cover capital costs. For ventures with limited liquidities, these barriers can curtail and delay their ability to scale or pivot.

Finally, Mr. Dave Smardon of *Bioenterprise* noted during a recently held AIC event that trying to help agri-food companies find capital to pilot demonstrations was currently a significant challenge.

AIC recommends that the government expand NRC-IRAP's offering to SMEs looking to commercialize their innovation by making capital costs eligible for funding.

Summary of Recommendations

AIC recommends that:

1. The government create a funding program to facilitate the adoption of established technology that seeks to automate processes in food processing.
2. The government, in collaboration with industry, incentivize the expansion of incubators and accelerators to stimulate entrepreneurship in agri-food.
3. The government, in collaboration with industry, actively attract private investments in agri-food research and innovation by marketing opportunities, success stories, and incentives for investment.
4. The government expand NRC-IRAP's offering to SMEs looking to commercialize their innovation by making capital costs eligible for funding.