

## KEY FINDINGS

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**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.