



Growing Alberta's Global Agriculture Advantage

In a period of increasing geopolitical uncertainty, supply chain disruption and shifting global trade dynamics, jurisdictions that can reliably produce and export essential resources have never been more important.

Alberta has what the world needs.

As countries look to secure stable access to both energy and food, Alberta's ability to provide safe, sustainable and high-quality agricultural products positions the province as a critical contributor to global food security and economic stability.

Agriculture has been the backbone of Alberta's economy for over a century, from our dairy, grain, pulse and beef production to cutting-edge ag-tech innovation today. Alberta employs over [83,000 people](#) in agriculture and agri-food sector and contributed \$10.3 billion to provincial GDP in [2023](#). Alberta is Canada's largest cattle-producing province, with [43.3 per cent](#) of the national total cow and calf herd.

Agriculture is not just tractors, bailers and feedlots. Ag-tech is a large contributor to Calgary's tech ecosystem with over [sixty ag-tech startups](#) alone. Alberta attracts significant venture capital for clean tech and ag-tech, enabling innovations such as precision agriculture, robotics and AI. These technologies allow producers to improve efficiency, sustainability and productivity. Despite this, Canada lags international peers in ag-tech investment, capturing less than two per cent of global venture capital ag-tech deals in 2024, compared with 45.3 per cent in the United States. Recent initiatives, including Farm Credit Canada's \$5 billion coalition to accelerate investment in agricultural technology, signal growing momentum to close this gap and scale innovation across the sector.

Canada is an export nation and Alberta's agri-food industry is no exception. The province accounted for [19.4 per cent](#), or \$92 billion, of Canada's total agrifood exports in 2024, making Alberta the third largest exporter after Ontario and Saskatchewan. With the CUSMA review on the horizon, predictable trade access will be critical to maintaining Alberta's competitiveness, particularly for beef, canola and other key products.

Preparing the Ground for Growth

Canada's Policy Landscape

Canadian agricultural policy has seen limited modernization since the 1980s. Fragmented programs and outdated frameworks create uncertainty, limiting producers' ability to invest, scale operations and adopt new technologies. Heavy regulatory and environmental requirements can also slow development timelines and increase costs, pushing industry activity toward the United States, where regulatory pathways are often more streamlined.

Key domestic programs, such as the [Sustainable Canadian Agricultural Partnership](#) (SCAP), also require modernization to better reflect technological advances, evolving production practices and the realities of an increasingly competitive global marketplace. Addressing these gaps will be critical to ensuring Canada's agricultural policy framework supports long-term growth, innovation and global competitiveness.

Climate

Drought conditions, increasing environmental stress and outdated water reuse and irrigation policies are placing growing pressure on both cattle producers and the broader agricultural sector. While recent amendments to [Alberta's Water Act](#) improve flexibility through streamlined licensing, enhanced reuse provisions and reduced administrative burden, there remain opportunities to modernize current systems. Limited access to expanded water supply, modern irrigation infrastructure and scalable reuse systems continues to constrain operational efficiency and restrict producers' ability to adapt to prolonged drought conditions.

Climate-driven heat and water stress are also increasing yield volatility in Alberta. In 2021, average crop yields were significantly reduced by drought and by 2050, research shows potential crop losses of [10 to 30 per cent](#) under drought conditions and growing pressure on forage systems critical to livestock production. This can result in livestock producers facing feed shortages while crop farmers experiencing lower yields and reduced supply reliability. These pressures across the agricultural system force some producers to reduce herd sizes, scale back production, or exit the sector altogether, weakening the long-term resilience of Canada's food supply chain, rural economies and agricultural competitiveness.

Agricultural insurance costs in Alberta are rising in response to repeated drought-related losses, with premiums increasing and record payouts placing growing strain on the system. While coverage remains available through publicly backed programs, the increasing frequency of claims is raising concerns about long-term affordability and sustainability.

Workforce and Labour Shortages

Alberta's agriculture sector faces a growing labour shortage that threatens productivity and sector growth. The Canadian Agricultural Human Resource Council projects approximately [1,900](#) unfilled agricultural jobs in Alberta by 2030, even with a forecasted rise in the number of foreign workers.

Labour shortages already carry significant economic consequences. In 2022 alone, workforce gaps cost Canada's agriculture sector an estimated [\\$3.5 billion](#) in lost sales. The rural location of agricultural operations, combined with the broader decline of rural communities, continues to make recruitment and retention particularly challenging.

Farm Succession and Capital Access

Alberta's agriculture sector is facing a significant generational transition, yet many farm families are encountering barriers to succession. While younger generations are often willing to take over operations, they frequently lack the capital and credit capacity required to do so.

Rising farmland values in Canada have significantly increased the cost of transferring ownership within families. Farmland values have continued to climb in recent years, increasing by [9.3 per cent in 2024 and 10 per cent year-over-year into 2025](#). In many cases, these increases have outpaced the borrowing capacity of the next generation, making it difficult to finance buyouts without taking on unsustainable debt.

At the same time, succession planning remains limited. Recent data shows that only [12 per cent](#) of Canadian farmers have a written succession plan, while up to [88 per cent](#) lack a formal plan altogether. As a result, viable farms risk being sold outside the family or consolidated, reducing opportunities for new entrants and weakening rural communities across Alberta.

The urgency of this issue is growing. By [2033, approximately 40 percent of farm operators are expected to retire](#). At the same time, more than half of farm operators are projected to be over the age of 60 by 2026, further accelerating the pace of transition. Without targeted policy solutions, these challenges will continue to limit generational renewal and constrain growth.

Improving access to capital and modernizing succession frameworks will be critical to ensuring Alberta's family farms can transition successfully, remain competitive and continue contributing to food security and economic strength.

Education, Research, and Talent Development

A strong education and research ecosystem is essential to supporting innovation and long-term workforce development in agriculture. However, Canadian universities and colleges are actively adjusting to declines or uncertainty in research funding, particularly in engineering and science fields that support agricultural innovation.

At the same time, a disconnect between graduates and global agricultural companies operating in Canada limits opportunities to retain highly skilled talent and slows the commercialization of emerging agricultural technologies. Limited exposure to agriculture within the K-12 education system further weakens the talent pipeline, reducing awareness of career opportunities and future workforce supply.

Digitization Gaps and Data Sovereignty

The rise of digital agriculture offers clear productivity benefits, but adoption remains uneven, and significant trust and infrastructure challenges persist. Concerns about data ownership, ethical use and the consolidation of farm data by large corporations have created complex issues. While individual farm data has limited standalone value, producers remain uneasy about how aggregated data might be used commercially without direct benefit.

These trust issues intersect with significant digital infrastructure gaps, manifesting in farms having limited connectivity. With real-time weather monitoring systems and soil sensors, precision planting can increase canola yields by about [nine per cent](#) compared to conventional planting methods in controlled trials. Remote equipment monitoring and predictive maintenance capabilities, which can prevent costly breakdowns during critical harvest periods, require reliable high-speed internet that is lacking in many rural areas.

Taken together, these challenges limit the sector's ability to fully leverage digital technologies for productivity, risk management and commercialization. Addressing both the trust and infrastructure gaps will be critical to ensuring that Canadian farm data is managed in a way that protects farmers' interests and competitiveness, and that digital agriculture benefits are accessible to all producers.

Trade and Infrastructure Constraints

Nearly half of Alberta's agricultural exports go to the United States, with many supply chains integrated across the border. Tariffs, weak internal trade infrastructure and limited west coast port capacity hinder competitiveness. For example, Canada exports approximately 45 per cent of its nitrogen fertilizer production, primarily to the United States. Production is concentrated in Western Canada, yet it is often cheaper for Eastern Canada to import fertilizer than to transport it by rail from the west.

Interprovincial trade standards that default to the lowest benchmark weaken Alberta beef's competitiveness and complicate national market alignment. Tariffs, inconsistent standards and rail, port and labour disruptions further reduce market stability and delay product movement. Reliance on

U.S. markets — combined with limited reciprocal access and cross-border cattle integration — creates additional vulnerability.

Recommendations

Federal-Provincial Collaboration

- Support coordinated federal-provincial investment in water innovation, including modern irrigation, water reuse research and flexible wetland funding, to strengthen long-term climate resilience.
- Expand programs focused on soil health, climate-smart agriculture and biofuel incentives to leverage Alberta's expertise while addressing environmental challenges.
- Modernize agricultural insurance programming to keep pace with increasing climate risk focussing on improving coverage for production volatility, strengthening incentives for proactive risk mitigation and ensuring long-term affordability and competitiveness for producers.
- Coordinate immigration, housing, healthcare and community infrastructure investments to make rural communities more attractive and sustainable places for workers and their families.
- Develop targeted financing tools and risk sharing mechanisms to support intergenerational farm transfers, including loan guarantees, blended finance models and tax incentives to reduce the financial burden on new entrants.
- Expand funding for technology adoption and education including AI, robotics and precision agriculture to strengthen the sector and encourage collaboration between producers, researchers and technology firms.
- Continue to advance the Broadband Strategy to ensure rural connectivity by 2027 through enhanced funding, regulatory reform, collaboration and innovative technology solutions to support rural, remote and Indigenous communities.

Federal

- Accelerate review processes for new agricultural technologies and inputs, ensuring Canadian producers can adopt innovations at pace with global competitors.
- Modernize Sustainable Canadian Agricultural Partnership (SCAP) and Business Risk Management programs to reflect current technologies and climate pressures. Create a digitization funding stream within SCAP to support commercialization and adoption of modern technologies in the agriculture and agri-food sectors.
- Establish a permanent dedicated immigration stream, such as the [Agri-Food Immigration Pilot](#), to provide experienced agricultural workers with clear pathways from temporary work to permanent residency, strengthening labour stability in Canada's agriculture and agri-food sectors.
- Enhance access to capital for farm succession by expanding programs through Farm Credit Canada and other financial institutions.

- Review and modernize tax policies related to intergenerational farm transfers to reduce barriers, including, capital gains treatment, to support family-to-family ownership transitions.
- Develop federal legislation to define ownership, access and use of agricultural data, ensuring producers retain control over farm-level data, with enforceable standards for interoperability and transparency. Tie public ag-tech funding to compliance with these standards to support fair data use and competition.
- Invest in trade-enabling infrastructure and improve internal market access to reduce costs and expand market opportunities.

Provincial

- Promote agriculture through “agri-science” branding, such as the [Calgary Stampede School](#), to attract younger talent and position the industry as technology-driven.
- Expand upskilling programs, agriculture-focused immigration pathways and youth outreach initiatives, including Alberta’s targeted streams under the [Alberta Advantage Immigration Program](#), to address labour shortages by strengthening the talent pipeline.
- Establish provincial loan guarantee programs that improve access to capital for young and new farmers seeking to acquire family operations.
- Strengthen education-to-industry partnerships through targeted provincial funding to support workforce development and attract youth to agricultural careers.
- Foster public-private partnerships by co-investing with industry in ag-tech pilot projects, demonstration sites and commercialization hubs to accelerate adoption of technologies such as precision agriculture, automation and AI to encourage investment and technology adoption in the ag-tech sector.
- Strengthen agricultural supply chains by investing in trade-enabling infrastructure, improving rail and port reliability and harmonizing interprovincial regulatory standards to reduce barriers and enable efficient movement of goods across Canada.

Conclusion

Alberta’s agriculture sector is at a pivotal moment. With modernized policy, investment in technology, infrastructure and a skilled workforce, the province can secure its role as a global leader in agriculture and ag-tech. Collaboration across federal, provincial and private sectors is essential to unlock Alberta’s full potential, ensuring growth, sustainability and competitiveness for generations to come.