



The next generation of farming is here

Is Canada prepared for the new age of agribusiness?



A vision for Canada's farming future

Farming is changing. We are seeing dramatic shifts across multiple facets of the industry, from technological innovations to supply chain challenges to sustainability expectations. As new ideas and methods spread throughout agribusiness, it's becoming less and less common to find a traditionally run, small family farm. Some of the changes are driven by trade regulations and government policies, some are necessitated by supply issues (which have been exacerbated by the COVID-19 pandemic), but even more are led by the industry itself in pursuit of a more efficient, resilient, future-friendly farm.

The Government of Canada has laid out lofty targets for the country's farm product exports. Canada's Agri-Food Economic Strategy Table's vision for the country is to be "one of the top five competitors in the agri-food sector" by 2025. What will it take to achieve such bold targets? A broad set of actions by agribusinesses; coordinated direction from government through regulation and policy; innovation, modernized processes and technology; and a workforce that's prepared for the future. Let's take a look at some of the key challenges and opportunities that lie ahead for farming in Canada.

In February 2017, the Minister of Finance's Advisory Council on Economic Growth identified Canada's agri-food sector as having great potential to be a driver of economic growth for the nation. A 2019 report by RBC indicates that Canada's agriculture industry could generate an additional \$11 billion of GDP by 2030 due to growing populations.¹

¹John Stackhouse, "Farmer 4.0: How the Coming Skills Revolution Can Transform Agriculture," RBC, August 27, 2019, <https://thoughtleadership.rbc.com/farmer-4-0-how-the-coming-skills-revolution-can-transform-agriculture/>.

The impacts of international trade agreements

Over the past several years, Canadian farmers have been working to diversify their practices, in an effort to reduce reliance on larger external markets. But cross-border trade is both a necessity and a reality.

Trade agreements do bring some challenges to Canadian farmers. Through the Canada United States Mexico Agreement (CUSMA), for example, the U.S. expects to increase dairy and poultry exports to Canada by \$697 million – or 2.69 percent of Canada’s 2019 sales – which raises competitive pressure for Canadian farmers. New regulations generally bring new certification requirements or new quotas, and it can be a challenge to keep up with the changes while maintaining a sustainable business.

On the other hand, trade agreements also bring many opportunities. Above all, they offer stability, which gives farming businesses the certainty needed to invest for the future. They also:

- Create transparency in resolving any trade disputes that arise
- Engender cross-border cooperation in promoting trade and science-based regulations
- Increase protection for proprietary formulas and methods
- Reduce red tape and modernize documentation requirements, which lowers trade costs
- Bring a broader range of food products to Canadian consumers



Adapting the family farm to the future

It's very common to see the percentage of original family members running a farm diluted in the transition from one generation to the next. As a result, Canada's farms have become significantly reliant on temporary foreign workers to perform farm work, a practice that became a significant challenge during the COVID-19 pandemic due to border closures and travel restrictions.

One increasingly common approach to overcoming some of the challenges facing traditional family farms is consolidation and vertical integration, through which a farm combines two or more stages of their production into a single product in order to streamline their operation. While selling to a corporate farm is also an option, family farms are an important part of the fabric of our country. Both types of farming bring their own challenges and opportunities, and both will have a place in the farming reality of the future.

Farms of the past

- Small family-run operations
- Traditional, manual processes

Farms of the present

- Larger family farm operations
- Combination of multiple family members and hired labour
- Investing in technology
- Committed to sustainability

Farms of the future

- Multi-commodity operations
- Vertically integrated
- Significant investment in technology
- Multi-family owned and operated farms co-exist with corporate farms
- Fully sustainable operations, low emissions and carbon footprint

The need for local, adaptable food chains

The COVID-19 pandemic has highlighted the need for our supply chains to be more adaptable. Closed borders resulted in worker shortages and delayed imports, and fields went unharvested. Demand shifted dramatically as hotels and restaurants closed and grocery store use increased, and many farmers were challenged to handle the dramatic shift in demand – animals and crops are on fairly fixed schedules, so their yields aren't easy to adjust.

A significant opportunity to address these challenges lies in Controlled Environment Agriculture (CEA), or indoor farming. It's a potential way to increase resilience in our food supply chains by shortening supply time and accelerating production cycles. According to David Guthrie, KPMG in Canada's National Agribusiness Sector Leader, "CEA can help address a wide range of issues, such as food safety, population growth and food insecurity, labour shortages, and consumer sustainability expectations. And there's significant investor demand for sustainable investment strategies." Indeed, venture-capitalist funding of CEA reached a record high in 2020 and is expected to grow to \$131.2 billion by 2025.²

²Indoor Farming Market – Growth, Trends, and Forecast (2020-2025)," Mordor Intelligence, 2020.





Benefits of Controlled Environment Agriculture

- Increased productivity per square foot
- Reduced input requirements
- Lower environmental footprint
- Reduced labour requirements
- Reduced land requirements

Challenges of Controlled Environment Agriculture

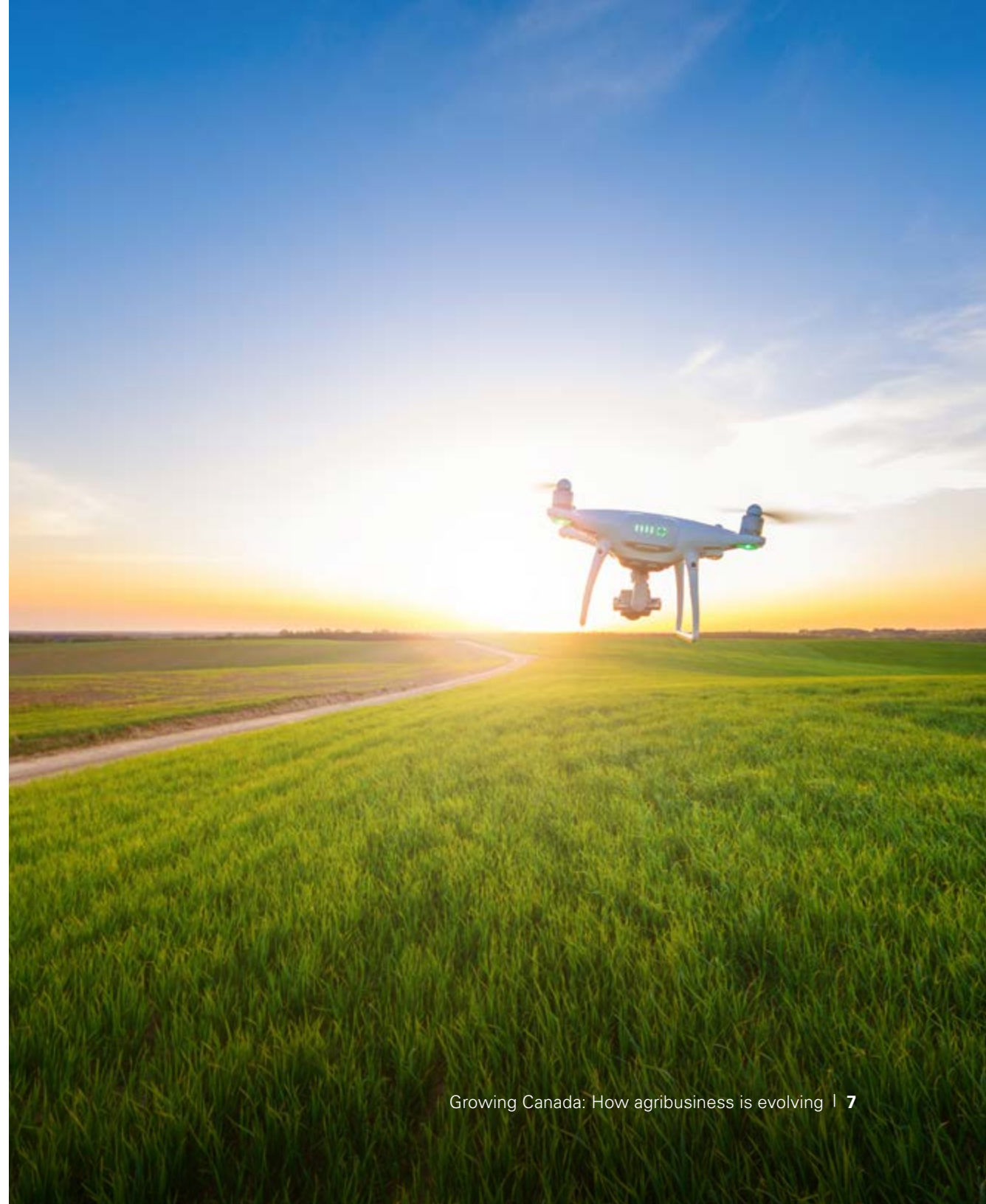
- High startup costs related to design/build of facility, and technology installation
- High production costs due to energy to operate lighting and control systems, and technology
- Limited crop varieties
- Supply chain “growing pains”

Technology's impact on Canadian farming

There's no question that there's a tremendous opportunity for farming to take advantage of technology. Already today, larger farms, and those led by younger farmers, are making use of technology to varying degrees. As more and more farms adopt technological innovations, we will see more automated, streamlined processes, and a reduced reliance on human manual labour. This will open up opportunities for farm workers to learn and use new skills such as data collection and analysis. In the short term, adopting new technologies may seem to be a challenge, particularly for more traditional farms, but the benefits will outweigh the growing pains.

The need for sustainable farming practices

Sustainability is growing more and more critical. As food insecurity grows and our climate continues to suffer from the effects of industrialization, consumers are demanding that their food comes from responsible sources. Opportunities abound to innovate and get ahead of this demand. But it won't happen on its own – policy action will be critical to make sure this transition happens, as will funding programs to support farmers in adopting sustainable practices.





The future of farming is upon us

Canada has been the world’s fifth-largest global exporter of agricultural products since 2011. But as the rest of the world moves into a new age of modernized farming, we risk falling behind. Canadian farmers rely heavily on subsidies to fund new technology but the industry needs to encourage more private investment in research and development if it wants to keep up.

COVID-19 showed us the challenges of relying on temporary foreign workers to fill worker shortages. Ultimately, a shift to automation will make our farming operations more resilient and adaptable. The future farm will involve a combination of new technologies, new skills, new processes and methods, and cross-industry collaboration to ensure a long-lasting industry and a resilient food supply for Canadians.

KPMG’s agribusiness team’s broad view of the industry and deep experience in upcoming farming trends allows us to bring new perspectives to farms that want to move into the future. For more information on how our agribusiness practice can help you, please contact our KPMG in Canada professionals today.

Feed the nation, feed the world. **Let’s do this.**

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