



Sustainability is the future of farming

How the Canadian agribusiness industry is adapting to changing consumer concerns and expectations



Environmental, social and governance in agribusiness

Agribusiness plays a critical role in both driving Canada's economy and feeding our population. Toward both of those ends, Canadians have become increasingly concerned with how the industry functions, where their food comes from, and how nutritious it is. And as Canada (along with the rest of the world) continues to seek its way out of the COVID-19 pandemic, legitimate concerns persist about the availability of food and about its safety.

All of these concerns point to the strong need for sustainable farming practices in Canadian agribusiness.



Concerns about food supply

The COVID-19 crisis highlighted a number of vulnerabilities in our global food production system. Suppliers had difficulties responding to shifts in consumer demand, farmers faced a challenge accessing temporary foreign workers due to border restrictions, and processing plants had to slow down or shut down to counteract outbreaks. Anxiety around shortages early on in the pandemic led to hoarding, which further exacerbated supply chain issues. Underdeveloped or overstretched grocery delivery services made it very hard for individuals to access the food they needed. As food insecurity increased, so did food bank use.

As the pandemic continues into the foreseeable future, issues in the supply chain caused by rail or border closures will only intensify, making our access to centralized products from other countries a challenge. To ensure the short- and long-term viability of our farming industry and maintain capacity to meet domestic and export demands, we need policy action to encourage innovation. We need investors to recognize the potential in modernizing the industry, which can help farmers afford new technologies to ensure the security of our supply. And most of all, we need agribusiness leaders to seize the opportunity to adopt new farming practices and make Canada's industry sustainable for the long term. Canadian farmers are the key to sustainability.

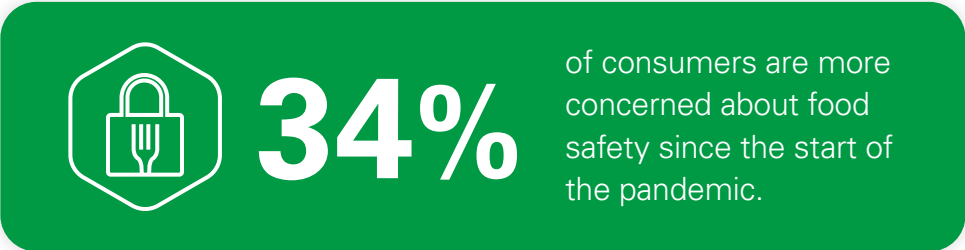
Creating food security for all Canadians can only be achieved when physical and economic access to sufficient, safe and nutritious food is available that meets all dietary needs and food preferences for an active lifestyle for all Canadians at all times.¹

¹Kerri L. Holland, "Canada's Food Security During the Covid-19 Pandemic," Simpson Centre for Agricultural and Food Innovation and Public Education, University of Calgary School of Public Policy, SPP Research Paper 13, vol. 13 (June 2020), <https://www.policyschool.ca/wp-content/uploads/2020/06/Food-Security-Holland.pdf>.



In search of safe, high-quality food

The pandemic has also heightened concerns around food safety. There is no evidence that the virus is transmitted through food, yet 34% of consumers are more concerned about food safety since the start of the pandemic.² They want to know where their food comes from and have confidence that it's safe to consume. Those who can afford it will likely increase their use of farmers' markets, or buy directly from farms or locally owned shops, because they feel safer buying locally.



On top of that, Canadians are also concerned about the country's growing health crisis, with levels of chronic diseases like type II diabetes on the rise. The health of our nation can be dramatically improved by increasing access to quality sources of nutrient-rich foods, used to both treat and, ideally, prevent chronic disease.

²Statista, "Share of Consumers Who Are More Concerned about Food Safety Since the Start of the COVID-19 Pandemic in Canada in 2020," August 2020, <https://www.statista.com/statistics/1175000/coronavirus-food-safety-concerns-canada/>.





Barriers to sustainable farming practices in Canada



Access to labour and reliance on temporary foreign workers leaves farmers vulnerable, and without enough labour to harvest crops



Slowdowns and shutdowns have led to reductions in labour-intensive specialized offerings



Closings of hotels, restaurants and institutions have led to disruptions in demand, which particularly challenges meat and dairy producers, who can't simply "turn off" their animals or change the harvest time of their plants

All of this leads to a strong desire for food traceability. Large fast food chains are leading the way here in committing to using sustainably grown inputs, which should have a trickle-down effect on other suppliers in the value chain. As the push for sustainable inputs continues, farms will need to be able to contribute to food traceability measures and show that they are meeting or exceeding sustainability regulations. To do that – indeed to enable most of the sustainable-farming innovations that are becoming so pervasive – farms will need to start collecting and analyzing their free, abundantly available data. Data collection and analysis is new to many, but it's a rich, untapped resource that can help you identify improvement opportunities in your operations that you might not otherwise see.

Sustainable practices on the horizon

All of these changing consumer expectations are creating more demand than ever for sustainable farming. “Farmers are stewards of our land,” says David Guthrie, KPMG in Canada’s National Agribusiness Sector Leader, “and consumers expect them to protect it. More and more, sustainable practices are simply becoming a farm’s license to produce.” There is room



for significant innovation in the agri-food sector, where many farms are still relying on older methods. The agriculture industry’s recovery from the effects of the pandemic will likely depend on its ability to adopt new, forward-looking practices. Consumers may not absorb the cost of innovation or sustainable practices, but many of the very innovations that offer sustainability will also bring efficiencies, so that they ultimately pay for themselves.

We expect to see a push toward more conservation and rehabilitation in farming systems, such as regenerating topsoil, increasing biodiversity, or improving the water cycle. The industry should also be increasingly addressing water use and green space, exploring options like hydroponics, aquaponics, aeroponics, geponics and vertical farming, and considering new technologies to help address labour shortages, such as self-driven tractors and seeders.

The green recovery – a combination of environmental, regulatory and fiscal reforms designed to recover prosperity after the pandemic – will help move the needle on sustainable farming. But it will take action from government, agribusiness leaders, and consumers alike to continue to push toward safer, more sustainable food production, for the benefit of all Canadians.

Sustainable agriculture innovations in Canada and around the world



Automated farm equipment: Self-driving tractors and seeders to help solve issues with time constraints and labour shortages



Crop and soil monitoring and management: Technologies such as sensors, drones and satellites to monitor how a farm is performing



Product testing in-field or on-site: A process to help lower costs for those crops that require lab testing and reporting



Laser scarecrows: Used to startle birds and prevent them from destroying crops



Bee vectoring: The use of a naturally occurring fungus (BVT-CR7) to protect crops from diseases; it is placed inside a beehive and then distributed by the bees into the crops and fields



Harvest Quality Vision (HQV): The use of computerized scanners to determine the quality and quantity of crops, resulting in better sorting and management of produce and eliminating the need for manual inspection



Radio frequency identification (RFID): Radio chips used to enhance traceability in the harvest, storage and packing of crops by tracking data such as location, date and time



Real-Time Kinematic (RTK): Used to enhance accuracy and eliminate standard errors of GPS signals



Vertical farming: Crops planted in vertical stacks or on inclined surfaces to produce more crops in less space



Minichromosome technology: Used to enhance or supplement a crop's nutritional content through bio-fortification, and to improve crop resistance by establishing new traits such as drought tolerance; the technology can express foreign genes without interfering in the host's natural development and growth



Solar powered farms: Large-scale installations of solar panels on the ground to generate electricity sustainably for a farm



Rainwater capture: Collection, treatment and storage of rainwater for re-use in watering plants and crops

How KPMG in Canada can help

KPMG's agribusiness team is committed to helping Canada's farms improve their sustainability. We can work with you to assess your current practices, establish data collection and analysis methods, and determine which technologies and innovations will be best suited to your operations. 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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