Introduction to the special issue on COVID-19 and the Canadian agriculture and food sectors: Thoughts one year into the pandemic

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Financial support to cover both page charges and technical editing was provided by the following: (i) Canadian Agricultural Economics Society; (ii) Masters of Food and Resource Economics (MFRE) Program, The University of British Columbia; (iii) Department of Agricultural and Resource Economics, University of Saskatchewan; (iv) Sol Sinclair Institute of Farm Management, University of Manitoba; (v) Department of Agribusiness and Agricultural Economics, University of Manitoba; (vi) Department of Food, Agricultural and Resource Economics, University of Guelph; (vii) McCain Family Chair in Food Security, University of Guelph; (viii) Institute for the Advanced Study of Food and Agricultural Policy, University of Guelph; (ix) OAC Research Chair in Agricultural Risk and Policy, University of Guelph; (x) Ridgetown Campus, University of Guelph; and (xi) Département d’économie agroalimentaire et sciences de la consommation, Universite Laval

The coronavirus disease-2019 (COVID-19) pandemic continues to cause significant economic hardship and death throughout the world. While governments have many concerns, an affordable and secure food supply remains a top priority. Based on years of a consumer-driven food system, Canadians have come to expect any food in the form, time, and location desired, always available at a reasonable price. Although COVID-19 caused immediate and pronounced changes in market conditions, Canadians were still able to consume food in the form, time, and location desired (excluding restaurants) at reasonable prices. While we view this, albeit unwanted, pandemic experiment as providing overwhelming empirical evidence of the resiliency and adaptability of the current global food system, calls for structural economic change persist. These calls, with rhetoric of increasing Canadian food security and resiliency, seek greater local food production, a less concentrated processing industry, and more lucrative farm support programs (Clapp 2020, CFA 2020). Ironically, these calls would increase food insecurity and they illustrate a fundamental misunderstanding of economic principles such as supply, demand, opportunity cost, and dead-weight loss. For the most part the federal and provincial governments have ignored many of these calls.

Ker and Cardwell (2020) warned of these calls, particularly so by public academics. Posner (2001) defines public academics as those academics continually communicating to the populace on current affairs while not having the expertise to do so. In fact, many of these academics have developed expertise in communicating to the public at the expense of expertise in their discipline. As a result, most public academics either recast what is already in the public or, worse, mislead the public with incorrect information. Economic illiteracy has been on full display with early warnings of “food riots” as well as current calls for more local food production under the guise of increased food security and resiliency. Smaller and more localized production increases costs, and thus prices, and thereby reduces food security. Another common call, that structural changes are needed as an insurance policy against the next pandemic, is unintelligible.

First, what catastrophic price increase or food shortage occurred in Canada during this pandemic that warrants consideration of alternative food systems? The answer is none: Canadian consumers consumed the same vast array of food at prices that rose less in 2020 than in 2019. Second, would these proposed alternative systems have performed better or
worse during the pandemic? Decades of research into food markets have taught us that the more isolated a region’s food market is, the higher the risk of food price and supply volatility. Adverse weather or other events can generate acute food shortages if mechanisms to bring food from other markets are not sufficiently developed. The supply chains that move food between markets (transportation routes, warehouses, and business relationships) develop over years — they cannot be quickly “switched on” in the event of local shortfalls. This is why the World Food Program resorts to airdropping emergency food aid to economically-isolated regions where the trading infrastructure to bring in food is underdeveloped.

A more diverse and accessible food supply is a more secure food supply. Third, what cost would changing our food system have on Canadians, its resources, and the opportunity cost of these resources? Changing the underlying structure through regulation and border thickening (i.e., supply management) would generate significant costs through lower efficiency (Veeman, 1982), and through higher consumer prices and unintended distributional effects (Cardwell et al 2015).

As we mentioned in Ker and Cardwell (2020), it is almost always more efficient for governments to deal with Black Swan events in real-time as they arise because these events cannot be predicted as to their specific form, their timing, or the most appropriate policy response. With respect to Canada’s agri-food system and COVID-19, federal and provincial governments moved quickly to ensure adequate farm labor supply, processing capacity, and consumer demand. Relatively constant consumer prices and only very short-lived stock-outs (which proved inconsequential given the vast number of substitutes) is strong empirical evidence for dealing with Black Swan events in real-time as they arise. It is also worth noting that early calls for new, and increased, government spending programs to support farm incomes seem to have been unwarranted. The ad-hoc programs targeted at short-term obstacles faced by some producers were accessible through existing business risk management programs, and Canadian farm incomes in 2020 are expected to be the highest on record.

This special issue of the Canadian Journal of Agricultural Economics is similar to the first special issue; an attempt to add content, from experts in their highly specialized area, to the discussions of many of the issues (past, present, and ongoing) regarding COVID-19 and the Canadian agricultural and food sectors. Again, we have invited articles from highly accomplished academics. These articles have been deliberately restricted to the authors’ respective area of specialization from which their credentials have been built. That restriction has led to 16 short articles dealing with very different aspects of the Canadian agriculture and food system. It is important for our authors to weigh in on if and why their predictions from the pandemic onset materialized. It is also important to understand what has transpired over this past year through an economic lens. These are the reasons for this second special issue on COVID-19.

The first article by Deaton and Deaton (2021) observes, as predicted, relatively stable food prices because there was no breakdown in the food system. They suggest that concerns expressed about food insecurity should not be seen as tantamount to a failure of our food supply system. Household income is an important part of the story. They conclude that oversimplified conflation of food insecurity concerns with the robustness of our food supply system, often done in the public domain, does a disservice to ongoing efforts to address food insecurity as well as our capacity to assess and improve the Canadian food supply system. The second article by Goddard (2021) notes that the food retail and service sectors continue to face some of the biggest impacts from COVID-19. As predicted, she notes that grocery stores have solidified their changed realities through an increased focus on omni-channel retailing rather than either bricks and mortar or online. She concludes that increased costs, resulting from the pandemic, are continuing to filter through the food system. Hailu (2021) explores the effects of the COVID-19 pandemic on Canadian food processors. He notes the sector experienced significant reductions in sales to the food service and restaurant sector but a significant increase to food retailers. COVID-19 has also resulted in supply-side disruptions—as some processors temporarily halted production or operated at reduced capacity—with a negative impact on food supply chains, labor demand and supply, and employment. The effects were largest in labor-intensive industries with a high density of workers, though disruptions in food processing were not as severe as in non-essential businesses. Hailu (2021) concludes that lower border restrictions for essential goods helped the food processing sector to run “smoothly” and quickly restored consumer confidence in the food supply chain. Hobbs (2021) finds that food supply chains have performed remarkably well during the pandemic. Cross-border linkages continued to function effectively. The most significant disruptions emerged from workforce outbreaks of COVID-19 in the meat processing sector and in fruit and vegetable production. She argues that agri-food supply chains are characterized by several important differences that need to be taken into consideration when evaluating resilience. Economies of scale and scope offer economic efficiency advantages in normal times, while investments in adaptability and flexibility can enhance resilience for abnormal times. Hobbs (2021) notes that long-run changes within supply chains may include increased

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automation and digitalization in food supply chains, while investments in infrastructure for online delivery services have permanently altered the food retailing landscape.

Turning to specific commodities, Brewin (2021) found that the grains and oilseeds sector generated a large crop and experienced strong prices, both contributing to record farm income in Canada in 2020. He indicates that the pace of grains and oilseeds exports in Canada and the loss of ethanol demand in the east were affected by COVID-19, but his forecast of a “near normal” 2020 was relatively accurate. Production and prices stayed on track, largely because the world did not impose significant new barriers to trade in cereals and oilseeds and because these sectors have distanced labor in virtually every step of the supply chain which protected these markets from the pandemic. The dominant price factor for the sector remains growing global demand and with tight global stocks, COVID-19 had a minor impact on grain prices which led to steady production worldwide and in Canada. Chenarides et al (2021) note that Canadian fruit and vegetable markets continue to adjust to the evolving landscape. They expected that access-to-labor issues in key production areas in the U.S. and Canada would have dramatic effects on production levels and, given the strength of retail demand for fresh food, expected trade flows to be significantly impacted. However, neither production nor trade appears to have been significantly affected by the COVID-19 pandemic, beyond a four to 6 week period immediately after the initial shutdowns took place. The most likely explanation for this apparent resilience combines rapid responses from both the U.S. and Canadian governments in ensuring the viability of the food production system, and self-interested responses from all agents in the supply chain. Weersink et al (2021) note that the dairy and poultry sectors responded quickly to the initial adjustments in the quantity and nature of food products caused by the shuttering of the hospitality sector and the subsequent switch to buying food from grocery stores. In addition, these sectors were less affected by the labor availability and health issues from COVID-19 that plagued others, such as red meat processors. McEwan et al (2021) found that while COVID-19 had the potential to be extremely disruptive to the Canadian pork supply chain, the sector showed resiliency by adjusting to market changes to ensure industry continuation. Evidence of this resiliency is seen in three main ways. First, market access to the US was maintained for both live pigs and pork exports. Second, Canada not only maintained market share in global pork exports, it actually increased shipments because of strong demand from China caused by African Swine Fever. Third, the challenges of processing plant closures and labor shortages were overcome in a variety of ways including increasing inter-provincial shipments and increasing live pig exports to the US. In North America, pork retail prices remained relatively flat; wholesale prices strengthened, particularly in May; and producers experienced considerable price variability. Pork consumption on a per-capita basis continued the historical downward trend. At the meat processing level, they anticipate that there will be an acceleration in the process to automate. Finally, Rude (2021) notes that the Canadian cattle industry entered 2020 with a breeding herd that had been declining for 15 years, a concentrated and aging processing sector, concerns about the rise of meat substitutes, and pressures for the industry to reduce its carbon footprint. In the second quarter of 2020, the sector faced a significant challenge with continent wide shutdowns of beef packers, reducing the US beef supply by one third and Canadian beef slaughter by almost 60%. These shutdowns resulted in a sharp divergence between wholesale beef prices, which more than doubled, and fed steer prices which declined by one-third. However, the sector has quickly returned to near normal conditions with prices and production levels similar to those observed prior to the pandemic. Rude (2021) notes that there have been calls from a number of quarters for the construction of small and medium sized packing plants but indicates such plants would find it difficult to survive because of scale economies in processing. He discusses alternative measures (including robotics) to reduce the labor intensity in beef processing.

The next set of three articles focus on trade. Canada’s agricultural and food sector exports more than half of what is produced domestically. Our largest trading partner is the United States. Orden (2021) outlines the situation in the United States after 1 year of the COVID-19 pandemic. He finds that agri-food markets suffered initial disruptions from both supply-side and demand-side shocks; however, significant adjustments by farmers, processors, distributors and government kept these relatively short-lived. Substantial support has been provided to US farmers as part of the US$5 trillion economy-wide stimulus enacted. This included payments in 2020 under the Coronavirus Food Assistance Program of nearly US$24 billion to producers of a wide array of products. These payments came on top of trade-related support provided to agriculture in 2018 and 2019. The stimulus also included expansion of nutrition assistance programs for low-income households which were among the hardest hit by the pandemic. He conjectures that the US will not shift the basic structure of agricultural production and distribution and that counter-cyclical farm policy is re-entrenched within the political arena. Barichello (2021) notes that global agricultural trade appears to have grown in 2020, well above anyone’s prediction. This was true as well for the US where it grew by 6%, but even more so for Canada where its agricultural trade grew by a remarkable 11–15%, depending on how widely or narrowly you define agricultural trade. He concludes that the resilience of the world agricultural economy in generating this positive trade result while facing a serious global recession and some short-term pandemic-induced supply chain disruptions is as impressive as it is under appreciated. Kerr (2021) notes inter-
national trade in agri-food products was minimally affected by the COVID-19 pandemic. Within Canada the disruptions did not put food availability at risk. While there were short run interruptions for particular products, there were always sufficient substitutes available on supermarket shelves. Canadian agri-food exports were largely unimpeded as importing countries wanted to keep food supplies flowing to their already stressed consumers. The net result has been that the Canadian agri-food sector appears to have returned to its pre-pandemic equilibrium. In terms of the long-term effects on the international trade regime, some members of the multilateral community have attempted to use the trade problems that have arisen in the wake of the pandemic as an opportunity to spur reform of the WTO – something that is important for Canada’s export oriented agri-food sector. Canada has been at the forefront of this effort through the fostering, hosting, and chairing of the Ottawa Group of thirteen WTO members whose agenda is reform of the multilateral system.

Finally, the last four articles deal with labor issues, transportation issues, land values, and risk management programs. Larue (2021) notes the perennial difficulty in recruiting domestic workers increased the reliance of Canadian farms on Temporary Foreign Workers (TFWs). Some farmers anticipated that it would be too costly to bring TFWs into Canada and to protect them adequately. To counter this, the federal and provincial governments committed funds to subsidize the required 14-day quarantine as well as the transport and housing adjustments to facilitate social distancing. In addition, AgriInsurance was expanded to include labor shortages as an eligible risk for the horticulture sector. Statistics Canada does not have recent data about TFWs, however, statistics for Quebec TFWs between February and August reveal that the number of TFWs dropped by only 5%. Overall, Larue (2021) concludes that the availability of TFWs has not been as large of a problem as initially feared. Gray and Torshizi (2021) is able to show that agricultural transportation systems have proven to be extremely robust and were able to innovate in real-time to address challenges in the agricultural and food supply chains. They are also able confirm that most of the transportation components are well-equipped to deal with the remainder of the pandemic and the recovery phase. Notably, the innovations created new services, cost-saving technologies, safety innovations, new institutions, networks, and channels of communication that operated effectively to address the pandemic. Gray and Torshizi (2021) conclude that these changes are likely to remain in place post pandemic. Lawley (2021) indicates that early evidence suggests that Canadian farmland values increased in 2020. Low interest rates in 2020 contributed to substantial farmland value increases in the last half of 2020. There is some evidence that the development component of farmland values increased in 2020. The future consequences of COVID-19 on farmland values are unclear. He notes that some economists suggest that future inflationary risks have increased. A return to inflation rates comparable to those experienced in the 1970s is unlikely, but if increased inflation does materialize it will put upward pressure on farmland values, while an increase in nominal and real interest rates will push farmland values down. Ker and Biden (2021) reiterate earlier critiques regarding calls for additional farm support because of the pandemic (Ker 2020). They note the following statistics during the 2020 pandemic: farm income is projected to reach record levels; AgriInvest balances increased; FCC additional lending capacity was not overly utilized by farms; farm household incomes vastly outstripped non-farm household incomes; and farm household wealth vastly outstripped non-farm household wealth. Ker and Biden (2021) note that no major changes to BRM programs were enacted nor were any needed. The federal government was able to work within the BRM suite: AgriRecovery monies were used to assist farmers who held back cattle and hogs from processing and AgriInsurance was expanded to include labor shortages as an eligible risk for the horticulture sector. Ker and Biden (2021) applaud the federal government’s reactionary, targeted, and fiscally tight response (as compared to the reparations to supply managed farms for recent trade agreements and the U.S. response to COVID-19) to problems caused by COVID-19 in the farm sector.

The following major themes arose from the 16 articles: (i) the current agri-food system and its supply chains were resilient and adaptable; (ii) the non-thickening of borders to trade of agri-food goods and labor enabled much of that resiliency; (iii) the Canadian government’s response to farm sector issues (i.e., labor) was financially prudent, targeted, and swift; (iv) COVID-19 exposed no vulnerabilities in the BRM programming despite significant calls to the contrary by the farm sector; (v) capital intensity will accelerate throughout the supply chain; (vi) consumers did not face significant price increases or food shortages; (vii) the farm sector as a whole was minimally affected and experienced a very strong year; and (viii) food insecurity is not tantamount to a failure of our food supply system and such arguments ignore the importance of household income as the most important determinant of food security.

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How to cite this article: Ker, A. P., & Cardwell, R. Introduction to the special issue on COVID-19 and the Canadian agriculture and food sectors: Thoughts one year into the pandemic. *Can J Agr Econ.* 2021;69:155–159. https://doi.org/10.1111/cjag.12289