

SUPPLY MANAGEMENT 2.0

A POSSIBLE ROADMAP FOR THE CANADIAN DAIRY INDUSTRY

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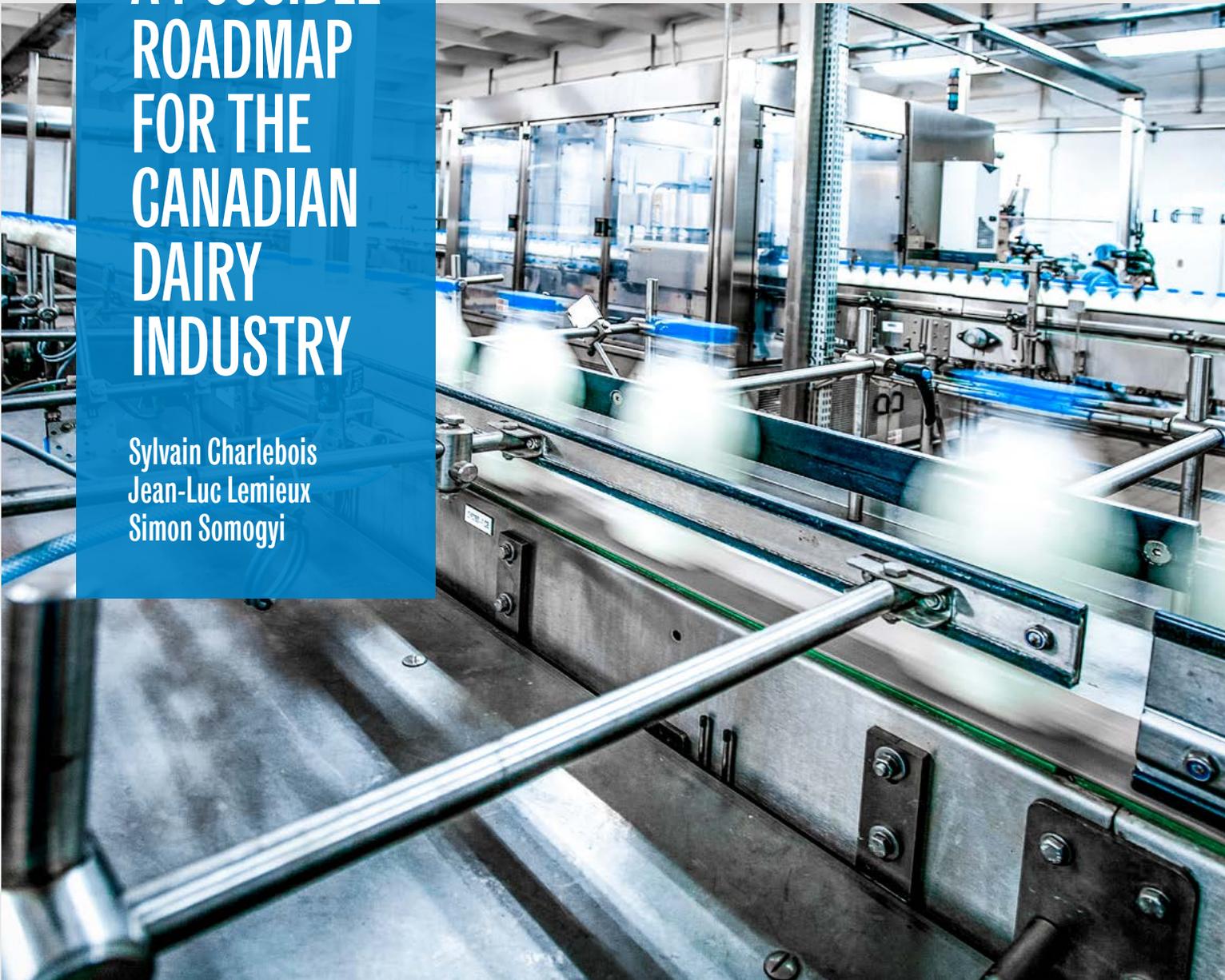


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EXECUTIVE SUMMARY

If supply management is not fundamentally changed, Canada **could see half of its current dairy farms disappear by 2030**. Throughout the value chain, however, there are signs of restructuring. Dairy processor **Saputo** announced two plant closures in recent months, which indicates how the sector is adjusting to more fragmented demand. More closures and restructuring initiatives are expected. Major coffee chain **Starbucks** intends to reduce the amount of dairy it serves as part of a global sustainability plan. More such announcements are likely to come. A recent survey by the **Agri-Food Analytics Lab** at **Dalhousie University** suggests that consumers, especially younger ones, have mixed feelings as to whether the Canadian dairy industry is good for the **environment** and whether **animals** in the sector are humanely treated. As dairy alternatives become more popular, the dairy sector in Canada still has no plan to reform its supply management regime in order to support our dairy sector.

Dairy farmers are receiving compensation to offset losses due to trade deals recently ratified by the federal government. **The fact that the Canadian public now directly financially supports the dairy sector changes everything**. It needs to be made more competitive, accountable and transparent. Without a strategy, the compensation program provided by the federal government could make things worse for the dairy sector and the farmers themselves. It will **overcapitalize** the market, without fostering competitiveness. Furthermore, over time, our country has seen increased concentration of the dairy sector in Central Canada, leaving many regions underserved. The Canadian dairy industry is facing challenging times.

Recognizing the difficulties of Canadian dairy farmers, we propose a roadmap with solutions aimed at revitalizing dairying in Canada. Our proposal is not only inspired by the opinions of Canadians, but it is also supported by these fundamental underpinnings:

1. Maintain dairy farming, and processing, in all regions of the country.
2. Allow dairy farming to become more financially appealing.
3. Make our domestic production capacity more competitive.
4. Adopt a value chain–focused approach to reform.
5. Develop a strategy that focuses on innovation and growth, domestic and international.

Over the years, the dairy industry has argued that it has adapted and modernized itself. But considering what is happening to the sector, these changes are not adequate. The purpose of this report is to **outline a 20-year plan for modernizing supply management**, fundamentally changing it to allow the Canadian dairy industry to become more competitive. We call this

plan *Supply Management 2.0*. It will provide incentives for Canadian farmers to adapt to a more liberalized market over time, and to become competitive in more niche and premium export markets. Supply Management 2.0 comprises four steps:

1. Create a voluntary program for dairy farmers to exit the industry.
2. Make significant changes to the Canadian Dairy Commission (CDC).
3. Remove interprovincial trade barriers on dairy products and create an innovation fund for the sector.
4. Initiate a 20-year plan to reduce general tariffs, develop an export strategy, create a Canadian brand and provide incentive for innovation.

Some of these goals will be more attainable than others; however, these are the general guidelines we believe must be followed to save the livelihood of Canadian dairy farmers while supporting the industry's position in a globalized world.

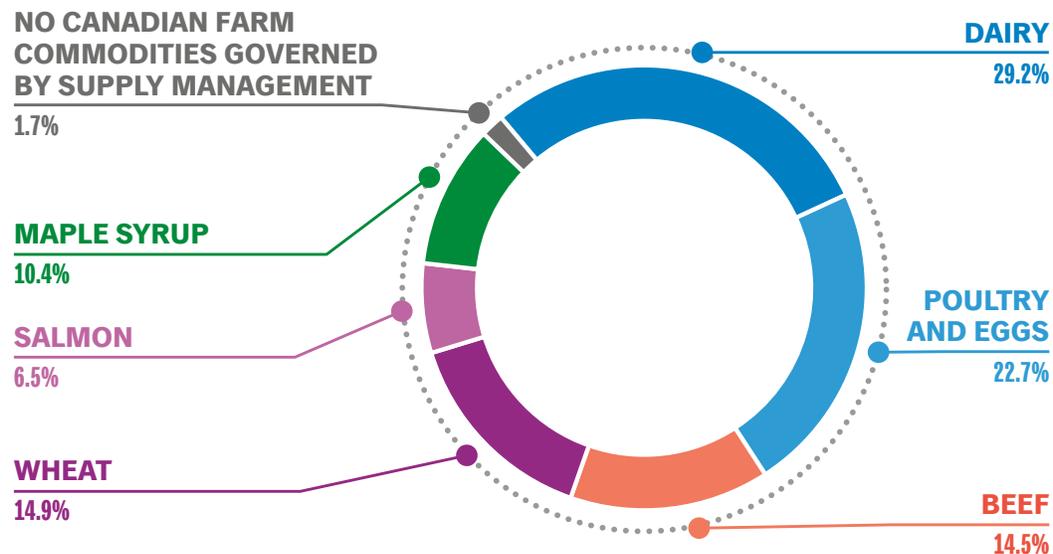
WHAT IS SUPPLY MANAGEMENT?

According to the survey results published alongside this report (and provided in the *Appendix*), most Canadians know very little about supply management. In our national survey, one respondent replied:

*"[There] [n]eeds to be **more education** about it as I know very little about it (mostly hear advocates praise it and others whine about it)."*

Many others expressed similar concerns. Survey results also suggest that only 17.2% of Canadians feel that they can strongly agree with the statement: "I am familiar with supply management in the dairy industry." Furthermore, **many Canadians believe that the salmon, wheat, maple syrup and beef industries are also regulated by supply management.** In fact, only dairy, poultry and eggs are federally supply managed. This lack of understanding is not new as many Canadians have not understood the essence of the regime (Charlebois, Langenbacher, & Tamilia, 2007). The future of the industry depends on transparency and accountability, which must become pillars of any plan moving forward. However, before we can turn to solutions, some explanation of the current regime is warranted.

Please choose the Canadian farm commodities that are governed by supply management. Choose all that apply.



The Dairy Farmers of Canada (DFC), an advocacy group, arose from the pressures of the Great Depression. It was established in 1934 to be the voice of dairy producers in lobbying the Canadian government. By the 1960s, many things were working against dairy farmers; for instance, Canada had lost access to its largest market for cheese exports when the UK joined the European Common Market, and there was a perception among farmers that producers held too much power (Conference Board of Canada, 2009). The DFC lobbied the government on behalf of farmers, which led to the Canadian Dairy Commission Act of 1967 and the establishment of the Canadian Dairy Commission (CDC) (Hedley, 2015). By the 1970s, supply management had been established in the Canadian dairy industry (Conference Board of Canada, 2009). At the time, economic stability for the sector was critical for rural communities and supply management was appropriate for the era. But it was also highly political as the dairy lobby showed itself to be incredibly powerful when it organized a record-setting march on Parliament Hill in 1967 (Conference Board of Canada, 2009). Public support for farmers was considerable at the time and remains quite high to this day.

According to a 2009 Conference Board of Canada report, “Making Milk: The Practices, Players, and Pressures Behind Dairy Supply Management,” the decision to determine milk quotas and prices based on a producer’s input costs was a direct result of the DFC’s lobbying. As the report explains, supply management offers farmers many benefits, such as protection from international competition, along with stable prices, which in turn create stable incomes for farmers (Conference Board of Canada, 2009).

The CDC, a Crown corporation funded by dairy farmers and the public, acts as the chair of the Canadian Milk Supply Management Committee (CMSMC), which sets the national target for milk supply (Ontario Ministry of Agriculture, Food, and Rural Affairs, n.d.). The CMSMC is composed of delegates from the provincial milk marketing boards (each province has its own). It works with the CDC and uses input from various stakeholders to set the national quota for milk. This quota is then allocated among the provincial boards and subsequently to farmers in each province. The provincial milk marketing boards also set the farm-gate price for milk (Dairy Farmers of Nova Scotia, n.d.). Many interest groups, including the DFC, attend CMSMC meetings because many important policy decisions that directly affect the livelihood of dairy farmers are made by the CMSMC (Canadian Dairy Commission, 2017).

The DFC and provincial milk marketing boards impose a levy on every hectolitre of milk purchased from farms to fund their marketing and lobbying operations. This is the DFC’s largest source of revenue. According to an article in *Better Farming*, in 2013, farmers paid \$1.50 per hectolitre for “market expansion,” which amounted to Ontario farmers providing the DFC with \$36.5 million (Mann, 2014). Dairy farmers have a monopoly on dairy products and are mandated to return a portion of their monopolistic profits to protect the monopoly. In 2012, the dairy lobby was named one of the three most active lobbies in Canada, according to *The Lobby Monitor* (The Lobby Monitor, 2013; Barichello, Cranfield, & Meilke, 2009).

In more recent years, the DFC's greatest challenge has been protecting the supply management system during negotiations of major free-trade agreements: Comprehensive Economic and Trade Agreement with the EU (CETA); Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which includes Australia, Brunei, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam; and the Canada–United States–Mexico Agreement (CUSMA). As a result of these trade deals, the federal government committed to compensating dairy farmers for potential losses incurred, thus creating a precedent (Government of Canada, 2019).

1.0 INTRODUCTION

1.1 OVERVIEW

The Canadian dairy industry is facing challenging times. Recognizing the difficulties of Canadian dairy farmers, we propose a roadmap with solutions aimed at revitalizing dairying in Canada. Our proposal is not only inspired by the opinions of Canadians, but it is also supported by these fundamental underpinnings

1. Maintain dairy farming, and processing, in all regions of the country.
2. Allow dairy farming to become more financially appealing.
3. Make our domestic production capacity more competitive.
4. Adopt a value chain–focused approach to a reform.
5. Develop a strategy that focuses on innovation and growth, both domestic and international.

It is difficult to see how our current path can achieve any of these goals. Under the current regime, **the number of dairy farms in Canada could go from over 10,000 to less than 5,500 by 2030**. It is critical that a new model allow the dairy industry to succeed equally in all regions. Right now, most of the industry is in Central Canada, which compromises producers' ability to fully serve the vast Canadian market. We seek to provide reforms for the industry that are based on the principles of transparency, accountability and economic viability for the system. We believe the current supply management system can be optimized and improved. Dairy Farmers of Canada (DFC) argues that the system has improved over the years, but these changes are not adequate. As we shall see, the industry continues to struggle.

We present a four-step framework, dubbed *Supply Management 2.0*, that illustrates one potential future for supply management. It would be unrealistic to expect the industry to follow our advice exactly; however, we hope this contribution generates discussion within the

Canadian dairying community. For years, groups have either defended the current regime or chastised it and called for it to be abolished. The current strategy is evidently not working, and now is the time to act. We present this report with the intent of beginning a discussion from which farmers, the dairy industry and consumers will benefit.

The present roadmap was partially inspired by results of a cross-national survey on the current system. We asked individuals from all generations, genders and socioeconomic levels across Canada for their opinion about dairying in Canada and used their responses in the formulation of our plan.¹

FIGURE 1: I believe dairy farming is an important industry in Canada.

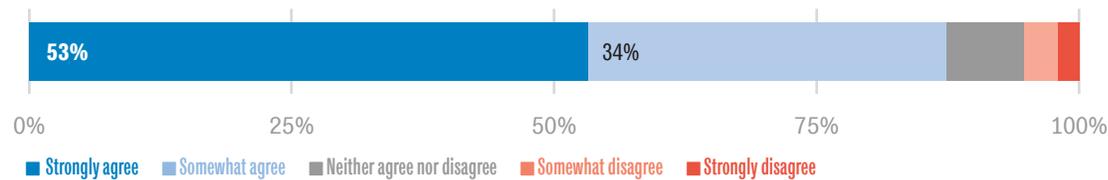


FIGURE 2: I believe it is important to support Canadian dairy farms by buying Canadian dairy products.

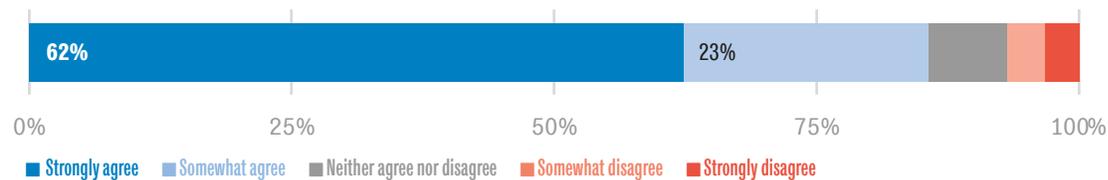
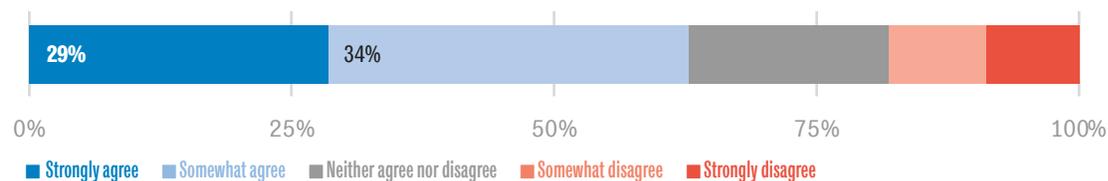
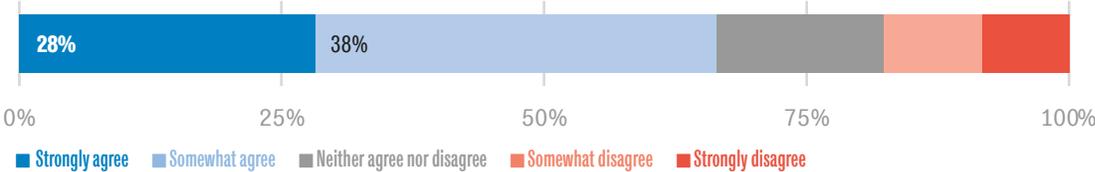


FIGURE 3: I believe the government should protect supply management in the dairy industry.



1 1,114 respondents were included in the survey. Data were collected in January 2020. Margin of error was 2.9%, 19 times out 20.

FIGURE 4: If dairy products were more expensive, I would still purchase them if it means that we can keep dairy farms in Canada.



Our findings suggest that Canadians overwhelmingly support Canadian dairy farming. Supporting a domestic industry is important to Canadians, and support for supply management is also evidenced by the results. Our results suggest that half of Canadians are even willing to spend more for dairy products in order to protect the domestic industry.

Basing our framework on these survey findings and solid economic analysis, we created the following four-step framework:

1. Create a voluntary program for dairy farmers to exit the industry.
2. Make significant changes to the CDC.
3. Remove interprovincial trade barriers on dairy products and create an innovation fund for the sector.
4. Initiate a 20-year plan to substantially reduce general tariffs, develop an export strategy, create a Canadian brand and provide incentive for innovation.

By following these steps, we believe the Canadian dairy industry will flourish, establishing itself as a leader in the global dairy ecosystem.

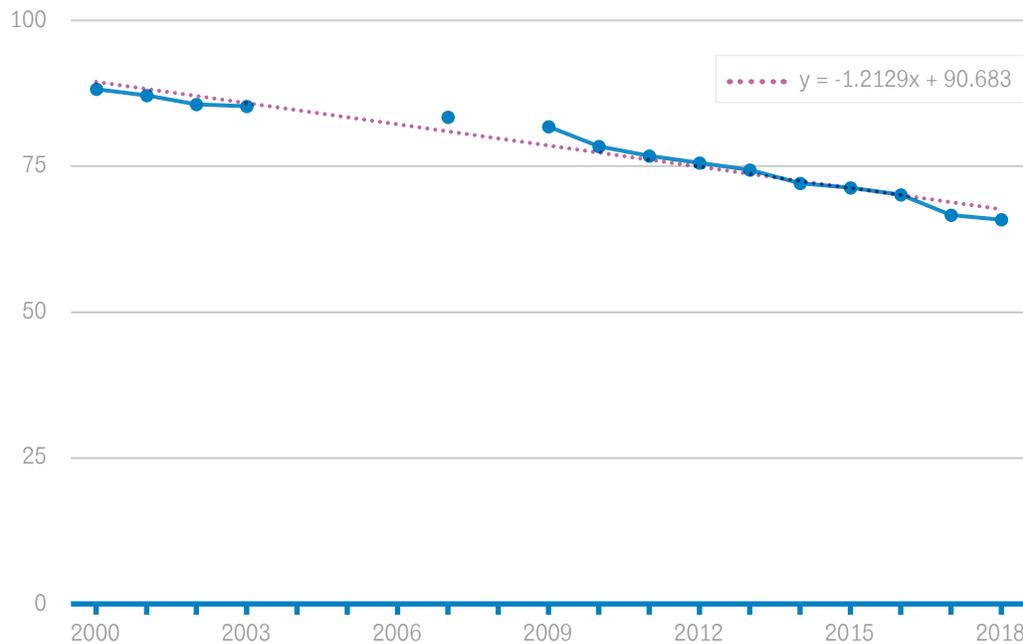
1.2 CONTEXT

In the past three years, Canada has ratified two new trade agreements: The Comprehensive Economic and Trade Agreement (CETA) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Under these new agreements, Canada’s supply-managed dairy industry finds itself in a precarious position. The CPTPP has cost the industry 3.25% of its market (CPTPP, 2020), CETA consumes an additional 1.3% of the market (Vigliotti, 2019) and, once ratified by Canada, the USMCA (United States–Mexico–Canada Agreement) will give an additional 0.59% access to American farmers (who already receive 3% of Canada’s market), according to experts from the Brookings Institution (Wolf, 2019). The combined effect of these free-trade agreements will harm the industry in the short term by having access to 8.14% of the Canadian domestic market, limiting domestic production quotas and taking revenue away from Canadian farms.

The DFC estimates the annual potential loss to farmers from these new trade agreements to be 8.4% of total production. More foreign products will generate competition for domestic products, leading consumers to drink less Canadian milk (DFC, 2019). In response to the concerns of dairy farmers and proponents of supply management, the federal government announced on August 16, 2019 that it will be compensating the industry with \$1.75 billion over eight years for losses to farmers from the CPTPP and CETA, with future subsidies planned pending the ratification of the CUSMA (GoC, 2019).

As a national lobby for farmers, DFC has played a major role in organizing farmers and dairy advocates into action to earn these protections, launching the My Canadian Milk advocacy movement (Tamilia & Charlebois, 2007). However, the capabilities of this powerful lobby may be hampered in future by what is currently happening to the industry. The rate of fluid milk consumption in Canada has been falling steadily for the past 20 years, as we can see from Figure 5. And, facing major budget cuts, the DFC has had to adapt, launching a new strategic advertising campaign aimed at increasing dairy product consumption among millennial parents to attract a new generation of milk drinkers with the “Milk. It’s In the Stuff You Love” campaign (DFC YouTube, 2019).

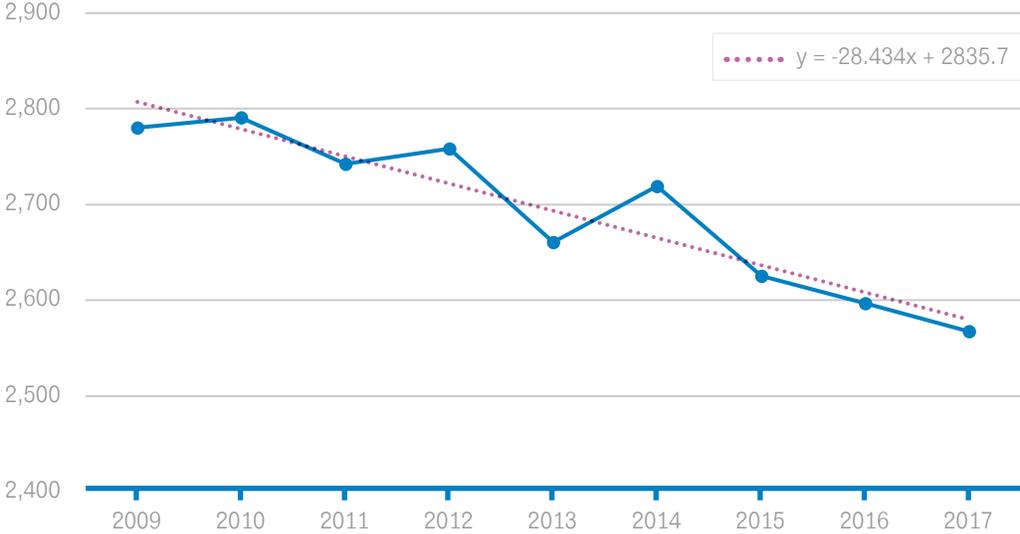
FIGURE 5: Annual Total Fluid Milk Sales in Litres per Capita Canada (2008 to 2018 where Data Available)



Source: Statistics Canada; Compiled by Agriculture and Agri-Food Canada, Animal Industry Division, Market Information Section

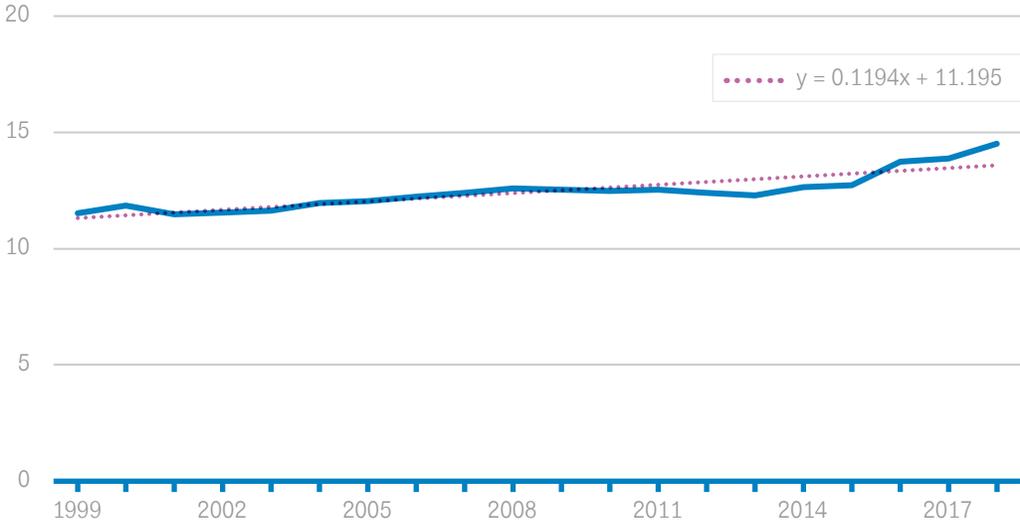
Fluid milk consumption is trending downward in Canada and global consumption is declining as well, with Asia being the only real emerging market (Canadian Dairy Information Centre, 2019a). The DFC, among others, has recognized this trend, and has begun focusing its marketing on non-milk dairy products, as seen above, recognizing that there has been a slight growth trend in consumption of these products. While this effort on the part of the DFC, along with direct subsidies for farmers from the federal government, may save the livelihood of Canada's dairy farmers in the short term, certainly, but looking forward, changes to the current system are needed.

FIGURE 6: Global Fluid Milk Consumption in Litres per Capita



Source: Statistics Canada; Compiled by Agriculture and Agri-Food Canada, Animal Industry Division, Market Information Section

FIGURE 7: Total Cheese Sales in Kg per Capita (Canada, 1999 to 2018)



Source: Statistics Canada

Inspired by the Keynesian school of economic thought, supply management in the Canadian dairy industry is an example of the costs and benefits of protectionist economic policies. Because of supply management, major dairy producers have thrived in Canada while avoiding the pressures of the global economy, and consumers have avoided drastic price fluctuations in dairy products. For the most part, supply management has ensured that processing plants have a consistent supply of safe, high-quality milk to make products, and that milk is not over-produced, spoiling before reaching the shelves of supermarkets. The cost of these benefits has been high dairy prices in Canada, low levels of innovation in the industry and an unfavorable starting point for trade negotiations (Findlay, 2012).

To simplify a complex system, the price of dairy products in Canada is based on production quotas set by the Canadian Milk Supply Management Committee (CMSMC) by assessing the demand for milk, and establishing a fair price for these quotas based on the costs of input for farmers (Canadian Dairy Commission, 2017). The CMSMC is chaired by the Canadian Dairy Commission (CDC), a Crown corporation that works in conjunction with provincial milk marketing boards to determine the quota to be allotted, based on consumer demand. The quota is then distributed among the provincial milk marketing boards to be allocated to farmers in each province. The CDC was created with the purpose of ensuring that Canadian dairy farmers receive fair prices for their output, and processors could depend on stable input for their products, to limit shortages and surpluses.

1.3 HISTORY OF SUPPLY MANAGEMENT

Historically, supply management made sense; agricultural products are subject to inelastic demand, and prices can fluctuate drastically based on small changes to supply (Tamilia & Charlebois, 2007). With a quota system, farmers can maintain their herds regardless of disturbances in consumer demand and consumers can depend on stable dairy prices regardless of disturbances in supply.

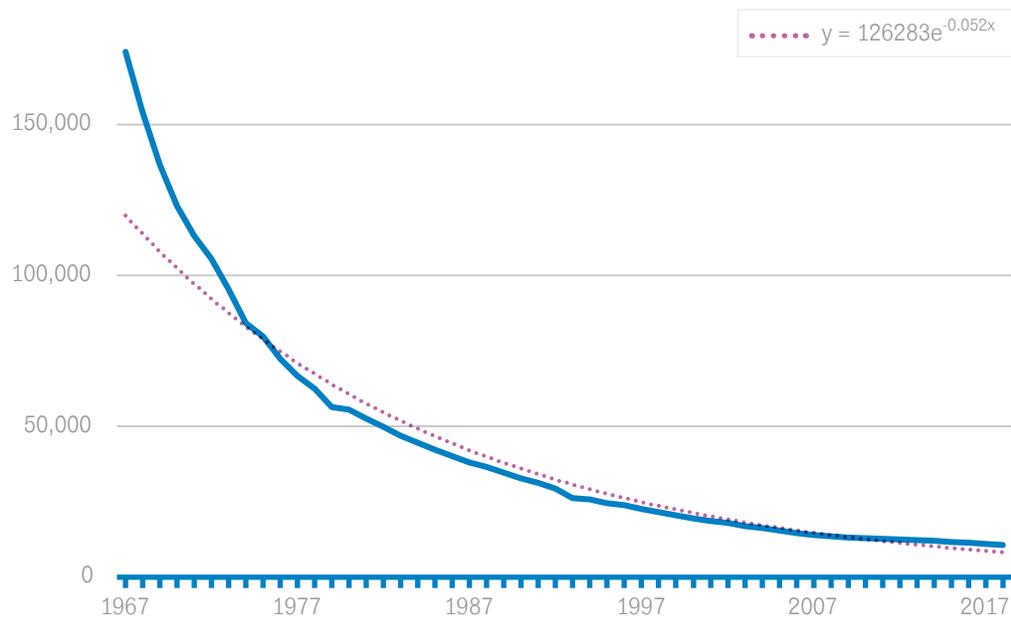
When supply management was implemented in 1971, farms were much smaller, and it took many more farms to produce the amount of milk that fewer farms produce today. In fact, in 2018, there were only 10,679 dairy farms (GoC, 2018) while in 1971 there were 145,000 (Findlay, 2012). Farms today have much higher revenues than those of 50 years ago, as we can see from Figure 8, which shows the growth in farm cash receipts from dairying in Canada from 1971 to 2018, in millions of dollars. When supply management was created, dairy farmers had limited means to communicate and gather market intelligence to fully assess market conditions. Today, most farmers are highly educated and run their operations with start-of-the-art equipment.

Since the advent of supply management, genetics and animal science have changed drastically, allowing for a much higher yield of milk per cow (Charlebois & Astray, 2012). In 1971, total milk production was 76,321,710 hectolitres; by 2012 it had hardly changed at 79,801,292 hectolitres (GoC, 2019). However, this level of production was achieved with far fewer farms and fewer cows (GoC, 2019). On the other hand, these statistics have garnered some criticism by animal rights groups, which allege that dairy cows are being denaturalized and inhumanely exploited (Boyens, 2018). Technology developments are also set to impact the Canadian Dairy Sector. Advances in precision fermentation will allow for the production of milk proteins in an industrial setting, providing milk and milk fats identical to those made by a cow. Some report suggest this technology will be in commercial operation within the next 15 years (Southey, 2020).

While supply management has offered dairy farmers stable prices, Canadian processors must still compete for the domestic market. In all markets with a dairy industry, including in Canada, competition has led to economies of scale regardless of the current supply management system. To reduce input costs, farmers have increased farm size and amalgamated production, although Canada has not taken as much advantage of scaling as the rest of the world and would fail to compete internationally. The decision to move toward economies of scale has resulted in disproportionate grouping in some areas of the country: 42% of the total market sharing quota for dairy is in Quebec, and 32% in Ontario (DFC, 2019).

Over 74% of all dairy farms are in two provinces where 58% of our country's population resides. This is problematic because having large farms located in only one or two provinces may not be the most sustainable or beneficial solution for Canada's industry going forward. *Figure 8* shows the number of dairy farms and *Figure 10* the number of dairy cows in Canada, demonstrating how the number of small farms in Canada has declined dramatically since the establishment of supply management, a notable weakness in the current system.

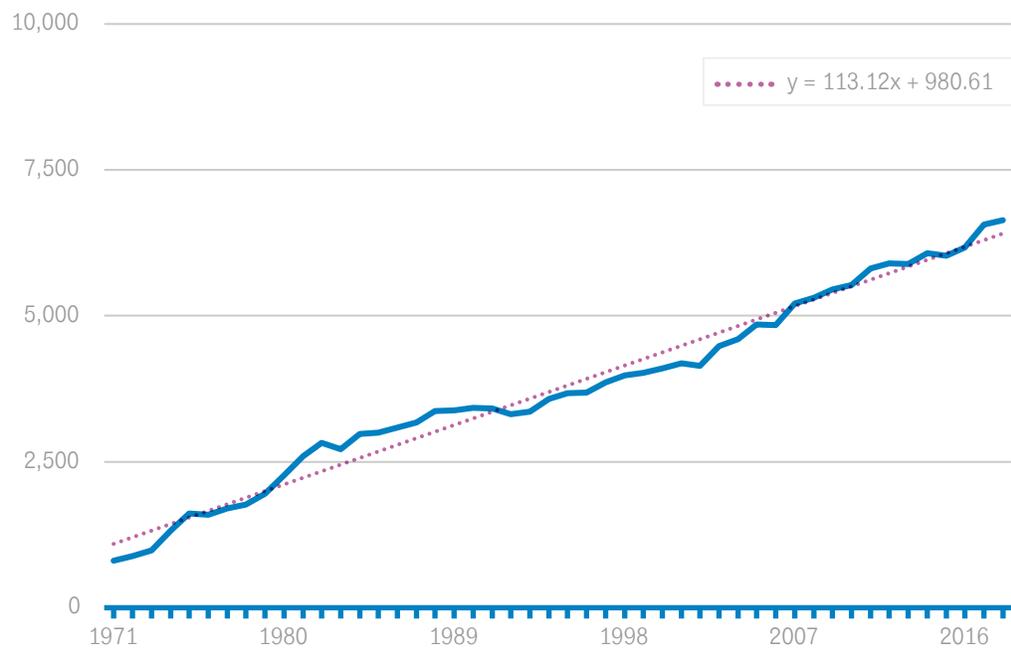
FIGURE 8: Number of Dairy Farms in Canada (1967 to 2018)



Source: Canadian Dairy Information Centre (2019b).

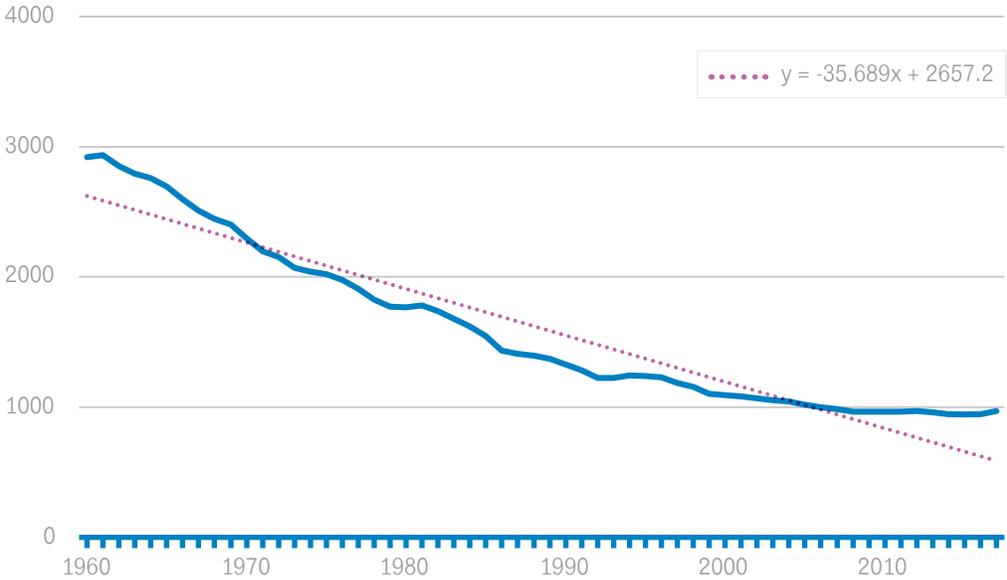
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FIGURE 9: Canadian Farm Cash Receipts from Dairying in Canada 1971 to 2018 (in Millions of Dollars)



Source: Canadian Dairy Information Centre

FIGURE 10: Number of Dairy Cows and Heifers in Canada (1960 to 2018)



Source: Canadian Dairy Information Centre

When we look at the trend line of the Number of Dairy Farms in Canada by Year, we find the best fit to be an exponential formula of the form: $y = 126283e^{-0.052x}$. We can extrapolate from this; that is, if the estimate is correct, in ten years' time we can expect the number of farms to have halved again, **to roughly 5,500 farms by the year 2030**. Maintaining domestic production capacity is critical to the success of the sector and to our nation's food security, but it remains unclear how the industry can remain strong with our current policy framework. What needs to be determined is the optimal number of dairy production operations in Canada, and no one has the answer.

While consumers in Canada can depend on a stable cost of milk when planning their monthly grocery budget, they can also expect to spend much more than their American neighbours. From 1997 to 2011, the price of milk in Eastern Canada averaged \$63.05/hl, while the U.S. Midwest price averaged \$39.42/hl and New York/New Jersey averaged \$44.31/hl (Mussell et al., 2012). More recent estimates come from an article published on Dec. 2, 2019 in the *Toronto Sun*, based on a study that confirms Canadians pay almost 30 cents more per litre of milk (Craig, 2012). However, the evidence that suggests that **milk and dairy products would be more affordable if supply management ends is weak**, at best. The laws of supply and demand in a vast country like Canada set new market conditions that are difficult to predict. Given the cost of distribution to cover the Canadian market, depending on where products are coming from, Canadians may very well pay more for dairy products, once supply management ends.

Canada's ability to negotiate trade deals has arguably been undermined by high tariffs imposed on dairy imports into Canada. Canada will seek to maintain its domestic monopoly on dairy products, restricting competition with high tariff rates. Other countries will also have similar non-negotiable issues. Tariffs on dairy products coming into Canada are generally in excess of 200% (Mussell et al., 2012b). Canada's dairy industry has been referred to as a "legal cartel," and some authors suggest dismantling supply management altogether in favour of consumers (Findlay, 2012), while others suggest doubling down on supply management and restricting further market access for dairy products (DFC, 2019b). In recent years, the issue has become quite political, as witnessed in the lead-up to the 2019 Federal election. As a result, Canadians are more aware of the existence of supply management, although many do not understand how the system works.

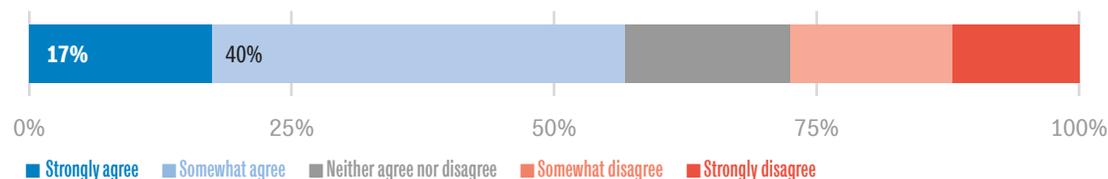
Overall, the dairy industry matters to Canadians because they care about where their food comes from and would prefer to support Canadian farmers, as shown in a 2019 study by *The Canadian Centre for Food Integrity*. Understanding how food policy is developed should therefore be of crucial concern to Canadians. While the issue may have become political, the fact remains that if supply management continues as it has, we will see erosion of Canada's domestic market to Free Trade Agreements, a lack of innovation in dairy processing, and regional amalgamation of farms for economies of scale, which harms smaller farms.

Seeking a fuller picture, we further evaluate this hypothesis by compiling Canadians' opinions on the dairy industry and supply management. Our results are staggering, and with consumers at the foundation of the entire dairy industry. We had 1,143 participants with proportionate representation from each region of Canada.

Notably, consumers must be informed when we shift from our current supply management system to *Supply Management 2.0*. Currently, 33% of Canadians are entirely uninformed about supply management and 44% believe the beef industry is protected by supply management. Consumers are uninformed, and our results speak volumes about the state of the industry.

The current dairy pricing mechanisms are shrouded in mystery, with only 9.21% of Canadians strongly agreeing with the statement: *"I understand how the price for milk on the farm and at retail are determined in Canada."* We must be careful when establishing a new path forward to be open and accountable to the public, to ask for their input, and to consider it when informing policy decisions.

FIGURE 11: I am familiar with supply management in the dairy industry.



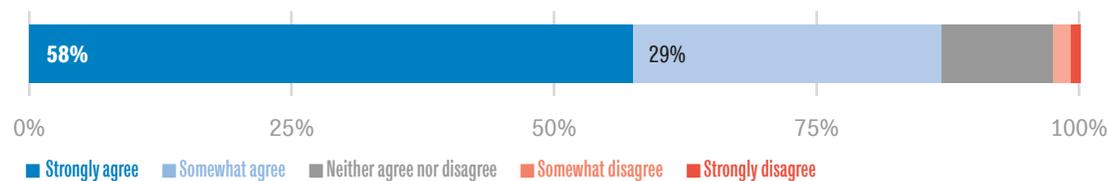
Based on our survey, 53% of respondents strongly agree that dairy farming is an important industry in Canada, while 66% somewhat or strongly agree with the statement: *“Dairy farmers in our country are an important part of what it means to be a Canadian.”* 62% strongly agree that it is important to support Canadian dairy farms by buying Canadian dairy products, and 60% somewhat or strongly agree that supply management is good for the Canadian economy.

62.8% of respondents somewhat or strongly agree that the government should protect supply management in the dairy industry. Our results show that Canadians care about dairy farmers and want them to succeed, and the majority are willing to protect them even if it means paying higher prices. Regarding the statement, *“If dairy products were more expensive, I would still purchase them if it means that we can keep dairy farms in Canada,”* 66% of respondents somewhat or strongly agreed. 50% of Canadians even agree somewhat or strongly that it is important to support Canadian dairy farms by providing direct subsidies to them.

With this foundation established, we can be certain we are headed in the right direction. Canadians do not want to see the end of the domestic dairy industry. Dairy farming is an important part of what it means to be Canadian, and the overwhelming majority of respondents (85.5%) somewhat or strongly agreed that **it is important to support Canadian dairy farms by buying Canadian dairy products.** Canadians want Canadian dairy products. The demand exists, and support for the system and its producers is evident. However, as mentioned previously, there are serious issues with the system as it stands, which must be addressed, either by logical analysis or by following the directive of consumers.

When we look to consumers for direction, we find evidence of a few things: first, not only do consumers prefer food produced in Canada, they prefer food produced in their own province. 86.9% either somewhat or strongly agree with the statement: *“I prefer to eat food produced within my province or region if possible.”* Most respondents want food that is sustainably sourced and are willing to pay more for food production that ensures animals are treated humanely. Furthermore, 55% believe that smaller farms treat animals more humanely than larger farms. Finally, a staggering 82.5% of respondents either somewhat or strongly agreed with the statement: *“I believe it should be a priority to protect jobs in rural Canada.”* With these consumer opinions in mind, let us turn now to the project at hand: developing a series of reforms to the current supply management system that will bring the greatest benefit to farmers and consumers.

FIGURE 12: I prefer to eat food produced within my province or region if possible.



2.0 A ROADMAP FOR THE FUTURE

2.1 SUPPLY MANAGEMENT

This report explores issues in the supply of dairy products and takes first steps toward creating a sustainable way forward for dairy farmers, ensuring they are not overrun by cheaper products from other countries, while also aiming to produce the greatest benefit for farmers and consumers. Our goal is to outline a 20-year plan for supply management, fundamentally changing it to make the Canadian dairy industry more competitive. We call this plan *Supply Management 2.0*. It will incentivize Canadian farmers to adapt to a more liberalized market over time, and to become competitive in more niche and premium export markets. *Supply Management 2.0* comprises four steps:

1. Create a voluntary program for dairy farmers to exit the industry.
2. Make significant changes to the CDC.
3. Remove interprovincial trade barriers on dairy products and create an innovation fund for sector.
4. Initiate a 20-year plan to reduce general tariffs, develop an exporting strategy, create a Canadian brand and provide an incentive for innovation.

Some of these steps may be more easily attainable than others but we believe these guidelines must be followed to sustain the Canadian dairy industry and support its position in a globalized world. We believe it is important is to recognize that dairy farmers barely earn enough to support a less than attractive lifestyle. **Dairy farming should become more financially attractive for anyone who wants to invest and export Canadian products abroad.**

2.2 CHANGING SUPPLY MANAGEMENT FOR THE RIGHT REASONS

According to a Conference Board of Canada report, “Reforming Dairy Supply Management: The Case for Growth” (Conference Board of Canada, 2014), supply management in the dairy industry should be dismantled, and trade should become fully liberalized. **But dismantling supply management is not a viable solution currently.** If trade were liberalized tomorrow, cheaper American milk would likely flood the Canadian market, our farmers would not be able to compete, and eventually the entire dairy industry would be dependent on imported milk.

The pure free-market economic model tells us that the Canadian dairy industry cannot currently compete with the marginal production costs of dairy producers in other countries. Therefore, it would be more efficient for Canada to dismantle supply management, halt all subsidies for the dairy industry and allow consumers to access cheaper international dairy. While free-market economics may produce an efficient outcome, it is not the optimal situation when we consider the livelihood of farmers, our rural economy and our values as Canadians.

Continuing this line of reasoning, a basic strategy for dismantling supply management would likely be for Canada to follow the Australian example, as discussed by Findlay et al. (2012), for instance. The plan would go as follows: remove tariffs on dairy products, import cheaper dairy, put a levy on dairy products for consumers, generate money (from the levy) to purchase milk quotas back from farmers, and set a 10-year course for purchasing all dairy quotas from farmers before fully entering a free-market system. The idea that Canada should adopt a model like Australia's for dismantling supply management is not new. Policy analysts have been recommending it since at least 2003 (Earl, 2003).

While this plan would reduce costs, it would inevitably lead Canada into a similar situation as Australia currently finds itself in. In Australia (due in part to massive drought, heat and high animal feed costs), the market has been devastated by the removal of supply management. As reported by Australia's national dairy service body, Dairy Australia, since deregulating the market, farmers have had to struggle to compete with international milk prices. "At an average of approximately US 42 cents per litre, Australian dairy farmers receive a low price by world standards and therefore have to run very efficient production systems" (Dairy Australia, 2019). In 1980, there were 22,000 dairy farmers in Australia; today there are fewer than 6,000. Milk production is forecast to fall by as much as 9% this year, according to an article from *ABC News* titled "Australia's dairy farmers issue warning as mass exodus continues" (Day, Jun. 26, 2019). Similar situations are occurring in other markets with free-market dairy policies, such as in New Zealand, the UK, and the US (Alberta Milk, 2019).

Furthermore, proponents of dismantling supply management will demonstrate that Canadians pay more for milk than Americans; however, when we consider the direct and indirect subsidies that American dairy farmers receive, we may not be convinced that the price is so different. According to Alberta Milk (2019), "Americans paid \$4 billion in dairy subsidies in 2009, and about 31 cents per litre, in addition to retail prices". An article from RealAgriculture (2018) reports that "Support, in its various forms, equaled 73 percent of U.S. dairy farmers' market returns in 2015". In fact, Wisconsin dairy farmers are discussing asking the federal government to become more involved in the industry, as farmers are currently struggling. Some are even proposing a system similar to Canada's current supply management system (Mertens, 2019).

Finally, the loss to Canada's economy from protecting the supply management system cannot be denied. According to Davey (2004), supply management of the Canadian dairy industry results in a roughly \$123 million deadweight loss to society annually. Davey's calculations used data from the 1997–1998 data year; more recent calculations are unknown.

The Canadian dairy sector deserves a Canadian solution. Other countries in which supply management was eliminated have had to manage different economic realities. But supply management here in Canada has severe limitations. Most of our dairy farms and processors

are in Central Canada, leaving many regions underserved. If we are to maintain a system, it needs to foster innovation across the country, while keeping in mind some of the market challenges agriculture faces. Consumers are increasingly concerned about the environment and animal welfare. Given that the sector is focused on supply-side economics, it is ill-prepared to address consumers' concerns, especially those of the younger generations. Also, consumers want more choice. This roadmap rests on the foundation that the country needs a strong nationwide dairy sector, and that Canadians want to eat Canadian-produced commodities. It also accepts as a premise that innovation and dairy processing are key for the sector's growth and future, and that regional proportionality is critical for all Canadians.

2.3 WHAT CANADIANS ARE SAYING ABOUT OUR DAIRY INDUSTRY

Our survey responses were quite revealing concerning Canadians' opinions about the dairy industry generally, the average consumer's knowledge of supply management, the industry's importance to the economy as observed by Canadians, the impact dairying has on the environment, and the value of having producers in Canada and locally. When we look at the results, we find they vary by region, by age group surveyed, and by socioeconomic status of the respondent.

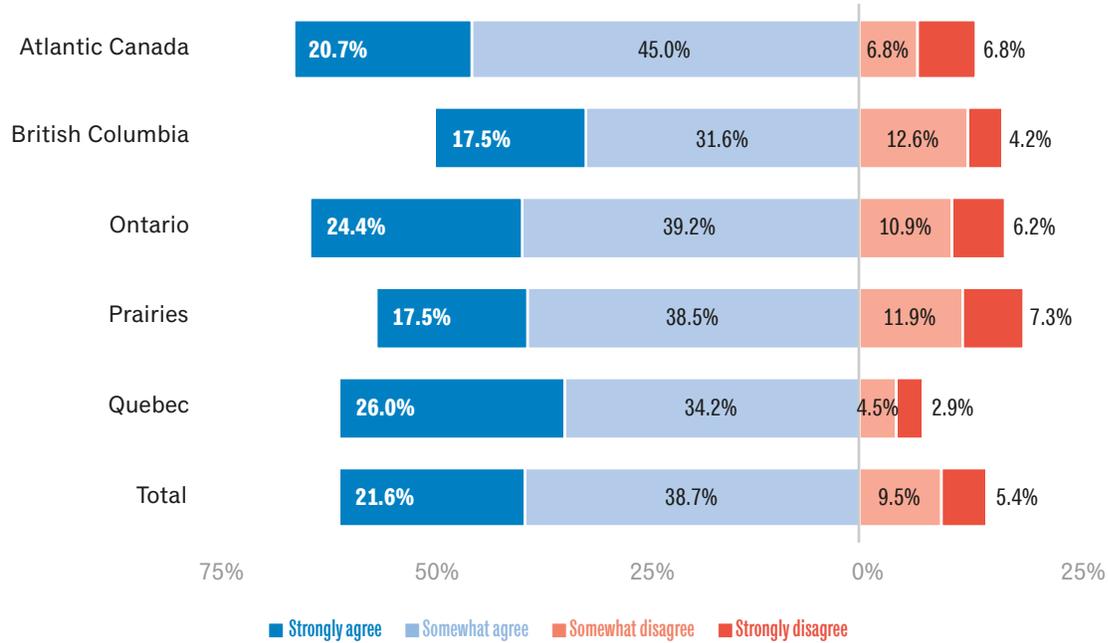
While Canadians may not understand how the dairy industry operates, or how supply management works, they overwhelmingly favour supporting the industry. In total, **87.3% of Canadians somewhat or strongly agreed when presented with the statement: "I believe dairy farming is an important industry in Canada"**. However, interestingly, when we look at the responses divided by age group, we find a clear pattern emerging: support for the dairy industry declines with each successive generation. Individuals born before 1946 are more likely to agree or strongly agree with the statement (98.4%) than those born between 1965 and 1979 (87%), and much more than those born after 1994 (80%). This trend should raise concern in the industry. **Canadian support for the dairy industry is decreasing with each generation.** There were similar, but even more striking findings for the question: *"Dairy farmers in our country are an important part of what it means to be a Canadian,"* where agreement fell from 82.5% in the eldest generation to only 56.3% in the youngest generation. One Canadian even replied to our survey with the following statement:

"[...], Dairy is an outdated and unnecessary food – Canadian dairy farmers should get with the times and switch to agriculture. The future is vegan and even the Canada Food Guide supports this reality."

These differences in generational perspectives are perhaps the most interesting results of this analysis. Another generational difference that could explain this gap is that younger people were more likely to claim they understand how the industry works than older generations.

45% of people born after 1994 agree with the statement: “I understand how the price for milk on the farm and at retail are determined in Canada,” while only 40.5% of those born between 1946 and 1964 agreed. This could imply that knowing more about the current supply management system encourages younger generations, more than their senior counterparts, to think the dairy industry is less important. Or, this could be a false correlation and the results could be explained differently. As a side note, women were less likely than men to agree (37.1% compared to 44.1%).

FIGURE 13: I believe supply management is good for the Canadian economy.

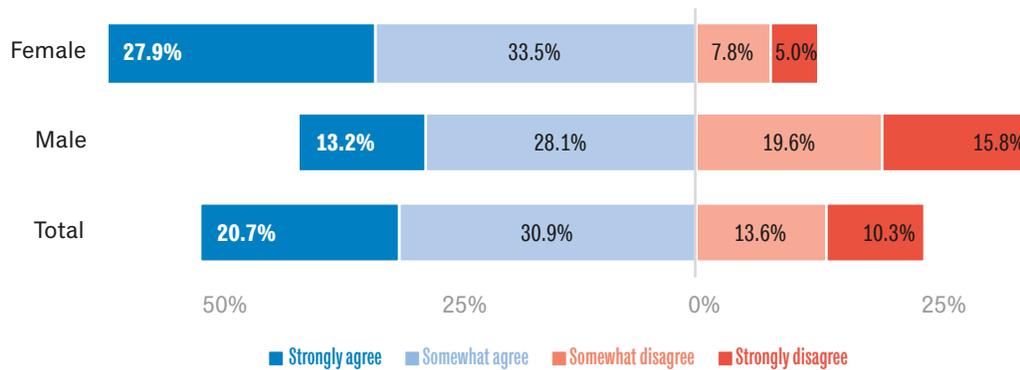


Overall Stat Test of Percentages 0.04829

When it comes to knowledge of supply management, as stated above, people appear to be less than adequately informed. However, for those who do know, or at least have a vague understanding about it, most (60.3%) agreed with the statement: “I believe supply management is good for the Canadian economy,” with more women (64.3%) agreeing than men (56.1%). Those who agreed were mainly in Quebec, Ontario and Atlantic Canada (65.7%, 63.6% and 60.2%, respectively). When we continued this line of reasoning with the statement: “I believe the government should protect supply management in the dairy industry,” we found similar results. Interestingly, the type of locale (i.e., small town, suburban or urban) was significant for this question, with results showing that people in small towns were less likely to agree (57.5%) than those located in urban cores (65%).

Canadians even support direct subsidies for the dairy industry, with 51.6% agreeing with the statement: *“I believe it is important to support Canadian dairy farms by providing direct subsidies to them.”* More who agreed were female (61.4% compared to 41.3%), and those with children were more likely to agree than those without. As before, we found there was more agreement with the statement in Quebec, Ontario and Atlantic Canada. Another finding from this statement, perhaps unexpected (although an argument could be made both ways), is that those with a annual household income of less than \$50,000 were more likely to agree than those with over \$50,000.

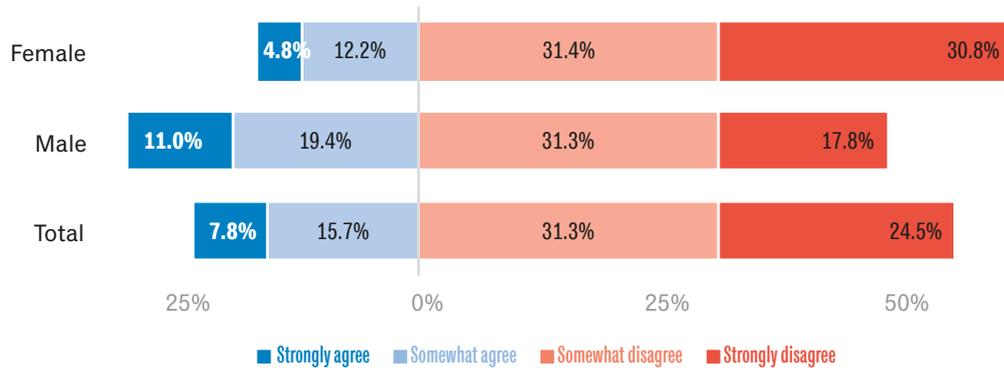
FIGURE 14: I believe it is important to support Canadian dairy farms by providing direct subsidies to them



Overall Stat Test of Percentages 0.00000

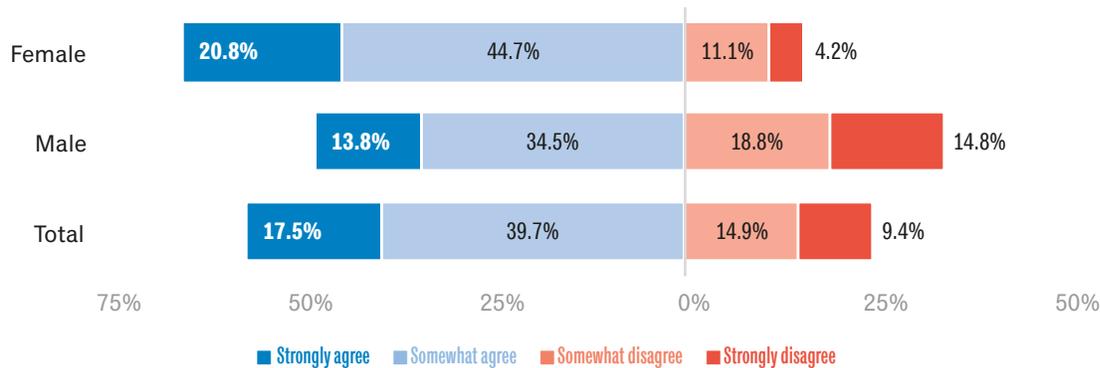
Consumers, for the most part, **feel they pay a fair price for milk in Canada**, and that drinking milk produced in Canada is more important than having milk at lower prices (57.2% agreed with the statement: *“The price of milk and other dairy products is fair in Canada.”* 55.8% disagreed with the statement: *“I believe lower prices for consumers is more important than drinking Canadian milk”*). Finally, on this note, Canadians also agreed (66.3% of the time) with the statement: *“If dairy products were more expensive, I would still purchase them if it means that we can keep dairy farms in Canada.”*

FIGURE 15: I believe lower prices for consumers is more important than drinking Canadian milk.



Overall Stat Test of Percentages 0.00000

FIGURE 16: The price of milk and other dairy products is fair in Canada.



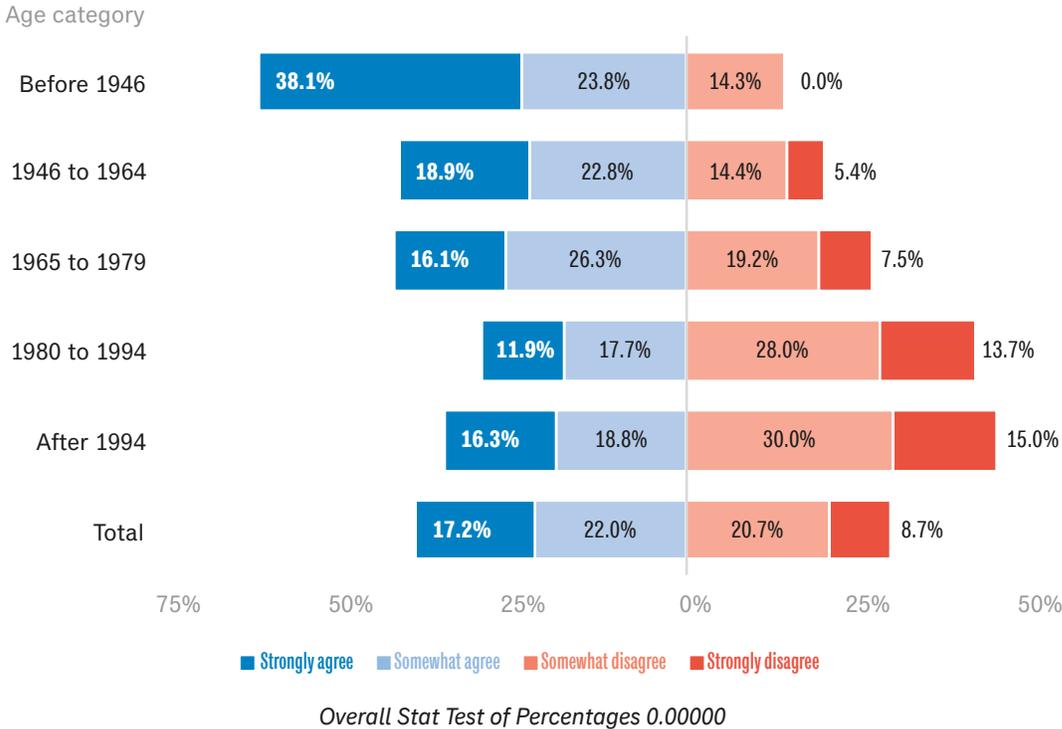
Overall Stat Test of Percentages 0.00000

Again, women were more likely than men to agree with both statements. Another recurring theme: when divided by region, we find that individuals from Quebec, Ontario and the Atlantic region were slightly more likely to agree with the statements. Perhaps the gravest finding of our analysis for the industry: consumer opinion of the dairy industry is falling by generation. We found that when we asked Canadians if they agreed with the statement: “I believe it is important to support Canadian dairy farms by buying Canadian dairy products,” overwhelmingly they agreed (85.6%). Similarly, we found that Canadians would also prefer to eat dairy products produced locally than foreign products, regardless of whether they are more expensive (62.8% disagreed with the statement: “I prefer to eat food imported from foreign countries if it is less expensive than Canadian food.”). However, in both cases, the results varied quite significantly by age: 74.6% of individuals born before 1946 strongly agreed, while only 52.6% of those born between 1980 and 1994 strongly agreed. This downward trend in generational support for the dairy industry can be seen in Figure 17

below. Similar results were found for the statement: *“I prefer to eat food imported from foreign countries if it is less expensive than Canadian food.”* The number of people who strongly disagreed with the statement fell from 30.3% to 16.3% across generations as we can see in the figure.

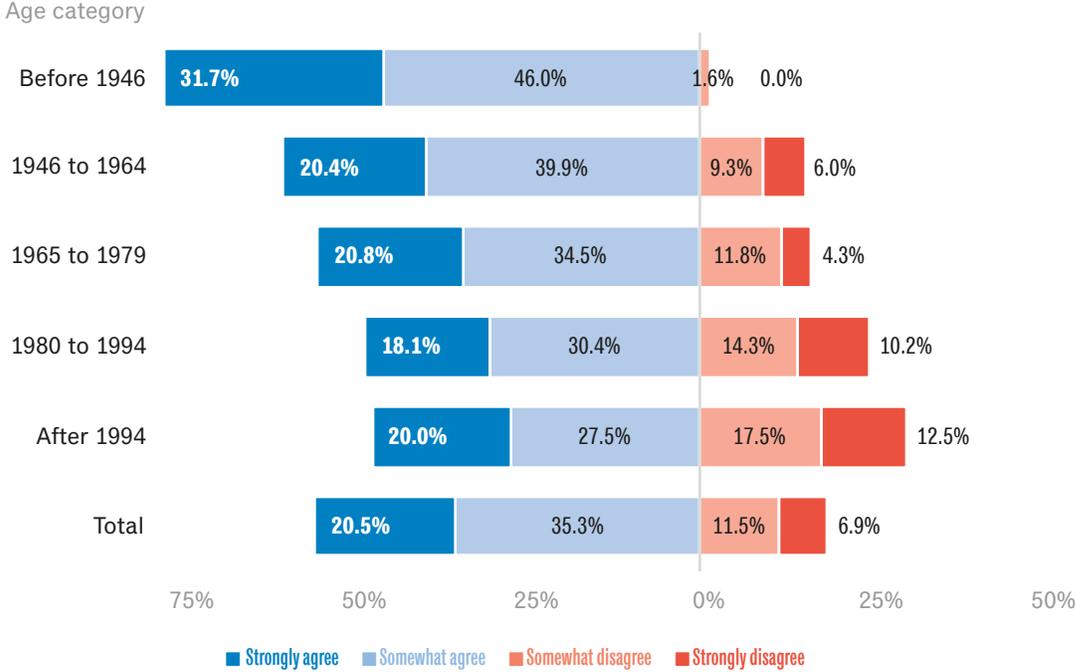
Consumers raised other concerns, making their preferences very clear for how the Canadian dairy industry should be managed. Canadians are clearly concerned with the environmental impact of the dairy industry, the welfare of its animals, the quantity and quality of available dairy products, and showed an overwhelming support for protecting rural Canada.

FIGURE 17: I believe dairy farming is good for the environment.



Turning first to the environmental impacts of the dairy industry, we find first and foremost that **most Canadians did not agree with the statement: “I believe dairy farming is good for the environment”** (39% agreed). In fact, Canadians say they would be willing to pay more for dairy if it had less of an impact on the environment (68.5% agreed with the statement: *“I am willing to pay more for food which is sustainably sourced and has less of an impact on the environment”*). Interestingly, when we analyze the data by level of education, we find that those with an undergraduate degree or higher **are less likely to agree that dairying is good for the environment** than those with less education. We also found that those who feel that dairying has a negative impact on the environment are more likely to be women and, again, are more likely to be of a younger generation.

FIGURE 18: I believe the dairy industry treats cows and other animals humanely in Canada.



Overall Stat Test of Percentages 0.00013

When considering the welfare of animals, Canadians made it very clear: **Canadians do not feel the dairy industry protects animal welfare in Canada** (especially younger generations), and they would be willing to pay more to ensure it does, as 73.7% agreed with the statement: *“I am willing to pay more for food which ensures animals are treated humanely.”* They also believe that small farms treat animals more humanely than large farms, with 55% disagreeing with the statement: *“I believe large dairy farms treat animals more humanely than small farms.”* One respondent even proclaimed:

“Honestly, milk is a largely inhumane industry more interested in selling the white cow juice and making a buck than focusing their acquired resources on other more sustainable nutritional options.”

This sentiment, that animals are treated unfairly in the dairy industry in Canada also corresponds to level of education, with a higher level of education correlating with a low percentage of agreement. Interestingly, only 46.9% of people living in urban cores agreed with the statement, while 66.3% of those in rural areas agreed.

Finally, consumers **asked for a greater variety of products to choose from**, and greater support for rural Canada. 61.8% agreed with the statement: *“I would prefer a greater variety of dairy products available to me, such as artisan cheeses and yogurt.”* These numbers were, as

expected, higher among individuals whose annual household income was above \$50,000. While we did not collect very much data on protecting jobs in rural Canada, we did find that 82.4% of Canadians agreed with the statement: *“I believe it should be a priority to protect jobs in rural Canada.”*

Canadians have made their wishes clear for the direction of the supply-managed dairy industry going forward. As mentioned earlier, our goals for the industry are the same as those of Canadian consumers: greater transparency, less environmental impact, more awareness related to animal welfare, and an increased variety of products. On the supply side, there are several goals: make sure all regions of the country are equally served by the dairy industry, increase competitiveness, increase support for the industry among the younger generation and convince them of the economic benefits of the industry to the environment. Lastly, we need to work toward increased production and consumption of dairy products over the long run while ensuring fair returns to farmers.

3.0 SUPPLY MANAGEMENT 2.0

3.1 VOLUNTARY QUOTA BUYBACK PROGRAM

This plan will likely be criticized by the sector because it advocates change. Dairy farmers, as a group represented by boards, have always voiced their opposition to radical and sustainable changes. But individual dairy farmers do see challenges ahead with no solution in sight. This document attempts to provide some ideas for change.

No roadmap is perfect, but our current path is not sustainable either. The unfortunate reality that dairy farmers face, regardless of what is to be done going forward, is a loss of roughly 8.1% of the Canadian market to new free-trade agreements, as described in Section 1.2. This is inevitable, and the current approach of the federal government, to direct compensate farmers for the next eight years, is merely putting a Band-Aid on a wound that needs sutures. The reality is unpleasant for farmers and, unfortunately, if we are to act appropriately, some farmers will have to exit the industry to make room for new foreign competitors.

For this reason, we propose that **the federal government initiate a voluntary quota buyback program of equal value to the concessions made to foreign competition in recent trade deals**. It will be better to exit on one's own terms than be forced out by foreign competitors. Instead of subsidizing the industry, we propose using the earmarked cash to initiate this program. By agreeing to exit, farmers will be fully compensated for their quota and their livelihood, allowing them to enter another industry and start afresh. Meanwhile, as we see it, only the most competitive farmers will remain, giving a direct boost to Canada's ability to compete with these new foreign suppliers.

When we look at a selection of 70 dairy farmers, as found in the 2018 *Ontario Dairy Farmers Association* report, we find that the bottom 15 farms have an average net farm income of -\$23,489, while the top 15 farms have an average net farm income of \$175,779. To take this one step further, when we look at quota allocation, those same bottom 15 farms have nearly a third of the total quota of the top 15 ([Dairy Farmers of Ontario, 2019](#)). What we take away from this is that some farms are struggling, and they are about a third of the size of those large farms which are excelling, so supply management continues to benefit the large and harm the small. Through publicly coordinated consolidation, dairy farmers could see their income rise to achieve financial success and be more capable of reinvesting in their operations to make them more competitive. Furthermore, those farmers who find themselves operating in a continual deficit position, regardless of what is done in the short term, will eventually find themselves pushed out of the industry. We propose to nip this problem in the bud, so to speak, and buy back the quota from these least efficient farmers, offering them an opportunity to either succeed in another industry, or continue business as usual, and fail on their own.

This program should be launched over the next few years and should take no longer than the time allotted for the original subsidy plan. The federal government has opted to overcapitalize our dairy production system by compensating farmers over eight years, and not entice farmers to adhere to specific performance metrics related to issues that matter to consumers. Sustainability and animal welfare are among them. Again, while farmers may find this first step challenging to cope with, our end-goal is to produce a more lucrative and beneficial system for all involved. While this program will further incentivize conglomeration of farmers, and may lead to even more regionalism, we believe this outcome can be prevented by cleverly redesigning the CDC's quota pricing program.

3.2 MAKE CHANGES TO THE CDC

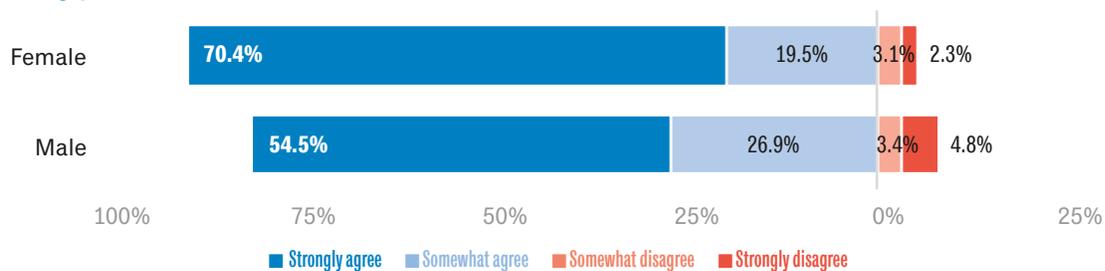
The current milk pricing quota is set by the CDC in cooperation with the Provincial Milk Marketing Boards as voting members of the CMSMC. This is the second change that must occur, not only for the benefit of the public, but also for the industry. The Canadian dairy industry must become more transparent and accountable if governments are to participate in the well-being and sustainability of the sector moving forward.

It is not enough to merely reveal how the price is set currently. **We must reevaluate how that price is determined altogether.** Why are there only supply-focused prices for milk at farm gate, regardless of what markets are looking for? We believe the one element that should determine price is the impetus of dairy farmers to meet the demands of consumers by considering nutritional value and affordability at retail. Also, the industry, by applying different pricing formulas, should incentivize farmers and processors to regionalize, adopt more sustainable and humane practices, and promote new and innovative methods and companies to enter the industry. These practices should be embedded into the CDC's pricing strategy.

The pricing formula could be modified to adopt a more **value-chain focus approach** and incentivize the formation of cooperatives between small farms in each region, with a higher farm-gate price for dairy to recognize the increased input costs of production for smaller producers. The CDC should consider ways to keep production capacity in all regions, to support **dairy processing**.

Furthermore, farms should innovate, creating markets for new artisanal dairy products. In this way, Canadians can have access to more products from within their province or region, as they desire. Canadians are even willing to pay more for their dairy products if it means keeping dairy farms in Canada (66.31% either somewhat or strongly agreed). With the current trend of declining numbers of dairy farms in Canada, something must be done to halt this exodus. We believe incentivizing small, innovative, cooperative and regional farms is the solution to this problem as well.

FIGURE 19: I believe it is important to support Canadian dairy farms by buying Canadian dairy products.



Canadians care about the environment; it was the top issue in Canada's 2019 federal election (Shah, 2019). Furthermore, they care that their food is sustainably sourced and that the animals are treated humanely. According to a 2009 study, "Comparing the environmental impacts of pasture-based and confinement-based dairy systems in Nova Scotia (Canada) using life cycle assessment", farms that allow cows to graze freely on grass are far less environmentally unfriendly than those where cows are perpetually confined (Arsenault, 2009). We asked Canadians if they agreed with the following statements: "I am willing to pay more for food which is sustainably sourced and has less of an impact on the environment" and "I am willing to pay more for food which ensures animals are treated humanely." Canadians are concerned about the environment and they are willing to pay more for dairy if it is sustainably sourced. This should be taken into consideration when determining the dairy quota pricing formula.

And, finally, **transparency will be key for the CDC**. People from outside the dairy industry, excluding people who used to work in it, should be more involved with the Crown corporation. Both the current CEO and Commissioner are from the dairy industry and most think of the CDC as a lobby group, which it is not. More information about what it does and how it

serves the Canadian public would be helpful. Right now, based on the evidence provided by our survey, the dairy industry and supply management are largely unknown features in our economy. Given that the CDC plays an important role in supply management, **it should become more accountable to the Canadian public than it is today.**

3.3 REMOVE INTERPROVINCIAL TRADE BARRIERS ON DAIRY PRODUCTS AND CREATE AN INNOVATION FUND FOR THE SECTOR

Of course, this measure affects more than just the dairy sector, but it's critical for regions to develop their core competencies in dairy over time. A report released in July 2019 by the International Monetary Fund , "*Internal Trade in Canada: Case for Liberalization*", describes the myriad advantages of liberalizing interprovincial trade barriers and non-tariff barriers to trade (IMF, 2019). An entire report could be devoted to discussing the implications of **removing interprovincial trade barriers**, but suffice to say, food is the sector that would see the fourth-largest benefit overall, and this benefit could be significant for the struggling dairy industry.

Removal of interprovincial trade barriers is essential to promoting artisanal dairy products. Because the market is much smaller than for general dairy, it is vital that producers of these products can access consumers across the country.

This measure would be coupled with the creation of an innovation fund to entice dairy farmers to innovate and develop new products and markets, while keeping in mind the market attributes consumers are looking for. **Sustainability, affordability and animal welfare** should be top priorities for this fund. More provision should be made to empower our dairy processing sector to innovate and capitalize on market opportunities, both domestically and abroad.

3.4 INITIATE A 20-YEAR PLAN TO REDUCE GENERAL TARIFFS, DEVELOP AN EXPORTING STRATEGY, CREATE A CANADIAN BRAND AND INCENTIVIZE INNOVATION.

It is no use entering trade negotiations with one hand tied behind our back, and Canada must accept that the world is moving to a free-market system, regardless of whether or not we seek to protect our domestic industries. **A progressive reduction of tariffs is desirable over a 20-year period, but tariffs should not be eliminated outright.** Canada should become an attractive market for importers, as much as it is for our own industry. The industry must prepare for this reality by becoming more competitive. The government cannot protect its dairy industry from the inevitable reality of future trade deals, such as MERCOSUR and others (MERCOSUR, 2019). Instead, the dairy industry must protect itself.

Canada also needs **a strategy to export milk and dairy products.** Through a highly coordinated effort between industry and governments, a new set quota for export markets could be established to attract new investors and entrepreneurs to dairy production and processing. This could also be achieved through the creation of a new milk class under CDC's

Milk Class system. World markets have a surplus of milk, but with a sound Canadian-designed strategy, a global market for Canadian dairy products can exist.

Canada has a valuable brand image. The industry should endorse its brand and begin developing new and innovative Canadian dairy products for export. In speaking with a trade lawyer, it became obvious that if Canada seeks to export, and wishes to avoid further WTO complaints, then eventually, the tariffs on dairy imports must fall. Currently, the industry is not prepared, but we should look to New Zealand for inspiration. New Zealand is an excellent example of the power of national branding. Before 2013, its “100% Pure” campaign was a major success, but when a botulism scare (which proved to be a false alarm) led to several countries imposing import bans on New Zealand milk, the brand image took a major hit, and so did its dairy industry. Australia has also had success with high-value processed milk products targeting the Asian market, such as infant formula and fresh milk exports. This has been the results of their “clean, green and authentic” brand image and the development of a daigou (Chinese personal shopper) network.

Canada should seek to protect and nurture its national brand in dairy. In this way, in 20 years, when tariffs on dairy products have generally been reduced and Canadian dairy farmers find themselves having to compete with a range of cheap international products, then it will be of the utmost importance to have prepared. By innovating and continuing to grow a national brand image around 100% Canadian milk, Canada can emerge on the international market ready to capitalize on it.

4.0 CONCLUSION

Herein we have presented a four-step roadmap illustrating one potential future for supply management. We hope our contribution generates constructive discussion within the industry instead of creating more division. Canada needs a new plan; the current strategy is evidently not working and now is the time to act. We present this paper to begin a narrative from which farmers, the dairy industry and consumers will benefit, and survive.

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