Understanding the Internal Frictions Weighing on Milk Supply Management

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■ Take Home Messages

- The Canadian dairy industry must address some difficult issues in policy evolution, almost regardless of the pressure due to recent trade agreements.
 - The industry is composed of a producer demographic with relatively older farm operators who hold high levels of underperforming capital, leading to challenges in the industry renewing itself.
 - Dairy farms in Canada have experienced very strong operating returns. In recent years expansion in quota helps explain some of this; however, for the most part it has been steadily increasing milk prices that have increased revenues. In turn, these are capitalized, increasing milk quota values, to the point that some may view this as a reliable basis upon which to make quota investments. The sustainability of ever-increasing prices as the primary means to anchor earnings is questionable.
 - Shifts in farm structure erode the continuity of interest across farms. This is evident in producer attitudes toward growth that can differ sharply according to housing type, especially tie-stall vs. free-stall/robotic. It is evident in the provincial fragmentation of markets, with some provinces primarily a fluid market, and others with significant dairy processing. It is evident in agriculture more broadly in a distribution driven to extremes with a small proportion of very large farms responsible for the bulk of the farm output, but with the bulk of the farms relatively small.
 - Dairy markets globally are among the most distorted, Evidence from the European Union and the U.S., both of whom Canada has recently concluded trade agreements, suggests that it is getting worse.

These factors define a range of domestic dairy policy challenges and specific traps to avoid:

- Provincialism and political decay: Most of the instruments of milk supply management operate at the provincial level. The elements of farm and market structure that differ across provinces can be used to fragment policy, in which provinces withhold support for national initiatives that would strengthen milk supply management. This can be highly costly.
- The dairy market in Canada at the retail and processing level is national in structure, with very large concentrated retailers and processors. This interfaces with a provincially fragmented milk production segment. There is incentive for these to be brought into greater alignment, acknowledging that market power among processors and especially retailers is structural, but also that some processors and retailers seek a more intimate relationship with producers. How to facilitate this effectively and yet protect producer market access is an ongoing challenge
- Even with the Canada-US-Mexico Agreement (CUSMA) concluded with the U.S. (but not yet ratified), the Comprehensive and Progressive for Trans-Pacific Partnership (CPTPP), and the Comprehensive Economic and Trade Agreement (CETA) between Canada and the EU, Canada faces trade policy challenges relative to dairy. As of 2021, subsidized dairy exports will be banned, effectively eliminating most of Canada's dairy exports under the current system. Canada must anticipate pressure deemed domestic support to dairy, as broader pressure mounts among countries to further limit domestic agricultural support.
- The ramifications of domestic market access granted under recent trade agreements are only just beginning to be felt in cheese under CETA.
- Progress in the evolution of milk supply management requires a vision and objectives, and a willingness to take on these difficult challenges. It is important that stakeholders revisit the vision for supply management. The philosophy of supply management and where it can and should lead needs to be redeveloped and sold to a younger generation for whom the turbulent period preceding supply management is known only as history, and the tangible elements are in high, stable prices and high levels of quota equity.

Introduction

The trade dialogue leading to the Canada-U.S.-Mexico Agreement (CUSMA) thrust Canadian dairy into the limelight, and in the wake of the CUSMA and

associated market access and dairy policy provisions, the federal government has initiated two task forces: one to consider the future of the dairy industry, and a second to consider compensation for market losses due to recent trade agreements. These are consistent with a government prerogative to align domestic policy with trade policy.

In this process, it will be important for the participants in the policy dialogue to understand and incorporate the existing and developing sources of friction in Canadian dairy policy, and to factor these in to any discussion of policy evolution and compensation. The purpose of this paper is to provide an overview of aspects of the Canadian dairy industry and some of the issues and challenges that have built up as milk supply management has evolved.

Selected Economic Demographics

The Canadian dairy population has been decreasing in size over the long term, with slight increases countering this trend in the last couple years. At the same time, the number of dairy farms has been in decline. The implication, as in most of Canadian agriculture, is for increases in average farm/herd sizes. Since 2004, the Canadian dairy herd has decreased from well over one million cows to just over 940,000 head, and the average herd size has increased from 65 cows to over 80 cows.

Farm and Producer Demographics

The introductory understanding above is insufficient to interpret the true nature of the demographic shift in Canadian dairy, and the averages are unlikely to be representative. One reason for this is sharp differences in housing types across regions and the nature of farm sizes relative to housing type. The data on housing, presented for 2012, 2014, and 2017, divides farms on milk recording programs into tie-stall, free-stall, and robotic herds, with an understanding that the bulk of the herds using robotic systems are in free-stall housing. Free-stall housing systems can be more flexible and amenable to expansion versus tie-stall housing.

Nationally, tie-stall housing is in decline, but still is almost 70% (as of 2017). In Quebec, the share of farms with tie-stall housing is in decline, but it still represents > 80% of herds, and in Ontario just over 60% of herds. The share of farms reporting free-stall housing is steady nationally, with a slight increase in Ontario (to just under 30%) and Quebec (to just over 5%), with a slight decrease in western Canada, where it comprises around 80% of herds. It is in herds with robotic milking (and in practice, free-stall housing) where regions align in a growing trend. Nationally about 10% of herds had robotic facilities in 2017, ranging from almost 20% in BC to about 7% in Quebec. The general

observation is that the farm facilities, and the herd sizes and potential for expansion that they can support, are eclectic across regions.

Another aspect of farm demographics is the age distribution of dairy farm operators. This was reported on in a study by Jelinski et al. (2015). Using queries of the Statistics Canada Census of Agriculture, age pyramids of male and female operators of dairy farms in Canada were developed to compare the 1991 and 2011 census years. Within a general trend of fewer dairy farm operators, the age pyramid for both men and women has narrowed at the bottom and broadened at the top. The implication is a more disparate age distribution of dairy farmers with relatively more in the older age brackets (especially in excess of 56 years of age) and relatively (and absolutely) fewer in younger age categories.

A further source of disparity is indicated from the broader structure of agriculture in terms of the share of economic output according to farm size. This is indicated from data collected for all farm types in census years 1981, 1991, 2001, 2011, and 2016, with farm cash receipts benchmarked to 2015 dollars, effectively ruling out the effects of inflation over time. In 1981, the bulk of farm cash receipts came from the middle tier economic size of farms, with farm revenues of \$100,000 to \$250,000. In the period since, the bulk of farm output has gone to ever larger farms, but it has not been a simple sideways shift to the right. Rather, the very large farms, especially those with greater than \$2 million in sales, now account for the bulk of farm output. The share of small farms has declined but not dramatically. Rather, the mid-size farms have either expanded to become the large farms or have exited agriculture. The economic dominance of the few and large farms changes the nature of agricultural communities, how producers relate to one another, and the transactional basis for farm marketing and farm supply.

It is unknown to what extent the above is representative of the situation in the dairy industry. However, a potential proxy is the share of milk quota holdings by dairy farms in alternative categories of quota holdings. The evidence comes from data supplied by the Dairy Farmers of Ontario on quota holdings. In 2009, almost 45% of the quota in Ontario was held by farms with total holdings of 20–40 kg; farms with > 120 kg accounted for less than 10%. By 2016, the share of milk quota held by the 20–40 kg group had declined to less than 10%, farms with 40–70 kg had more than a 35% share, and the farms with > 120 kg had about a 16% share.

Farm Operating Returns and Finance

Data on operating revenues and operating income for Canadian dairy farms are obtained from income tax filings through the Tax Data Program. Operating revenues show a strong and consistent uptrend, with the data presented beginning in 2000. The smooth trend in revenues is consistent with increases

in revenue that are a product of price and quota increases over time. Operating income also shows an uptrend, although more varied than operating revenues. The ratio of dairy farm operating income to operating revenues can be viewed as a proxy for Earnings Before Interest, Taxes, Depreciation and Amortization as a ratio to sales, a commonly used operating efficiency and profitability metric outside the farm economy. Canadian dairy has generated a ratio of operating income to revenues of around 23-24% on average, implying that many farms experience higher levels of profitability than this. These are impressive profitability ratios.

Dairy farms have invested heavily to generate these returns. The evidence provided in this regard is from the Farm Financial Survey for the period since 2005, conducted on a bi-annual basis following 2009; the most recent year available is 2015. The data show that, on an estimated market value basis, dairy farms have assets increasing in value (especially since 2011), recently averaging in excess of \$5 million per farm. The liabilities associate with these asset values are increasing concomitantly, with average debt per farm recently around \$1.5 million.

When dairy farm operating earnings are related back to the market value of assets, the relative returns range between 2 and 4%, low relative to the costs of capital tied up in dairy farm assets and the risk incurred by operators. Another measure of financial performance is the asset turnover ratio—the level of sales relative to the value of assets deployed to generate sales. It has tended to decline on average as asset values have increased and is around 13%. Farm management professionals suggest that the asset turnover ratio should typically be much higher than this, perhaps as high as 50%

The implication is that dairy farms in Canada have very healthy operating earnings but motivated from a capital stock that is significantly underperforming.

Fragmentation of Milk Marketing in Canada

Supply management is primarily provincial agricultural policy, federated to the national level in dairy under the facilitation of the Canadian Dairy Commission with representation of producers at the national level by the Dairy Farmers of Canada. Markets downstream from the farm are not provincially fragmented. The retail and foodservice customers for dairy, poultry, and egg products operate at the national level, and expect their suppliers to grow with them to the appropriate scale. Processors in supply-managed products are thus pushed toward increased scale by the demands of their anchor customers. At

¹ Larry Martin, Agri-Food Management Excellence

the same time, processors have managed significant market consolidation, departing from a provincially fragmented past, under the benefit of protection from imports under supply management. The result is a value chain reoriented toward a more national scale. Attempting to break this value chain up into provincial segments or maintain a provincial structure when the market has shifted to a national scale, creates important inefficiencies and costs.

Within a provincial orientation, significant cooperation among provincial producer boards has been achieved. Provincial milk marketing boards have coordinated in an Eastern Canadian milk pool (or P5) and in a Western Milk Pool to pool farm milk revenues and to coordinate a number of industry standards, such as ProAction, that ultimately derive from provincial authorities. This cooperation occurs on a case by case basis and is not assured.

Some Canadian processors in supply managed products have invested in multi-national operations, apparently to obtain more rapid growth than they found possible in the Canadian market due to large existing market shares, or due to export limitations faced by Canadian operations. For these processors, provincial fragmentation is a legacy of the past and an inefficiency, perhaps made tolerable only by strong margins in their protected Canadian operations.

Consolidation of the food retail segment is ongoing. Information on grocery retailer market shares is only anecdotal, but it is clear that concentration is increasing, feeding concerns of retailer market power. Some evidence of this is the ability of retailers to block price increases passed on by their suppliers, and even to claw back past cost increases.

Shifting International Dairy Policies

Canada's competitors in dairy markets face some of the same challenges that exist in Canada; one is the growing surplus of skim milk relative to butterfat demand, weighing in on milk prices and producer revenues. More generally, dairy prices outside of Canada have languished at very low levels on an ongoing basis since 2015. Countries have responded differently to this and other challenges. In the European Union (EU), these conditions have pressed action, even as the EU has structurally reduced market price support for commodities. The resulting gap has been filled by an alternative structure of payments under the Common Agricultural Policy (CAP). In a report published by the European Parliament in 2017, data on 2015 CAP payments to dairy farms showed that 70% of dairy farm net income in the EU was explained by these payments. In selected countries the share of dairy farm income resulting from CAP exceeds 70%.

The U.S. finds itself in a position in which low milk prices are causing a struggle for many dairy operations, and in some areas the dairy industry is

under threat of collapse. In its initial form the U.S. Margin Protection Program (MPP) was of very limited value in providing relief; it appears an agreement may have been reached on a new farm bill that will strengthen and rename MPP. Another instrument used by the U.S. to address the situation is Federal Milk Marketing Orders (FMMO). As skim surpluses have developed and U.S. milk prices have declined, under FMMO increasing skim milk has been redirected toward Class 4. Component prices—butterfat and skim—have historically existed in a balance with one another in Class 4 and the other classes. However, since 2015 this balance has given way to stable or increasing butterfat prices but with structurally lower skim milk prices. These relatively lower skim prices are consistent with more of an export stance, and indeed an export dependency on behalf of the U.S. dairy industry.

Observations

Within the context of dairy policy that is viewed broadly by producers and processors as highly beneficial, this section highlights some important difficulties and challenges.

- The Canadian dairy production segment finds itself in a situation with an aging demographic with large amounts of underperforming capital. This presents the prospect of protracted difficulty in renewing dairy farm assets with the next generation of producers and encouraging their investment. Put differently, the data suggest that the incumbent generation of dairy farmers have very strong balance sheets. However, they are drowning in their own equity as the sales and earnings realized relative to the market value of assets is exceptionally low. The age disparity in farm operators creates urgency around this issue.
- The trend in operating revenues is remarkably strong and stable, but its long-term stability is a source of concern. The pattern of increasing operating revenues is consistent with repeated increases in price, and more recently increases in milk quota. However, especially with regard to price, the effect of this pattern is to reinforce capitalization into milk quota values. Some producers may have come to expect ongoing price increases and associated strength in quota values as a given. This may strengthen balance sheets, but it surely exacerbates the existing problems of underperforming capital and the related difficulties described above.
- The shifts in farm structure over time are not uniform; rather, they are driving toward extremes as some farms become much larger and account for a greater share of output while others do not pursue this evolution. This is a broad trend in Canadian agriculture, but there is evidence of it in dairy. The remarkable contrast between tie-stall housing versus free-stall and robotic systems across regions is one such example, with the free-

stall and robotic segment likely with advantages of scale and better positioned for growth than the tie-stall segment. A consequence of this is that it erodes the continuity of interests that exist among producers and makes it more difficult to achieve effective representation over the full breadth of issues and reflect the interests of all.

- The customers for dairy farmers—processors and retail/food service—are becoming increasingly concentrated, raising fears about use of market power. This would appear to validate marketing boards as a means of rectifying balance in the terms of trade. However, the situation is more complex and protracted than this. Existing milk marketing systems view problems of market power as being between producers and processors; however, increasingly it appears that retailers hold a commanding position with suppliers, forcing cost pressures back upstream and pressuring both producers and processors. Secondly, there is an increasing interest among processors and retailers in more closely aligning with producers to secure attributes in farm products that enhance the associated food product, and indeed contribute to the brand. For producers in a position to reliably supply these product attributes in a closer alignment with processors or retailers, a more intimate relationship could be beneficial. However, for others lacking the ability or not wishing to enter these more intimate relationships, it represents market access risks. Somehow the marketing system will need to act to both facilitate these relationships and offer producers protection.
- Global dairy markets are among the most distorted in the world, and there is evidence that the situation is getting worse. When very high proportions of dairy farm income come from government support, however structured (such as the estimated 70% in the EU in 2015), major volumes of milk production are occurring that likely would not have in the absence of support. In turn this can generate surpluses that reduce world prices. A different concern is observed with the U.S., with increased allocation of skim milk from other classes into U.S. Class 4, at structurally lower prices, that increasingly supply an export market. As Canada's milk marketing system faces ongoing scrutiny from others, Canada will need to change tact from playing purely defense against scrutiny and take a more neutral or offensive position in which it brings scrutiny against others, particularly dairy industries and countries with whom Canada has recently established or renewed trade agreements.

Selected Challenges

This section discusses issues that result from some of the economic trends noted above.

Provincialism and Political Decay

Supply management faces some critical big picture challenges that will require broader and deeper interprovincial cooperation. These are especially evident in dairy, where the structural surplus of skim milk combined with export limitations has caused the (limited) dumping of milk, with ongoing concerns regarding a shortage of adequate processing capacity. Canada's dairy export limitations will further tighten when the Nairobi Declaration comes into full effect in 2021, greatly exacerbating the impact of the structural surplus of skim, unless milk pricing accepted as non-subsidized is implemented for dairy exports. The magnitude of these issues will challenge provinces to cooperate effectively at the national level, even when their significance is much greater than on other matters in which they have cooperated quite effectively.

The effect of a lack of provincial alignment is to create inefficiencies and lost growth opportunities in supply managed systems, as well systemic risks. The tangible costs of delayed action on the structural surplus in dairy is evident in the creation and growth of milk class 4(m) over time, in which skim solids are marketed well below world price into the feed market. The delay and ultimate agreement on national Class 7 illustrates both the difficulty and accomplishments. The process of reaching a national agreement on Class 7 strained relations across provinces' dairy producer groups, even as it achieved an historic producer-processor agreement and has facilitated impressive growth in industrial milk quota.

The above indicates what the political scientist Samuel Huntington called political decay. Political decay is a situation in which there is more rapid evolution and reorganization due to social and economic development than in corresponding institutions designed to regulate social and economic interactions. Participants begin to use established institutions to fragment interest and block change, rather than to rally collective interests to address change, transition the membership, and transition the institutions themselves. The result is institutions that are seen as less effective and just, and trust in these institutions erodes. Political decay is costly and can ultimately undermine the integrity of institutions and peoples' beliefs in working together collectively.

Political science has taught us that organizations, in order to act effectively in collective action, must be able to identify goals, set objectives and take on tasks, enact structures/institutions that deliver progress toward achievement of goals, and do so in a manner that builds trust. The building of trust relates to the perception held throughout the group that outcomes and participation are distributed equitably, that the organization is seen as operating with integrity, that leadership is popularly elected and supported, and that a mechanism for recall exists if the group is dissatisfied with its leadership.

In practice, balancing all these considerations is complex and requires constant work on an extensive set of fronts. For example, an organization could be very effective at meeting established and broadly supported goals, but if the benefits are seen as flowing primarily to a subset of members, or if the process of establishing or achieving objectives is seen as lacking in integrity, the trust in the organization will erode. Conversely, trust will also erode if an organization's processes are viewed as transparent, appropriate and equitable, but the organization simply proves ineffective in achieving its collective goals.

The possible sources of political decay in supply management are many. The statutory nature of provincial fragmentation and the capitalization of supply management benefits into quota values makes managing its collective organization all the more difficult. For supply management agencies, the essential way to combat political decay is to engage a dialogue with members on a continual basis regarding the broad objectives of collective action through supply management, the alternatives that could be taken to advance the objectives, the relative advantages and risks of each, and why particular decisions are taken and how they are being monitored. This lends to a culture of humility, a clear understanding of the challenges and risks attached to bold objectives, and one in which new ideas to advance objectives are actively encouraged and debated. This contrasts with an alternative institutional culture that focuses on pride in past accomplishments and cultivates fear of failure or change among its members and broader stakeholders.

Modern Agricultural Markets

Sexton (2012) observed that in modern agricultural markets, market power—through processor concentration and/or through preferences for specific, differentiated product attributes—exists in virtually all marketing relationships encountered by farmers. In this context, marketing arrangements facing farmers can be structured to maximize efficiency and benefit both producers and processors through contracts with processors. However, in this process there is an inherent bias on behalf of processors to purchase product from fewer, larger producers capable of supplying specific processor demands or investing to meet their requirements. This is based on the transaction costs faced by processors in procurement (these costs of contracting are invariant to volume), and on processor product lines and brands and physical plant investments that demand specific farm product attributes and associated investments to supply attributes made by farmers.

In turn, this creates the prospect of creating gaps in producer market access for producers who are unable to supply desired product attributes or are unwilling to enter direct supply or more intimate relationships with processors. Equity in or protection of market access is a fundamental tenet of supply management, and even as the producers successful in establishing

contractual arrangements with processors can benefit, others could be left behind. Yet, the realities of modern agricultural markets and farm product marketing and procurement cannot be ignored, as doing so would risk the flight of processing investments in Canada. This suggests a balance in the evolution of marketing structures, but how this can occur requires attention and development.

Sobering Trade Environment

Under milk supply management the Canadian market balances on the basis of butterfat. However, given demand binding production on butterfat generates a surplus of skim milk. This has long been the case; however, the extent of skim that can be regarded as surplus to the system has grown over time for a variety of reasons. Because butterfat and skim are contained in essentially fixed proportions in milk originated at the farm, as the industrial milk quota has increased due to increasing butterfat demand, effectively the supply of skim has increased.

Canada is not a major exporter of dairy products. This is due largely to the domestic focus of the supply management system. In the resolution of the World Trade Organization (WTO) case regarding dairy exports, Canada agreed to the finding that its exports as subsidized and agreed to bring its exports in line with subsidized export caps. Thus, Canadian dairy exports have been subject to limits on (the lower of) deemed outlay and volume.

Canada does not actively subsidize milk production. However, it reports market price support for milk, which relates to current support prices for butter and (previously) skim milk powder versus historical levels, administered by the Canadian Dairy Commission. In a typical year with no income disasters in other farm segments triggering extraordinary payments, market price support for milk represents a very high proportion of most distorting support reported by Canada to the WTO.

Canada maintains milk prices referenced to production costs. The integrity of this pricing is managed by a system of tariff rate quotas and high over-quota tariffs designed to sharply limit imports in excess of the quota volume.

The implication of the above is that Canadian dairy policy is vulnerable to restraints on all subsidized exports, domestic support, and pressure for increased market access.

At the WTO's Tenth Ministerial Conference, held in Nairobi, Kenya in December 2015, members agreed to dismantle export subsidies in agriculture. In effect, the declaration indicated that:

Developed country members shall immediately eliminate their remaining scheduled export subsidy entitlements as of the date of adoption of this decision, effective January 1, 2016.

Developing country members shall eliminate their export subsidy entitlements by the end of 2018.

However, the declaration also allowed an exception for a developed country that (1) agrees to eliminate all export subsidies for exports to least developed nations by January 1, 2016, and (2) has notified export subsidies to the WTO in at least one of the last three years in which notifications have been made, to maintain quantity commitments attracting export subsidies at the actual average of subsidized export quantities made in the years 2003-2005.²

As such, Canada was given a reprieve until January 2021 to come fully within compliance of the declaration. At that time there will be no more subsidized dairy exports from Canada, leaving only exports declared as non-subsidized. Currently these would be exports of products made from milk purchased under Class 7. Under CUSMA it appears that the opening for non-contingent milk price classes was acknowledged, based on the levels of skim milk powder and milk protein concentrate exports that exceed WTO cap levels specified in the agreement. However, this remains somewhat ambiguous.

Thus, Canada finds itself somewhat under siege, with burdensome supplies of skim that create a costly market imbalance, limiting export caps, and increasing imports through new trade agreements.

This limited export market access situation has generated protracted problems clearing the Canadian skim market. The structural surplus and sharply limited export market access eroded the incentive to invest in skim processing capacity, even as the skim surplus has grown. This has pushed Canada toward other means of skim surplus removal within the domestic market, such as the marketing of skim milk into the feed market in Class 4m (at exceptionally low prices), and periodic waste dumping of surplus product with no market.

The rationale for a price class with world pricing not contingent on export (i.e., Class 7) was established as a mechanism to allow the Canadian skim market to clear. By providing for pricing at a competitive world price, in either domestic or export markets, consistent with the WTO definition, exports can help the skim market to clear without being notified to WTO as subsidized. In

² Footnote 4 in the Nairobi text on export competition reads as follows: "For these products, scheduled export subsidies shall be eliminated by the end of 2020, and quantity commitment levels shall be applied as a standstill until the end of 2020 at the actual average of quantity levels of the 2003-05 base period.

turn, this provides an incentive for renewal of skim processing investments, and investment in dairy processing in Canada has recently occurred.

Without this mechanism, the structural surplus of skim had reached the point that it could overwhelm the system. Milk supply management has evolved to a point at which, absent a non-contingent pricing class (i.e. Class 7), it is effectively bound by skim production, not butterfat; in turn, balancing domestic skim supply and demand ends up driving the adjustment in butterfat quota, more so than actual demand in butter and cream markets. In the limit, without a non-contingent price class, increases in butterfat demand in Canada would need to be served by imports, as additional production under quota would exceed the feasible limits to market skim.

Consequently, Class 7 is much more than a trade irritant identified by the U.S. that is closed off through a concession in a trade agreement, with the system re-setting back to pre-Class 7 levels. Without a non-contingent price class there is no path that would allow the system to revert to a stable past. A major reduction in production quota and complete loss of any access to exports (as of 2021) would immediately sour the climate for dairy processing investment and strand assets recently invested in dairy processing. Producer pricing of skim would deteriorate. At current levels of butterfat demand, the sudden removal of Class 7 would begin a process of sequential butterfat quota reductions, very sharply reducing domestic milk production, and likely difficult to predict or control, that could eventually threaten the milk supply management system.

Observations

As the Canadian food industry continues to evolve toward larger and more concentrated retail, foodservice, and processing blocs, the provincially fragmented nature of supply management will need to evolve toward ever increasing levels of cooperation. In this regard, evolution toward a single, national milk marketing board would facilitate this development. There are important constitutional obstacles impeding this development; as such, it will become increasingly important for provinces and provincial marketing boards to act in concert, acknowledging their differences but also the nature of the situation they face supplying national scale customers. There are several factors that could cause a splintering of producer interest, such as differences in housing type and ability to increase volume, farm size and unit costs, and markets that are primarily fluid versus processing. Allowing differences in producer interests to fragment milk marketing will be increasingly costly.

The simultaneous development of larger and more concentrated customers with an increased interest among customers for a more intimate relationship with producers is a form of disruptive event. Marketing boards will be pressured to simultaneously provide customers with greater access to

producers and to accommodate specific relationships between producers and processors, and provide protection for producers engaging in the relationships, and yet facilitate market access for producers not entering these relationships. This creates new challenges for marketing boards to be more collaborative and yet retain strong authority in producer processor relations.

With CUSMA now set and pending ratification, the other challenges from the trade front will press on supply management. The year 2021 looms as the point at which Canada will be out of the dairy export market, absent what can be notified as non-subsidized from non-contingent price classes. The milk supply management system is not geared to export, but with the ongoing structural surplus of skim, access to an export market for dairy products high in embodied skim content is crucial. An ongoing focus of policy engineering in the future will be how to manage this access in a post-Nairobi environment.

The broad Canadian agri-food interest is for reduced domestic support; for legacy reasons relating to support prices dairy finds itself on the outside of this. With such a high proportion of most distorting support notified to the WTO by Canada in dairy, it is inconceivable that Canada could be part of an agreement toward reduced domestic support without reductions in market price support to dairy. The most likely format for this would be reductions in the support price for butter, or a decoupling of butterfat component pricing from the butter support price. The potential adjustment toward lower farm milk prices implied will be controversial and painful for some. But policy planning must anticipate this development and create accommodation for it. Conversely, this development could serve to help alleviate the concerns regarding asset capitalization and underperforming capital identified above.

Conclusion

Progress in the evolution of milk supply management requires a vision and objectives, a willingness to take on some difficult challenges, and a focus on the retention, profitability, and future growth of production and processing-rather than a commitment to steadfast preservation of the instruments that maintain existing economic outcomes. It will clearly require strong industry leadership to lay out the rationale and vision for progress, with the profile and determination necessary to take on the interests encrusted around the status quo. It will also require leadership from governments, both provincial and federal, in stepping up to help renew the system and avoid the pitfalls of provincialism.

Without a renewal in the philosophical underpinnings, the dialogue relating to evolution in supply management will occur largely at a technical level, without reference to long run vision, objectives, constraints faced, and future achievements, and will occur outside of the scope of many of its stakeholders.

As a result, re-engineering of supply management instruments could occur that either overshoots or undershoots realistic and popularly held ambitions for it. Unnecessary conflicts could result, with necessary conflicts left unresolved to fester as the received view of supply management leaves them too sensitive to engage. In this regard, provincialism is the first potential theatre of potential conflict, but absent an overriding and popularly held vision to guide changes in instruments, other dimensions of conflict are possible: small farm vs. larger farm, producers wishing to grow vs. others locked into existing scale, etc. At worst, almost any new idea for how the system could operate will be greeted with hostility and written off as being "anti-supply management".

Dairy producers are broadly supportive of supply management. Processors have adapted themselves to be profitable in milk supply management; in cases in which processors are multinationals, the Canadian division is typically among the most profitable. Governments, federal and provincial, are broadly supportive of supply management, both as an element of political accommodation and in terms of the local economic activity generated in farming, processing, and allied industries.

We can anticipate that important pressures for change will confront supply management in the near or intermediate term, beyond CUSMA. This appears most evident with the adjustment challenges associated with the Nairobi Declaration known for 2021.

With these in mind, it is important that stakeholders revisit the vision for supply management. The philosophy of supply management and where it can and should lead needs to be redeveloped and sold to a younger generation for whom the turbulent period preceding supply management is known only as history, and the tangible elements are in high, stable prices and high levels of quota equity. Greed and self-interest are elements of supply management (as well as other market structures) but these cannot be dominant considerations in a sustainable collective system. Political decay should not be allowed to take hold in supply management systems. On a steady basis, new ideas that flow from a renewed vision are required that are properly researched and debated, and widely shared to build public consensus among stakeholders.

Looking forward, stakeholders in supply management should engage in a fulsome dialogue that can anticipate and respond to the following questions:

What can sustainably be achieved through supply management? What can or should the farms look like? How will it attract future generations in terms of work and lifestyle and as a financial proposition? How can it work better with the supply chain? How do people work collectively to obtain this?

What are measurable future objectives? What can we expect to accomplish by acting collectively in this way? What are the risks?

- What are the internal constraints associated with longer term objectives? What governance structures will be required to implement forward looking objectives?
- A possible resolution to provincialism is national marketing boards, but what would this mean in terms of winners and losers, and oft benefits versus the costs of attempting to retain the existing structure? Do provincial governments understand, and are they prepared to accept that maintaining a provincially fragmented system that generates economic activity in their respective provinces can seriously weaken supply management as a whole, and as such may be unsustainable?

An aspirational view of supply management, popularly held at greater than just provincial levels, and that openly acknowledges gains and past pitfalls that have been prevented, but also opportunities missed, changes in the various stakeholder interests, external constraints, and how supply managed products fit with the broader agricultural and rural community sphere is needed to cope with the challenges and broader changes in the policy context that can be anticipated.

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