

Competitiveness of Canadian Agri-Food Supply Chains – A Policy Brief¹

AAFC provides a pragmatic definition of competitiveness – “**the ability to produce profitably and to maintain long-run viability, in relation to competitors, for relevant markets**”.² Competitiveness is ultimately defined through the actions and successes of individual players in the supply chain. This can be in increased output, trade, employment, profitability and contribution to Canada’s GDP and well-being of its citizens. However, competitiveness at any level of the chain depends on the competitiveness of other levels of the chain, on the policy environment and the position and actions of competing supply chains and nations. This broad view, illustrated for select industries in the tables that follow, provides the framework for an examination of the competitiveness of agri-food supply chains in Canada. This policy brief reviews the competitiveness of three very different sectors in Canada - grains and oilseeds, pork, and the supply managed sectors of dairy and poultry and the implications for innovation policy.

Grains and Oilseed

The grains and oilseed supply chain is export focused. It is competitive in commodity markets although it is being challenged by some re-entrants in the export market. The sector does participate in higher valued and differentiated markets. Pulses and canola are promoting health attributes. The canola crush is very competitive with the US. The grains and oilseeds sector is not moving into the bio-fuel sector as quickly as the US. Natural factors of production such as land and climate in conjunction with good genetics contribute to Canada’s competitiveness. Trade liberalization and trade policy to re-open borders has enhanced competitiveness. Subsidized crop insurance and income support programs help shelter farms from market fluctuations. However, the downside of these programs is that inefficient producers remain in the sector and producers have fewer incentives to make major changes. Another factor reducing competitiveness is transportation infrastructure, service, and cost. Access to new genetics, biotechnology and inputs is slowed by Canada’s regulatory system. Opportunities for profitable private sector R&D are commodity specific which is gradually disadvantaging producers of cereals. Rising population and income are shifting exports to Asia. Because of its export intensity, a high Canadian dollar suppresses exports. With such large volumes of production, Canada must continue to ensure production and distribution is efficient. However, there are opportunities to move into differentiated, higher value products and the industry is seizing these opportunities. The sector will also be a major player in a growing bio-fuel and bio-product sector. In terms of policy, support for exports, continued focus on innovation and R&D, and market development support are required. There is a need for a bio-product/bio-fuel strategy.

¹ This policy brief presents some key findings of “Competitive Advantage of the Canadian Agri-Food Sector”, October 2010 by David Sparling, Richard Ivey School of Business and Shelley Thompson, SJT Solutions. The paper was commissioned by the Canadian Agri-Food Policy Institute.

² AAFC, Overview of the Canadian Agriculture and Agri-Food System of 2009”, 2009.

Table 1. Competitiveness of Canada's grain and oilseed supply chains

	Competitive assessment	Policies and their issues/impacts
Industry characteristics	Canada's largest agri-food industry and exporter. Internationally competitive in many commodity markets – Production and exports of raw and processed products growing. Growth in canola and pulse sector has been substantial.	Agricultural policies initially started to support grain in the prairies. Many production, catastrophe and income support programs.
Market directions	Expanding demand due to biofuels and bioproducts; expanding population, wealth and changing consumption. New trait opportunities focused at specific markets from fuel to health. International competition from BRIC countries. Growth in organic.	Export opportunities mean increased productivity, ability to segregate and identity preserve will be important.
Inputs	Seed, chemicals and equipment inputs are often from multi-nationals. Canada lacks the scale to attract many of these companies to Canada other than as branch operations. Canola is one exception where Canada is the global leader in R&D. Canada is the largest producer of potash.	Access to inputs at competitive prices and timing is important. PMRA responsiveness was an issue but is improving.
Farms	Largest number of farms but many are small and not very profitable. Economies of scale are significant with higher incomes and higher sales/asset ratios. Numerous production and income support programs reduce income variability and need for market returns. Canola production and exports are growing rapidly, wheat flattening. Greater weather variability challenging the sector. More focus on corn and canola for biofuels. Bioproduct presents new opportunities.	Crop insurance, income insurance support farm income. CWB and export development programs support grain exports. Research support for genetics and production
Distribution	Rationalization has been significant in grain handling. From 1998 to 2010 the number of primary elevators in Western Canada fell 70% to 314. Small facilities were replaced by fewer larger ones so the capacity of primary elevators fell by only 12%. Market share of largest four firms was stable over 1998-2010 at 69% to 70%. Large scale mergers have occurred. Grain handlers are competitive and expanding internationally. Transportation is critical – access to rail and shipping is necessary.	CWB support exports but inhibits some high value sales. How will its demise affect the industry? Grain Transportation Act. Infrastructure investment – particularly in ports
Processing	The main categories of processed products are milling, crushing and feed. Processing capacity an issue, particularly for developing new products and applications.	Regulations regarding SERD and health claims may at times hinder innovation.

Pork

Canada's pork supply chain is positioned as a low cost exporter with limited differentiation but controlled quality. Japan and the US are Canada's major pork customers and together accounted for 70% of total exports in 2009. The competitiveness of the sector has been enhanced by NAFTA, the low value of the Canadian dollar relative to the US during the 1990's and early 2000's, low cost production of feeder hogs, sow productivity, and dramatic increases in the scale of production. The sector's competitiveness has been enhanced by government trade policies. BRM programs helped reduce risk and increase overall return to producers and the Hog Transition program helps the industry downsize and recover. COOL has reduced the competitiveness of Canada's pork sector as has the rising value of the Canadian dollar. Swine flu perceptions are another factor reducing exports. The processing sector is not competitive with the US – lack of scale and modernization. The sector needs to re-position itself in a higher value space focusing on product rather than cost differentiation. Exports should be shifted away from the US to higher valued markets in Japan and China. The processing sector requires investment in innovation in order to improve its competitiveness. To support this positioning, government policies

encouraging market development, innovation and R&D are required. Action against COOL must be continued.

Table 2. Competitiveness of Canada's pork supply chain

	Competitive assessment	Policies and their issues/impacts
Industry characteristics	The hog industry has moved from a focus on contained farrow to finish operations to much larger units focused on one part of the process piglets, early weaning and growing operations. Production and processing have shifted to Western Canada.	Elimination of the grain transportation subsidy
Market trends	Move to more red meat in developing economies and less red meat in developed economies. COOL and higher C\$ caused animal sales in 2009 to drop by 12% for under 50lb and 34% for larger pigs.	Export support for Asia and revisiting COOL in U.S.
Inputs	Feed and genetics are specialized for the industry. Sow productivity high. Yield increases in corn much higher than in barley which makes western Canada less competitive than US industry	Policies to support purchase of inputs
Farms	Large scale, professional, highly integrated Inputs and labour costs and availability a challenge. Reduction in production was essential to helping the industry recover.	Deep hog cycle and high \$ C caused rationalization; transition aided by government
Processing and further processing	Canadian slaughter less productive than US plants because of small capacity Labour costs and availability a challenge Need for more product innovation and targeted exports	Deep hog cycle causing rationalization; HACCP requirements result in limited growth for smaller operators; challenges in international market development

Supply Management

Because of supply management, the dairy and poultry supply chains are high cost, protected industries focused only on the domestic market. They are not competitive in global markets. If they were to compete on an international basis a complete restructuring of the industries with rationalization of farming and processing operations would be required. Canadian farmers would be able to compete but at much lower income levels and much larger scale. Processing would need a major reinvestment and much larger scale. Supply management has limited achieving economies of scale in farming and processing, limited investment in world class processing and in product innovation. Lack of competition and supply reduces processing innovation in Canada. It is highly likely that supply management will remain in the medium term, although it may come under pressure if tariffs begin to be reduced through future WTO negotiations or if multi-lateral agreements like the Trans-Pacific Partnership. The cost of supply management is borne by consumers not governments, making it desirable politically. The industry must take its responsibility seriously and focus on supporting efficiency to drive down costs to the consumer and to increase competitiveness in preparation for a more open future. It must also develop systems to support new product innovation and differentiation. To support this future positioning, governments, producers, and processors must work together to find new models to support innovation and efficiency. Support for improved processing capabilities and investment in Canada is required.

Table 3. Competitiveness of Canada's supply managed dairy and poultry supply chains

	Competitive assessment	Policies and their issues/impacts
Industry characteristics	<p>Dairy: Domestic focus, supply managed and protected by very high tariff walls although Canada still had a dairy trade balance of -\$344 M in 2009 with specialty cheese the main imports.</p> <p>Poultry: Domestic focus, supply managed and protected by very high tariff walls. The industry is multi-level with feed and hatcheries frequently controlled by processing firms in the broiler industry</p>	Supply managed, Trade stance at WTO protecting supply management
Inputs	<p>Dairy: Crop inputs & equipment for crops as well as dairy. Canada is slightly less competitive in some seed, chemicals and equipment which are often produced by multi-nationals outside Canada. Trade imbalance in chemicals and equipment was \$2.5 B in 2009. Animal genetics industry very strong and internationally competitive generating \$100 M in exports in 2009. Feed/feed supplements and genetics are specialized for the industry.</p> <p>Poultry: Feed is a domestic industry. Many feed companies are integrated into major processing companies. Chicks are supplied by hatcheries which are also often integrated and have been since the 1990's and earlier. Most equipment is imported. Hatching egg farms are supply managed to control egg and chick supply</p>	
Farms	<p>Dairy: Much smaller scale than in the U.S. or New Zealand - Growth is constrained by ability to access quotas, both due to cost and availability; largest farm investment is in quota; most farms professional, but independent. Incomes are strong and stable as producers have pricing power. Significant income transfer from consumers. Because of the massive investment in quota per animal, sales to assets exhibit much lower scale effects than other industries</p> <p>Poultry: Much smaller scale than in the U.S. and independently owned in most cases. Growth is constrained by limits on quota and the high cost of quota. The largest farm investment is in quota. Most farms are modern and automated but with significantly higher cost structures than in the U.S. Pricing power keeps incomes strong and stable with prices based on production costs, not international market prices. Significant income transfer from consumers. Because of the investment in quota, sales to assets exhibit much lower scale effects than other industries but are higher than dairy.</p>	Supply management costs borne by consumer, BRM payments to supply managed farmers smaller than for other sectors.
Processing	<p>Dairy: Access to milk products limited by marketing system limits growth which is done through acquisition, also limits product innovation. Scale smaller than competitors. Value added per employee is <i>declining at a rate of 1.7% per year</i> (Figure D2).</p> <p>High level of cooperative ownership. Barriers to interprovincial trade also restrict rationalization of the industry and innovation.</p> <p>Poultry: Access to poultry is limited by marketing system, effectively creating a quota system for processing. Growth is largely through acquisition. Only 8 establishments have more than 500 employees. Difficulties in accessing raw materials limits innovation, although the system has been attempting to support new products with supply. Scale smaller than the U.S. and Canadian processors lag behind their U.S. counterparts in size, productivity grow and efficiency.</p> <p>Value added per worker is improving. Barriers to interprovincial trade also restrict rationalization of the industry, efficiency and innovation.</p>	Limited by supply management system
Further processing	<p>Dairy: High value dairy products growing.</p> <p>Poultry: Generally done by processing companies.</p>	

Implications for Innovation Policy

It is clear from the review of competitiveness that innovation is a necessary ingredient to competitiveness. For export sectors, like grains and oilseeds and pork, that innovation has to be in products aimed to meet the need of increasingly differentiated international markets and a need to move beyond a focus on U.S. market opportunities. Improvements to Canada's regulatory system would improve the innovation process in the grains and oilseed chain. Canada's pork supply chain must re-position to compete on high quality products rather than on cost and a favourable exchange rate. It must also reorient its export focus and thus its products beyond the U.S. to Asia as a growing opportunity. This will require significant innovation in the processing sector and support for international marketing. It will also require aiming research and development efforts at products best suited for these markets.

Supply management has inhibited innovation in the dairy and poultry supply chains. Continuing efforts to ensure that innovative new products are supplied with product will be critical to supporting innovation in the future. Continued consolidation in the supply managed industries is expected as firms strive for more supply of product and greater economies of scale.

A Framework for Policy and Competitiveness of Agri-Food Value Chains

Government Policy

Base factors - Land, climate, genetics, education, location, etc

Industry Competitiveness Factors

