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Competitiveness of the Canadian Agri-Food Sector

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About this publication

This paper is part of the series, The Viability of Canada's Agri-food Sector. The opinions stated are those of the authors, and not necessarily those of the Canadian Agri-Food Policy Institute.

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SUMMARY

The Canadian agri-food sector is by and large an export-focused sector, with bulk unprocessed agri-food exports equal to 35% of the farm gate value of agricultural production, and semi-processed and consumer-ready exports representing 37% of the value of shipments from Canada's food manufacturing facilities. Viability and growth depends on being competitive in international markets. This is not a choice. It is a requirement.

The value of the Canadian dollar directly affects Canada's competitiveness. Export volume and earnings grew when the dollar was weaker. The competitiveness of the processing sector, with its smaller scale of operations and critical mass issues, affects the competitiveness of the agri-food supply chains in export markets, as do the size of the domestic market and costs of major non-farm inputs. Overall productivity is another important determinant of competitiveness. Data indicate that Canadian food manufacturing operations contribute a lower percentage of value-added expenditures to R&D than their major international competitors. Canada has competed primarily on a low-cost basis. As Canada differentiates its product offerings into higher value markets to address ongoing challenges, a focus on innovation is needed in order to support competitive positioning strategies.

More than half of Canada's total agri-food export value is from the US market. Consequently, the agri-food sector faces currency value risks and border closure risks, both of which recently caused a serious adjustment in the Canadian red meat sector. A challenge for the sector is to diversify future growth in export volumes away from the US and to increase the amount of economic value that can be added to primary products before they enter the export market.

Competitiveness at the farm level for any commodity is driven by a few basic factors. These include the size of operations, efficient use of capital and fixed assets, price of inputs, best practices and technologies used to utilize inputs efficiently, and having a business management focus to operations. Policies and programs are in place to enhance the competitiveness of the supply chain. These include trade liberalization, trade agreements to secure market access, actions to prevent border closures, and business risk management programs that reduce producers' risk and provide for stability of production for the supply chain. They also include financial incentives for capital investments, R&D expenditures, innovation, and commercialization of new products.

Competitiveness can be further enhanced through agri-food policies. A strategy is required for increasing both public and private investment in research and development, a strategy that is particularly focused on Canadian advantages. Two factors make investment in Canada's processing sector essential. Firstly, the sector is losing ground in efficiency and needs modernization. Secondly, the opportunities for higher value exports will exist in generating processed products such as meats, rather than in sending live animals to the US. Currently, relatively few policy and program resources are directed at food processing. Market access is fundamental, and policies are needed that will continue to improve access to the nearby US market and limit trade barriers. As well, investments are required in export market development in growth areas such as India and China, while opportunities for higher value-added products should also be explored.

The bulk of agri-food expenditures are focused on business risk management programs at the farm sector. Investments in innovation, R&D, market development, and market access are required to maintain and enhance the competitiveness of the agri-food supply chain. This would require a shift in government support. Instead of allocating taxpayer dollars to directly support farm income, Canada should be investing in future competitiveness, helping mitigate and offset uncontrollable risks, and supporting farm incomes in a less direct manner.

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Introduction

What is competitiveness and what does it mean for Canada's agriculture and food industry? The objective of this project is to "provide an indication of the competitive position of the Canadian agri-food sector supply in the domestic market and in the export market for the major supply chains of grains (and oilseeds), horticulture, livestock, dairy and poultry and to provide a perspective on potential policy options to support a competitive agri-food supply chain."

This paper considers four approaches to competitiveness:

- trade, where competitiveness is driven by costs and efficiency of resources, economies of scale, product differentiation and innovation;
- industrial economics such as Porter's six factors that determine competitiveness - production factor conditions, demand conditions, related and supporting industries, firm structure, strategy and rivalry, and chance and government;
- strategic management and its focus on "competitive advantages linked to available resources on firm level" and the role of increased knowledge and skills;
- institutional economics and the impact of markets, firms, government (institutions) on economic performance.[1]

Several themes are consistent across the different approaches. These include increasing output, sales and trade, profitability and the ability to contribute to standards of living (National Competitiveness Council (Ireland)[2], Coffin *et al*, Van Berkum[3,4]). Typical ways to measure competitive performance include: profit, growth, market share, trade balance, value added, purchasing power parity, constant market share, and notable competitive advantages[5]. Agriculture and Agri-Food Canada (AAFC) defines competitiveness as "the ability to produce profitably and to maintain long-run viability, in relation to competitors, for relevant markets".[6]

Since the agri-food industry in Canada is highly focused on production and exports, this paper defines competitiveness as the ability to compete against international competitors in both international and domestic markets. The definition includes an implicit assumption of profitability. If a firm or sector cannot compete and earn profits in specific domestic or international markets over the long term, it will eventually exit those markets. This understanding of competitiveness has three primary measures: value of production, exports and trade balance. Secondary measures include manufacturing value added for food processing, and expenditures on research and development.

Canada appears to have two primary objectives for agri-food competitiveness: maintaining or improving farm income and viability, and creating economic growth in GDP, trade and employment at all levels of the agri-food supply chain. These may result from a combination of greater efficiency and innovation, which are the outcomes of firm actions, government policy and industry or supply chain strategies. However, governments can also support farm income directly, through support payments to producers rather than through investments in competitiveness. This approach achieves short term income objectives at the likely cost of long term competitiveness. The conflict between these objectives and strategies is a source of friction between farmers and policy makers; finding the right balance is a constant challenge for governments. In addition, each sector or supply chain must find its own formula for competing successfully. That formula differs by product and market.

Key findings

Competitiveness is not a choice – it's a reality for survival

1. Exports drive the Canadian agri-food industry, and have a major impact on its success. Being uncompetitive is not an option. The industry's

survival depends on its ability to compete in international markets.

2. The Canadian dollar is a major factor in the competitiveness and profitability of the industry.

3. The US market is the major destination for Canadian products, accounting for 51.2% of Canada's total exports of agriculture and food products in 2008. Exports to the US grew by 51% from 1998 to 2008. Grains and oilseeds are the most widely distributed on a global basis.

Processing in Canada is losing ground internationally

4. Although earlier studies pointed to processing as being competitive, the research for this paper shows mixed results. Canada's processing sector is expanding output and exports but losing ground on trade balance. It lags behind international competitors in investment in research and improving productivity.

Being competitive does not necessarily mean being profitable

5. In export intensive industries, prices vary widely and the impact of commodity price changes on farm incomes is considerable. BRM programs and other government payments smooth out that variation, add to farm incomes, and reduce the need for farmers to earn all of their returns from the market. These measures increase the ability of farmers to compete in international markets.

6. Farm income has always been an implicit objective in competitiveness studies. This is exemplified in the objective of the recent House of Commons review of agri-food competitiveness, which was "to improve the competitiveness of the Canadian agriculture and agri-food sector while protecting and enhancing return to farmers"[7]. Unfortunately, being competitive does not necessarily mean being profitable, at least in the short term. Profitability in farming is influenced by the sector and markets in which a farm operates and by the size of the farm. There are significant economies of scale in farming and most small farms in Canada are not profitable. However, since the vast majority of farms in Canada are small (selling less than $250,000/year) even being highly competitive on a national basis will not fix Canada's farm income problems. The reality is that under almost any competitive scenario, prices will be too low for smaller scale farms to earn reasonable incomes from the market.

The focus of Canada's agri-food policy has been on farm income rather than competitiveness

7. In 2009-10, Canada's federal and provincial governments spent $7.072 billion on the agri-food sector. Of this expenditure, $3.1 billion (42.9%) was spent on programs to support producer incomes, including income support and stabilization, ad hoc and cost reduction, production insurance, and financing assistance (Appendix 1). Although farm income support does contribute to global competitiveness by increasing farm incomes and reducing the need for farmers to earn returns from the market, the longer term impact of this support on global competitiveness is unclear.

The Competitiveness of Canadian Agri-Food Sectors

This analysis begins at the industry level, examining the competitiveness of agriculture and the food manufacturing industries. An individual analysis of each major agri-food sector in Canada follows.

Competitiveness and Canadian Farms

Canadian farm products are competitive in global markets

The value of production has increased across Canadian farms as a whole (Figure 1) and both exports and trade balance improved in the last decade (Figure 2). However, in the livestock sector, cash receipts, trade and trade balance, and profitability all declined in 2009. In every important dimension, livestock competitiveness has been reduced by the higher Canadian dollar and country of origin labelling, COOL, in the US.

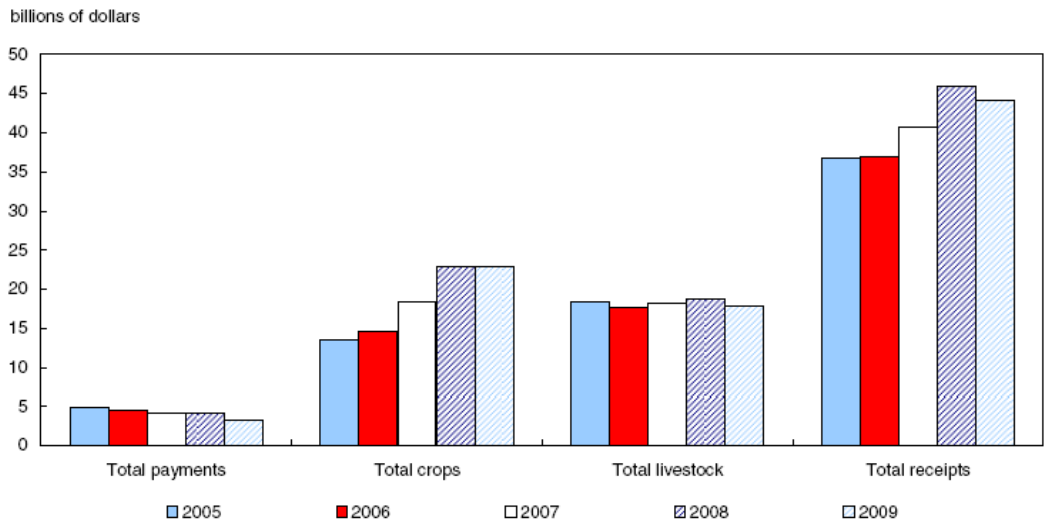

Figure 1. Farm cash receipts 2000-2008 Source: Statistics Canada, Farm Cash Receipts May 2010. Source: Industry Canada Trade Data Online.

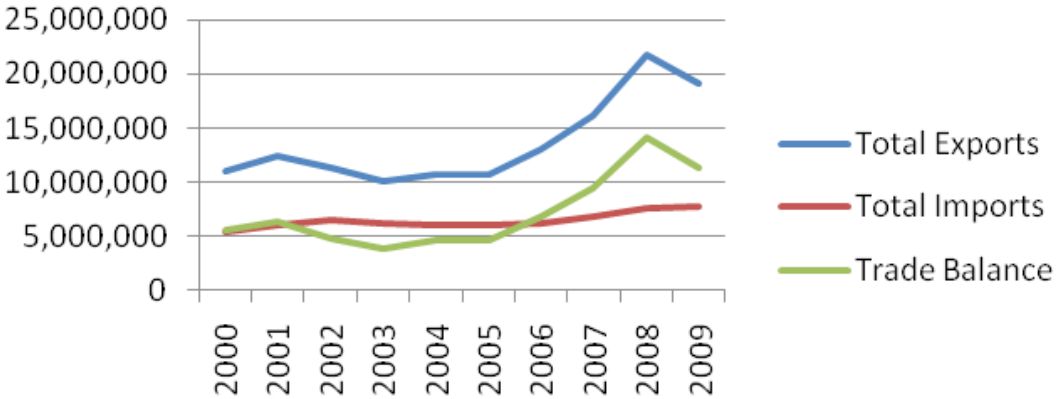

Figure 2. Canadian crop and animal exports, imports and trade balance: 2000-2009. Source: Industry Canada Trade Data Online.

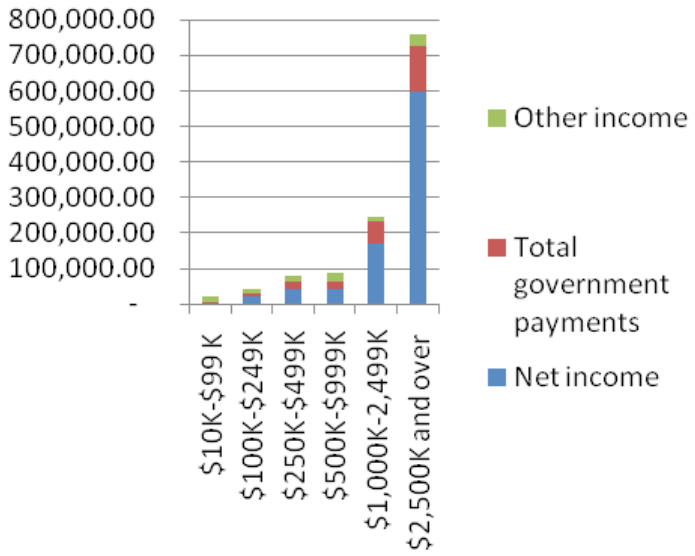

Figure 3. Income by Total Annual Revenue Class (2007) Source: Sparling et al 2010 using Statistics Canada FFS 2007.[8]

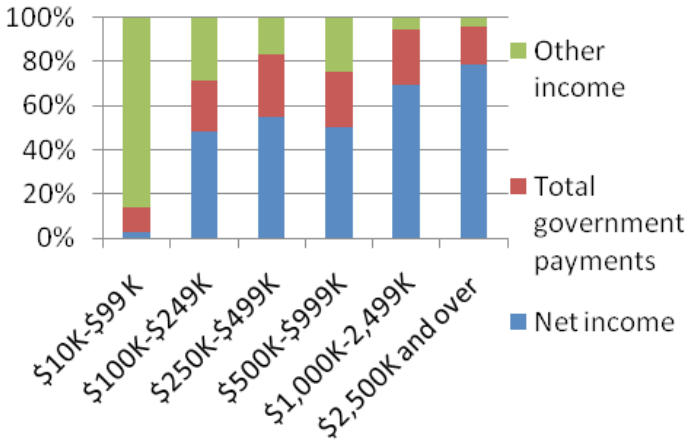

Figure 4. Income Source as a percentage of total family income, Canada 2007. Source: Sparling *et al* 2010 using Statistics Canada FFS 2007.

In 2009, governments spent $470.[8] million on agricultural R&D. This compares favourably with the US. Canada's government spending on R&D in 2009 represented 1.2% of farm cash receipts, compared to 0.8% in the US.

Competitiveness ≠ Profitability

A major reason why governments care about agri-food competitiveness is the role it plays in supporting farm incomes. But being competitive on global markets, and increasing output and trade, do not necessarily translate into being profitable, at least in the short term. In the early 2000s, although global grain prices were depressed, Canada continued to export grain and grain products even though many grain farms experienced income challenges. Profitability is particularly difficult for small farms (Figure 3). The smallest Canadian farms earn little from the market, slightly more from government payments and most of their income from off-farm employment (Figure 4).

This situation is challenging for an industry where more than 72% of Canadian farms sell less than $250,000 per year (Figure 5). A large percentage of Canadian farms has low profitability, leading to pressure for more resources devoted to support farm income.

Competitiveness and Food Processing/Manufacturing

Food manufacturing is competitive at many levels. It makes up a growing share of Canada's manufacturing business, increasing from 10.8% of Canadian manufacturing output in 1999 to 12.7% in 2008. While total value and manufacturing value added both grew, the results vary by sector (Table 1). Trade is increasing but the trade balance in food products is declining (Figure 6).

The Competitiveness of Agri-Food Sectors

Grains and Oilseeds

The grains and oilseeds sector is export focused. It is competitive in commodity markets, but is challenged in global markets by some new entrants. Canada's competitiveness benefits from natural factors of production, such as land and climate in conjunction with good genetics. The sector also participates in higher valued and differentiated markets. Pulses and canola are promoting the 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 it is in the US.

Canada's competitiveness has been enhanced by trade liberalization and trade policies designed to open borders. Subsidized crop insurance and income support programs help shelter farms from market fluctuations, and reduce the need for returns from the market. Conversely, these programs allow inefficient producers to remain in the sector. Competitiveness is also reduced by transportation infrastructure, service, and cost. As well, Canada's regulatory system slows down access to new genetics, biotechnology and inputs. Opportunities for profitable private sector R&D are commodity specific, gradually disadvantaging producers of cereals.

Meanwhile, 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 efficiency. However, opportunities exist in 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, the grains and oilseeds sector needs support for exports, a continued focus on innovation and R&D, and market development. A bioproduct/biofuel strategy is also needed.

Beef Sector

The beef sector is positioned as a low cost producer with limited differentiation. The US is Canada's major customer and accounted for 78% of Canadian beef exports in 2009.

The competitiveness of the beef sector has been enhanced by NAFTA, the low value of the Canadian dollar relative to the US during the 1990s and early 2000s, and by the occasionally low feed costs for cattle production. Off-farm income reduced the need for market returns for cow-calf production,

which increased competitiveness but reduced focus on improvement. The sector's competitiveness has been hurt by the lack of scale and modernization in processing compared to the US. Yield increases in the US relative to Canada are reducing Canada's competitive advantage in cattle production. COOL has reduced the competitiveness of Canada's beef sector, as has the rising value of the Canadian dollar. Competitiveness is also hindered by the sector's lack of focus on quality and standardization.

Policies that have enhanced the competitiveness of the Canadian beef sector include: trade liberalization, removal of the WGTA, tax policies, BRM programs, ad-hoc payments during the BSE crisis, and trade policy to re-open borders.

In order to overcome future challenges, such as the high dollar, industry structure, and the number and independence of part-time participants, the sector needs to re-position itself in a higher value space,

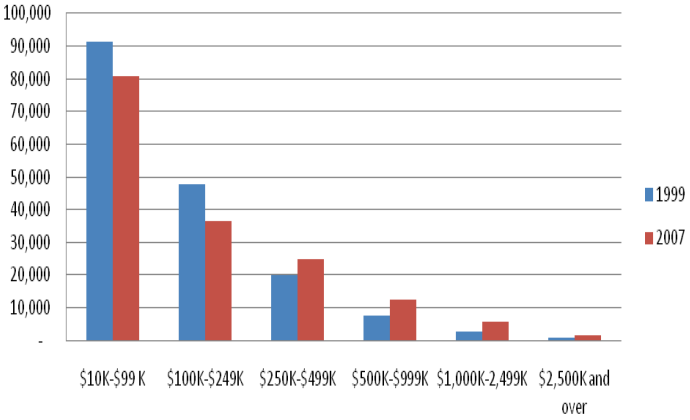

Figure 5. Distribution of Canadian farms by total revenue. Source: Statistics Canada FFS 1999-2007.

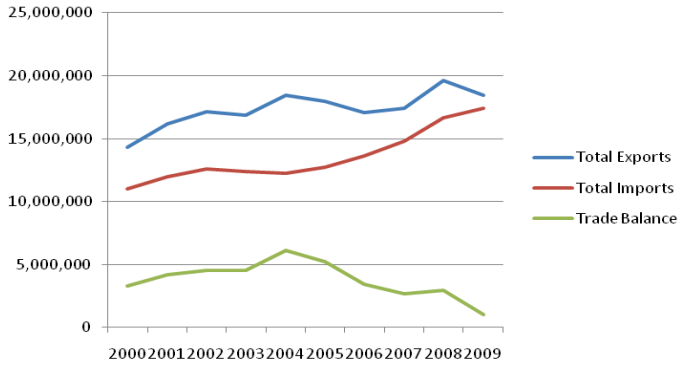

Figure 6. Exports, Imports and Trade Balance in Canadian Manufactured Food Products (2000-2009). Source: Industry Canada Trade Data.

focusing on product rather than cost differentiation. Exports should be shifted away from the US to higher valued markets in Japan and China, although live animal exports will continue to target the US. To support this positioning, government policies are required that encourage market development, innovation and R&D. Action against COOL must continue, securing Canada's position as a preferred supplier.

Pork Sector

Canada's pork sector 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 several factors, including: NAFTA, the low value of the Canadian dollar relative to the US during the 1990s and early 2000s, low cost production of feeder hogs, sow productivity, and dramatic increases in the scale of production and a restructuring of the sector toward more efficient production and processing.

The sector's competitiveness has been enhanced by government trade policies. Due to the nature of the hog cycle, BRM programs were particularly helpful in reducing risk and increasing overall return to producers. The Hog Transition program has helped the industry downsize and recover from the recent prolonged downturn, the result of the reduced competitiveness of Canada's pork sector due to the rising value of the Canadian dollar and

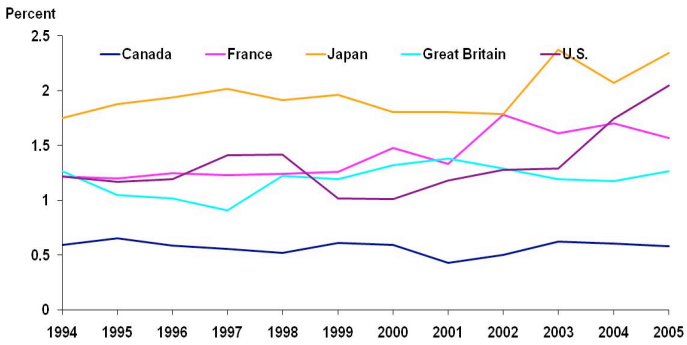

Figure 7. Food and beverage expenditure. Source: OECD, STAN Indicators, 2009.

COOL. Consumer misconceptions around swine flu also reduced exports. The processing sector is not competitive with the US due to lack of scale and modernization.

The sector needs to re-position itself into a higher value space, focusing on product rather than cost differentiation. Exports should be shifted from the US to higher valued markets in Japan and China. This will mean a shift from live animals to processed meat. The processing sector requires investment in innovation to improve its competitiveness. To support this positioning, government policies encouraging market development, innovation and R&D are required. Action against COOL must continue.

Horticulture Sector

Canadian horticulture is diverse, ranging from fruit and greenhouse production to field vegetables and potatoes. The sector has experienced considerable growth in recent years, fueled by a low Canadian dollar and the NAFTA trade agreements. Growth has been particularly strong in the greenhouse sector and in fruit and vegetable processing manufacturing.

Because of the diverse nature of the horticulture sector, competitive positioning tends to vary by commodity. Much of the industry is focused on low cost production and pricing, particularly in potatoes, fruits and vegetable for processing. Higher value opportunities exist for organic production, supplying local food markets and farmers markets. Local food programs benefit horticulture. Recently, there have been investments in IQF processing.

The competitiveness of the pork sector has been aided by the NAFTA trade agreement, the low value of the Canadian dollar in the 1990s and early 2000s, and climatic conditions (climate in products like potatoes can reduce disease pressure). BRM programs have also been helpful at the farm level. Competitiveness is being inhibited by the higher energy and labour costs endured in Canada compared to competitors. A rising Canadian dollar has reduced cost advantages in the US market.

In the future, the horticulture sector's competitiveness will be affected by the rising value of the Canadian dollar, processing capacity, and higher energy costs. The industry will have to focus on cost reduction to remain competitive in the US, and will need to identify higher value markets. Additional processing capacity will be needed to fully exploit industry potential. Policies should focus on programs to reduce costs, particularly energy. The development of opportunities in local food should continue, as should investments in sector innovation and R&D.

Dairy and Poultry Sectors

Protected by supply management, the dairy and poultry sectors are high cost industries focused only on the domestic market.

Table 1. Canadian Food Manufacturing Performance 1998-2007. Source: Industry Canada, Industry Statistics Online.

	Manufacturing Shipments		Manufacturing Value-Added	
	Value in C$ billions 2007	CAGR 1998-2007	Value in C$ billions 2007	CAGR 1998-2007
All Food Manufacturing	70.2	3.2%	22.8	2.80%
Grain and Oilseed Milling	6.8	1.4%	2	0.50%
Meat Products	21.4	4.2%	6.3	5.50%
Fruit and Vegetable Preserving and Specialty	5.8	2.8%	2.6	2.80%
Dairy Product	11.9	3.1%	2.4	0.01%
Sugar and Confectionery	3.7	1.6%	1.4	0.00%
Bakeries and Tortilla	6.1	6.3%	3.1	4.00%
Animal Food	4.9	1.7%	1	0.08%
Other	5.7	3.2%	2.7	3.40%

Table 2. The Canadian Beef Sector.

	Competitive assessment	Policies and their issues/impacts
Industry characteristics/ inputs	Genetics not standardized and mainly domestic. Yield increases in corn much higher than in barley, which makes western Canada less competitive than US industry. Value of feed grain not identified and captured; technology adoption a barrier to this.	Limited genetic research. More research on food than feed grain.
Cow-calf	Continues to be dominated by small operators for whom beef is one part of their farm and their life.	Small farms, low incomes affect income perceptions and calls for support.
Feedlots	Disadvantaged by long approval time for pharmaceuticals. Not necessarily lowest cost. Labour costs and availability a challenge.	Challenged by regulatory approvals, BSE and high C$.
Processing	Canadian meat slaughter less productive than US plants. Labour costs and availability a challenge.	High level of concentration results in calls for government action. HACCP requirements result in limited growth for smaller operators.
Further processing	Canadian plants less productive than US plants (scale and output/employee). Labour costs and availability a challenge.	HACCP requirements result in limited growth for smaller operators.

Table 3. The Canadian Pork Sector.

	Competitive assessment	Policies and issues/impacts
Industry	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 US.
Inputs	Feed/feed supplements and genetics are specialized for the industry. Sow productivity is 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.	Deep hog cycle causing rationalization; transition aided by government.
Processing	Canadian slaughter less productive than US plants because of small capacity. Labour costs and availability a challenge.	Deep hog cycle causing rationalization; HACCP requirements result in limited growth for smaller operators.
Further processing	Canadian plants less productive than US plants (scale and output/employee). Labour costs and availability a challenge. Need for more product innovation.	Deep hog cycle causing rationalization; HACCP requirements result in limited growth for smaller operators.

Dairy and poultry are not competitive in global markets. For them to compete on an international basis would require a complete restructuring of the industries with rationalization of farming and processing operations. Canadian farmers should be able to compete, particularly in dairy, but at much lower income levels and much larger scale. Processing would need a major reinvestment and larger scale.

Supply management has limited economies of scale in farming and processing, and restricted investment in world-class processing and in product innovation. Lack of competition and supply reduces processing innovation in Canada. Supply management is most likely to persevere in the medium term, although it may come under pressure if tariffs are reduced in the course of future WTO negotiations. The cost of supply management is borne by consumers, not governments, making it desirable politically.

The industry must focus on supporting efficiency to drive down costs to the consumer and to increase competitiveness. It must also improve systems to support new product innovation and differentiation. 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.

Summary and Industry Strategies

Exports are critical to the competitiveness of Canada's grains and oilseeds, red meat, and horticulture sectors. These sectors have attempted to position themselves as low cost producers, but where possible seek out and exploit higher valued markets. The supply managed sectors are not competitive in global markets, and focus on the domestic market.

Canada's export sectors have benefited from natural advantages, such as a favourable climate and land base. The competitiveness of these sectors has been enhanced by the liberalization of trade (such as NAFTA) and at times by the low value of the Canadian dollar. Canada`s proximity to the US has been a major factor in Canadian exports. In 2008, although it was down from the peak of 67% in 2002, the US still accounted for 51.2% of total exports. This has been particularly important for allowing Canada to be competitive in exporting animals. Policies such as COOL are detrimental to the red meat sector. A higher valued dollar negatively impacts the competitiveness of all the export sectors. Other policies encouraging innovation, market development and R&D have also been beneficial. At the producer level, BRM programs have helped producers to weather business cycles and unexpected shocks.

The Canadian dollar is likely to remain strong in the near future. Therefore, exporting sectors in particular will have to undertake a dual position of improving efficiency and lowering cost while seeking out higher valued differentiation opportunities. Differentiation will occur on a variety of parameters. Horticulture and grains and oilseeds will use health as one area of differentiation. Meat products will have to focus on meeting high level consumer expectations on factors like quality, taste and health, as well as animal welfare and environmental impact.

The industry is attempting to achieve these objectives through individual sector strategies. The pulse sector, which has experienced significant growth, has two strategic objectives: 1) enhancing value (via new market development; new uses; promoting health, nutritional and environmental benefits) and 2) reducing costs (via competitive access to markets; efficiencies in marketing and transportation). The canola sector is focused on increasing the size of the industry to achieve a target of 15 million tonnes of market demand and production. It is focused on: high value markets and promoting healthy properties; encouraging renewable fuels; encouraging science based regulation; and supporting agronomic research, technology transfer, and extension.

The beef and pork sectors are both focused on improving market access. The beef sector's strategy is to build a dynamic and profitable industry with high quality products through: market access; animal care; animal health; grading/inspection; environmental stewardship; marketing; and regulatory and government policy. The strategy of the pork sector is to enhance success through market access, competitiveness, consumer confidence, and public policy advocacy. The pork sector also has a transition strategy to move to a smaller, greener, more sustainable industry.

Table 4. The Canadian Horticulture Sector.

	Competitive assessment	Policies and their issues/impacts
Industry characteristics	Canada has a diverse horticultural industry, with active vegetable and fruit production particularly in Ontario and BC, berries in the east, potatoes and other vegetables across the country. Canada also has a very active greenhouse and flower growing operations, especially in Ontario and BC.	
Market trends	Horticulture is experiencing a boom: the focus on the role of fruit and vegetables in health, the local food trend and growth of farmers' markets, the move toward designating food products as natural by adding fruits and vegetables to food and beverages. Canada has lost processing capacity in recent years.	Export support for Asia and revisiting COOL in US.
Inputs	Energy and labour are key inputs for the sector. Recent initiatives include programs.	Energy efficiency, programs to import temporary labour for horticulture production.
Farms	Farm size and focus varies widely. Fruit farm numbers are skewed toward smaller size while greenhouse and potato farms are more evenly distributed across total revenue categories. Vegetable exports are focused almost exclusively on the US market. Fresh exports have dropped to $376 million in 2009 while greenhouse exports are fairly flat at around $1 billion with 98.6% sold to the US. Fruit exports are $196 million with 90% heading to the US.	Access to seasonal labour assisted by policy.
Processing	Fruit and vegetable processing in Canada was a $5.8 billion industry in 2007 with firms spread across the country. Total production was fairly flat between 2002 and 2007, although efficiency increased with value added per employee growing at 2.9% over the last decade. The simple packaging nature of much of the processing means that the industry is dominated by small and micro plants. Exports have flattened in recent years at just over $ 2 billion in 2009 with 88% destined for the US.	

Table 5. The Canadian Dairy and Poultry Sector.

	Competitive assessment	Policies and their issues/ impacts
Industry	Dairy: Domestic focus, supply managed and protected by very high tariff walls, although Canada still had a dairy trade balance of -$344 million in 2009 with specialty cheese the main imports. 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.	Supply management, Trade stance at WTO protecting supply management
Inputs	Dairy: Crop inputs & equipment for crops as well as dairy. Canada is uncompetitive in some seed, chemicals and equipment which are often produced by multi-nationals outside Canada. The trade imbalance in chemicals and equipment was $2.5 billion in 2009. Animal genetics industry very strong and internationally competitive, generating $100 million in exports in 2009. Feed/feed supplements and genetics are specialized for the industry. 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 before the 1990s. Most equipment is imported. Hatching egg farms are supply managed to control egg and chick supply.	
Farms	Dairy: Much smaller scale than in the US 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 very 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. Poultry: Much smaller scale than in the US 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 US. 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.	Supply management costs borne by consumer, BRM payments to supply managed farmers smaller than for other sectors.
Processing	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 declining at a rate of 1.7% per year (Figure D2). High level of cooperative ownership. Barriers to interprovincial trade also restrict rationalization of the industry and innovation. 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 US, and Canadian processors lag behind their US counterparts in size, productivity, growth and efficiency. Value added per worker is improving. Barriers to interprovincial trade also restrict rationalization of the industry, efficiency and innovation.	Limited by supply management system.
Further processing	Dairy: High value dairy products growing. Poultry: Generally done by processing companies.	

The supply managed sectors are attempting to reduce costs and further differentiate their products, while retaining supply management.

Canada's horticulture sector has initiatives in place to profitably increase the value of production (to $10 billion) and to increase the market share of Canadian grown production in food service and food retail. This sector is already benefiting from a greater interest in health, and enjoys significant opportunities to increase fresh, frozen and processed product offerings.

Policy and the Future of Agri-Food Competitiveness

Recommendations

1. Increase investment in agriculture and food research and development. Canada lags behind its global competitors in investment in industrial research and development, particularly in food processing. In addition, the beneficial nature of government support of agricultural R&D is well known. There needs to be a strategy for increasing both public and private investment in research and development, particularly focused on Canadian advantages. Improving access to SR&ED tax credits for agriculture and food companies should be a priority.

2. Modernize Canada's processing sector. Two factors make investment in Canada's processing sector essential. First, the sector is losing ground in efficiency and needs modernization. Second, the opportunities for higher value exports will be for processed meats, rather than for live animals to the US.

3. Dedicate more resources for investment in competitiveness. With limited resources, it is virtually impossible to achieve both global competitiveness and a healthy income for all farms. The two objectives require very different investment strategies. Currently, a significant portion of government expenditures in agri-food is focused on the second objective through programs that provide support payments to producers. To compete in global markets, many parts of the Canadian agri-food industry have been positioned as low cost producers and exporters. However, as the market is changing, some components have begun the process of de-commoditization by differentiating their products which moves at least a part of their production from commodity markets. Innovation, R&D, and market development and similar activities are required to maintain and enhance Canadian competitiveness in differentiated markets. This would require a shift in government support, from focusing on direct producer payments that support farm income to investing in future competitiveness through research, market development and improved industry capabilities. This shift would support farm incomes in a less direct manner, but with longer term economic and income benefits.

4. Continue to work to improve access to the US market and reduce the limitations imposed by COOL.

5. Continue to invest in export development, particularly in China and India. The growth in these markets, and opportunities for sales of higher value products, will continue to increase as these economies continue to grow and become wealthier.

6. Continue to prepare supply managed sectors for increased levels of competition. The supply managed sectors are not globally competitive. Transfers from consumers through high prices and border controls, rather than government payments, create high and stable incomes in the supply managed sectors. In a less protected world, both producers and processors would have to make significant adjustments. Government policies could help in the transition, adjustment, and eventual competitive re-positioning.

7. Develop strategies for new opportunities that will reshape the future of agriculture:

    - Food and health;
    - Biofuels and bioproducts;
    - What roles will agriculture play in ensuring sustainability on the farm and in Canada?

Annex

Grains and Oilseeds

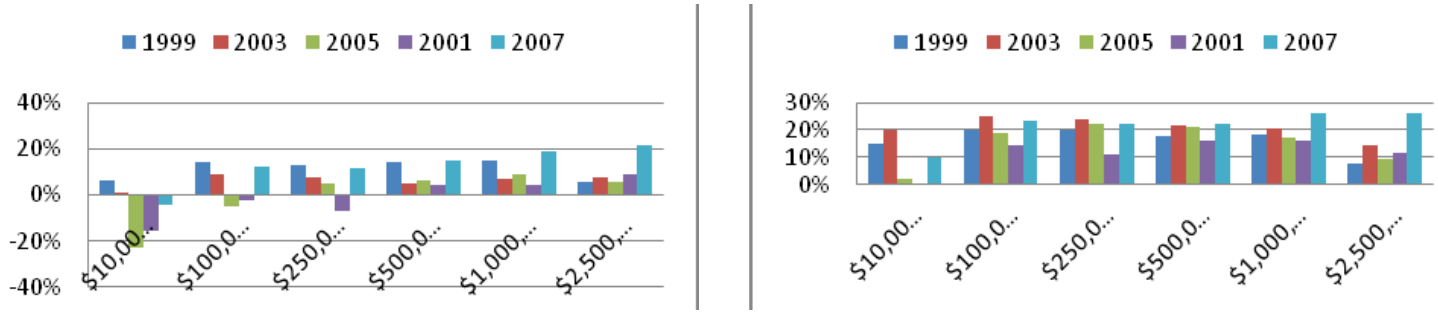

Figure 8. Gross margins for grains & oilseeds producers by revenue class before government payments & after government payments – 1999-2007.[9]

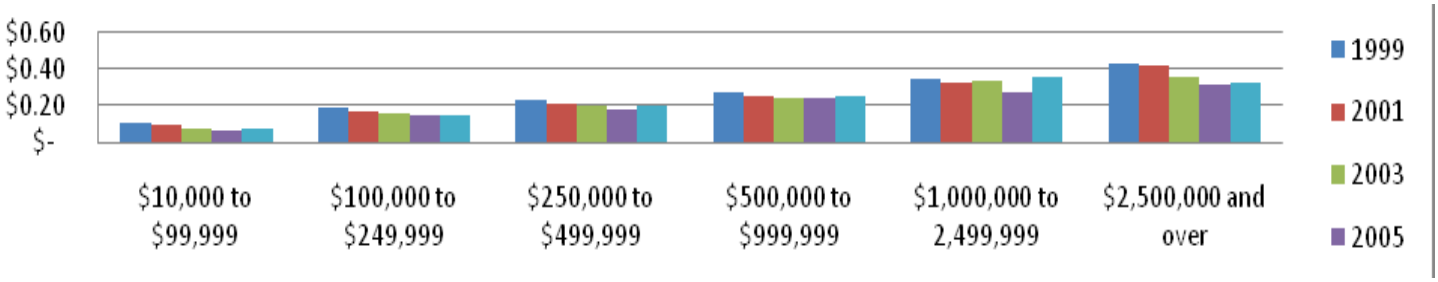

Figure 9. Sales to asset ratios for grain and oilseed farms increase over revenue classes.

While there has been growth in the volume of canola exports, exports of barley, peas, durum and wheat excluding durum have been flat or declining slightly.[10]

Many producers have moved into the production of pulse crops. The following chart shows the growth in Canadian farm cash receipts from lentils.[11]

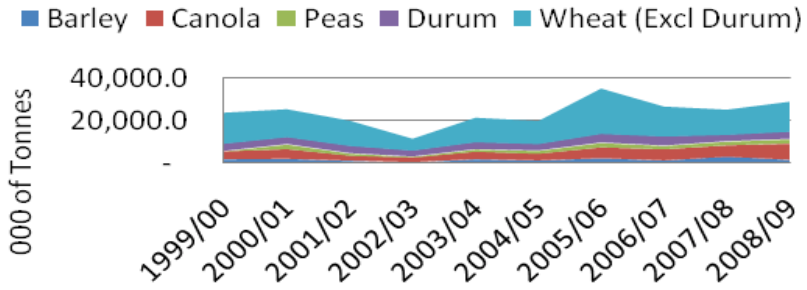

Figure 10. Canadian Bulk Exports.

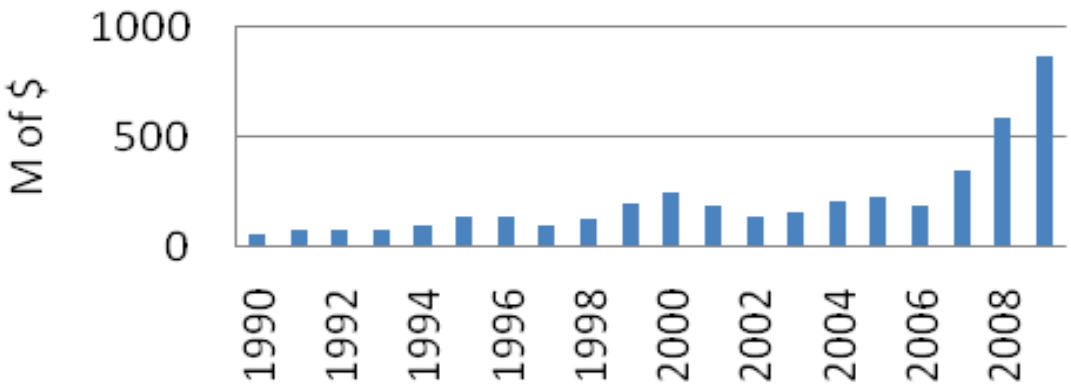

Figure 11. Farm Cash Receipts from Lentils.

Table 6. Cost Comparison Canada/US Animal Slaughter (red meat, excluding poultry).

2007	*# of Employees*	*Total Shipment Value*	*Ship/Employee*
Can (C$)	26,595	10,100,000,000	$ 379,770
US (C$)	142,334	72,850,186,905	$ 511,825

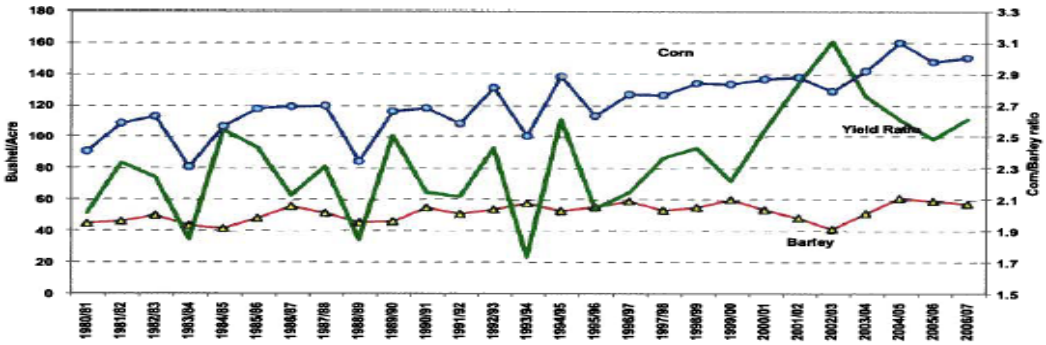

Figure 12. US Corn and Canadian Barley Yields. Source: Reproduced from Informa Economics, "Task 2: US and Canadian Cow Calf and Backgrounding Sectors Evaluation," August 2006 based on published data supplied by Statistics Canada, USDA, and Alberta Grain Commission.

Beef Sector

Scale and technology issues contribute to lower productivity in Canada's slaughter sector.

In 2009, Canada's major customer for beef was the US, accounting for 78%. Mexico and Japan were the next largest customers, accounting for 11% and 4% respectively.

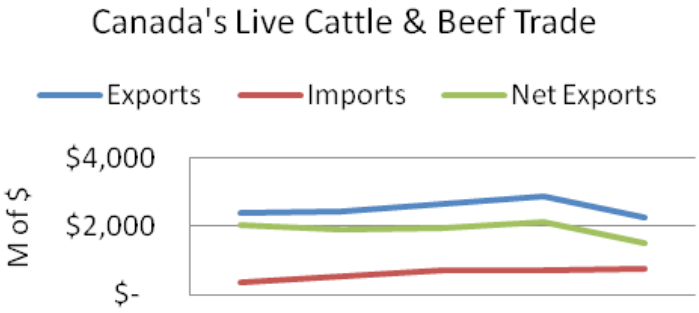

Figure 13. Canada's Live Cattle & Beef Trade.

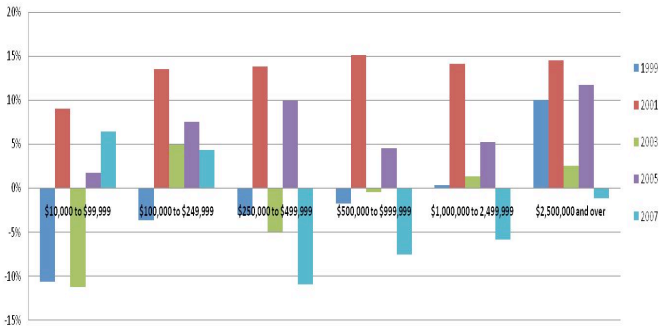

Figure 14. Hog and Pig: Margins for Different Revenue Classes 1997-2007 Excluding Government Payments.

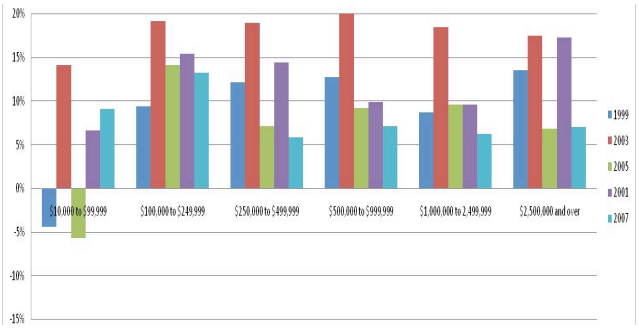

Figure 15. Hog and Pig: Margins for Different Revenue Classes 1997-2007 Including Government Payments.

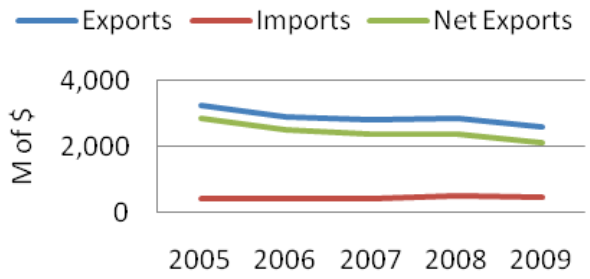

Figure 16. Canadian Hog and Pork Trade.

Pork

Gross margins for hog producers by revenue class before government payments & after government payments – 1999-2007.[12]

Canadian exports of hogs and pork are falling. In 2009, Japan and the US were the top customers for Canadian pork accounting for 37% and 33% of Canadian exports respectively.

Canada is more productive in terms of sow births and weanings.

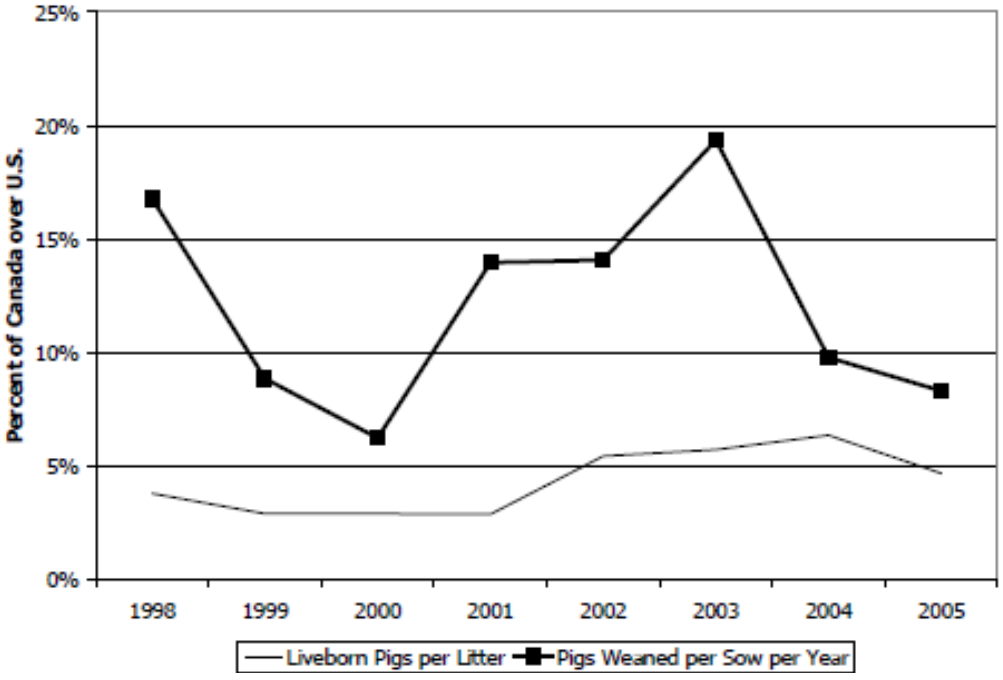

Figure 17. Historic Differences in Canadian and US Sow Productivity. Source: George Morris Centre, "Competitiveness in the Canadian Pork Segment: A Reassessment," 2006.

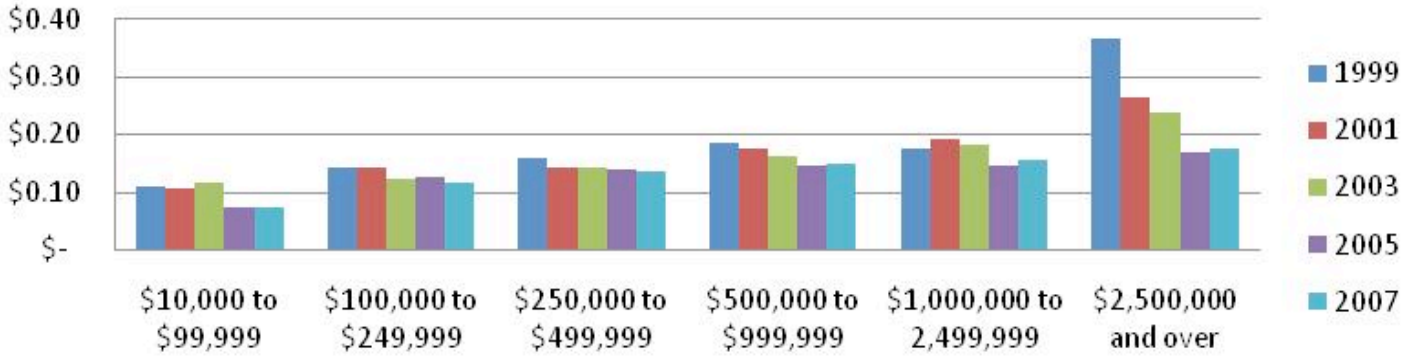

Figure 18. Sales to Asset rations for dairy farms by revenue class – 1999-2007. Source: Sparling *et al.* 2010 based on Statistics Canada data.[13™]

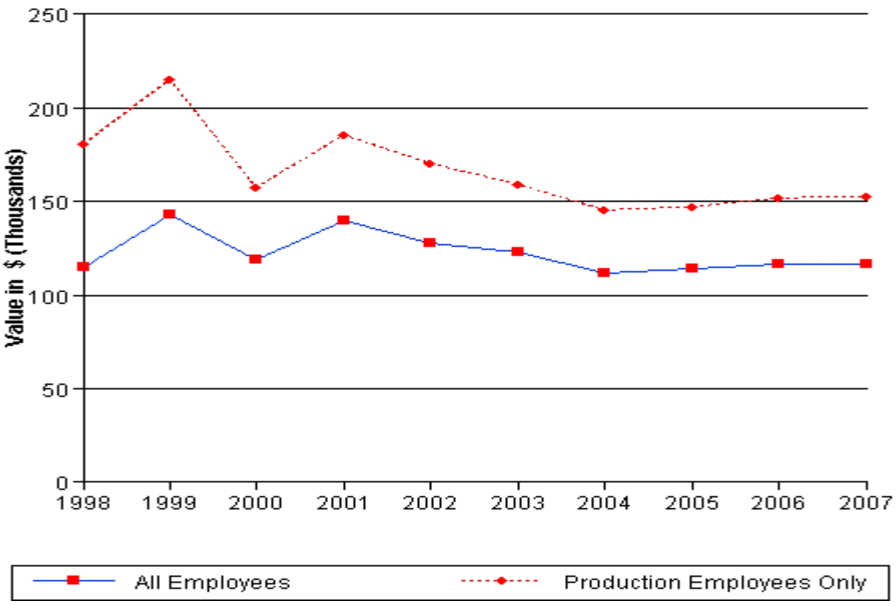

Figure 19. Manufacturing Value-Added per Employee: 1998-2007 All Employees vs. Production Employees Dairy Product Manufacturing (NAICS 3115) Source: Statistics Canada, special tabulation, unpublished data, Annual Survey of Manufactures, 1998 to 2003; Annual Survey of Manufactures and Logging, 2004 to 2007.

Dairy

Sales to asset ratios are quite flat across revenue classes indicating that there are few scale economies.

Based on manufacturing value-added per employee, the sector is not becoming more productive over time.

Poultry

Processing productivity has improved.[14]

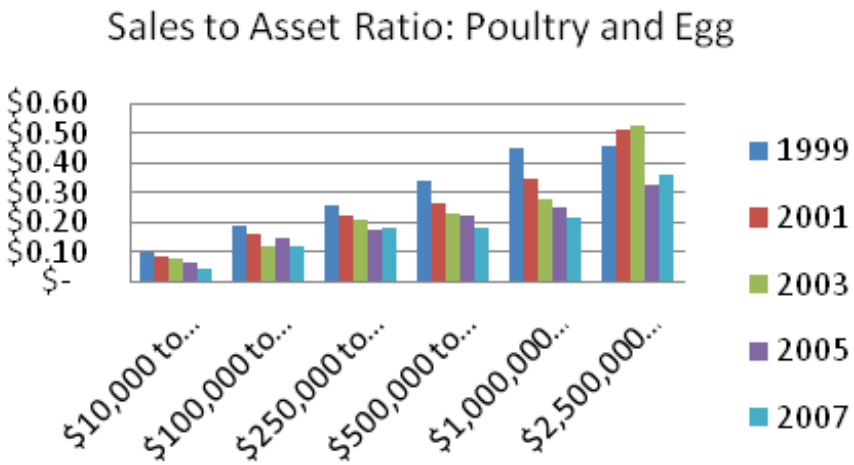

Figure 20. Sales to Asset Ratio: Poultry and Egg.

Table 7. Poultry Processing Output per Employee

	1998 Value 000 Of $)	*2007 Value (000 Of $)*	*Cagr 1998-2007*
Manufacturing Revenues per Employee	192.8	262.6	3.1%
Manufacturing Value-Added per Employee	60.3	82.3	3.1%

Horticulture

Canada's horticulture sector is diverse with fruits and vegetables produced across the country in fields, greenhouses and orchards. Data are readily available on three sub-sectors, greenhouses, fruit and potatoes, as well as on processed products in the Fruit and Vegetable Preserving and Specialty Food Manufacturing category. The three agricultural sub-sectors exhibit similar scale effects on income but very different income distributions and sources of income.

Manufacturing shipments were 5.78 B in 2008 with exports of 2.08 B of which 88% was shipped into the US market. The industry has become more export focused with export intensity increasing from 25.2% in 1999 to 39.9% in 2008.

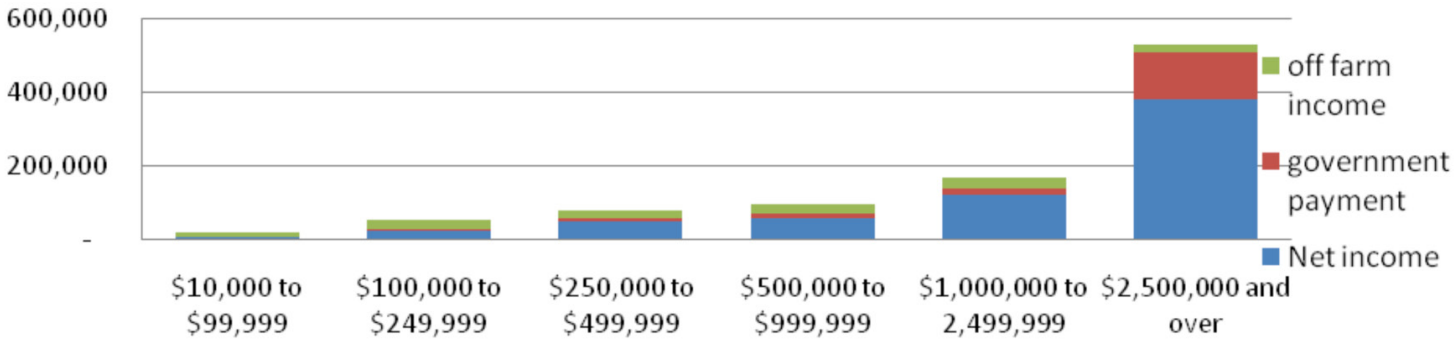

Figure 21. Greenhouse: Income Sources 2007.

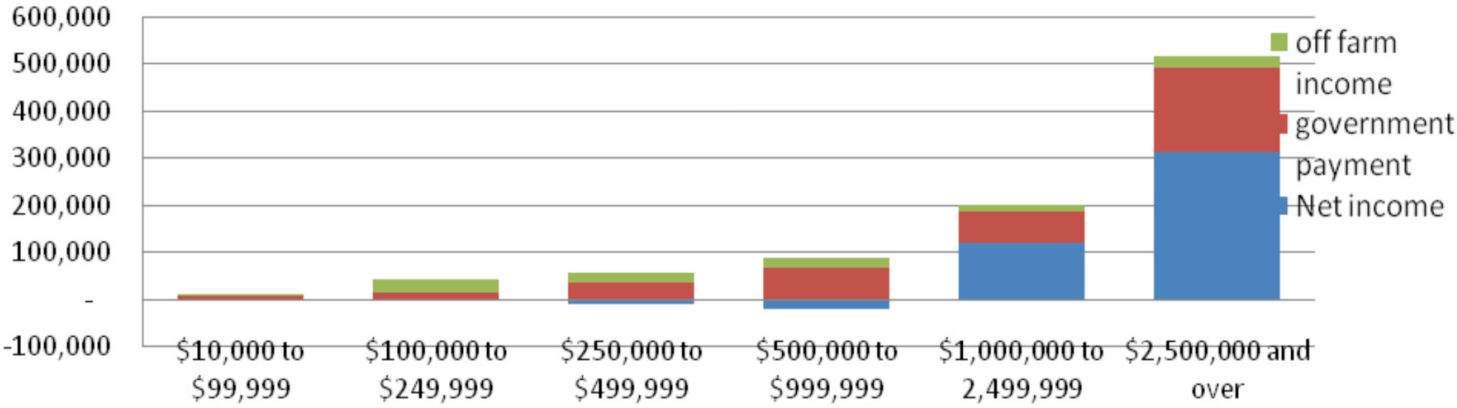

Figure 22. Potatoes: Income Sources 2007.

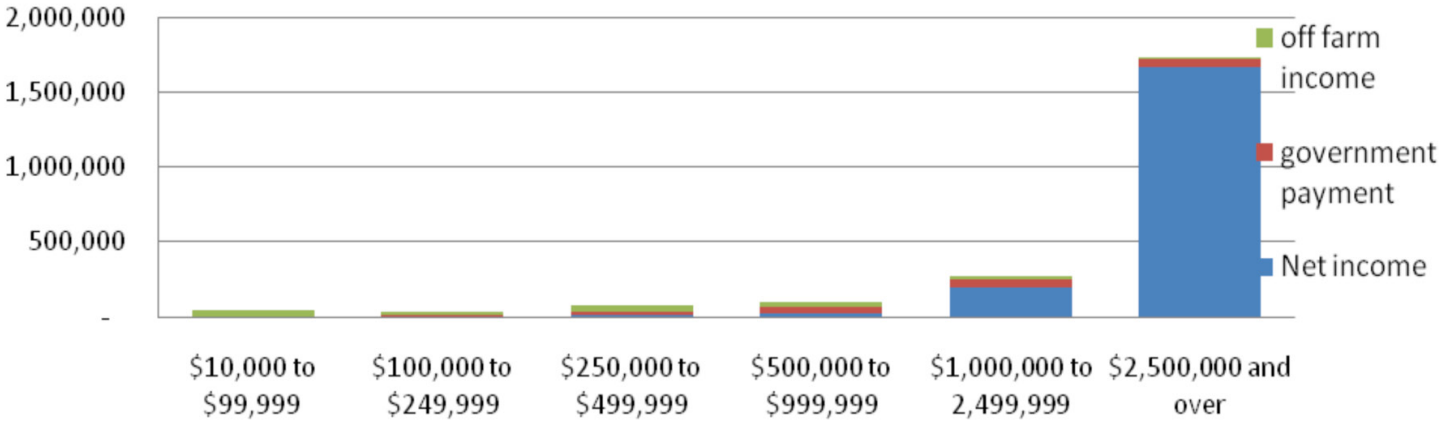

Figure 23. Fruit: Income Sources 2007.

Appendix 1

Distribution of agri-food program funding 2006 to 2009[15]

Table 8. Government Expenditures in Support of the Agri-Food Sector, by Category, Canada and Provinces, 2006-07 to 2009-10.

	PROVINCIAL				FEDERAL			
	2006-07	2007-08	2008-09 Forecast	2009-10 Estimates	2006-07	2007-08	2008-09 Forecast	2009-10 Estimates
	($000)							
CANADA								
A. Operating Expenditures	663,280	713,138	776,792	810,249	1,520,814	1,561,356	1,498,080	1,418,911
B. Capital Expenditures	108,284	89,535	96,347	70,196	55,520	54,825	58,649	72,722
C. Program Expenditures	2,208,285	2,256,575	2,503,895	2,285,200	3,258,381	3,088,202	2,409,271	2,173,827
c.1 Income Support & Stabilization	1,303,567	1,144,179	1,524,322	1,281,065	1,951,241	1,211,583	535,336	755,805
c.2 Ad Hoc and Cost Reduction	50,900	96,711	36,942	23,962	100,870	449,750	352,311	135,786
c.3 Production Insurance	303,890	270,081	345,911	409,182	285,301	344,611	493,243	384,636
c.4 Financing Assistance	70,387	126,498	86,869	89,362	38,026	60,578	35,148	34,593
c.5 Storage and Freight	6,210	2,189	2,062	2,622	1,132	-	6,120	-
c.6 Social and Labour	19,993	20,334	29,544	22,041	864	833	642	864
c.7 Research	88,107	168,364	100,914	108,309	79,397	78,860	22,101	69,414
c.8 Food Inspection	51,693	69,035	44,313	43,845	19,807	97,521	72,847	94,966
c.9 Food Aid	-	-	-	-	471,352	432,435	617,807	416,340
c.10 Marketing and Trade	25,181	46,219	33,940	46,938	90,602	74,592	54,181	105,245
c.11 Rural and Regional Development	87,752	83,981	72,298	64,101	81,054	73,134	87,535	92,810
c.12 Environment	52,017	51,689	64,249	37,692	99,647	201,134	97,826	63,408
c.13 Education	121,050	143,607	128,658	124,049	98	167	78	-
c.14 Extension	27,538	33,688	33,872	32,031	38,989	63,005	34,096	19,959
D. Tax Expenditures	467,047	387,145	383,671	398,617	-	-	-	-
Sub-Total Gross Expenditures	3,446,897	3,446,394	3,760,705	3,564,261	4,834,714	4,704,383	3,966,000	3,665,461
Recoveries	(170,621)	(283,281)	(158,104)	(151,064)	(208,784)	(184,362)	(171,900)	(6,470)
Total Net Expenditures	3,276,276	3,163,112	3,602,601	3,413,197	4,625,931	4,520,021	3,794,100	3,658,991

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