



*Structure et la Performance de l'Agriculture  
et de l'industrie des produits Agroalimentaires*

*Structure and Performance of Agriculture  
and Agri-products industry Network*

## **Performance, Policies and Institutions in Canadian Agriculture**

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## Performance, Policies and Institutions in Canadian Agriculture

**Abstract:** Whether because of technological and scientific advances, changes in lifestyles or the emergence of international food giants, the Canadian agri-food sector will face significant challenges in the coming years. We discuss whether the sector has the institutions, trade and agricultural policies, and regulations it will need to capitalize on these opportunities and remain competitive. We analyze the performance of three food chains – grains, meats and the supply-managed sectors – and conclude that these food chains will have to excel in risk management, improve coordination among retailers, food processors and producers and innovate to reduce costs and develop new products.

**Résumé:** Que ce soit à cause des avancées technologiques et scientifiques, des changements dans les habitudes de vie, ou de l'émergence de géants internationaux, le secteur agroalimentaire canadien est appelé à relever d'importants défis au cours des prochaines années. Mais possède-t-il les institutions, les politiques commerciale et agricole et la réglementation nécessaires pour pouvoir exploiter ces nouvelles opportunités et rester compétitifs? Dans cette note, nous analysons la performance de trois chaînes d'approvisionnement, celle des céréales, celle des viande et celle des secteurs régis par la gestion de l'offre, et nous concluons que ces filières devront exceller dans la gestion des risques, améliorer la coordination entre les détaillants, transformateurs et producteurs, et innover pour réduire les coûts et développer de nouveaux produits.

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### Introduction

The agri-food sector has experienced rapid productivity growth during the last century because of significant public and private (to a lesser extent) investment in research activities. The mechanization of agriculture, the green revolution, and recent advances in food engineering did much to put to rest predictions of food supplies falling short of the needs of an ever growing world population. Technological improvements in transport and logistics have meant that fresh foods can be sourced from anywhere in the world. Agri-food, like many other sectors, is truly global.<sup>1</sup> Exploitation of economies of scale in farming, food processing, distribution and retail have contributed to drastic reductions in costs and in the number of farms and firms.

Our “domestic champions” in distribution and retail, Loblaws, Sobeys and Metro which are respectively the 6<sup>th</sup>, 12<sup>th</sup> and 17<sup>th</sup> largest North American food retailers in terms of 2010

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<sup>1</sup> A Brazilian firm, JBS, has recently become the world's largest meat processor thanks to its takeover of Smithfield's (USA) beef business, Australia's Tasman group and a 50% stake in Italy's Inalca.

sales,<sup>2</sup> must compete with “global champion” Walmart, Canada’s largest grocer and private sector employer (Freeman et al., 2011 p.487) and will soon have to contend with Target. The food retail landscape might end up being quite different five years from now and Canadian nationalists may not like the outcome.<sup>3</sup>

Because of lifestyle changes, consumers are increasingly spending on further-processed and ready-to-eat foods. Worldwide, trade in processed agri-food products is increasing much faster than trade in primary agricultural products. Exploiting these and other economic opportunities will necessitate greater coordination between farms, processors and retailers. Canada is recognized as a major exporter of agricultural products. However, one wonders whether we have the right institutions (e.g. domestic and trade policies, regulations, property right laws, etc.) to remain competitive in a rapidly-changing world. In this article, we analyze the performance of different agri-food supply chains, with an emphasis on the farms and the institutions affecting their competitiveness.

### **Grains and Oilseeds**

Canada was the third largest wheat exporting country after the US and the European Union (EU) in 2010, the 4<sup>th</sup> largest barley exporter and the world leader in Canola exports. Grains and oilseeds (g&o) are doing well and should keep on doing well because of the rapid expansion of biofuels (fostered by energy and environmental policies) and increasing meat consumption in low and middle income countries experiencing rapid economic growth. The 1980s were characterized by very low g&o prices because of US and EU subsidies that favoured expanding production. An upward “correction” in g&o prices took place in the late 1980s during the GATT negotiations. The figure below shows that the corn price followed a slight downward trend between 1989 and 1999 reflecting productivity increases and reduced subsidies.

The ethanol boom in the US began in 1999 and since this point in time, we can observe a close relationship between corn and petroleum prices. Unfavourable weather conditions in large producing countries, like Australia and Russia, also added upward pressures on the level and volatility of prices during the last decade mostly because of the strong global demand. The 2008 spike was not limited to corn, as all commodity prices exhibited a similar pattern, and this created a food crisis. Millions of households in low-income countries saw their purchasing

<sup>2</sup> See <http://supermarketnews.com/profiles/top75/2011/> for the top 75 ranking.

<sup>3</sup> Foreign takeovers have allowed Canadian brewers to be integrated into much larger global firms. Molson merged with Coors in 2005 and Labatt is part of AnheuserBusch-InBev, the world’s largest brewer.

power melt and got deeper into poverty. Commodity prices, including the corn price, decreased in the second half of 2008, but they started rising again in the Fall of 2010.<sup>4</sup> The sensitivity of food prices to supply shocks and the closer link to volatile energy prices makes efficient risk management a priority along supply chains. . Farmers will have to make efficient use of futures markets and government programs will have to complement personal risk management strategies.

High prices imply higher returns on assets which eventually translate into higher asset values. Canadian agricultural land prices experienced rapid semi-annual growth rates of 7.7%, 5.8% and 5.9% between the beginning of 2008<sup>5</sup> and the second half of 2009 which contrasts with the 2-3 percent rates observed in 2010 and 2011. Land prices have already adjusted to higher commodity prices and should remain high, barring unforeseeable events. This should make entry and expansion more difficult, and increase the debt load of g&o producers. Similarly, fertilizer and seed prices have gone up as demand for farm inputs has increased. There is no doubt that the outlook of high g&o prices plays a part, but there are increasing concerns about the lack of competition among companies providing farm inputs, especially in the market for bioengineered seeds.

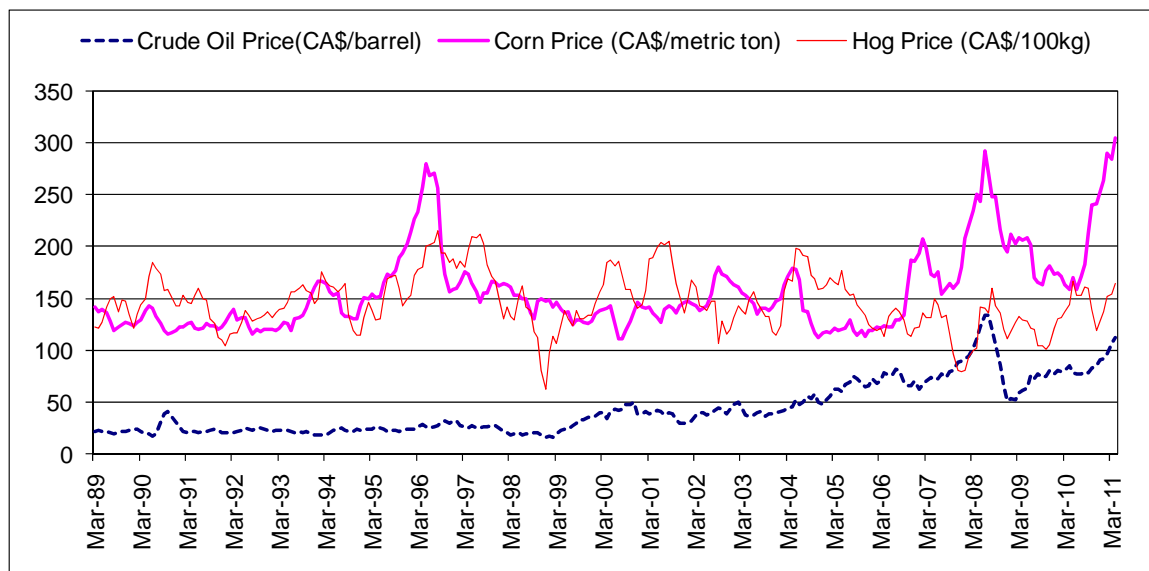


Figure 1: Linkages between commodity and energy prices between 1989 and 2011.

<sup>4</sup> Fortunately, the situation is not as bad as in 2008 because relief agencies are better prepared and rice prices did not increase as much.

<sup>5</sup> See <http://www.fcc-fac.ca/en/products/property/flv/spring2011/index.asp#nationaltrend>

The new majority government has already indicated that it would remove the Canadian Wheat Board's (CWB) monopoly on wheat and barley export and domestic human-use sales. The CWB is a marketing agency that came about because Western Canadian growers saw fairness in pooling revenues from all sales and believed that they could obtain better prices through the ability of a single-desk agency to exercise market power in international markets. This ability of the CWB will erode without its monopoly and so will its *raison d'être*. Agricultural economists are divided on the merits of this particular state trading agency. Some argue that the CWB causes inefficiencies and that farmers should have the right to market their grain as they wish. The CWB has been an irritant in Canada-US trade relations. It was (wrongly) accused of being a mean to illegally subsidize Canadian farmers.<sup>6</sup> It remains to be seen whether Western Canadian farmers will be better off with more marketing choices, but the change should sharpen their entrepreneurship.<sup>7</sup>

### **Red Meats**

Canada is the 3<sup>rd</sup> largest swine meat exporting nation and is 5<sup>th</sup> for beef and veal meat exports. Diseases (BSE in beef, H1N1 in pork) had a strong effect on the profits of livestock producers in recent years and so did the high Canadian dollar, high feed prices and changes in domestic programs and US regulations. Livestock inventories are slow to adjust and this is why livestock and feed prices are sometime seen moving in opposite directions. This can be seen by looking at the slope of the thick and thin lines representing corn and hog prices in Figure 1. Beef and hog prices are notoriously cyclical and farmers must be able to manage the ups and downs. Properly designed government programs can help in reducing risk. In Quebec (and very recently in Ontario), producers have been participating in a revenue insurance program known as ASRA for *Assurance Stabilisation des Revenus Agricoles*, to cope with risk.

ASRA guarantees a minimum price based on the average cost of production of surveyed producers. Premia are subsidized and the program is harmonized with Agri-stability, a Federal program which provide support when the current profit margin falls below 85% of a historical

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<sup>6</sup> Tamini, Gervais and Larue (2010) show that the CWB initial payment can be used as a strategic instrument against US grain marketers. Larue and Lapan (1992) also showed that the CWB's monopoly is conducive to exploit country-specific reputation effects.

<sup>7</sup> Australia had also created a wheat board in the 1930s. It converted its single-desk state trading agency in 1999 into a private company, AWB limited. The company was afflicted by scandals and poor performance. It was taken over in 2010 by Calgary-based Agrium.

average. Because ASRA payments are proportional to the volume produced, larger (and probably more efficient) producers get most of the assistance. The ASRA program was recently modified to mitigate this effect. Revisions now encourage producers to become more efficient by having lower per unit subsidies for larger farms and by excluding less efficient farms in the determination of representative costs of production. ASRA was not included in Canada's aggregate measure of support which is subject to WTO negotiated reductions because it was shielded by the *de minimis* provision which allows trade distorting support as long as the support represents less than 5% of the value of domestic production. It will be difficult to hide cost-of-production based programs under a potential Doha agreement because the *de minimis* threshold is expected to be significantly reduced and the introduction of product-specific liberalization constraints. Agri-stability has shortcomings as well. The timing of payments has been an irritant and the effect of successive "bad years" on the reference margin has been a concern.

Country-of-Origin Labelling (COOL) is a US program that forces US retailers to inform consumers about the origin of the meats they sell. Because US meat processors must segregate foreign cattle from domestic ones and incur costs when handling imports from Canada, some have decided to no longer import live cattle from Canada. The good news is that this trade-distorting regulation may not be consistent with WTO practices.

The processing sector has made strides to become more competitive in the face of a strong Canadian dollar and smaller single-shift plants. First, wages paid to unionized workers are now more in line with wages paid in competing countries like the US. In 2007, Olymel, the largest hog processor in Quebec hired former Premier Lucien Bouchard to convince workers to accept a 30% pay cut! At about the same time, Maple Leaf Foods announced its strategy to diminish its involvement in hog slaughtering to focus on further processing. Efforts are being made to facilitate vertical linkages to better cater to differences in consumer demand at home and abroad. Investments in genetics and documented production processes under various types of contractual arrangements are being implemented. Still, there is much heterogeneity in hog production and this is why a federal program was put in place in 2009 to buy out less efficient farmers. Many farmers are experiencing financial difficulties and the decline in the number of farms will persist. Red meat prices should continue to increase and the beef and hog sectors should bounce back in spite of the strong Canadian dollar and high feed prices, but the role of marketing boards is changing as the supply chains become increasingly integrated.

### Supply-Managed Sectors

Dairy, chicken, turkey and eggs sectors operate under a supply management (SM) policy. The basic idea is to restrict primary domestic production and imports of primary and related processed products to generate higher prices at all levels of the supply chain. SM sectors are not export-oriented sectors and they are primarily located in Ontario and Quebec. The restricted quantities to be marketed bring high and stable returns to primary producers, input suppliers, processors, and retailers which all share what amounts to a large transfer from consumers. As indicated earlier, high returns get capitalized in sector specific assets. In SM sectors, high returns are capitalized into production quotas that producers must own to be allowed to produce.

In the dairy sector, the price of production quotas increased rapidly during the early 2000s and price ceilings were imposed on quota sold in Quebec and in Ontario. The price is capped at \$25,000/kg of butter fat/day which is well below prices paid in other provinces.<sup>8</sup> As a result, the volumes of quota sold in Quebec and in Ontario are very small, which makes it virtually impossible for producers to expand. Given that 2010 average herd sizes are very small in Quebec (57 cows) and in Ontario (76 cows), that US dairy farms with 1000-5000 cows are not rare and that Mosheim and Lovell (2009) found no end to economies of size, one can only be worried about current and future productivity. In spite of SM, the number of dairy farms is declining, as there were not quite 13,000 dairy farms in Canada in 2010, down from over 29,000 in 1993.<sup>9</sup>

In the chicken industry, growth in interprovincial competition for live chicken induced the imposition of ad hoc bans. Interprovincial trade in this context can be likened to what Brander and Krugman (1983) call reciprocal dumping. Allowing the free flow of goods and increased competition is the best policy even though what is interprovincially traded could be produced and sold at home without incurring transport costs. The chicken industry is in a different situation relative to the dairy industry, in spite of the trend toward fewer but larger farms, because the growth in per capita poultry consumption. The last year the OECD published

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<sup>8</sup> See <http://www.dairyinfo.gc.ca/pdf/quota11.pdf>

<sup>9</sup> See [http://www.dairyinfo.gc.ca/pdf/farms\\_shipping\\_milk.pdf](http://www.dairyinfo.gc.ca/pdf/farms_shipping_milk.pdf).

producer support estimates (PSE) by product was 2004 and at that time, the PSE for poultry was 4% while for milk it was 52%!<sup>10</sup>

SM products may not all fit in an eventual sensitive products list under a Doha agreement. Sensitive products would be subject to less aggressive tariff liberalization, but minimum access commitment would have to be expanded, thus compounding the small size problem alluded to previously. The short run future of SM sectors depends on what will happen with the Doha Round, but in the long term, the competitiveness of the SM supply chains lies with the capacity of processors to keep innovating and developing new differentiated ready-to-eat products.

### Conclusion

The agri-food sector has experienced rapid productivity growth throughout the supply chain and across all commodities. Certain commodities are currently positioned better than others in terms of global competitiveness. Whether this will be enhanced or diminished depends on current and future investment in research and institutional choices (e.g. policies, laws, regulations). Canada will always remain challenged in its quest to capture economies of size relative to the United States. Attempts to reduce the heterogeneity in costs of production between farmers might accelerate the trend toward fewer and larger farms. Enhanced vertical coordination between individual firms and farms along supply chains will undoubtedly enable quicker reactions to changes in the market place. However, it also entails a diminished role for marketing boards and producer associations and we will have to increasingly view farmers as entrepreneurs.

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<sup>10</sup> PSE takes into account direct and indirect measures of support. See [http://www.oecd.org/document/54/0,3343,en\\_2649\\_33727\\_35009718\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/54/0,3343,en_2649_33727_35009718_1_1_1_1,00.html)



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