



TD Economics

Special Report

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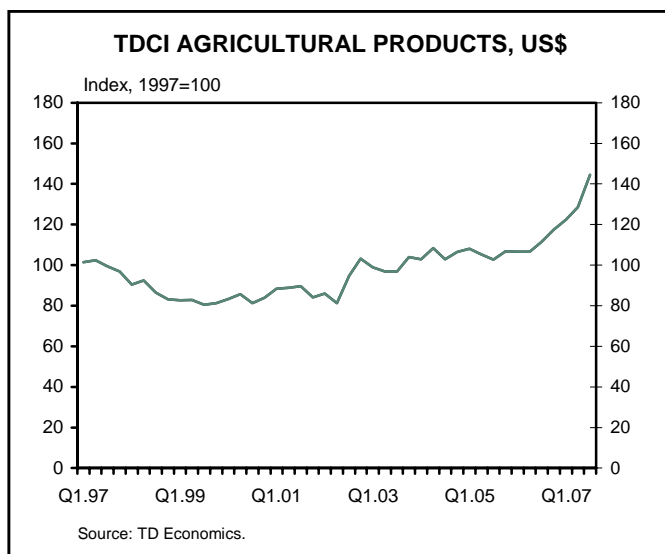
CANADIAN AGRICULTURE BEGINS A NEW ERA *Growth Opportunities Abound*

Canada's agriculture sector is accustomed to dealing with adversity. But the past half decade has to rank as one of the most challenging periods on record. Since 2002, the fortunes of the sector have been pummeled by a number of unexpected surprises, chief among them include a soaring Canadian dollar, elevated energy prices, bovine spongiform encephalopathy (BSE), drought, and avian flu. Yet through ongoing efforts to adapt and adjust, many agricultural producers have emerged from this period in a position of strength, with the sector as a whole retaining its status as an important driver of productivity and prosperity in this country.

In recent months, agriculture has moved to centre stage, but not because of stories of challenge or hardship. Instead, the pendulum has recently swung to the sector's unprecedented opportunities – and not just for farmers but the entire agricultural value chain. Heightened efforts

HIGHLIGHTS

- **Through ongoing efforts to adapt and change, the agriculture sector has retained its status as a key driver of productivity and prosperity in Canada**
- **Longer-term outlook for many agricultural prices ratcheted up in recent months, brightening the sector's fortunes**
- **Still, rising input costs and a strong loonie will remain a significant challenge**
- **Consumer attention on the environment, health and food safety is creating unprecedented growth opportunities for agriculture and agri-food**

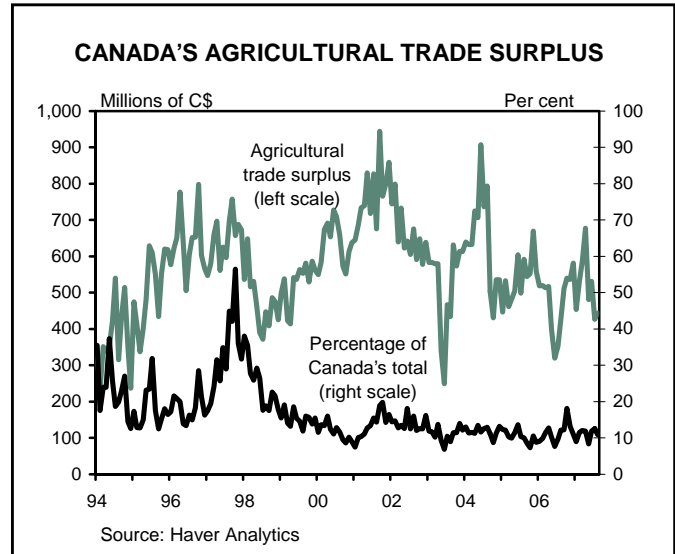


globally to develop new energy sources and meet rising emerging market demand for food have led many forecasters of late to ratchet up their medium-term agricultural price forecasts. The increased public emphasis on the environment, food safety and health is opening the door to significant potential in areas such as bio-products and organics. Canada's farming and agri-food community is well-positioned to take advantage of these opportunities, although the extent to which success occurs will partly boil down to the effectiveness of government policy.

Agriculture a critical cog in Canada's economic wheel

Reflecting in part a world-wide shift towards urbanization, the nation's primary agriculture sector, or upstream crop and livestock activities, has witnessed a gradual decline in its share of total national output, falling from about

25% in 1900 to about 5% in the late 1970s then to 1-1.5% of GDP in recent years. But while the importance of primary agriculture appears modest at first glance, it remains at the core of a much larger agri-food system, which encompasses processing and distribution activities. For instance, factoring in secondary food processing and input and service suppliers raises the GDP share to about 4-4.5% of GDP. Some estimates of the economic contribution of the agriculture and agri-food chain even take into account food service and food retail and wholesale industries. Based on that broad measure, the sector makes up a sizeable 8% of GDP and one in eight jobs in Canada. As the accompanying chart shows, the relative importance of agriculture and agri-business varies widely by province – with the highest reliance in P.E.I. and the prairies.

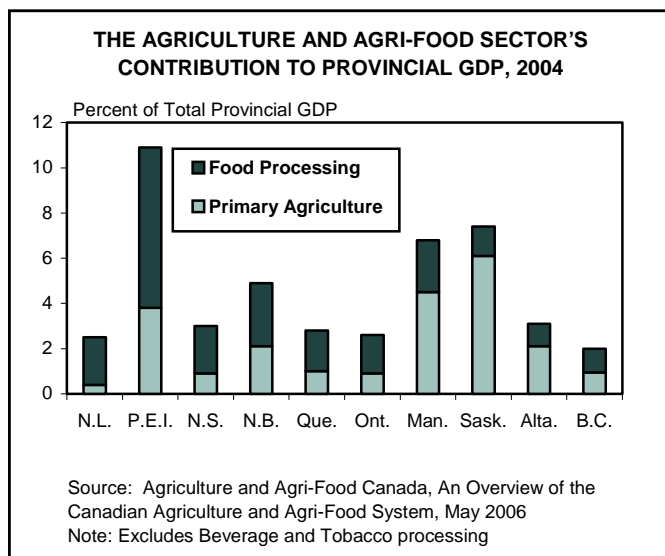
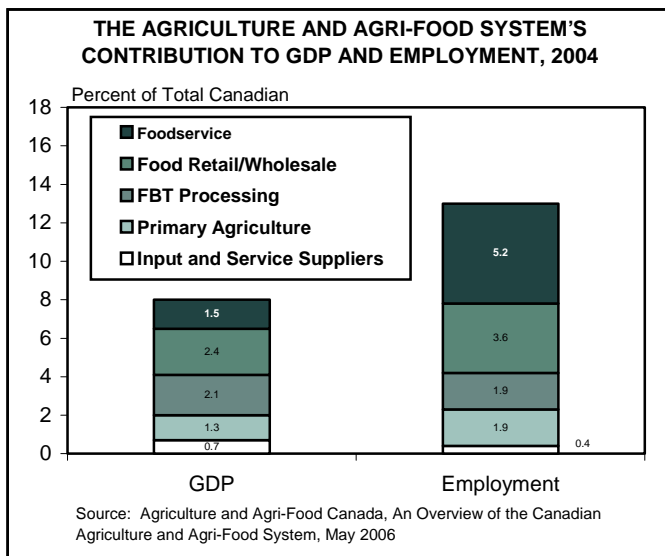


Agriculture and related businesses continue to throw their economic weight around in other areas. Supported by an increasingly integrated North American and global marketplace, the sector remains a major driver of exports – in fact, Canada is the world’s fifth largest agriculture and agri-food exporter after the European Union, the United States, Brazil and Australia. And notwithstanding the fact that Canada is also the world’s fifth largest importer of agricultural products, the area still makes a disproportionately high contribution to Canada’s overall merchandise trade surplus (\$6 billion or roughly 10% of the total). Grains and oilseed products, live animals and red meats account for more than half of Canada’s export sales.

The knock-on effects from activities in agriculture and agri-food to other areas of Canada’s economy are significant. For example, primary agriculture is a major user of energy products, machinery and maintenance and repair services, while food processing is a heavy consumer of paper, fabricated metal products, plastics, glass and glass products. On the supply side, agriculture and agri-foods is a key supplier of products such as fuel wood and cork, raw animal hides and animal and vegetable fertilizers.

New challenges arise over the past half decade

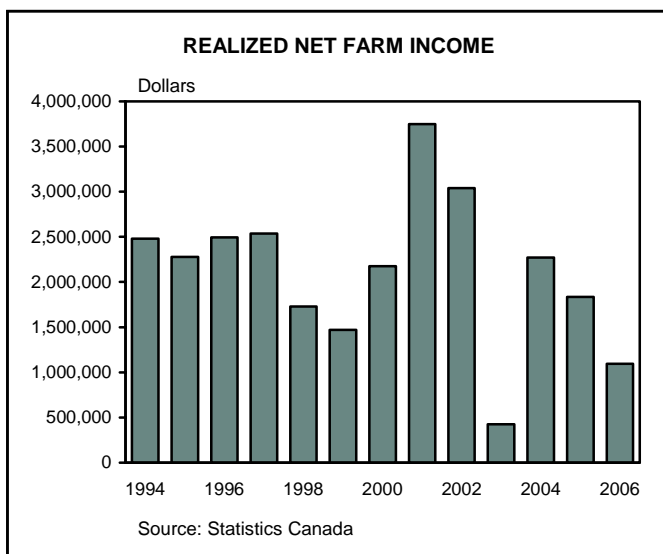
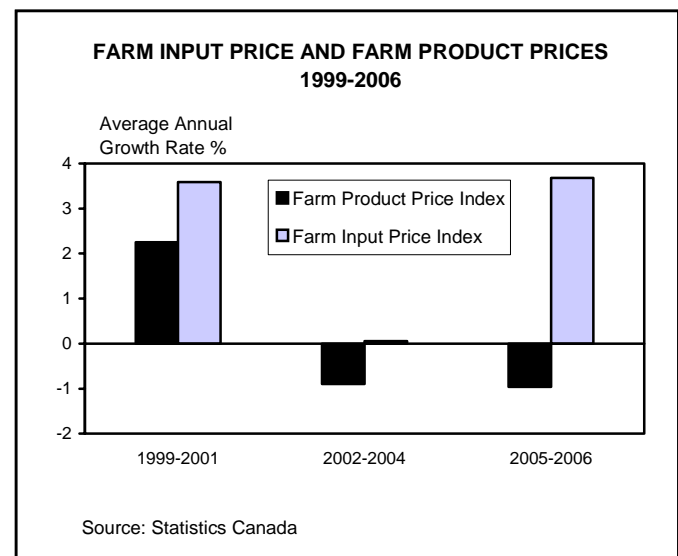
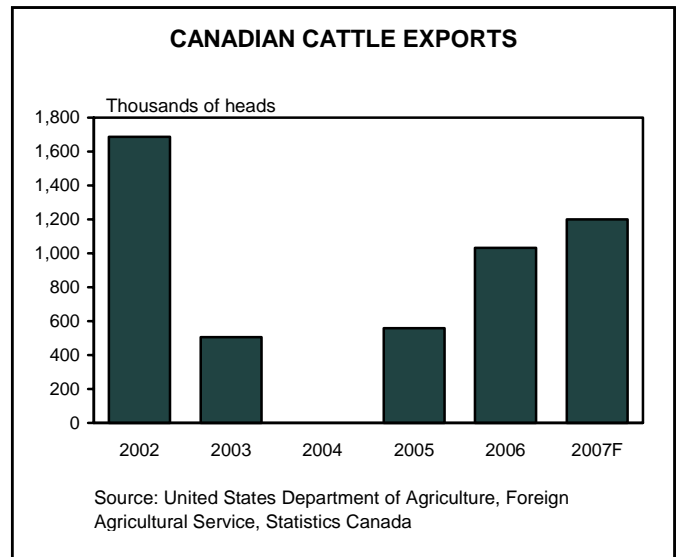
There has been no shortage of challenges facing the agricultural community over the past half decade. Not only have crop farmers been hit by difficult growing conditions – with average rainfall on the decline and temperatures on the rise – but the livestock industry has faced a barrage of surprises. The outbreak of avian flu – both at home and



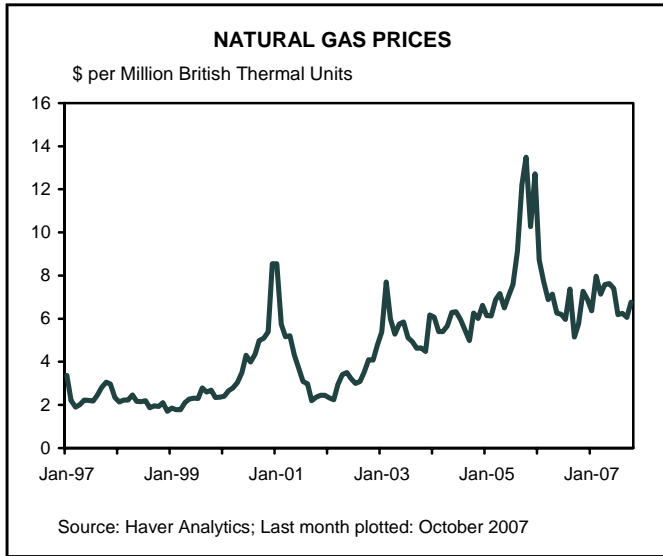
abroad – has adversely affected the chicken industry in Canada. Still, the most important development was the United States’ decision in 2003 to close its border to live Canadian cattle and beef exports after the discovery of BSE in Alberta. Although beef exports to the U.S. began flowing again later that year, it wasn’t until 2005 that the U.S. border was re-opened to live cattle shipments for animals under 30 months. About two years later, on November 19, 2007, the U.S. government permitted Canadian cattle imports of up to 78 months. While the U.S. actions were most detrimental to Canadian cattle and beef producers, other countries – including Japan and New Zealand – also imposed restrictions following the 2003 BSE incident that were slow to be lifted.

On top of these sector-specific challenges, few players within the agricultural arena have been immune to the squeeze on bottom lines that has resulted from the soaring currency and rising input costs. Agricultural prices are commonly quoted in U.S. dollars, so that a rising Canadian dollar reduces the returns to farmers after conversion. It shouldn’t come as much of a surprise then that the 60% surge in the loonie since 2002 has taken a real bite out of the operators’ revenues and left crop and livestock prices in real (after inflation) Canadian-dollar terms hovering at extremely depressed levels – that is, until recently, as we discuss in more detail on page 5. In the export-oriented food processing sector, the run-up in the currency has virtually eliminated any competitiveness advantage that has traditionally been enjoyed with its U.S. counterpart.

Meanwhile, agricultural input costs have been on the



rise. The rally in crude oil and natural gas prices over the past five years has hit the farming sector both directly, through higher diesel and gasoline prices and indirectly, through increased costs for fertilizer (where natural gas is an important input). Domestic rail freight rates and elevator company handling charges have been growing at a relatively muted rate over the past few years, but ocean freight rates have soared on the back of rising global trade activity and capacity shortages. While the cost of borrowing remains at relatively low levels, rates have been tracking upwards since early 2004. Property taxes have been increasing rapidly in certain parts of the country. Lastly, the agriculture sector has been faced with tight labour market conditions – particularly out west where producers have been competing with booming conditions in resource sec-



tors. As a result, rising wage costs have further pinched bottom lines.

With costs outstripping revenues, the persistent decline in real net income earned by Canadian farmers that has been observed since the mid-1980s has continued so far this decade. In 2005, for every dollar earned in gross sales, Canadian farmers paid out 83 cents to 91 cents in operating expenses.

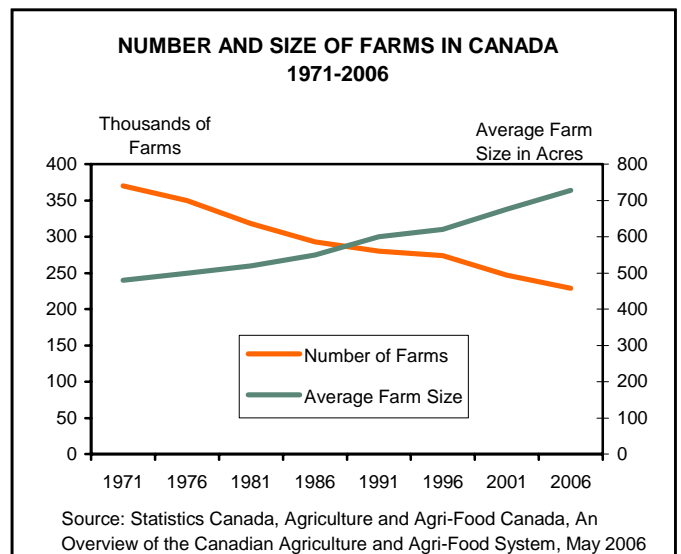
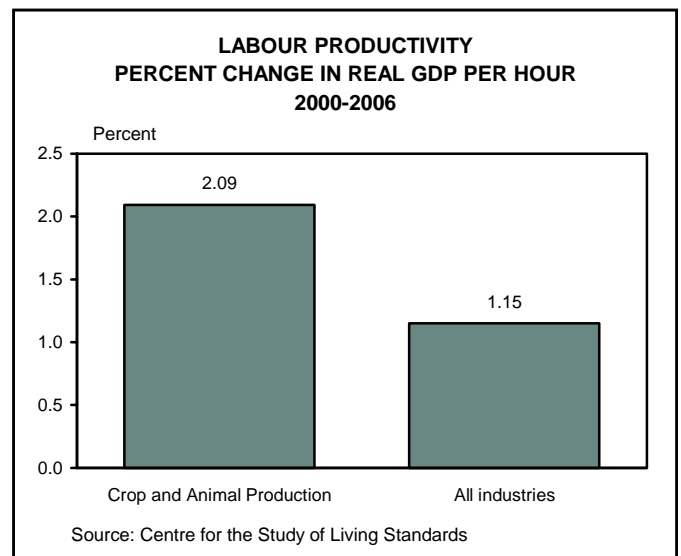
The sector responds

The recent release of the 2006 Agricultural Census, which covered the 5-year period ending in 2005, provided reassuring evidence that the nation’s agriculture sector is responding to many of the challenges on its doorstep. Especially notable have been moves designed to improve efficiency, raise economies of scale and lower costs. Over the first half decade, the average size, value of assets and net worth of the average farm continued to rise. The trend towards higher crop and livestock yields remained intact. There was also a shift in commodity export sales away from wheat and course grains towards oil seeds, red meats and special crops, which reflected further efforts to diversify and take advantage of areas offering greater revenue potential.

The farming community has been busy implementing new technologies and changes to processes and techniques in order to ramp up productivity. The ability of the industry to take advantage of the new equipment has been made more viable by declining prices. More specifically, although a rising Canadian dollar has a net negative impact on the

agriculture and agri-food businesses as a whole, there are some offsetting benefits – one being a reduction in prices of U.S.-made capital goods. A few examples of the productivity improvements include:

- Progress in grain inventory management, as evidenced by a drop in the average time grain spends in the system to 56.6 days last year from 67.4 days five years ago;
- Technologies to conserve energy and protect soil and groundwater;
- Innovative tracking systems for cattle and bison;
- Increasing and high level use of the internet, which includes development of websites and receiving information that helps with issues such as determining



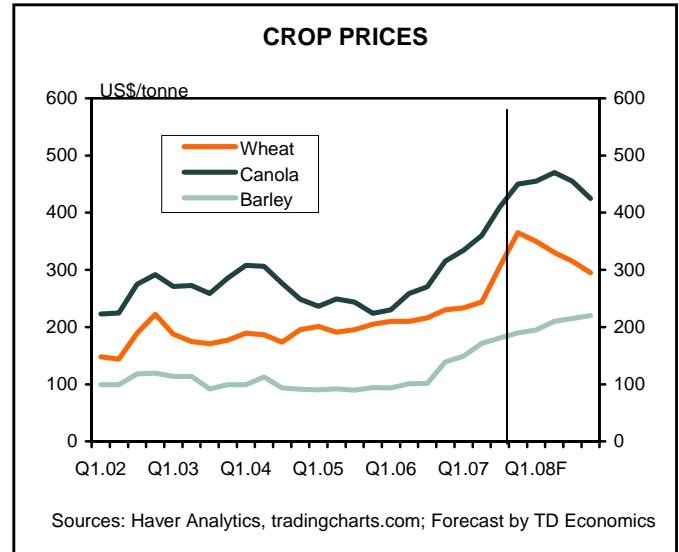
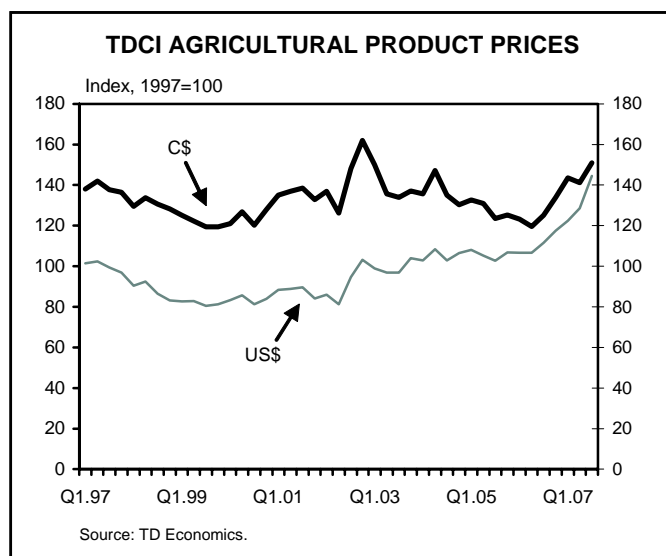
the cost and revenues of different crops, estimating food requirements of different types of livestock;

- Global positioning systems (GPS) designed to enable farmers to precisely locate and delineate field positions.
- Electronic bird-deterrent systems and new imaging technologies that can monitor soil properties, crop conditions and harvesting processes are being adopted.

The efforts to become more efficient have been borne out in data on labour productivity. Since 2000, annual productivity growth has averaged a brisk 2% per year for primary activities – twice the average pace of the overall economy. And while the productivity performance of food processors softened over the past half decade, it has perked up considerably since the Canadian dollar really began to gain legs in 2005.

Longer-term outlook for prices ratcheted up

In recent months, a more positive air has been blowing across the global agricultural landscape. Expectations have begun to build that the sector has entered a new era of high prices, supported by rising food consumption from emerging markets and the prospects of competing demand for crops as a source of bio-fuels. For Canadian farmers, it is about time. In 2002-06, prices for energy, base metals, precious metals and forest products were recording impressive gains – only agricultural prices were left out of the rally. So far this year, agricultural prices as measured by the U.S.-dollar *TD Commodity Price Index* have jumped by almost 40% on a year-over-year basis, outper-



forming changes registered in the other sub-indices and outstripping the 20% gain in the Canadian dollar. Increased investor demand through the development of a number of innovative financial products such as exchange traded funds (ETFs) have added fuel to the fire.

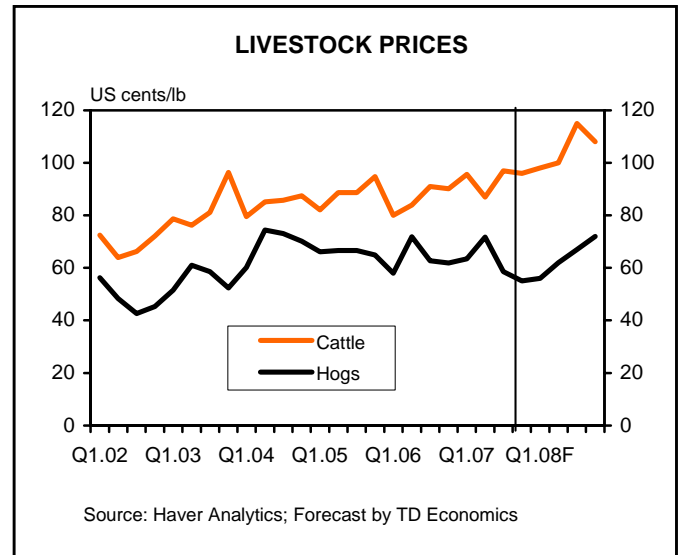
The strength in prices across the crop sector has been quite broadly based. Corn – and to a lesser extent, soybean prices – were the first to draw significant attention, when aggressive moves in the United States to spur ethanol and bio-diesel production drove up demand for those commodities in 2006. In particular, corn prices surged from US\$2 per bushel to US\$4 per bushel by the end of last year, which ultimately triggered a move to increase U.S. acreage devoted to corn at the expense of wheat and other crops. At the same time, poor weather conditions this year in the key wheat growing regions of Australia, the U.S, the Ukraine and the Canadian prairies, have dampened yields, sending world wheat stocks as a per cent of anticipated use (66 days) to the lowest level in modern history. Accordingly, wheat prices have surged to new records in 2007, while barley prices have been pulled along for the ride. In the canola market, where drought in Australia has dampened the supply outlook and excitement about the commodity's prospects as bio-fuel's feedstock has gathered momentum, prices have also rallied significantly. In contrast, corn prices have lost some ground in 2007, owing to a 10% increase in world production, but remain reasonably high.

The rally in crop prices has been presenting an added challenge for livestock producers, given that feed costs are an important share of their cost base. North American

cattle producers have responded to these higher costs by reducing herd sizes, which has helped to shore up prices. In the hog market, however, there has been little reprieve on the price front, as the spotlight has remained on lofty inventories of hogs on farms reflecting reductions in hog-processing capacity over the past few years. For example, largely in response to the strains inflicted by a high Canadian dollar, Canada's Maple Leaf Foods announced in late 2006 that it would forge ahead with a 3-year plan to rationalize its pork processing operations in order to focus growth on its value-added packaged meat and meals businesses.

Given that part of the strength in crop prices is the result of temporary factors, such as drought-related supply shortfalls, we expect prices to fall back to some extent in 2008. Wheat, in particular, is vulnerable to increased supplies next year due to the likelihood of significantly higher plantings in the upcoming year. Furthermore, to the extent that some of the recent run-up in crop prices was driven by short-term speculative flows, some reversal seems likely. Not all agricultural commodity prices are expected to soften, however. In our view, the current ultra-low level of hog prices is not sustainable, although the projected recovery is expected to be a gradual one in view of the ongoing hog-processing constraints and continued above-average animal inventories.

Beyond 2008, the picture for prices is bright, as some of the trends that have captured attention this year are expected to remain in force. For one, growing demand in China, India and other emerging markets is likely to keep



overall global consumption of key agricultural commodities running at a brisk pace over the next 5-10 years, fuelled by rising populations and incomes. In fact, Canadian agricultural producers are already benefitting from a Chinese buying spree, especially canola. In 2006, exports of agricultural goods to China totalled more than \$1 billion, about double its level in 2002 and 14% of total Canadian shipments to the country.

Based on OECD FAO projections, consumption growth in the developing and transition economies through 2016 is expected to range from 0.5%-1% per year for wheat and rice to as high as 3% per year for meat and poultry products. Production growth rates in the developing markets

CONSUMPTION AND PRODUCTION ANNUAL GROWTH RATES, 2007-2016						
	Production (%)			Consumption (%)		
	Total	OECD	Non-OECD	Total	OECD	Non-OECD
Wheat	0.7	1.0	0.5	0.8	0.9	0.8
Rice	0.9	0.1	1.0	0.9	0.1	1.0
Coarse grains	1.2	1.2	1.3	1.2	0.9	1.5
Coarse grains used for feed	1.0	0.5	1.5	1.0	0.5	1.5
Oilseeds	2.1	1.3	2.6	1.9	1.3	2.2
Oilseed meal	2.1	1.4	2.5	2.1	0.9	3.2
Beef	1.5	0.2	2.4	1.5	0.2	2.4
Pig meat	1.7	0.4	2.3	1.7	0.5	2.2
Poultry meat	1.9	1.0	2.6	1.9	1.1	2.4

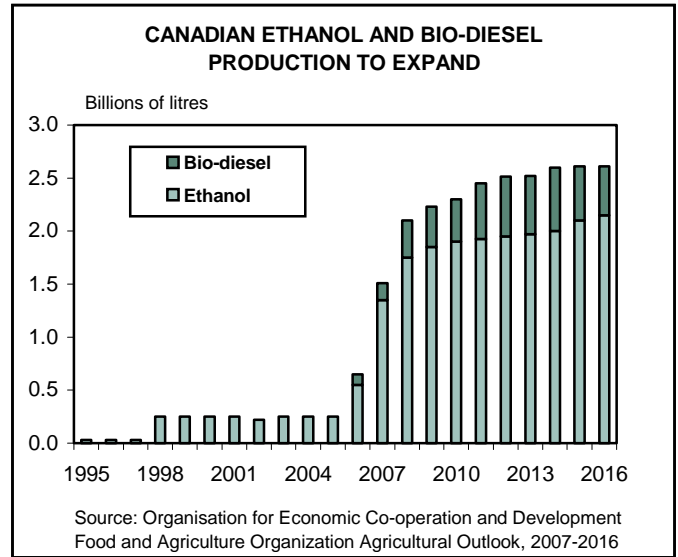
Source: Organisation for Economic Co-operation and Development Food and Agriculture Organization Agricultural Outlook, 2007-2016

are also expected to accelerate in lockstep – led by an ever-increasing supply presence of Argentina, Brazil and China. But in some cases – such as wheat and coarse grains – consumption is still projected to exceed production.

Second, we don't expect any monumental slowdown in efforts to derive energy from agricultural products. Certainly, there are global barriers to the development of bio-fuels from agricultural feed stocks, notably high costs of production, the reliance on government subsidies and concerns about food price inflation in food-importing developing markets (the so-called "food versus fuel" debate). Still, in light of recent upward adjustments to crude oil forecasts and the United States' desire to diversify away from overseas crude oil imports, renewable energy sources derived from grains, cellulosic ethanol, bio-diesel and solid waste will remain at the forefront.

Compared to both the U.S. and the European Union, bio-fuel production in Canada is small in absolute terms, but is growing quickly, supported by the federal government's announced intention to mandate a 5% ethanol blend in gasoline by 2010 and a 2% bio-diesel blend in on-road diesel and heating oil by 2012. The federal government and provinces have also implemented incentives programs to help achieve stated medium-term objectives on energy and the environment. By 2009, the OECD estimates that global bio-fuel output will surpass 40 billion litres per year, up from the current level of about 20 billion.

Underpinned by these structural factors, U.S.-dollar ag-

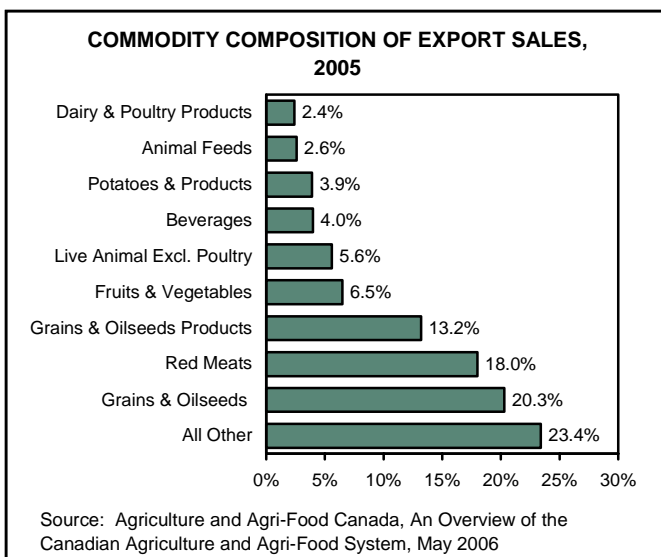


ricultural prices are likely to remain relatively elevated over the foreseeable future. That message was echoed in the latest OECD-FAO Agricultural Outlook, which revealed an upgrade in the organization's 10-year price outlook.

Cost pressures will remain a challenge

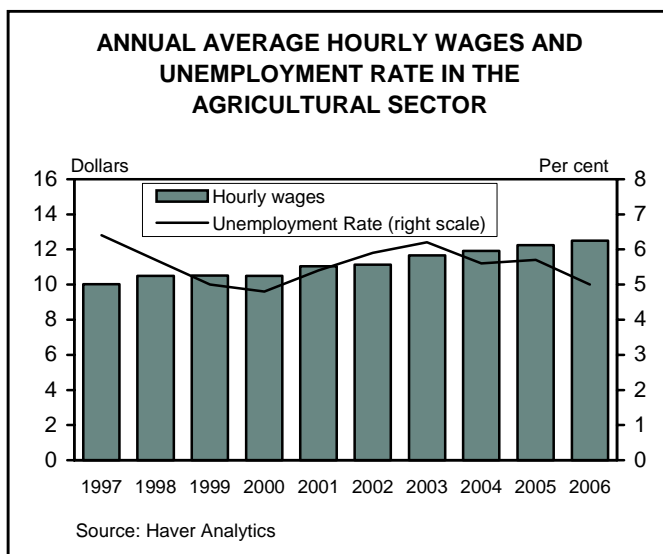
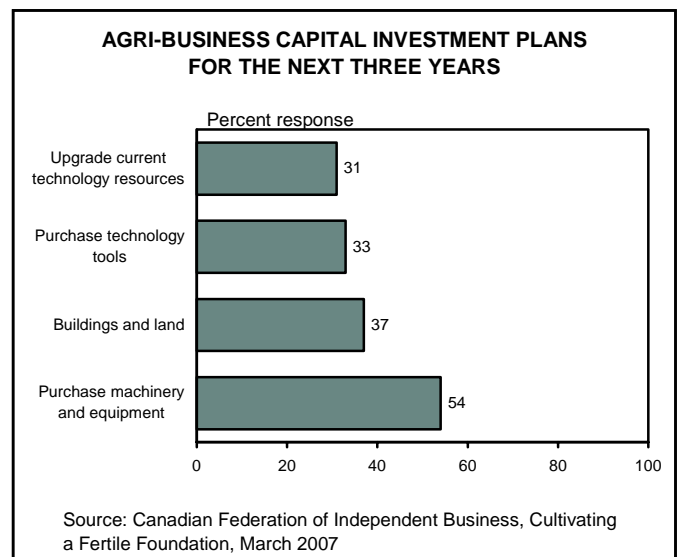
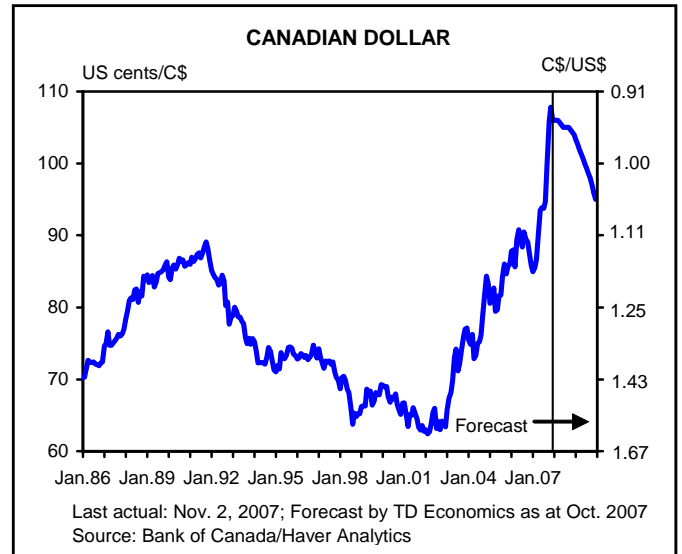
The higher-price environment over the medium term will be welcome news for farmers, providing opportunities to reap higher returns than in the past. At the same time, however, improvements in profit margins will be limited to some extent by other factors, notably on the cost side:

- *No significant relief on the interest rate front forthcoming.* In response to the growing downside risks to economic growth and inflation, the Bank of Canada is projected to lower its overnight rate by 50 basis points over the next few months. Still, with both the U.S. and Canadian economies expected to avert a major downturn, we believe the scope for more significant rate cuts is limited. At the same time, short- and long-term bond yields are likely to drift upward by 50-75 basis points by the end of 2009.
- *Energy and fertilizer prices will remain high by historical standards.* With support from rising demand from emerging markets, crude oil prices are likely to hold above US\$65-70 per barrel over the next few years. The recent softness in natural gas prices could provide some near-term relief to farmers through lower nitrogen fertilizer prices. Still, we expect natural gas prices to rebound in 2008 to about US\$8 per MMBtu and to



average in the US\$8-9 range in 2009-10.

- *Competition for labour will remain fierce.* TD Economics expects Canada's unemployment rate to remain low over the medium term – less than 7% – partly reflecting the dampening impact of an aging population and declining labour-force participation rate of older Canadians on growth in the national labour force. Hence, little easing in wage pressures can be expected.
- *Strong international trade will likely keep freight costs advancing.* Fuelled in part by robust demand for coal in China and Indian, ocean freight rates for dry bulk cargoes are expected to increase at a 5% average annual clip through 2010. Some moderation in cost increases could occur at the tale end of the decade when a large number of new vessels hits the market.
- *Canadian dollar will remain strong.* The Canadian dollar could rise even further over the next few months as the U.S. economy encounters housing-related problems and the greenback comes under further bouts of selling pressure. However, by almost any measure – including relative productivity differences between the two countries – the loonie is over-valued at its current level of about US\$1.01 and should fall back towards 95 U.S. cents, albeit not before 2009. With the euro following a similar trend, we expect the euro-Canadian dollar exchange rate to hold relatively stable. In contrast, the yen appears to be under-valued against major overseas currencies at current levels, so look for a significant strengthening in the yen-Canadian dollar in 2008-09 – in the order of 15-20%.



Summing it all up, the cost issue will not go away any time soon and the Canadian dollar, while over-valued, will probably not lose much ground over the next few years. As a result, producers will face ongoing pressure to contain costs and raise productivity. In this climate, the returns of investing in machinery and equipment (M&E) imports from the United States, which have been made cheaper by the strong loonie, appear substantial. Happily, higher capital investment appears to be on the horizon. A survey conducted earlier this year by the Canadian Federation of Independent Business (CFIB) revealed that more than half of small and medium-sized businesses in the agriculture and agri-food business plan to boost M&E spending.

Unprecedented opportunities ahead

Looking beyond some of the shifts taking place in pricing and costs, the farming sector – and the overall value chain – appears to be chartering through a period of unprecedented change and potential to become an even bigger driver of Canadian economic growth down the road. The consumer attention placed on the environment, health and food safety is altering tastes and opening the door to new products that best meet those needs. We have already touched on one area – bio-fuels – but there is no shortage of others. With an increasing number of individuals in Canada and abroad taking an active interest in tracking their food from field to dinner table and eschewing pesticides, antibiotics or hormones, the organic business is

booming. Since 2001, the number of certified organic producers in Canada has jumped by 60%, while a growing number of retailers are joining the bandwagon.

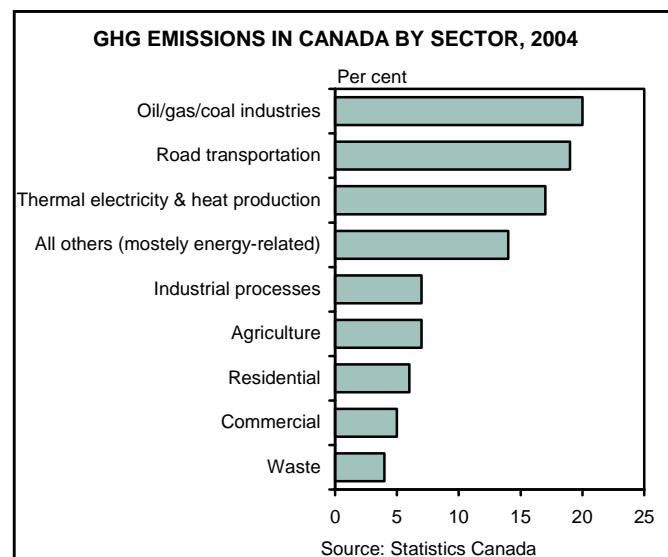
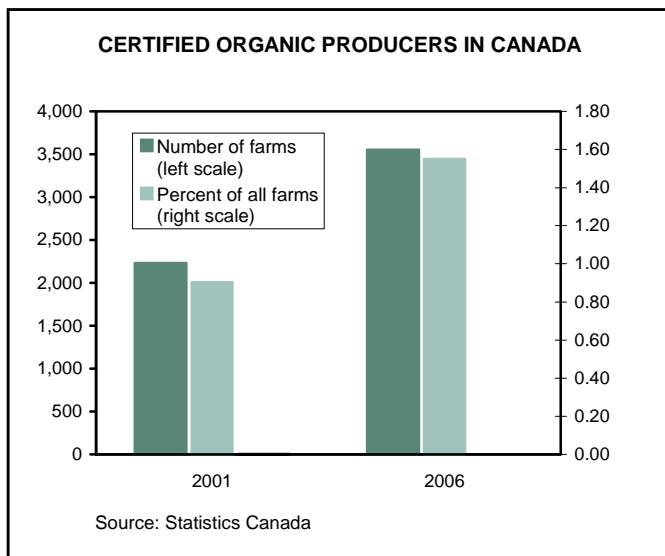
Concerns about the environmental impacts of transporting goods across the world have also spurred other changes in buying behaviour. The “100-mile diet” – which was coined by Canadians James McKinnon and Alisa Smith following their personal experiment of living off food grown within a short radius of their home – is case in point. The number of followers of the diet remains small, but the movement has been garnering increased attention in North America and worldwide and is likely to continue expanding in the future. Lastly, over the longer run, climate change will lay the seeds for new crops to be successfully developed on Canadian soil.

These sweeping trends underway will have a number of implications for the future of farming and food production. While efforts to further increase the scale and scope of Canadian farms should continue, the general movement toward more environmentally-friendly and healthy eating will provide opportunities for smaller niche players to charge premium prices for their products. In some cases, total distances of transporting food from field to table can be reduced by moving up the value-added chain. As well, the push to lower greenhouse gas emissions (GGEs) raises opportunities, but also challenges for the agriculture sector given that it accounts for about 5% of GGE emissions in Canada – above its share of total Canadian output.

Above all, for Canada’s agriculture and agri-business industries to succeed in flexing its muscles in the 21st century there must be stepped up efforts to innovate. Public and private research and development (R&D) expenditures across the food value chain have been increasing in Canada, but the overall intensity (i.e., spending to total industry revenues) remains relatively low and much lower than for total manufacturing. In addition, venture capital funding is in short supply. These trends will need to be reversed in order to generate significant inroads into plant science innovation that will set the stage – for example – for new crops from which biodegradable plastics and other bio-materials can be made as well as crops with improved tolerance to heat, cold, frost and drought.

Big role for governments

Certainly, ensuring adequate R&D and venture capital funding are two areas where the federal and provincial

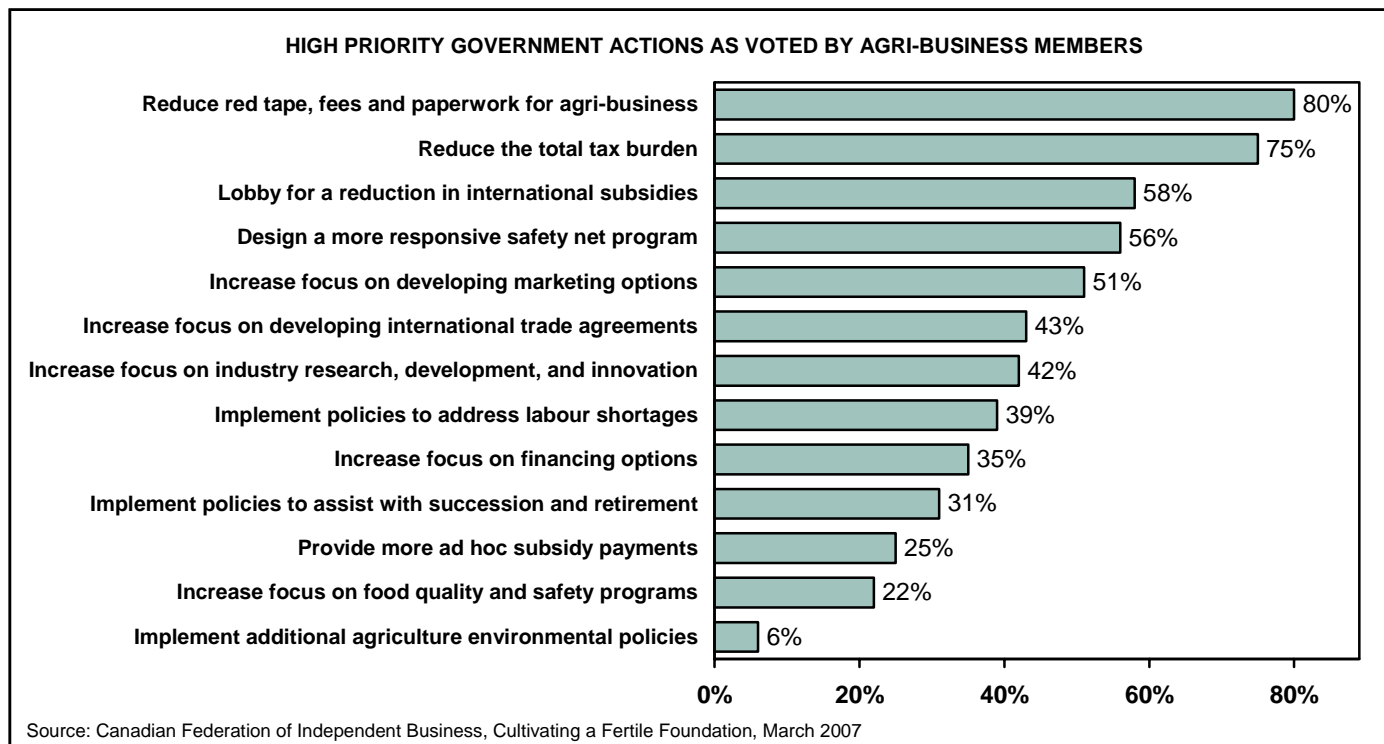


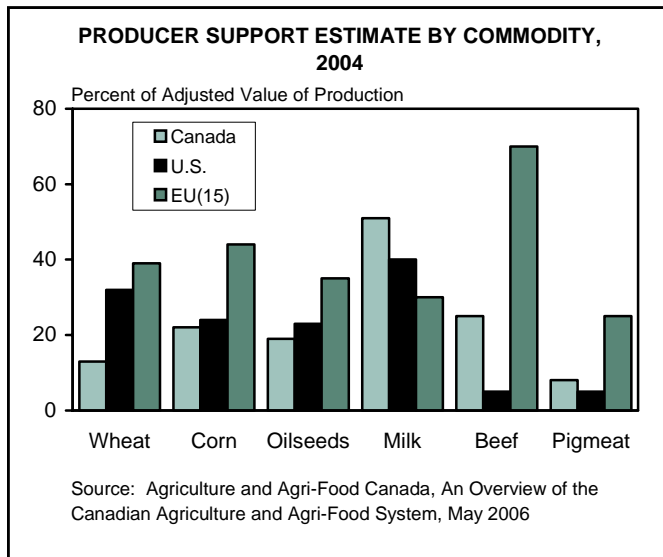
governments can play an increased role. But the need to further support research and commercialization activities just scratches the surface of the key stake that governments have in ensuring the success of Canada's agriculture and agri-food business. Regulation, taxation, trade and business risk management will loom large. And indeed, the next 6-12 months will be a critical period, as the federal and provincial First Ministers hammer out the Next Generation of Agriculture and Agri-Food Policy – aptly named *Growing Forward* – to replace the out-dated 2003 agreement.

In March 2007, the CFIB – which represents 6,500 agriculture businesses across Canada – released a comprehensive survey of its members' views on the agriculture policy landscape. The chart below reveals the priority levels that the governments should place on specific actions as they related to assisting the businesses of the members. Some of the responses will not raise many eyebrows – for example, the high priority attached to lowering the tax burden shows up on virtually every small business list. And, indeed, the federal government's commitment earlier this month to accelerate by one year the previously-announced 1% reduction in the small business corporate income tax (CIT) rate, together with deeper-than-expected cuts to the general CIT rate, will be welcomed by the sec-

tor. Somewhat more surprising was the fact that reducing red tape, fees and paper work was ranked number one on the survey. And the source of concern was not solely related to food safety. Regulatory compliance on sales tax, workers' compensation/occupational health and safety and employment standards were viewed as major barriers to growth.

Also featuring prominently was the need for governments to lobby for a reduction in international trade subsidies and increasing focus on developing international trade agreements. Canadian farmers have enjoyed increasing access to the U.S. market since NAFTA was put in place. But more recently, there have been some setbacks. On June 1, 2007, the U.S. government not only implemented a charge on cross-border traffic entering the country, but there are two bills currently before Congress that would impose new inspection fees on imported food. Furthermore, mandatory Country of Origin Labeling (COOL) legislation on all beef, lamb and pork among other food products is poised to become effective in the United States September 30, 2008, which is tantamount to a non-tariff barrier to trade and will raise costs for Canadian and foreign producers. Some parties in Canada, however, view COOL as an opportunity given the country's reputation as a quality producer of safe food and the fact that its traceability sys-





tems for livestock are considered light years ahead of those in the United States.

Canadian producers also have much to gain by global efforts to reduce agricultural subsidies. On aggregate, government support for agriculture in Canada stands at about 30% of agricultural production, similar to the U.S. but less

than the 37% average for the OECD. Still, some areas of Canadian industry would be vulnerable from global efforts to lower subsidies. In particular, Canada's supply-managed milk industry enjoys much higher-than-average government support.

Unfortunately, the Doha round of WTO trade negotiations broke down in June 2007 due to an impasse between the U.S., EU, Brazil and Russia on disagreement over the subsidies issue and on trade liberalization in countries, including developing nations. Looking forward, it is hoped that the brightening prospects for crop prices might make subsidy cuts more palatable in international jurisdictions, breathing new life into the WTO talks. In the meantime, Canada can continue to seek out bilateral trade opportunities.

In June 2007, the federal and provincial governments released a vision for its new agricultural policy. The broad elements line up well with the list of concerns of industry, but the devil will be in the details. This policy presents a major opportunity to strengthen the longer-term foundations for growth in the sector. We are optimistic that it will not be squandered.

Derek Burleton
AVP & Director of Economic Studies
 416-982-2514

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