Agriculture et Agroalimentaire Canada | Agriculture and Agri-Food Canada

Market Volatility and the Food System a Canadian perspective

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PECC Pacific Food System Committee Annual Workshop

Washington, D.C., May 11-14, 2009

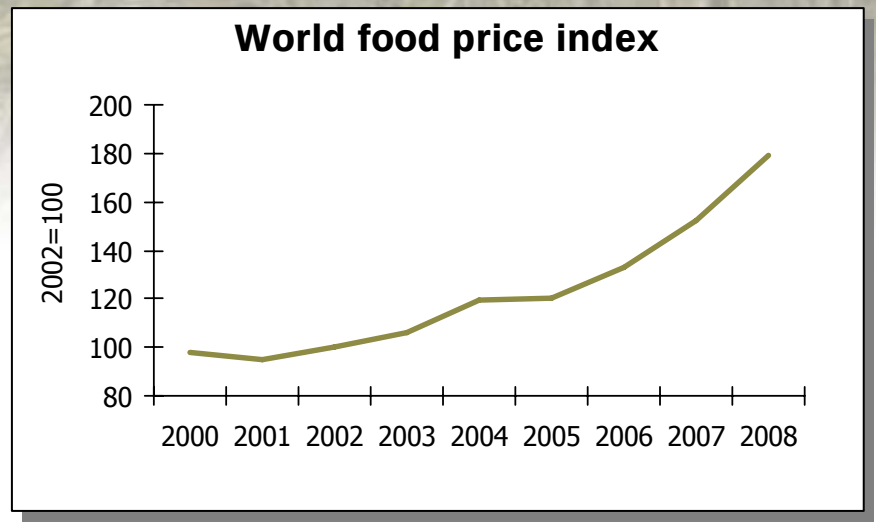
The authors wish to thank Cameron Short for his comments and input. However, views expressed, errors and omissions are those of the authors alone and do not reflect those of the Government of Canada.

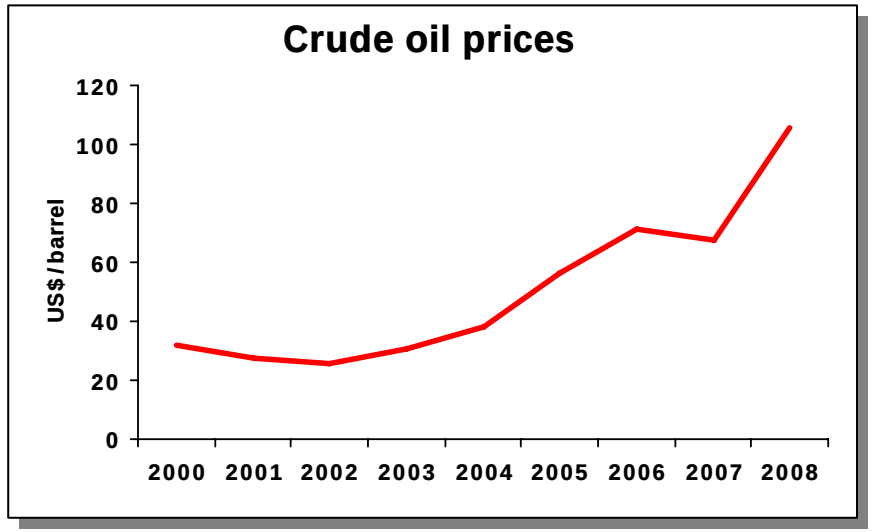
Canada

REVIEW AND DIAGNOSTICS

Recap: Commodity prices rose to unprecedented levels in the spring of 2008

- The World Food Price Index almost doubled between 2002 and 2008
  - In February 2008, wheat prices peaked at $762/tonne (CRWS #1), up from $271/tonne a year earlier
- The impact on consumers was a major issue around the world
- Between 2005-06 and the spring of 2008, crude oil prices jumped by 72% contributing to higher food prices
- Supply and demand factors had an impact: droughts, adverse weather, water shortages, income and population growth in developing countries, grain use by the biofuel industry, and record low stocks are also contributing



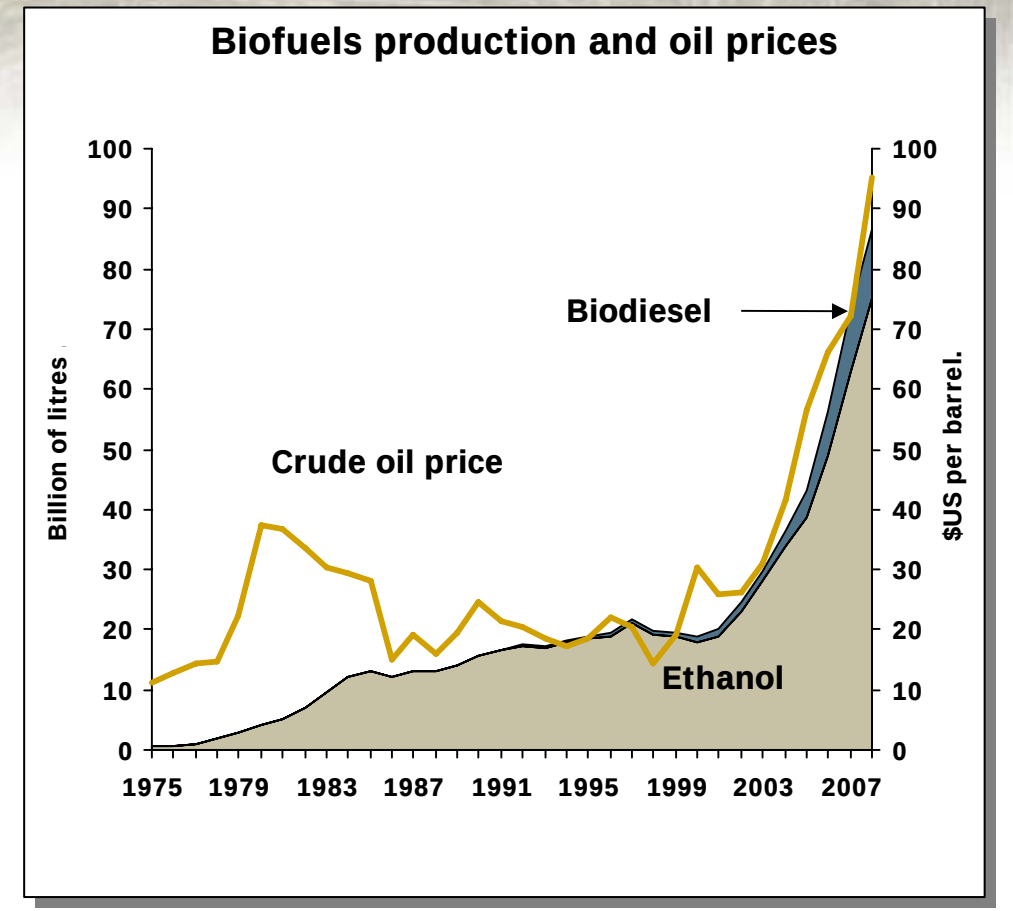


Weather, population growth and economic development all played a role

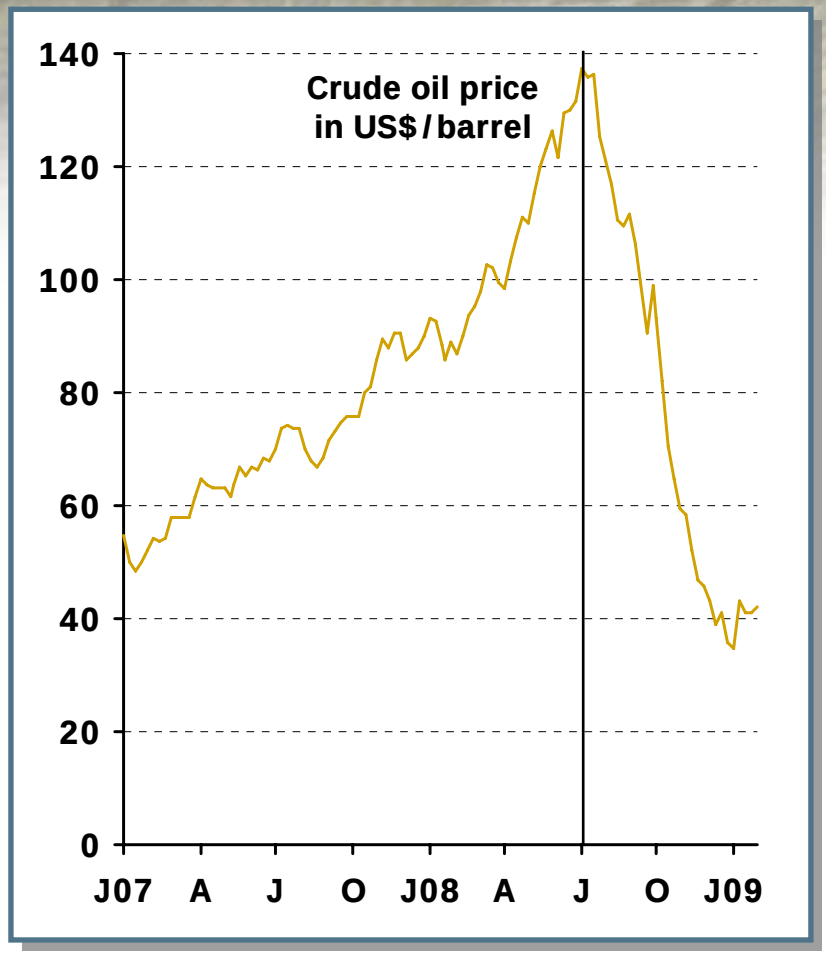
- Several factors reduced global production below trend in 2007-2008:
  - Australia suffered droughts in six successive years, seriously depleting ground water and soil moisture levels, while its wheat stocks fell to 30 year lows and its rice crop by a third
  - Production in Europe, Ukraine was below trend in 2007-2008 because of adverse weather
  - Water shortages and quality degradation had an impact on world production and prices
- At the same time, strong GDP and population growth, coupled with a rising middle class in many developing countries led to a greater demand for food
  - Food demand is growing because of world population growth. World population increased by 600 million between 2000 and 2007 reaching 6.6 billion
  - More importantly, income growth and the rise of the middle class in countries like Brazil, Russia, China, India and Indonesia are driving demand. As incomes rise, consumers consume less cereals and more meat, fish, poultry and dairy products, thereby boosting demand for grains and oilseeds as feed. This is a very positive development and not one to be lamented.

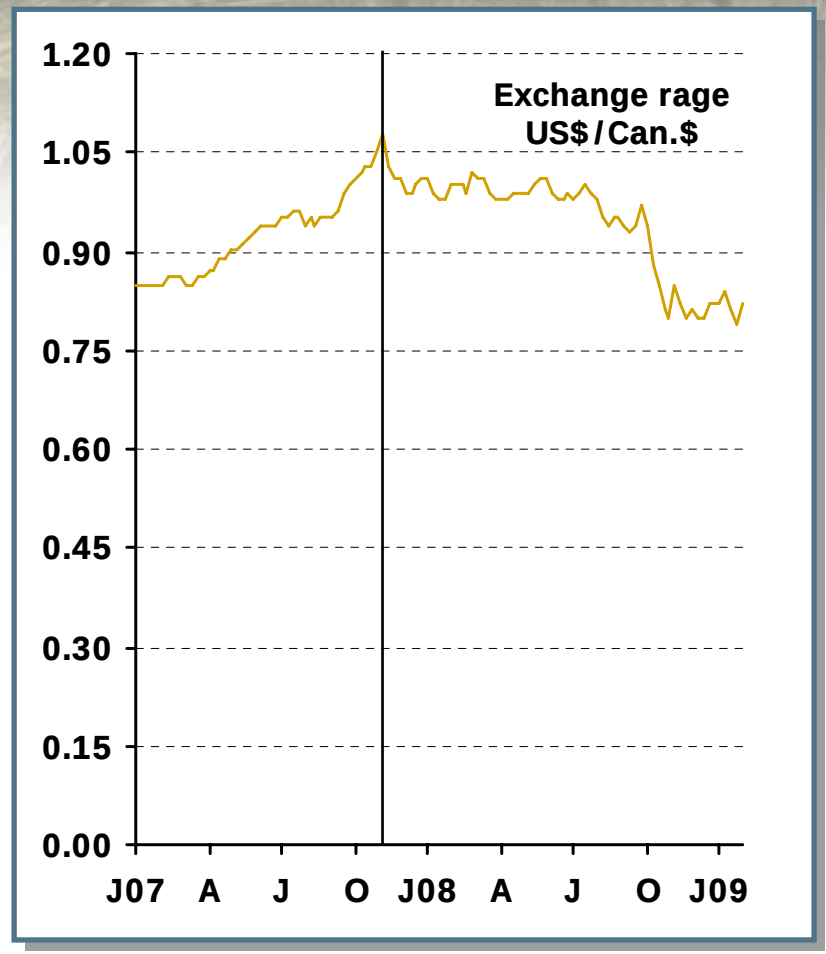
As the world supply and demand situation created pressure on world stocks and prices, concurrent developments in energy markets compounded matters

- Commendable and desirable growth in developed and large emerging economies drove up the price of oil and other fuels.
- Higher crude oil prices increased transportation and input costs for farmers
- Biofuel policies aimed at environmental concerns in the EU and energy security in the US spurred biofuel production
- U.S. ethanol production is expected to rise to over 42 billion litres in 2008-2009, requiring 31% of the U.S. corn crop, in comparison to 1% in 1999-2000.
- Ethanol and biodiesel production worldwide is exceeded 85 billion litres in 2007-08



Crude oil prices impact agriculture and nearly all other sectors of the economy – but exchange rate adjustments have had a partially offsetting effect for Canadians

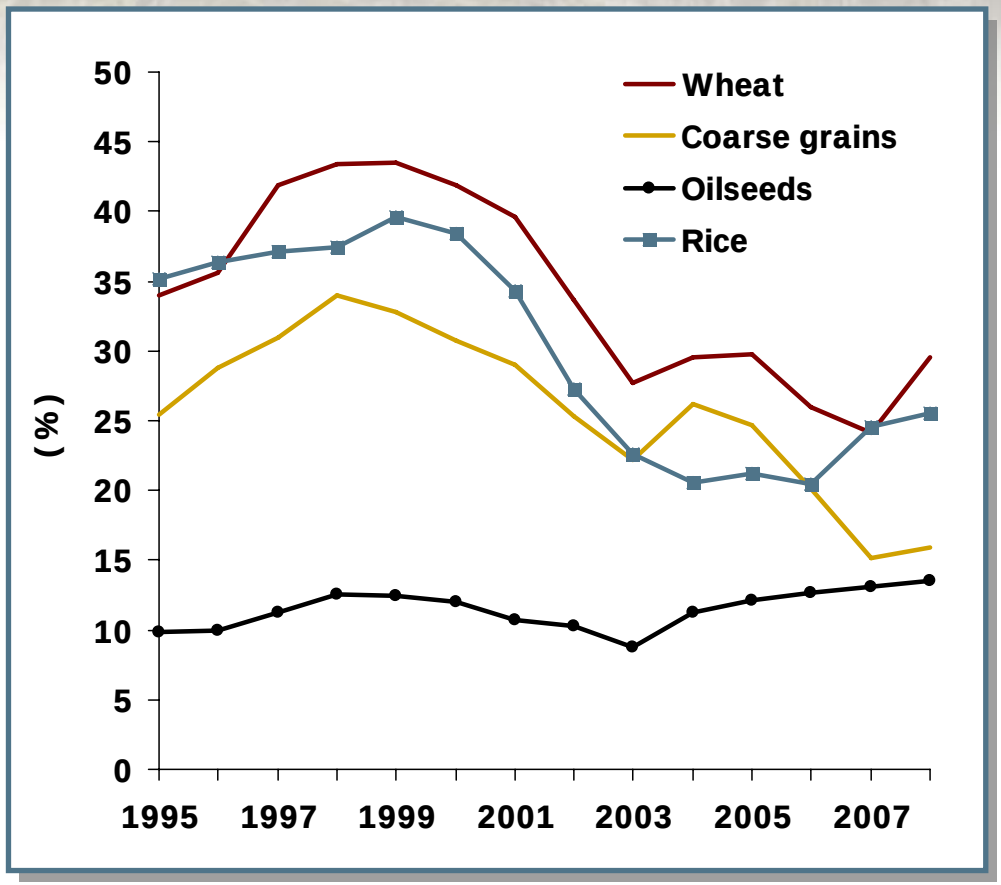




The crude oil price affects agricultural costs directly and indirectly through the prices of other inputs. It also affects demand directly for bio-fuel feed stocks and indirectly through transportation.

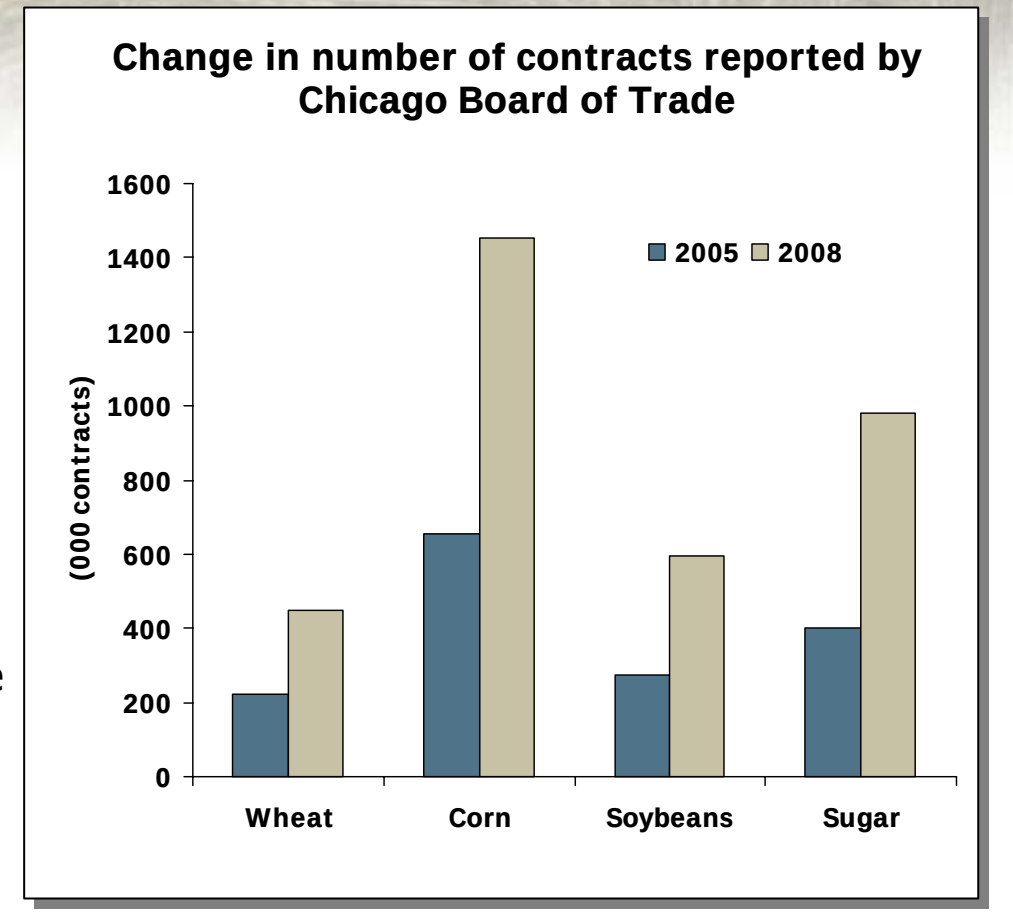
Volatility in commodity prices has been partly driven by low stock-to-use ratios

- In 2007-08 world stock-to-use ratios were drawn down to almost unprecedented low levels for most major staple crops
- These ratios are a good indicator of supply and demand conditions and the direction of change in prices
- This resulted in increased volatility of prices on futures and spot (cash) markets
- World stock-to-use ratios have improved but remain low in historical terms
- Global stocks are still too low to cushion a major production shortfall
- Overall, continued price volatility seems likely



Index funds, speculation, and investment hedging may have also pushed up food prices … but precise causality links are difficult to discern

- This played out against a backdrop of uncertainty in financial markets which may have spilled over into commodity and resource markets
- There was a large increase in the number of future contracts
- In the past, the US Commodities Futures Trading Commission limited participation by speculators and index funds
  - But index funds were exempted a couple years ago and in January 2008, they accounted for 40% of wheat trades

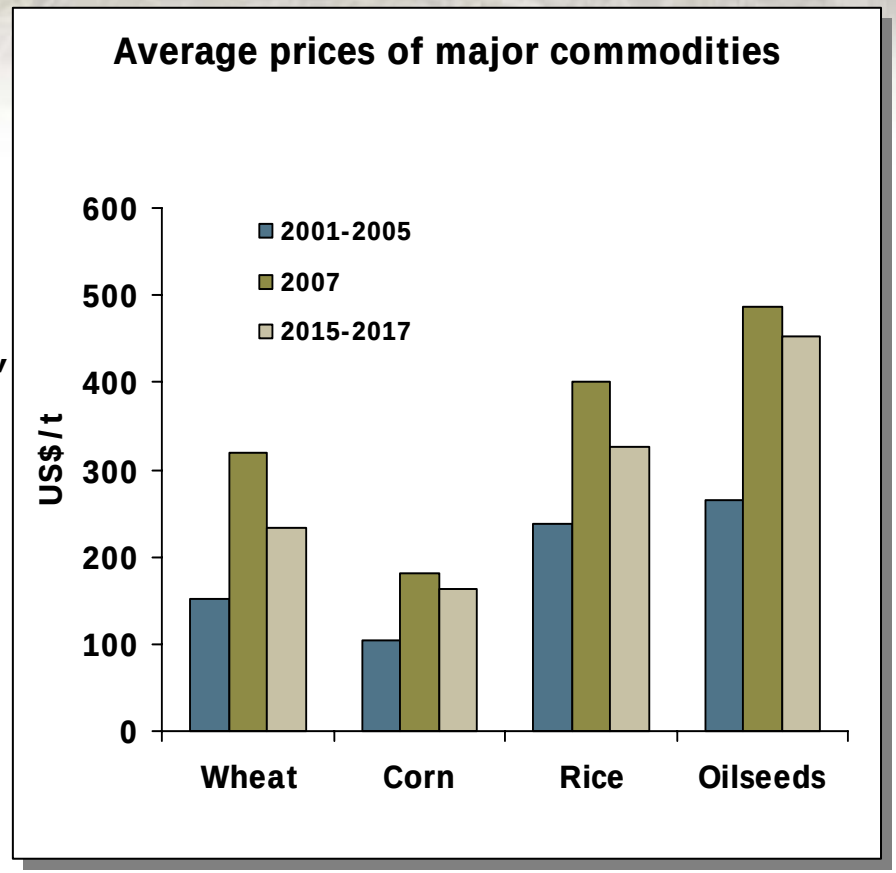


Preliminary analysis by leading international organizations evaluated the different factors that have contributed to the rise in cereal prices

- Some of their tentative conclusions were:
  - Rice price increases were mostly due to restrictions, hoarding and panic buying in thinly traded export markets (IMF)
  - If world biofuel production was held at its 2008 level, corn prices and wheat prices would decline 20% and 10% respectively in 2009 (IFPRI)
  - The slower growth in production resulting in lower stock to use ratios was been an important factor (USDA)
- However, the dynamics and interrelationships between the various factors are also important
  - Rising oil prices spurred biofuel production, and led to higher transport and farm input costs
  - Increased corn and edible oil prices had "knock-on" effects on the prices of other commodities competing with them for land

In spite of the downturn, world commodity prices are nevertheless expected to stabilize around a new plateau in the medium term

- Projections from leading think tanks (e.g. OECD, IFPRI, USDA-ERS) show world prices of grains in the medium term will be lower than in 2007-08, but still higher than in the past
- This comes about in part because of greater integration within the world economy and because of emerging technologies which tie food, fibre, fuel markets more closely together
- Meat and poultry prices will eventually increase to reflect higher feed prices
- Price declines for vegetable oils and sugar will be more modest than those shown here for G&O
- Other fundamental factors (e.g. oil prices, exchange rates) create tremendous uncertainty and pose challenges for forecasters



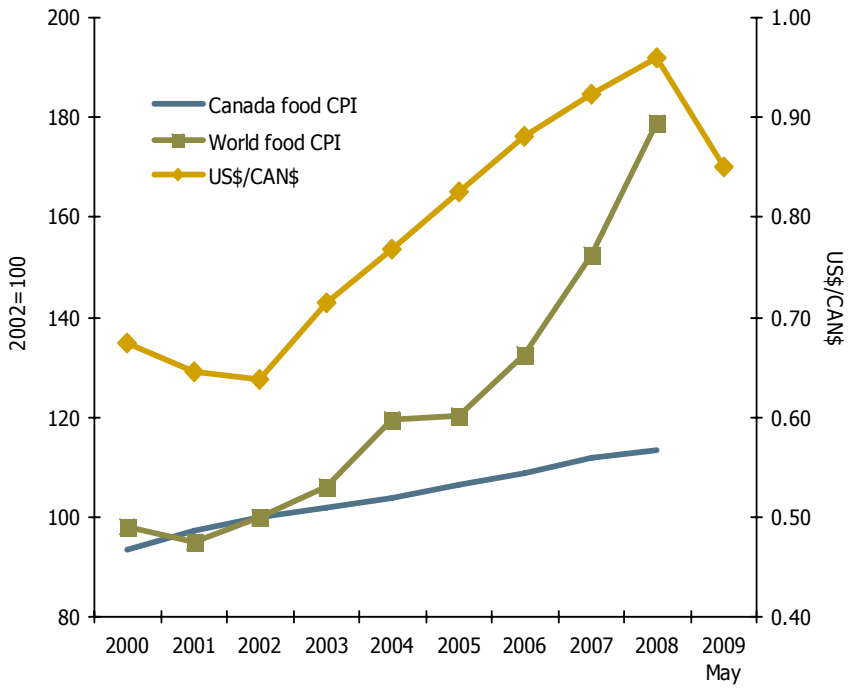
High prices have had radically different effects for population groups in developing countries and some protected consumers by limiting increases food prices

- Although most of the poor live in rural areas, many of them consume more food than they produce. The poor in both rural and urban areas spend a large share of their income on food
- Some countries tried to insulate their consumers from higher world prices by new export restrictions, export tariffs and price controls
  - These policies provide short term relief for their consumers but increase prices and uncertainty elsewhere, while also reducing production incentives for their farmers
- In response to increased food and fuel costs, the international community was asked to fill a US$755 million gap in the UN's World Food Programme
  - Canada increased its food aid contributions by $50 million and untied all food aid
  - Targeting support to poor, net food consuming households would provide needed support and provide the incentives to production
- The agricultural sectors in developing countries are underdeveloped partly because of restrictions on market access and trade-distorting subsidies in developed countries
  - Increased trade liberalization would help in medium to long term and lower price volatility

In Canada, rising commodity prices had a limited impact on food price inflation and a modest impact on consumer well-being

- In Canada, the share of household expenditures spent on food purchases decreased to 9.4% in 2006, but has risen slightly in each of 2007 and 2008 … but remains less than 10 %.
- As the cost of commodities makes up only a fraction of the final price for food products purchased by Canadian consumers, significant increases in commodity prices only marginally drive up retail prices.
- Several other factors combined to buffer Canadians from higher food prices in 2008:
  - A 40% appreciation of the Canadian dollar between 2002 and 2008 kept imported food prices down
  - Many F & V prices actually fell from 2007, when a freeze in Florida drove prices up
  - Prices for marketing board commodities are based on cost of production formula and did not yet reflect higher input costs
  - The price of beef and pork had not yet adjusted to the high feed prices
  - Competition among food retailers is fairly fierce in some urban areas

World and Canadian Food Price Indices and U.S./Canada exchange rate



While food price inflation in Canada has increased, overall inflation remains low
Although food price inflation has risen, it remains well within manageable levels

- There was a slight "surge" in prices in the 4th quarter of 2008 and 1st quarter of 2009 but this was in large part due to shifting exchange rates
- Food price inflation climbed to 7.3% in December 2008, due to high inflation in categories such as Bakery and Cereal Products and Edible Oils
- Higher transportation costs and the weakening Canadian dollar have contributed to higher prices for imported fruits and vegetables
- The Canadian Dairy Commission took the unusual step of approving an unscheduled increase in industrial milk prices in September 2008 to help cope with rising farm input costs. A scheduled price increase also occurred in February 2009

CANADIAN FOOD PRICE INFLATION

Expenditure Class	2008 Annual Avg.*	December 2008**
Overall CPI	2.3%	1.2%
Food (Total CPI weight = 17%)	3.5%	7.3%
Food purchased from stores (Food CPI weight = 70%)	3.9%	9.0%
Beef Fresh or Frozen (4%)	2.0%	7.6%
Pork Fresh or Frozen (1%)	1.4%	7.9%
Poultry Fresh or Frozen (4%)	4.1%	4.1%
Dairy Products (10%)	3.9%	6.0%
Bakery and Cereal Products (11%)	11.2%	12.4%
Fresh Fruit (4%)	1.6%	18.9%
Fresh Vegetables (6%)	1.8%	26.9%
Fats and Oils (1%)	13.6%	22.0%

* Calculated by averaging CPI levels over the 12 months of a calendar year.
** Compares the CPI in one month of a given year to the same month of the previous year.

Source: Statistics Canada, February** and April* 2009

PROSPECTS, RISKS, STRESSES AND CHALLENGES

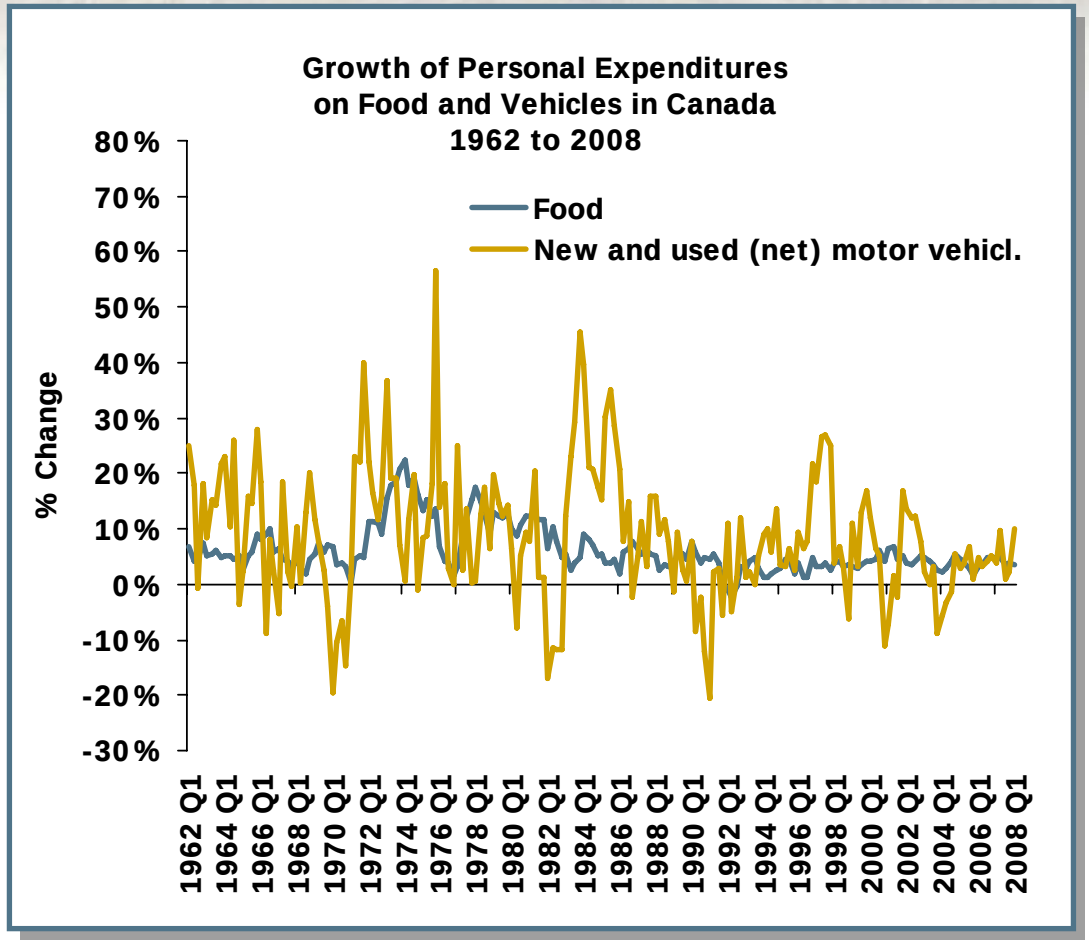
The current outlook is for an extended recession, affecting most developed countries and for sharply lower growth in the emerging economies

- As we've heard over the past 3 days, forecasts for GDP growth around the world are being revised downwards in view of falling consumer demand and flagging commitment to trade liberalization. Analysts with leading international institutions now suggest that a more fulsome recovery will only occur some time in 2010.
- Volatility and uncertainty about crude oil prices also impacts upon the agricultural sector in many different ways
- But there are also some reasons to think that the Canadian agriculture and agri-food sector will remain strong and competitive
  - Canada's banking system remains strong: the World Economic Forum ranks Canada as first for having a sound and healthy banking system
  - The recent depreciation of the Canadian dollar after several years of appreciation could improve sector profitability
  - Food is a necessity and, while purchases can be shifted from one product to another, they can not be postponed.
  - Preliminary analysis shows a modest impact on agricultural prices in Canada in next 2 years

IMPACT ON CANADIAN PRICES (% CHANGE)			
	2009	2010	Average
Wheat	0	-10	-5
Canola	-5	-10	-7
Barley	0	-7	-4
Corn	-1	-7	-4
Oilmeal	-6	-14	-10
Cattle	-4	-9	-6
Hog	-5	-7	-6

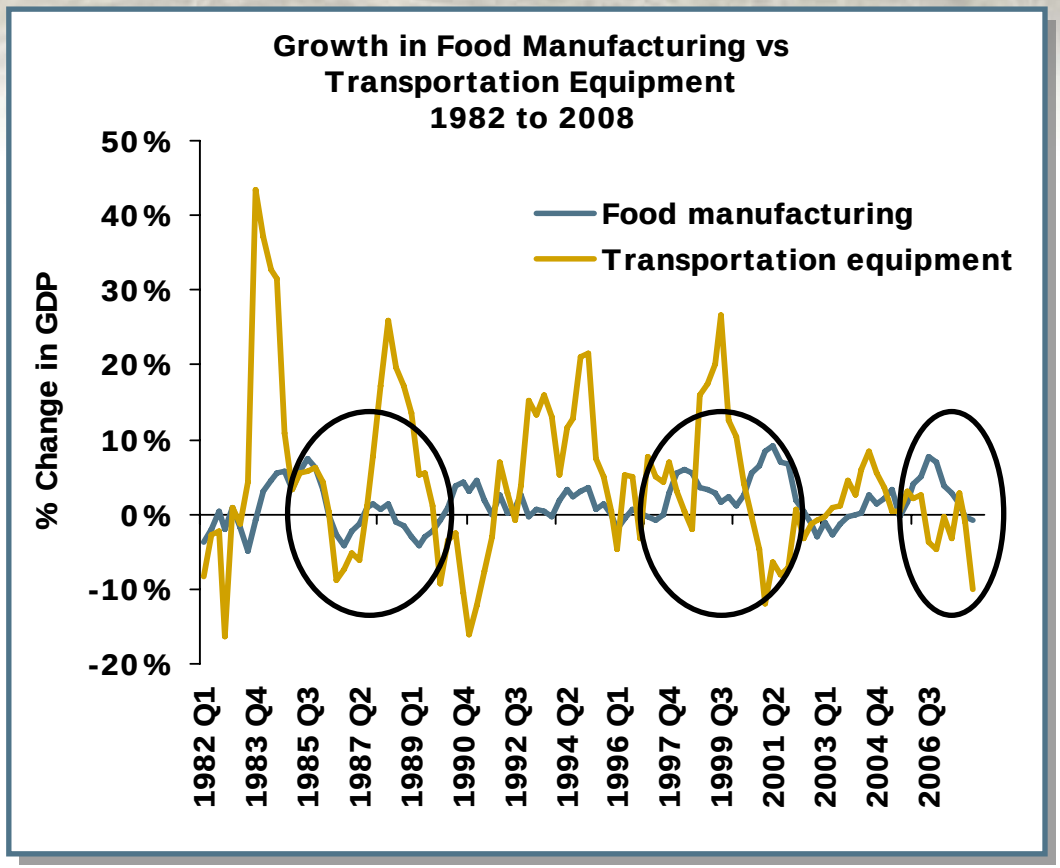
Canada's agri-food value chain should be able to weather the downturn

- As a necessity, demand for food remains relatively stable, even in periods of economic downturn
- Consumers may substitute cheaper food items for more expensive items and eat out less.
- In 2008, food purchased from stores increased by 3.9 % in price while prices for food in restaurants rose only 2.5 % as demand slowed.
- However, consumers cannot delay food purchases indefinitely, as they can with discretionary purchases like electronics and vehicles



With relatively stable demand, Canadian food manufacturers tend to weather downturns better than other sectors of the economy

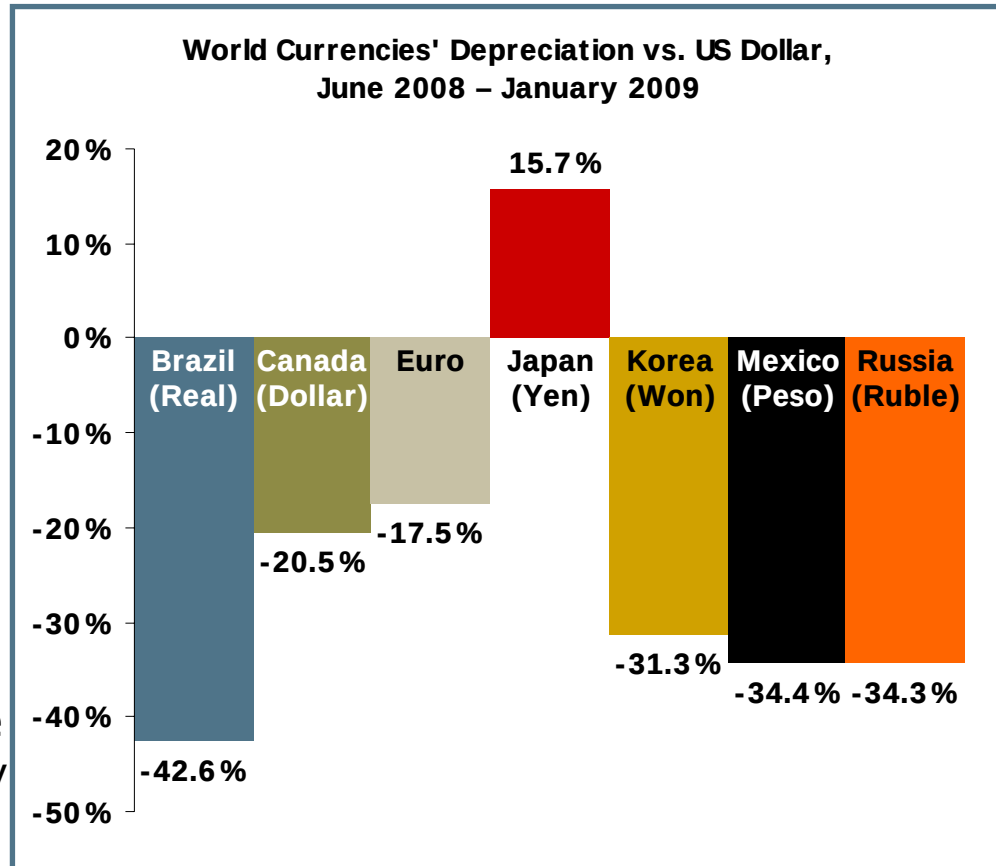
- GDP growth in food manufacturing has been less susceptible in the past to economic ups and downs than other sectors
  - For example, transportation manufacturing has exhibited deeper troughs in GDP growth during past recessions
- Some food processors may even take advantage of tough economic times for other sectors
  - Some make capital investments when interest rates and the cost of constructing new plants is low
- The red meat sector, however, is undergoing hardship as feed input costs remain relatively high and market prices have not yet adjusted. While the depreciation of the Canadian dollar since the summer of 2008 has provided some relief, the sector remains under pressure.



- Should interest rates rise significantly, leveraged firms and farms will be placed under additional stress.

Prognosis?

- Canada's banking system remains sound and healthy according to the World Economic Forum
- Canadian consumers are relatively well buffered against rising global food prices
- Crop prices are still expected to be relatively high but volatile in the short and medium term, but Canada has a small built-in or "automatic" stabilization effect:
  - International crop prices have fallen as world oil prices have collapsed
  - But lower oil prices depreciate the Canadian dollar, which partially mitigates the decline in crop prices for Canadian producers
- The recent depreciation of the Canadian $ against the USD could improve sector profitability. However, this has to be weighed against even larger depreciations elsewhere. Depreciations in competitors may make them even more competitive while depreciations in export destinations make them less able to buy our products.
- The financial crisis has considerably increased uncertainty for 2009-2012 but the Canadian sector appears to be in a relatively sound position to weather this storm



PERSPECTIVES GOING FORWARD

Getting the diagnostics right is of fundamental importance to the design and delivery of "remedial measures". Ill-conceived "prescriptions" will do more harm than good.

- What transpired from 2005 through 2008 was not a result of commodity market malfunctions. Therefore, "remedies" predicated on such market malfunctions are likely to be off target.
- If experience is anything to go by, "remedies" which supplant or distort market signals may well exacerbate the situation. Historical and cross-sectional evidence suggests that bureaucratic and administrative arrangements which supplant rather than harness market forces are part of the problem, not a part of the solution.
- The problems that arose are more a result of the confluence of: (1) rising affluence and standards of living in emerging economies; (2) under-funding of agricultural research over the past several decades; (3) patchy or inadequate infrastructure and/ or value chains; (4) new technologies that increase the linkages between food, fibre and fuel markets and competition for natural resources and commodities; (5) income shortfalls; (6) misguided policies.
- Some of these are good things that we need more of and need to scrupulously avoid discouraging or impairing. Others are problematic and need to be dealt with expeditiously.

It is important to disentangle and distinguish between the challenges faced by poor countries, poor households, and international aid agencies

- The "food crisis" is partly what has and is unfolding in poorer countries and in poor households. They are food insecure largely because of inadequate incomes and infrastructure shortcomings.
- Remedies for these dimensions of the crisis, therefore, are more likely to be effective and sustainable if they deal with income-related shortfalls and resolving infrastructure-related challenges.
- Intervention in commodity markets may provide short term relief but could well exacerbate the situation in the longer term as it would dampen incentives to produce as well as invest in the sector, the value chain, and facilitating services (e.g. transport, handling, logistics).

It is important to disentangle and distinguish between the challenges faced by poor countries, poor households, and international aid agencies

- A second dimension to the "food crisis" stems from the way aid agencies receive their funding and deliver their programming.
- Because of exchange rate movements, commodity price increases over the past several years were relatively larger when expressed in USD terms than in many other currencies.
- While this did not pose a problem for the (majority) of countries whose currencies had appreciated relative to the USD, it did pose problems for many aid agencies. Many agencies receive their funding and deliver their programming in USD. Because of the depreciation of USD and the concomitant run-up of commodity prices in USD terms, these agencies found it a challenge to deliver the same level of aid and services, especially from 2005-08.
- Although food price volatility was acute, media "noise" relating to the food crisis was probably amplified somewhat by the predicament in which international aid agencies found themselves in. But the issue was partly related to commodity prices and partly related to exchange rate volatility and funding issues.
- For this reason, it is important to be careful not to intermingle these different issues and should make every attempt to disentangle them. We should not confuse the real and very devastating impacts and challenges faced by low income, resource poor households in developing economies with the daunting but quite solvable financial and administrative challenges of international aid agencies.

Increasing productivity and reducing waste in the value chain and in transport and logistics will play a critical role

- Physical access to markets:
  - Transaction costs associated with moving agricultural product to market are a significant part of the final consumer cost in both developed and developing countries. In some sub-Saharan African countries, for example, transport costs can account for 50-60% of total marketing costs. In many countries, losses between the farm gate and the consumer plate approach 30 % of production.
  - Improving road and other modes of transport connection are critical to improving links to markets in both developed and developing countries. Inter-modal connections are also critical. Inefficiencies at ports are a major cost factor in exports. For example, while Brazil has major cost advantages over many developed country agricultural sectors at the same level of production, it loses a significant part of this advantage on exports due to sub-standard roads and ports. This also highlights the key role that non-agriculture ministries play in improving the performance of the agriculture sector.
- Institutional strengthening:
  - The global agriculture sector is largely organized along private sector, market-based principles. While this gives the private sector a leadership role in decision-making about production and pricing, the public sector must nonetheless provide critical institutional supports to facilitate the smooth operation of agricultural (and other) markets.
  - Key among these are the existence of contract and property rights, and an open, transparent legal system to enforce them.

Recognize that individuals, households and private farms respond to incentives and, when properly motivated, are innovative and entrepreneurial in nature (e.g. HRS)

- Ambassador Carla Hills challenged us to think of how to harness such individuals, households and firms … rather than supplanting or inhibiting their efforts. In this context, Ambassador Hills also noted that it is important to ensure that short term urgencies and exigencies do not preclude an adequate response to the important issues over the longer terms.
  - For example, if green house gas emissions and climate change issues are not factored into deliberations, food insecurity issues could return with a vengeance and prove intractable
- Areas where positive steps could be taken?
  - Trade facilitation and expediting business licensing reduces time and waste and is almost costless
  - Improving infrastructure can reduce time and waste and enable specialization and scale economies. Complementary public/private approaches (Chile & Singapore good examples)
  - In developed countries and among international agencies, research and development funding has lagged in both the public and private spheres.
  - Need to cogently make the "Gains from Trade" known to the lay public. Need to show the "interconnectedness" and welfare improvements known at the local level to improve suasion and discourage backsliding.
  - Show how addressing income issues, infrastructural shortcomings and community development are more sustainable (less transient) and have higher paybacks and few disruptive elements than policy interventions in commodity markets.
  - Using Netherlands as benchmark (?), would it be possible to partially decouple growth from GHG emissions, land and water nutrient loading, or other adverse environmental consequences that could undermine well being and productivity over the longer term?