

## **Economic Trends Affecting the Canadian Hog/Pork Industry**

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The Canadian hog and pork industry has faced major uncertainty and instability over the recent past. Consider the following:

- Drought in Western Canada that increased feed prices so much that US corn was being imported
- US threat to impose country of origin labeling
- US countervail and anti-dumping action
- Spill-over effect of the BSE case.

All of these have affected the Canadian pork industry since 2002, along with the usual changes in market demand and supply. And, since Canada is one of the major exporters of pork and/or hogs, those “usual” changes that we need to monitor are in a number of countries.

There is no reason to believe that there will be fewer “shocks” in the future. In fact, we expect more of them as the industry grows and becomes more international: trade provides increased opportunities, but it also brings more risks. An obvious potential one is the move by Canadian corn producers to bring countervail and anti-dumping action against US corn. So, while this paper is about the “trends” affecting the industry, we must also be aware of the shocks.

The paper addresses a number of trends: North American demand for pork; production; exports of hogs and pork; potential input costs; changes in the packing industry; and expected price trends for the next few quarters.

### **North American Demand for Pork**

Domestic demand for pork in the US has been quite steady for a number of years. This is clear in Figure 1, which contains indexed US retail prices of pork against US per capita consumption since the early 1980's. With the exception of a few outliers ('83, '96, '97), demand has been quite stable. If the domestic market was the only market, changes in pork production would likely be the major cause of changes in retail margins: i.e. if production was 49 lbs/capita, price would be about 105, but it would drop to 85 if

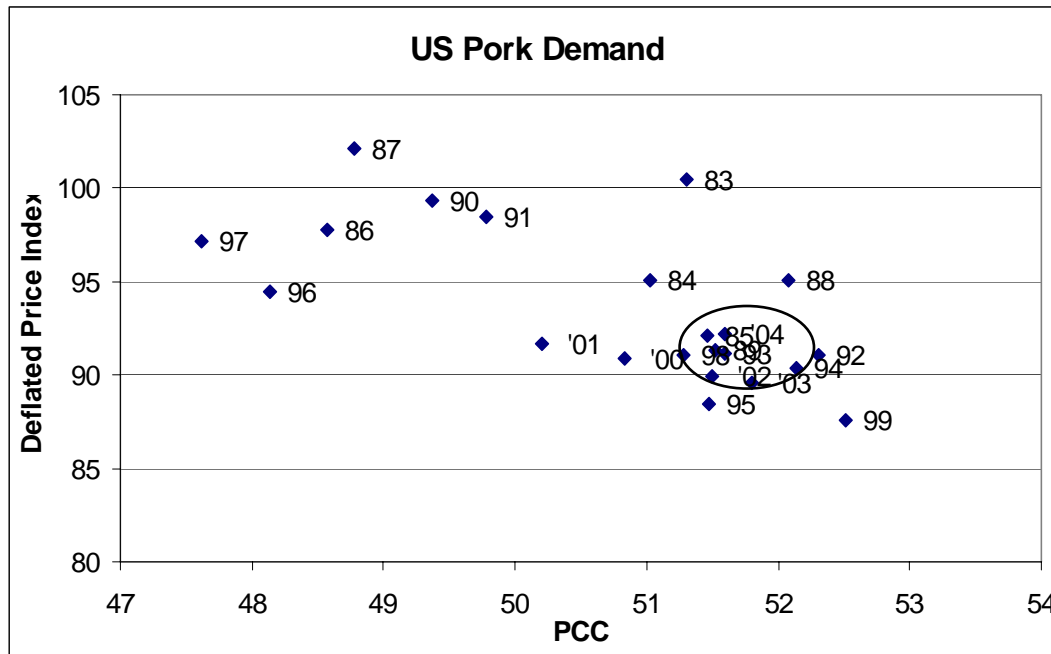
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production increased to 53 lbs. So, while demand isn't growing much, if international trade wasn't possible, prices would be very sensitive to changes in supply.

The circled area includes the past three years, which have been extremely stable.

Figure 1: Demand for Pork in the United States



The same has not been true for Canada (Figure 2). This graph has similar price and consumption data for Canada. It is clear that the general pattern was similar to the US until 2003. In that year demand declined dramatically, and remained weak in 2004. Why the difference? The answer is BSE: demand for beef *increased* substantially in 2003 and stayed strong in 2004. This was what many called a “sympathy” effect due to the perceived unfairness of the US trade ban and the perceived low risk from the disease. It appears that there was a substitution effect – i.e. Canadian consumer demand for beef rose, but demand for pork fell. And it did not recover in 2004.

As an aside, the retail demand effect was only one part of the spillover of BSE into the pork industry. The clogging of demand and the huge burden of beef supply in Canada put substantial pressure on Canadian meat packers in the form of lower margins. Figure 3 shows the Centre’s estimates of US and Canadian packers’ gross margins during 2003. Note that they were very similar before mid-May and after early August. That period marks the time that neither cattle nor beef could be exported. The US allowed Canadian beef from young animals after August.

The combination of consumers pushing back on retailers and pork packers was passed on down the chain to hog producers during this period.

Figure 2: Canadian Demand for Pork

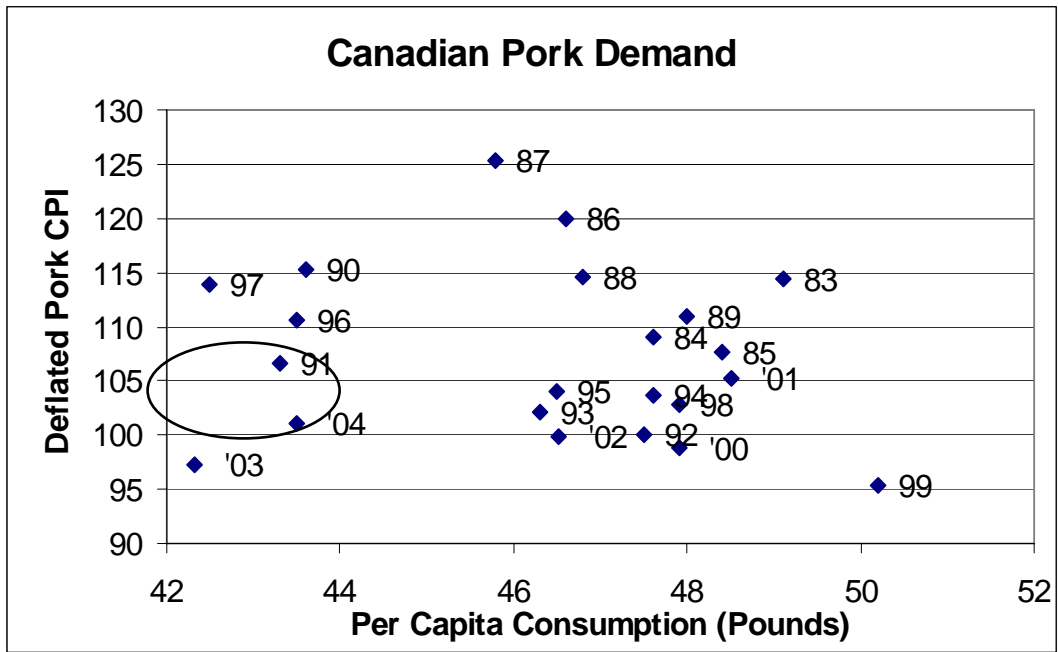
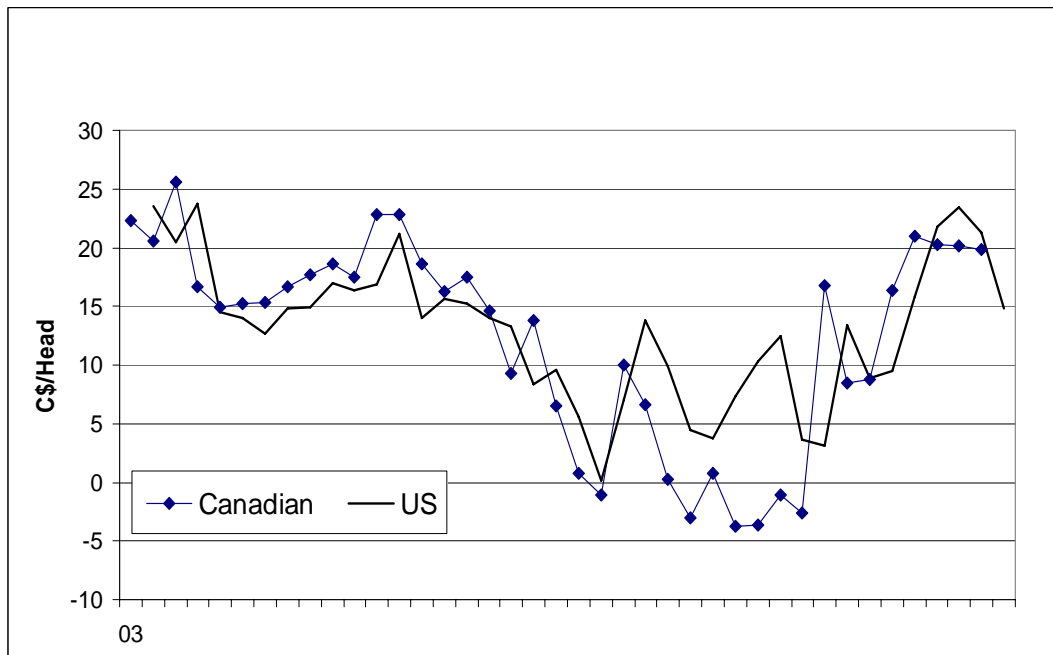


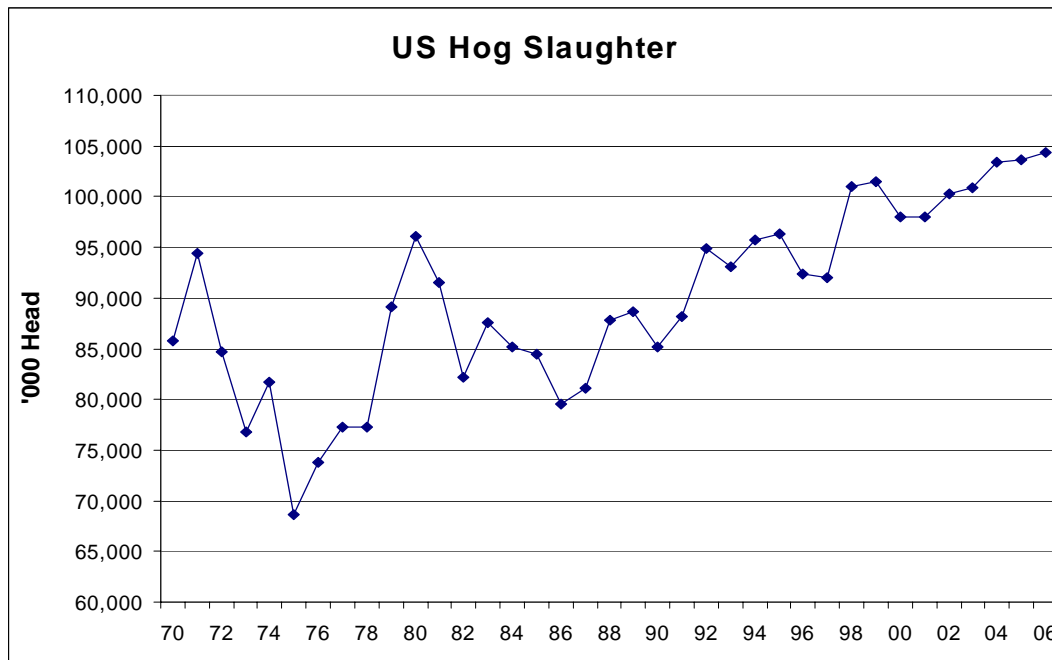
Figure 3: Canadian and US Pork Packer Gross Margins



## Trade in Pork

During 2003/04, there was much discussion among market analysts about the strong “demand” for pork, with some forecasters adding \$10 - \$25 per hog to their price forecasts to account for it. Figures 4 and 5 illustrate this point. Figure 4 shows the tremendous growth in US pork production in 2003 and 2004. Figure 5 shows how this interacted with demand to result in prices, compared to earlier years. In the decade or so before '03, there was a fairly clear relationship between US production and price – the apparent demand relationship. If US production was 18.5 bil lbs, price was around \$55. If production was 17 bil lbs, price was around \$70. But in 2003 and, especially 2004, hog prices far exceeded what was expected for the production level of about 19.5 bil lbs – mid-\$50's and low \$70's instead of low \$40's. How does this square with what we said above about the stable, in the case of the US, and declining demand, in the case of Canada, for pork?

Figure 4: U.S. Hog Slaughter, 1970 – 2006



The answer is, of course, the export market. Exports from North America grew rapidly starting in 2003 and have continued through 2005. Figure 6 contains US monthly pork exports for 2004 and 2005. To date through July, US exports are up by 24% from 2004 and 56% from 2003. Clearly, this buoyant export market is the major factor that has allowed prices to remain relatively strong. In fact, it would be easy to argue that the export market added almost US\$30/cwt to the price of hogs in 2004

Exports grew to traditional destinations such as Japan and Mexico. But much of the growth was because of new destinations such as China, Russia, Eastern Europe and Australia.

Figure 5: The Relationship between U.S. Hog Supply and Hog Prices

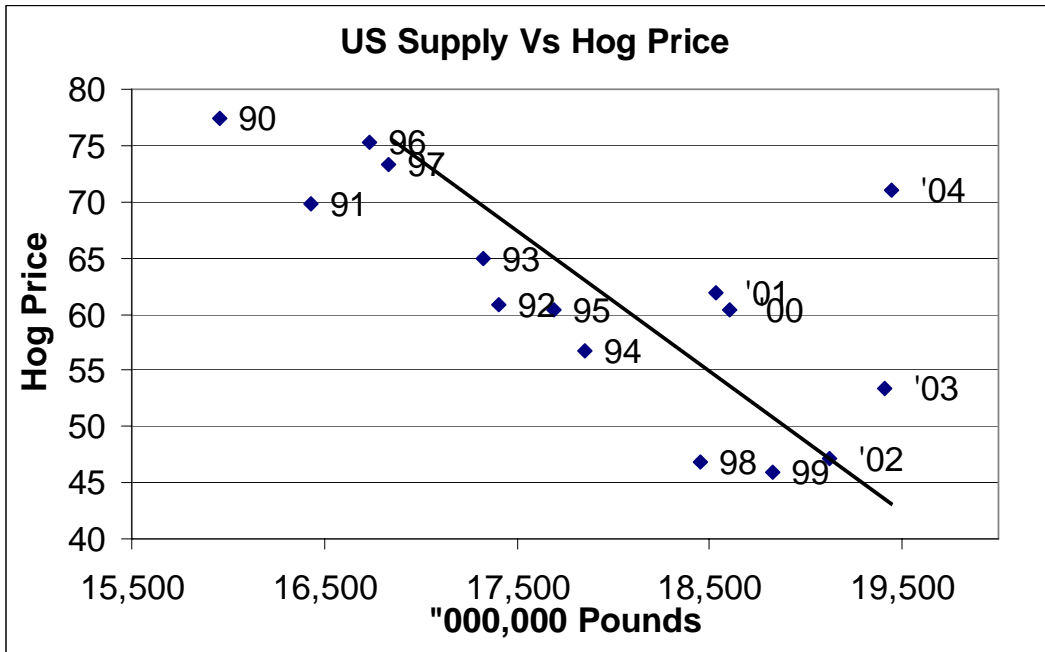
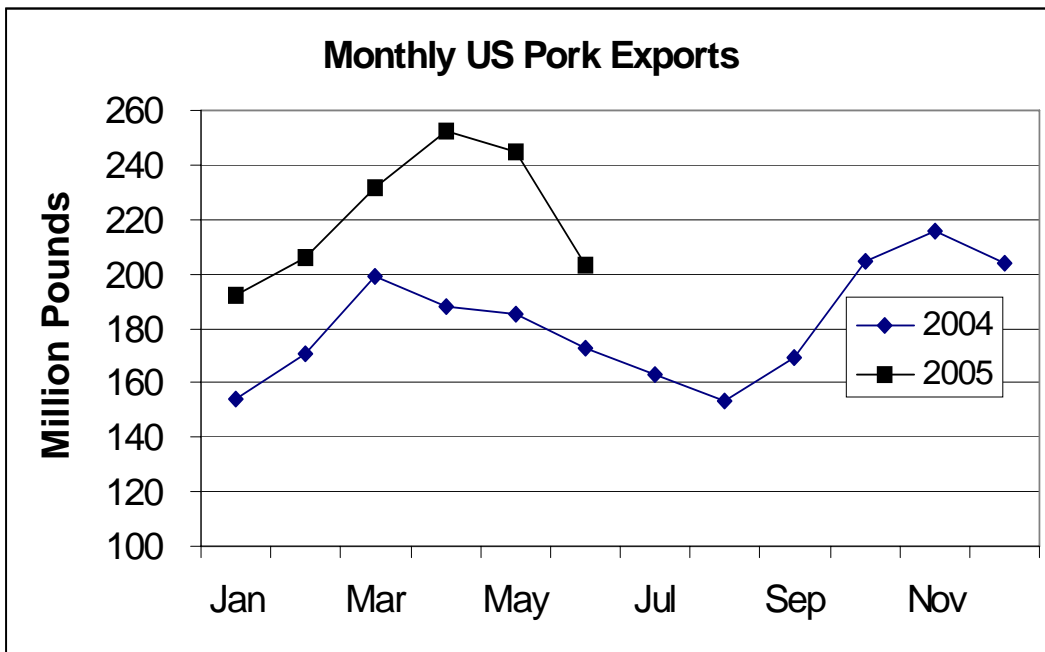


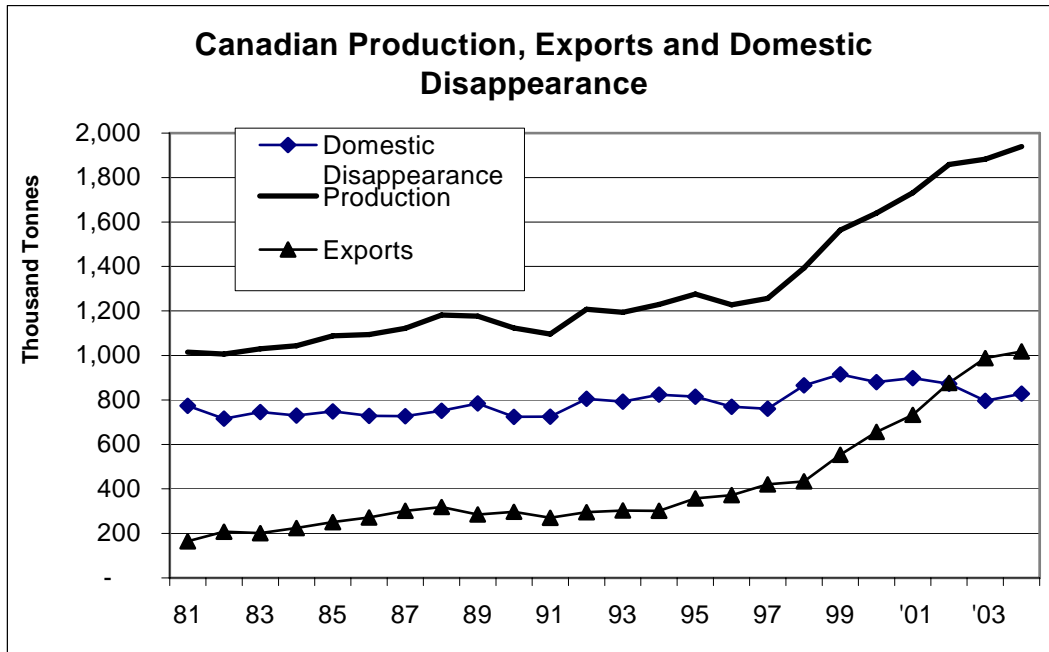
Figure 6: Monthly U.S Hog Exports, 2004 & 2005



Of course, Canada participated in some of the benefit of the export market. The reason we say “some” is because the Canadian dollar rose against the US, thereby wiping out part of the price benefit. In early 2004, we estimated that with US prices at \$50/cwt a rise from a \$.65 to a \$.75 dollar took over \$200,000 in revenue from a 1200 sow operation in half a year. Now we are near \$.85.

But clearly Canada has participated in the growth in exports. Figure 7 shows Canada's production, domestic disappearance, and exports of pork. The stability of domestic disappearance underlines the stability of domestic demand. But the rapid growth in production in Canada in the past decade was accommodated by the growth in exports. Note that exports of pork now exceed domestic consumption.

Figure 7: Canadian Production, Consumption and Exports of Pork



Of course much of Canada's exports are also done as slaughter hogs and weaners (Fig 8), and the weaner component grew the most. So Canada participated in the growth in export demand both directly and indirectly through the hogs we exported to the US.

It is interesting to note as a side line that the movement of weaner/feeder pig across state and provincial boundaries is an on-going aspect of market integration. Table 1 shows the major states/provinces that imported or exported feeder pigs in 2002/04. Note first that Iowa is both the leading importer and leading exporter of feeders. Nothing illustrates the integrated nature of the business more than that fact. Second, the fact that Manitoba and Ontario rank below two US states again underlines the integrated nature of the market.

Figure 8: Canadian Hog Exports

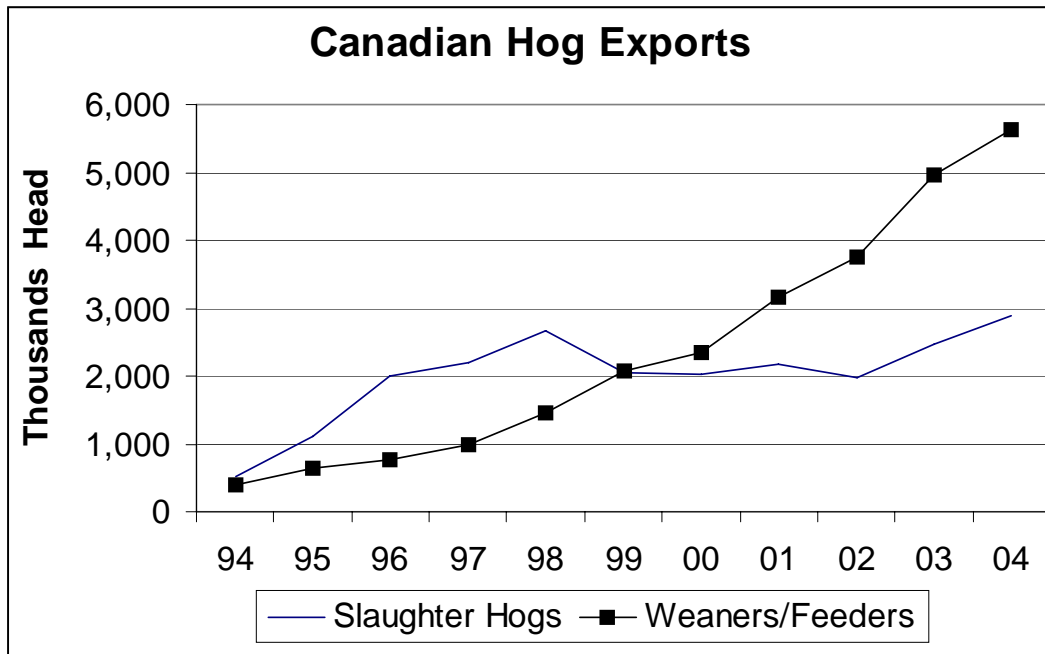


Table 1: Movement of Feeder Pigs in Major States/Provinces, 2002-2004

Table 2—States/Provinces by movement of feeder pigs, 2002-04

Rank	State/Province of origin	Percent of feeder pigs
1	Iowa	16.6
2	Oklahoma	15.5
3	Manitoba	14.3
4	Ontario	8.2
5	Nebraska	6.8
6	Minnesota	6.5
7	Missouri	6.0
	Others*	26.1

Rank	State/Province of destination	Percent of feeder pigs
1	Iowa	38.0
2	Minnesota	15.6
3	Nebraska	8.4
4	Indiana	5.6
5	Illinois	4.4
6	Missouri	2.2
	Others**	25.7

\*Others =Combined volumes of States whose individual share < 6 percent.

\*\*Others =Combined volumes of States whose individual share < =1 percent.

Source: U.S. Department of Agriculture, Iowa Department of Agriculture, *Market News*. *National Direct Feeder Pig Report*. NW\_LS255. Various issues, 2002-04.

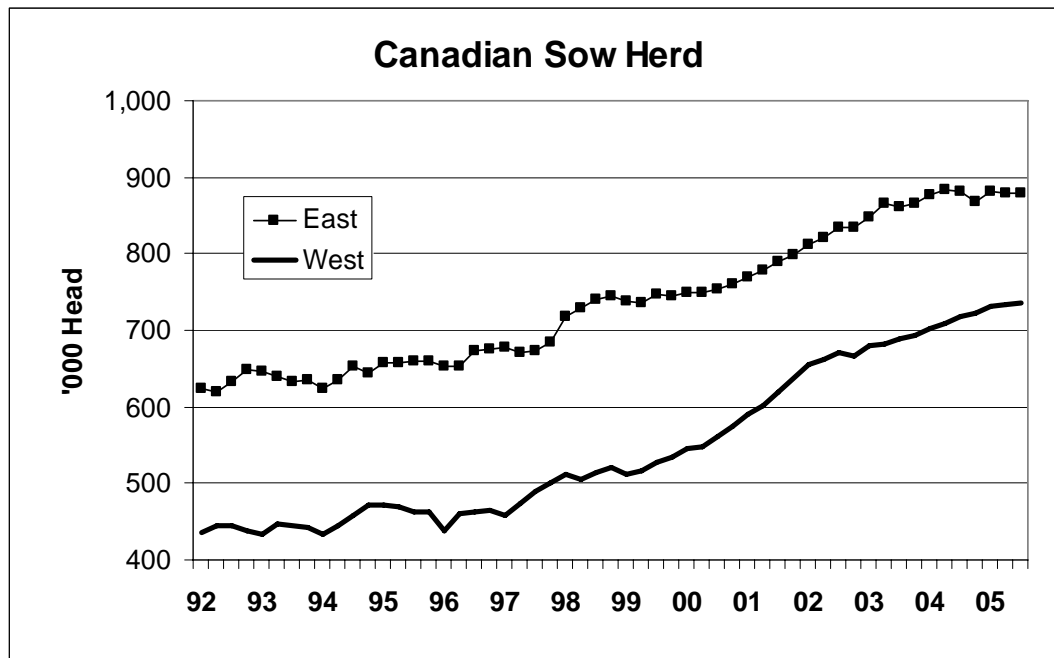
## Production and Packing Trends

During the trade action against Canadian hogs, US interests continually argued that Canadian production increased because of Canadian subsidies. Even using the National Pork Producers Council's substantially inflated numbers, Canadian subsidies for hogs amounted to about 5% of total revenue, and most of that resulted from (WTO-legal) farm income support programs after 1998. The substantial growth in hog production has more likely occurred for the following reasons:

- Elimination by Canada of grain transport subsidies and other policy changes in 1995, which resulted in reduced relative grain prices.
- Breeding herd efficiencies due to cooler climate and lower herd densities.
- Lower disease incidence.
- Favourable exchange rates until 2003.

As a result of the first three of these, the growth in Canada has been led by the Prairies (Figure 9). Indeed, three studies by the George Morris Centre starting in 1997 have consistently shown the Eastern Prairies to be the low cost producer of slaughter hogs and/or weaner pigs over this period. But the Eastern Prairies had a relatively small advantage over Ontario, Quebec and the Western Prairies, and all of these were comparable to US production regions. During 2001 – 2003, the major advantage was to weaner pigs, largely because drought conditions in the prairies resulted in relatively high feed costs.

Figure 9: Western and Eastern Sow Herd Trends





This is one of the two main factors that contributed to the surge in exports of weaner pigs to the US in the early 2000's; Canada enjoyed a major advantage in weaner production costs. The second factor is the condition of Canada's packing industry. Packers tend to compete on cost, and cost is a function of economies of scale as well as capacity utilization. Canada's packers have not measured up well on either. The five largest plants in the US processed 21,000 head per day in 2004, while in Canada, the top five averaged only 8,400 head per day. The difference is due to both scale and utilization – only one Canadian plant was at what is regarded as optimum scale, and none were double shifted.

This makes Canadian slaughter costs per head relatively high, which in turn tends to favour exports of live hogs. For the future, this may change as some smaller Canadian plants have been closed; Olymel is moving closer to double shift capacity in Red Deer, and other plants have benefited from new capital investment. Moreover, Maple Leaf Foods announced a new plant in Saskatoon to replace their old Mitchell's slaughter facility and rumours abound that additional capacity may be announced. These developments could change the competitive balance between hog and pork production.

A final trend that could be important for the future is the decline in cost competitiveness of feedgrain production in western Canada. Figures 10 and 11 show estimated costs per tonne for producing barley in Alberta and corn in each of Iowa, Brazil and Argentina. It is clear that barley production has lost competitive advantage relative to each of the other regions. Part of this is due to drought, of course. And barley is increasingly irrelevant, in the short term because of low priced feed wheat and, in the longer term, because of the advent of field peas as a feed source. But it is ironic that a region whose hog industry has largely been built on relatively low cost feedgrains faces erosion of the cost advantage.

Figure 10: Estimated Costs of Production for Alberta Barley & Brazil & Argentina Corn, \$US/MT

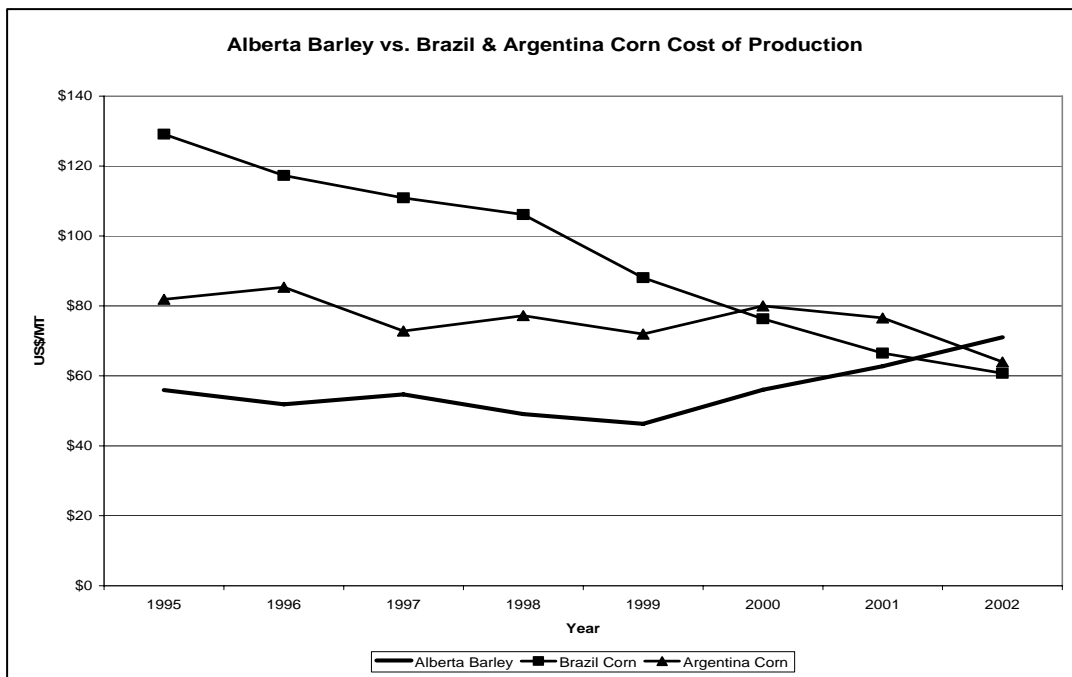
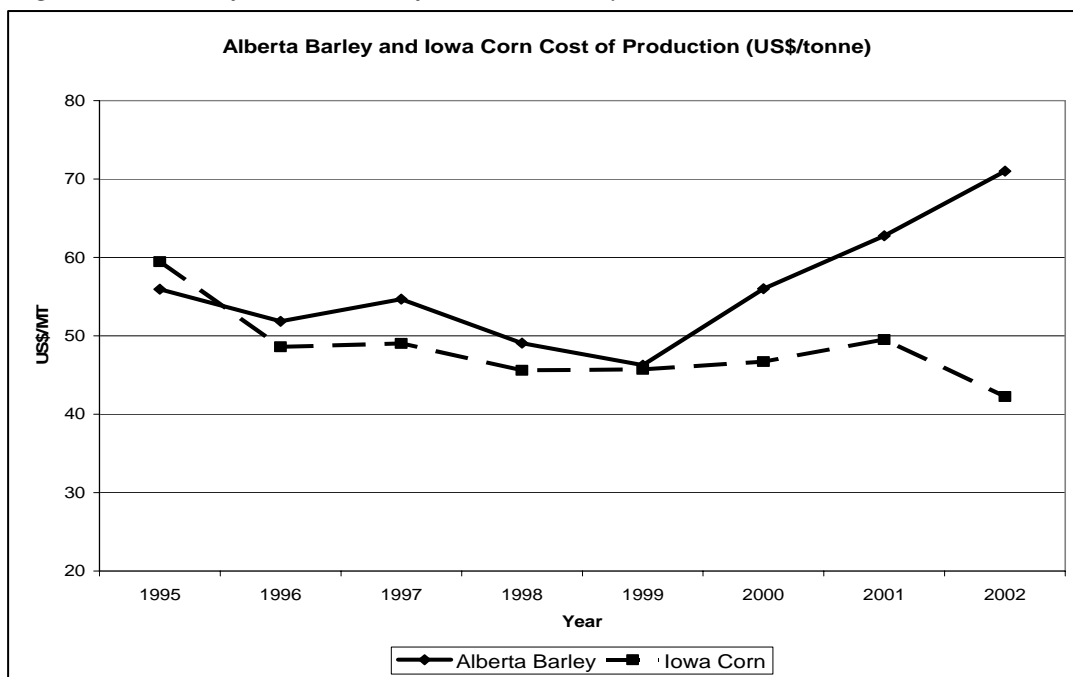


Figure 11: Cost of Production of Alberta Barley and Iowa Corn, \$US/MT



## Future Outlook

Canada continues to be a low cost producer of hogs but, not surprisingly, faces competition from other countries. Our climatic and cost advantages are likely to continue. Environmental challenges abound, especially in the more densely populated areas. But this is also a concern in most competitor countries. In the short term, the potential trade action against US corn may be problematic. Overdue adjustments in the packing industry should re-route slaughter and weaner animals into Canadian plants.

In my view, Canada has a healthier industry than it did two years ago. One must acknowledge that with our rising export dependence the risk of loss of market access and/or disease outbreak also rises.

Over the next few months, prices in Canada will continue to result from the North American market, especially the US. According to the traditional hog cycle, the second half of 2006 should be the cyclical high for production. To date, it appears that there is little expansion occurring; rather, there is continuing consolidation of production into fewer, larger operations with relatively new capital. According to USDA's June Hogs and Pigs Report, farrowings and farrowing intentions should result in slaughter during 2006 that will be above the current year by about 1%.

Assuming no continued increase in export demand, this will translate to lower hog prices. Our forecasts of quarterly averages for the US compared to this and the past two years are in Figure 12. Assuming about a \$.84 dollar and the Quebec formula, these translate to the prices in Table 2. It also compares our US forecasts to US futures at the time this paper was written.

Figure 12: US Quarterly Pricing of Hogs, 2003-2006

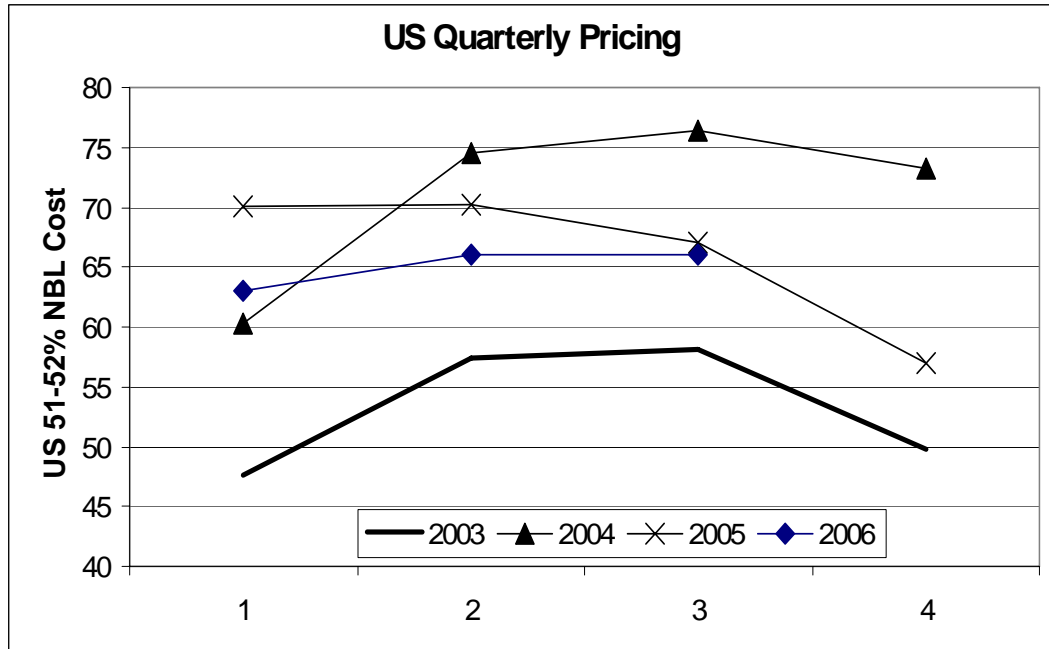


Table 2: US & Quebec Hog Prices Forecast

	US 51-52% Lean	Futures	Quebec Formula
Fourth Q '05	57	61	125-130
First Q '06	63	62	135-140
Second Q '06	66	62	145-150
Third Q '06	66	58	145-150