COMPETITIVENESS IN THE CANADIAN PORK SEGMENT: A REASSESSMENT

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ABSTRACT

The Canadian pork industry has been one of the most successful parts of the Canadian agriculture and food industry for the past twenty years. It has been a world leader in exports and its growth in size and revenues has been extraordinary. During the last two years however, the industry has been faced with some of the biggest challenges of the past two decades. Those challenges relate to three main areas: feed grain competitiveness, packer competitiveness and labour availability. George Morris Centre analysis has shown that producer costs, particularly in the areas of feed grains, are significantly higher than in the hog producing regions of the United States. In addition Canadian packers face operating costs that are materially higher than their counterparts in the US. In addition to that, the growth prospects for the industry are severely constrained due to lack of labour availability. As a result of these challenges, the pork industry is undergoing a restructuring process at the packer level. In addition, the lack of competitiveness in feeding is likely causing increased attrition at the producer level. The decisions and steps that the industry takes in the next year will determine whether the industry continues to grow or whether the industry begins a prolonged period of decline.

INTRODUCTION

The Canadian pork segment finds itself in a challenging position. While it has established itself as a leading international trader in pork and as something of a low-cost producer, it appears to be facing issues in these and other areas. In particular:

- The US recently surpassed Canada as the leading exporter of pork.
- Feed grain pricing patterns in Canada appear to have followed a different path relative to US feed grain prices than was anticipated in the mid-1990’s, particularly for western Canada.
- Labour constraints are a significant factor facing the pork segment, particularly in western Canada.
- Significant rationalization is occurring in the Canadian pork packing segment.

Thus, a reassessment of the competitive stature of the segment, and the factors driving it, is warranted. The purpose of this paper is to discuss these developments, place them in context, and interpret them in the context of the future of the Canadian pork segment.
NATURE AND STATUS OF COMPETITIVENESS IN HOG PRODUCTION

A combination of several factors is significant in determining regional competitiveness in hog production. The first is the set of natural factors and growing conditions that influence hog production. These relate to soil type and climate that influence the efficiency of pig growth; the principal factor that varies across regions is feed grains. The second critical factor relates to the availability of a quality workforce to work with livestock. The third factor is the proximity and ease of access to a population of consumers willing to pay for pork. A component of this factor is access to and the efficiency of the hog slaughter and pork processing function. The status of these factors in Western Canada and Eastern Canada relative to the Midwest US is explored below.

Natural Factors

Figure 1 presents trends in Alberta barley yields relative to Iowa corn. The figure shows that Iowa corn yields significantly exceed Alberta barley yields and, more significantly, that yield growth in Iowa corn has proceeded at a much faster rate than Alberta barley. For example, when the 2004-06 average yields are compared with the 1985-87 average yields for Alberta barley and Iowa corn, the data show that Iowa corn yields increased by 30.7%, while Alberta barley yields increased by 22%. The situation is very similar for Manitoba yields versus Iowa corn. Comparing 1985-87 average yields with the 2004-2006 average, Manitoba yields increased only 3%.

Figure 1.
Figure 2 plots Ontario corn yields relative to Iowa for the period 1985 to 2005. The figure shows that Iowa corn yields have generally exceeded Ontario corn yields. The divergent trends also illustrate that Ontario corn yield growth has lagged behind Iowa. Using the same approach as above, Ontario yields grew by 26% comparing 2003-05 with 1985-87, compared with just over 30% in Iowa.

Consistent with mostly lagging productivity in Canadian feed grains relative to the US, Canadian feed grain prices have increased on a relative basis. This is most easily seen with respect to Ontario corn relative to US Midwest corn prices. Figure 3 and Table 1 illustrate the relationship. They show that Ontario and Minneapolis corn prices are very highly correlated, but that the spread between the two has widened over time, particularly since 2001.

Figure 4 plots relationships between barley at Calgary, barley at Winnipeg, and Minneapolis corn. The figure shows that, historically, Winnipeg barley has been at a discount to Calgary barley and to Minneapolis corn. In particular, the discount relationship between Winnipeg barley and Minneapolis corn is some reflection of the fact that barley has about 85% of the feeding value of corn in a livestock ration. During the 2002-03 droughts in western Canada, barley prices increased through Minneapolis corn prices. Barley prices have retreated since 2002-03 but remained priced at a premium to Minneapolis corn.

Soymeal pricing in Minneapolis and points in Eastern and Western Canada illustrate a classic freight cost relationship, in which Minneapolis is the low price point, followed by Winnipeg, Hamilton, and finally Calgary.
Broadly speaking, the above shows that Canadian feedgrain productivity has lagged that in the Midwest US. This is borne out in most comparisons of yield growth, but most clearly in direct price comparisons. Canada has become a high-cost feeding region compared with the US.

**Figure 3.** Source: AAFC, USDA ERS.

![Eastern Corn Vs Minneapolis Corn](image)

**Table 1.** Chatham-Minneapolis corn price spread.

<table>
<thead>
<tr>
<th>Year</th>
<th>Price Spread, $Can/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>12.33</td>
</tr>
<tr>
<td>1997</td>
<td>15.91</td>
</tr>
<tr>
<td>1999</td>
<td>9.20</td>
</tr>
<tr>
<td>2001</td>
<td>24.58</td>
</tr>
<tr>
<td>2003</td>
<td>27.91</td>
</tr>
<tr>
<td>2005</td>
<td>21.94</td>
</tr>
</tbody>
</table>

**Labour**

A second critical determinant is the availability of a farm workforce. This has a couple of dimensions. The most tangible component is labour cost. However, some measure of labour productivity and interest in working with livestock in addition to cost is relevant.
Data on labour costs and wage rates is generally difficult to obtain, however data on wage rates for livestock workers is collected by Human Resources and Skills Development Canada according to National Occupation Classification (NOC) codes, including livestock workers (NOC 8253). The data is obtained from Employment Insurance claim data, and is fragmented by region, exclusive of benefits. In the US, data on wage rates is collected by the USDA National Agricultural Statistics Survey in the Farm Labour Survey for livestock workers. The wage rates collected are exclusive of benefits.

Table 2 below presents a comparison of Canadian regional and US Midwest wages rates, in $Can/hour. The table shows that livestock worker wage rates are clearly the highest in Alberta. This is not surprising, given the competitive influence of the oil industry on Alberta labour markets. Manitoba and Ontario livestock worker wage rates are significantly lower than Alberta. Wage rates for livestock workers in the Midwest US are generally the lowest. Compared with the Midwest US livestock worker wage rates, Manitoba wage rates appear to range around $2/hour higher, and Ontario wage rates range about $3/hour higher. Alberta wage rates appear to range $7/hour over the Midwest US.

**Pig Productivity**

Another aspect of labour relates to pig productivity given management and labour productivity in Canada vs. the US. Since common swine genetics are in use throughout North American and pig housing is essentially the same in the US and Canada, labour productivity and management must be a significant determinant of differences in observed pig productivity.
Table 2. Livestock worker wage rates.

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Region</th>
<th>Reference</th>
<th>Time Period</th>
<th>Wage Rate ($Can/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta</td>
<td>Red Deer/ Camrose/Olds</td>
<td>NOC 8253</td>
<td>Sep. 2003-Sep 2005</td>
<td>$17.54</td>
</tr>
<tr>
<td>Manitoba</td>
<td>Winnipeg</td>
<td>NOC 8253</td>
<td>May 2005</td>
<td>$12.00</td>
</tr>
<tr>
<td>Ontario</td>
<td>Kitchener/Stratford</td>
<td>NOC 8253</td>
<td>2005 Average</td>
<td>$13.10</td>
</tr>
<tr>
<td>Iowa/Missouri</td>
<td>Cornbelt II Livestock</td>
<td></td>
<td>July 2005</td>
<td>$10.15*</td>
</tr>
<tr>
<td></td>
<td>Iowa/Missouri</td>
<td></td>
<td>July 2006</td>
<td>$11.28*</td>
</tr>
</tbody>
</table>

*Converted to Canadian dollars assuming $Can 1=$US .90

Data on pig productivity in the U.S. and Canada suggest that Canada has had an advantage in farrowing exhibited by higher performance. Time series data obtained from PigCHAMP regarding breeding herd performance between Canada and the US provide some evidence. Figure 5 compares two key metrics of breeding herd efficiency: liveborn pigs per litter and pigs weaned per sow per year. Since 1998, aggregate data from Canadian producers show a 12 percent average advantage in pigs weaned per sow per year or approximately an advantage of 2.77 pigs weaned per sow per year.

**Historic Differences in Canadian and US Sow Productivity**

**Figure 5.** Source: PigCHAMP.
Capital

One of the key factors influencing labour productivity is investment in capital, and thus the cost of capital. The key measurement of capital cost is the prime business interest rate. This is presented in Figure 6 below. The figure plots Canadian prime business interest rates and US business prime rates. The figure shows that Canadian interest rates have generally been below US rates through the period, with the exception of a brief period from late 2002 to early 2004.

Meanwhile data from the Dow Jones and TSX indices illustrate that the equity returns are highly correlated in the US and Canada (Table 3). Through the late 1990’s, the Dow Jones index grew relative to the TSX; in recent years, the TSX has strengthened relative to the Dow Jones. Since 1990, the average rolling 12 month growth in the Dow Jones Index was about 11%, compared with 10% for the TSX. However, since 2000, the TSX has significantly outperformed the Dow Jones index, with an 11% growth rate compared with 2% for the Dow Jones. The TSX has experienced more volatile returns than the Dow Jones, regardless of which time period is used as a reference.

Thus, the underlying cost of debt capital is relatively low in Canada compared with the US, while the opposite appears true of equity capital. The historic spread between Canadian and US interest rates of 200-300 basis points has re-emerged, making Canadian debt inexpensive relative to the US. At the same time, based on recent performance, the expectation of return on stock equity investments has been higher in Canada compared with the US.

Figure 6.
Canadian and US Prime Business Interest Rates

Table 3. Annual average rates of return, mean and standard deviation.

<table>
<thead>
<tr>
<th></th>
<th>Dow Jones</th>
<th>TSX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-2006 Average</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>2000-2006 Average</td>
<td>2%</td>
<td>11%</td>
</tr>
<tr>
<td>Std Deviation 1990-2006</td>
<td>0.133</td>
<td>0.167</td>
</tr>
<tr>
<td>Std Deviation 2000-2006</td>
<td>0.115</td>
<td>0.206</td>
</tr>
</tbody>
</table>

Observations

The following observations emerge from the above. First, compared with the US, Canada currently appears to have little to offer in terms of competitiveness in hog feeding. This is surprising, particularly given that much of the development of the western Canadian hog industry was developed precisely on an anticipated advantage in hog feeding. However, the data show that US feedgrain productivity, measured simply as yield growth, has outstripped that in both western and eastern Canada. Consequently, feedgrain prices in western and eastern Canada have increased relative to that in the US. Points in western and eastern Canada are also at a freight cost disadvantage to the Midwest US.

Interestingly, Canada’s comparative advantage in hog production appears to have developed in the area that has least to do with feedgains and feeding costs. The record of performance data obtained from PigChamp suggests that Canadian producers have been successful at obtaining larger litter sizes and in weaning more pigs from sows than their US counterparts. Thus, Canadian producers and hog farm workers have achieved greater sow productivity. However, based on the wage data, this relative performance may be occurring at a higher wage cost, particularly in Alberta. It is also consistent with new investment in the conversion of facilities originally intended for hog feeding to farrowing facilities, which was driven by the above feedgrain situation.

Thirdly, the structure of capital costs and returns in Canada relative to the US would appear to favour debt capital over public equity. As illustrated above, interest rates in Canada are currently at a discount to that in the US, similar to what occurred through the late 1990’s when much of the investment in Canadian hog production facilities occurred. The equity situation is somewhat less clear, but the leading indicators suggest that rates of return are higher in Canada, and riskier, than in the US. Thus, projects in hog production or pork processing attempting to access external equity in Canada would need to offer higher returns than in the US in order to attract Canadian equity. This could be a significant factor, because debt is typically used to fund hog production investment projects, where processing plant projects would likely use a portfolio of debt and equity financing.
LABOUR CHALLENGES FACING CANADIAN PORK PACKERS

Labour has become one of the most important issues facing the packing industry in Canada. This section will explain the current trends and impacts on the industry. The focus of the industry is primarily on labor availability and its impacts on packer operations and development. The section also addresses labor challenges at the producer level.

The Problem Overview

Canadian livestock production and packing is facing a mounting labor shortage. This shortage has been brought on by many factors including an aging work force, a dramatic reduction in local youth enrolling in agriculture related programs/farm careers and an inability to compete in the labour market with other sectors. While the shortage is most noted in the west, particularly Alberta, the challenge faces the industry across the entire country. The following provides a perspective on the scope of the challenge in Alberta:

- In the 12 months ending in March 2006, 34 of 53 occupational groups had an unemployment rate below three per cent, compared to 22 occupational groups in 2003. (Statistics Canada says that an unemployment rate of below 4% indicates a labor shortage)
- The percentage of employers indicating a hiring difficulty in one or more occupational groups increased from 51.5 per cent in 2003 to 56.3 per cent in 2005.
- The percentage of employers reporting at least one position unfilled for over four months increased from 21.0 per cent to 28.2 per cent between 2003 and 2005.

Alberta’s tight labour market is leading to increased competition among industries and employers for workers across a range of skill levels, including low-skilled entry-level positions. As competition for limited numbers of low- and semi-skilled workers increases, several industries are finding it difficult to offer the higher wages and benefits other industries are capable of offering to attract and retain the workers they need.

Again, it is important to note that while the situation is most acute in Alberta, the situation is the same, to varying degrees across Canada. This new labor environment is directly impacting hog production and packing from coast to coast.

Primary Agriculture Employers

The growth of Alberta’s and the prairies resource-based industries creates a downside that affects every aspect of the economy. It is driving up wages; consuming support industries such as construction, engineering, professional services; creating shortages in cement, steel, and other building materials; and has effectively consumed the available labour pool. The resulting supply/demand gap in labour raises fundamental questions about the sustainability of current growth levels, threatens the viability of every province’s livestock industry, and
impacts the quality of life in rural communities.\textsuperscript{1} In fact, in Alberta the situation is regarded as an “imminent labour crisis facing cattle feeders and pork producers in the province.”\textsuperscript{2}

Dairy, pork and beef feedlot producers have been particularly impacted with labour shortages. Livestock require continuous management and labour shortages result in owners working longer hours. Numerous producers find some are struggling with 80-90 hour workweeks and are contemplating significant cutbacks in production, which threaten the viability of their farms. Extension staff in Alberta are increasingly hearing of decisions to keep teenage children home from school to help out with farm duties, and are concerned about risks to their personal and family health from overwork. Many are highly emotional and stressed regarding not being able to find workers and with the bureaucratic processes involved.

Over the past couple of years, hog production growth in Canada has been curtailed or in the case of the east, inventories have even declined. The lack of growth is due to a variety of reasons ranging from disease to poor financial returns. According to larger producers, however, another reason for the lack of growth is due to a lack of labor availability. There is no definitive measure on this factor, yet, but larger producers suggest that they are not able to run their operations at capacity due to a lack of labor. Suggesting a certain percentage lack of capacity would be misleading now, but there is no doubt that a lack of labor has now become a limiting factor in Canadian hog production.

**Pork Packing**

Canadian pork packers across the country are suffering due to a lack of labor. The R.A. Chisholm company in Toronto, is one of several Canadian entities that is working on trying to address the labor availability issue in the agriculture and food industry. Chisholm notes that in Alberta, pork and beef packers currently require about 1,500 new workers. In Manitoba approximately 600 workers are required. Throughout Ontario and into Quebec and the Maritimes pork packers of varying sizes are in need to additional workers.

Maple Leaf Foods has repeatedly stated that the key reason it has not begun a double shift at its Brandon, Manitoba plant is due to insufficient labor. Olymel in Red Deer, Alberta was unable to continue its second shift during 2006 due to a lack of labor.

The impact of labor availability is both very obvious and subtle. From the obvious perspective, the lack of labor results in lower production volumes at the plant and in the industry as a whole.

Just using the Brandon and Red Deer examples, it is clear that the industry could be processing an additional 80,000 hogs per week. That translates into lost revenues for the

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\textsuperscript{1} Adopted from A Livestock Industry Perspective on BUILDING AND EDUCATING TOMORROW’S WORKFORCE: A framework to enhance Alberta’s people capacity 10-YEAR STRATEGY, Alberta Pork and Alberta Cattle Feeders Association, March 2006.

\textsuperscript{2} A Livestock Industry Perspective on BUILDING AND EDUCATING TOMORROW’S WORKFORCE: A framework to enhance Alberta’s people capacity 10-YEAR STRATEGY Alta Pork and ACFA, March 2006
industry of approximately $600 million per year. That in turn translates to added transport costs on hogs shipped to the United States. This has obvious implications for Canada’s pork market share in both domestic and export markets. It is of interest to note that in recent years, Canada has become one of the United States’ fastest growing pork markets. At the same time, Canada has been losing share to the United States in world export markets.

There are more subtle losses associated with the labor challenge as well. One such loss is the fact that packers and processors are often not able to cut pork to more refined specifications due to a lack of labor. That contributes to a loss of value added production in Canada. Another subtle loss relates to the lack of asset utilization and the associated loss of return on investment. For example, Olymel has invested in a plant and equipment in Red Deer in order to facilitate a double shift. That investment is now significantly underutilized.

The Canadian pork packing industry faces many challenges but the lack of labor is arguably the most significant. Furthermore, when the packing industry suffers due to this or any other challenge, the ramifications are felt directly by producers as well.

INTERNATIONAL TRADE

Previous research by the George Morris Centre conducted for the Canadian Pork Council illustrated the material benefits to the Canadian hog industry as a result of pork exports. The following are some of the major points derived from that research:

- Pork exports have been the driver of the exceptional growth of pork production in Canada
- Canada is a world leader in pork exports (see graph below).
- Canada has diversified its export markets to over 100 countries and is increasingly less dependent upon the US market.
- Pork export demand has been rapidly growing while domestic demand has been stable.
- Pork exports of $2.8 billion in 2005 are responsible for economic activity amounting to $7.7 billion and 42,000 jobs.
- Pork exports support the incomes of about 6,000 farmers and about $2 billion in farm cash receipts.
- Premiums derived from the export market due to value differences in those markets could result in enhanced producer income of up to $9/hog.

The key message of the report was the importance of exports to the Canadian hog production sector and to the Canadian economy in general. Further to that point it needs to be reinforced here that pork exports are likely more important to Canada’s pork industry than to other industries around the world. The following comparisons make that point clear:

3 Utilizing an estimated 2006 cutout of about $140/head.
4 The Benefits for Canada from Pork Exports, October 16, 2006, George Morris Centre
World exports = 5% of total pork production
US exports = 10-13% of total production
Brazil exports = over 25% of total production
EU’s exports = 7% of total production
Canada exports > 50% of total production

Figure 7. Source: USDA.

Leading Pork Exporters

The importance of Canada’s pork exports is well illustrated in the graph below. The graph clearly shows that pork exports have been the sole source of growth for the Canadian pork industry.

Obviously relative to other countries, Canada has a greater stake in exports and therefore in export market competitiveness. It is therefore important to assess longer-term issues and challenges in the export market. The Food and Agricultural Policy Research Institute (FAPRI)\(^5\) specializes in longer term macro economic forecasting. In that regard, FAPRI sees pork trade increasing by 2.4% annually by 2015. Over that period of time, the market share of the enlarged EU drops by 3.3 points by 2015. Canada, the U.S., and Brazil gain 1.9, 2.7, and 4.2 points of market share, respectively.

FAPRI asserts that Brazil’s long-term prospects are good; new investments are expected to improve infrastructure and raise productivity. Strong domestic and export demand fuels a 3.1% annual expansion in Brazil’s pork sector. Net pork exports grow by 6.0%, to 1.2 mmnt in 2015. Improvement in productivity (breeding and feeding programs), favorable domestic

\(^5\) FAPRI is a dual-university research program. With research centers at the Center for Agricultural and Rural Development (CARD) at Iowa State University and the Center for National Food and Agricultural Policy (CNFAP) at the University of Missouri-Columbia.

The FAPRI paper referenced here is World Meat: FAPRI 2006 Agricultural Outlook.
policies (credit, infrastructure, fiscal), and a weakening currency improve Brazil’s competitiveness in the world pork market.

Figure 8. **Source: Statistics Canada.**

![Canadian Production, Exports and Domestic Disappearance](image)

The EU’s new member states are currently among the leading pork exporters in the world when grouped together. According to FAPRI, these countries will remain important exporters but their share of world markets will remain relatively stable or even decline by 2015.

In the EU, the decline in market share is driven by strict environmental regulations and animal welfare requirements. These limit the EU’s (especially the EU-15’s) long-term capacity, and production grows by only 0.7% annually.

China is often viewed as a potentially formidable competitor. FAPRI notes that pork is produced cheaply by backyard producers in China, but commercial producers’ costs are comparable to those of other countries. The fact is, however that FAPRI sees China more as a market opportunity than as a major exporter. WTO accession for China will result in more open market opportunities in coastal population centers as tariffs are reduced from 20% to 12% and as foreign firms are allowed to engage in distribution. FAPRI sees net imports expanding significantly by 2015.

Other major importers are expected to remain as major importers. In Russia, FAPRI is forecasting that net imports decline by 1.4% as production grows faster than consumption. Russia, however, is expected to remain as one of the major pork importers in the world. With WTO accession, Taiwan’s pork production increases only slightly, by 1.0%, and imports expand by 8.5% to meet the 1.3% annual increases in consumption. South Korea’s consumption growth, at 2.7%, is faster than its production growth, at 2.6%, and is thus met by more net imports. Improved consumer purchasing power and population growth caused pork consumption in Mexico to increase by 3.0%. Despite some industry integration, a limited
supply of cheap feeds and credit problems keep growth in domestic production lagging behind.

The FAPRI analysis shows that the world’s leading pork producers will continue to grow and compete for share in world markets. The main message garnered from FAPRI, however, is that the major import markets will remain very strong and growing markets for the world’s pork producing countries.

**PORK PACKER ISSUES AND CHALLENGES**

Exports are usually regarded as a sign of competitiveness. That is, the more an industry exports, the more competitive the industry is regarded. With that said, the Canadian pork packing industry offers a paradox. On one hand, the industry is a world leader in pork exports. That suggests that the Canadian packing industry is competitive on world markets. On the other hand, however, 2-3 million slaughter hogs and 6 million feeder hogs are annually shipped south to the US. That fact suggests that Canadian packers are not competitive with their US counterparts.

In some respects the issue of packer competitiveness is one of the most important factors facing the industry. The massive changes announced by Maple Leaf in the fall of 2006 as well as the expected structural changes to be announced by Olymel are major consequences of the competitiveness problem. Maple Leaf announced that it would close or sell five plants across the country. This is in addition to its earlier decision to exit its stake in plant operations in PEI and Quebec. The announcements in the fall of 2006 by Maple Leaf mean a potential loss of capacity of at least 4.5 million head. The company also said it would double shift its Brandon. The net potential loss of capacity could amount to over 2 million head, mostly in Ontario.

For its part, Olymel has already announced that one of its Quebec slaughter plants will close in March 2007. In addition, for a variety of reasons, the company elected not to go forward with its previously announced plans to construct a plant in Winnipeg. Further announcements are expected in light of its late 2006 external evaluation of its pork processing business. As noted earlier, the company was also forced to end its second shift at its Red Deer plant.

In addition to those massive developments, other developments are also occurring. For example there has been a protracted strike during late 2006 at a relatively small Quebec packing plant. This has likely been precipitated by poor financial results. The Quebec hog marketing system has been put in disarray due to the collapse in pricing of one of the three pillars of their system. In addition a packing plant in Moose Jaw has been opened and closed in 2006.

As a starting point in the discussion of the pork packing issues and what is driving these changes, it is worthwhile to review some of the key drivers to success in pork packing.
Pork Packing Characteristics

The following points are key pork packing plant characteristics.

- Scale economies
- Plant location/utilization
- Labor costs
- Hog weights
- Credits

Scale Economies

The following provides a good outline of relative plant sizes between Canada and the United States:

- Canada
  - average daily capacity: 3,200 head
  - 5 largest Cdn plants: 8,400 per day
  - 3 of top 29 are >40,000 per week

- United States
  - average daily capacity: 13,000 head
  - nearly 4 times greater than in Canada
  - 5 largest US plants: 21,000 head
  - 2.5 times greater than the top five in Canada
  - 20 of top 29 are > 40,000 per week

The main message is that Canadian plants or line speeds are much smaller or slower than in the United States. The following table provides another perspective on the same factor:

Table 4.

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Canada</th>
<th>Quebec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg Daily Capacity</td>
<td>13,000</td>
<td>3,200</td>
<td>2,700</td>
</tr>
<tr>
<td>Five Largest</td>
<td>21,000</td>
<td>8,400</td>
<td>5,500</td>
</tr>
<tr>
<td># Plants &gt;40,000 head/week</td>
<td>20</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

This is important because economic research as well as statistical analysis has consistently shown that larger plants have lower costs per head than smaller plants. In larger plants, direct and even indirect costs are spread over larger numbers. In addition labor is more productive and physical assets are more fully utilized. According to George Morris Centre, USDA and other academic research, costs can be C$2-8/head lower costs for large (1,000/hour) versus small (300-400)/hour.

Double shifting is important for similar reasons. Indirect costs such as administration and depreciation are spread over a larger number of hogs and assets are generally more fully
utilized. All major US plants are double shifted whereas in Canada only two very small plants in Quebec are double shifted. According to George Morris Centre research, Canadian plant costs are at least C$3 higher than US plants due to a lack of double shifting.

Essentially, Canadian plant costs are likely at least C$5/hog higher than in the US due to the fact that they are smaller and not double shifted.

**Other Drivers**

Generally the entire spectrum of factors that are important for success in pork packing tend to favor the United States.

- Canadian plant utilization rates have been declining in the last three years.
- Wage rates in Canada result in a cost disadvantage of at least $1/hog.
- Lower hog weights in Canada result in a cost disadvantage of about $1/hog.
- US packers receive up to C$1/hog more on inedible by-products.

**Canadian Dollar Appreciation**

The appreciation of the Canadian dollar has had an impact on Canadian packers in two ways. The first is that it has modestly resulted in reduced gross margins. That is due to the fact that appreciation has reduced pork cutout revenues at a slightly faster rate than it has reduced hog costs. As such, gross margins have been trimmed during the period from 2003 through 2006 as the appreciation occurred.

In addition to the impact on gross margins, operating cost competitiveness relative to the US competition has also been impacted. For example, if labor costs per hog in Canada amount to C$10/hog, when the exchange rate is at 0.65, the US equivalent was just US$6.50/hog. At a ninety cent dollar, that same US equivalent becomes US$9/hog. As such, the appreciation results in a relatively higher cost structure.

**Observations**

Canadian packers have significant challenges that have resulted in a material competitive disadvantage to their US counterparts. These challenges are being addressed by the packing sector but the adjustment is going to result in major uncertainty and disruption for producers across the country.

**SUMMARY AND CONCLUSIONS**

The Canadian pork industry from producer through packer is at a critical point in its evolution. Pending decisions and stated intentions by the two leading pork-packing companies in Canada have placed the industry at this critical point. These leading packers have made decisions or have begun to make plans that have major ramifications for the entire industry. Moving forward, the industry faces at least two possible paths. One will result in
rationalization due to the packer actions while the other path involves taking advantage of opportunities created by the packer actions.

Regardless of the path that is eventually taken by the industry, it is important to realize how the Canadian pork industry and in particular, the packing sector evolved to this critical point in its development. The industry needs to have these factors enunciated and understood before it can move forward.