

Risks to Canada's Domestic and Export Markets

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■ Introduction

The growth of Canadian hog and pork production over the last 15 years is one of the major achievements and outstanding phenomenon of Canadian agriculture and food. The success of the industry is based on quality, efficiency, productivity and entrepreneurship. This success is manifested by the fact that Canada is a world leader in pork exports.

This paper outlines some of the key variables that have led to Canada's success in domestic and export markets. The paper examines the trends in the industry with particular emphasis on structure. The paper also identifies some of the challenges and threats that the industry is facing. The purpose of the paper is to examine and analyze those challenges in order to help the industry to move forward and address those challenges.

■ Canada Pork Industry Success Indicators

There are many ways to measure success but one of them is growth. If an industry is growing over an extended period of time, it is usually a sign that other factors such as profits, productivity and quality are on the right track as well. In that regard, it is of note that in the ten years since 1995, the Canadian sow herd has grown by over 40%. At the same time, the US sow herd has been steady to slightly smaller. From 1995 through 2004, Canadian hog slaughter increased by 45% while US slaughter increased by just 7%.

With that noted, Canada is still a very small, although growing pork producer by world standards. According to the USDA's Foreign Agricultural Service, in 2000, Canada represented just 2% of total world pork production. By 2004, that world share had grown very slightly to just 2.1%. While the country is

very small in terms of production, Canada is the largest single exporting nation in the world. In 2000, Canadian pork exports comprised a 21% share of total world pork exports. By 2004, the Canadian export share had grown to 22% of a growing world pork export market.

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Structural Developments

Hog Production

In all sectors of agriculture, and in fact in most industries in general, there are fewer and larger firms dominating the industry. The hog and pork industry is no exception. Based on Census of Agriculture data, and extrapolating data from Statistics Canada's Livestock and Animal Product section, between 1996 and 2005 the number of operations with hogs declined by nearly 40%. During the same time, the average size of operation has more than doubled. On the prairies, the average hog farm size increased by over one and a half times. Furthermore, the very largest sized operations are gaining increasing share of the total herd. According to the Successful Farming ranking of top operations in Canada, the largest eight firms in Canada hold about 23% of the total sow inventory. That share would have been approximately 15-20% in the mid-1990's.

Pork Packing

Structural change in the pork packing industry can be measured by looking at industry capacity as well as plant and firm numbers. Slaughter capacity in the red meat industry is typically defined as the maximum volume that the industry can process over a specific period of time. Within that context it can be very difficult to quantify this maximum number with certainty. Capacity can be subject to change based on a variety of factors such as cooler space or regulatory changes. Capacity is even more difficult to state with certainty in Canada than in the United States. This is due to the fact that so few Canadian plants operate on a double shift or on Saturdays on a regular basis in comparison to their US counterparts. Therefore the Canadian capacity number can be even more fluid or subject to change.

Furthermore, there is the challenge of how to measure slaughter capacity for an industry. One method is to simply canvass the firms themselves and ask each plant manager for the capacity estimate and then tally the total. Another is to track the largest or maximum kill levels over a specified period of time. With those challenges and qualifications in mind, the following graph shows estimated Canadian weekly hog slaughter capacity based on the maximum weekly slaughter in a given year.

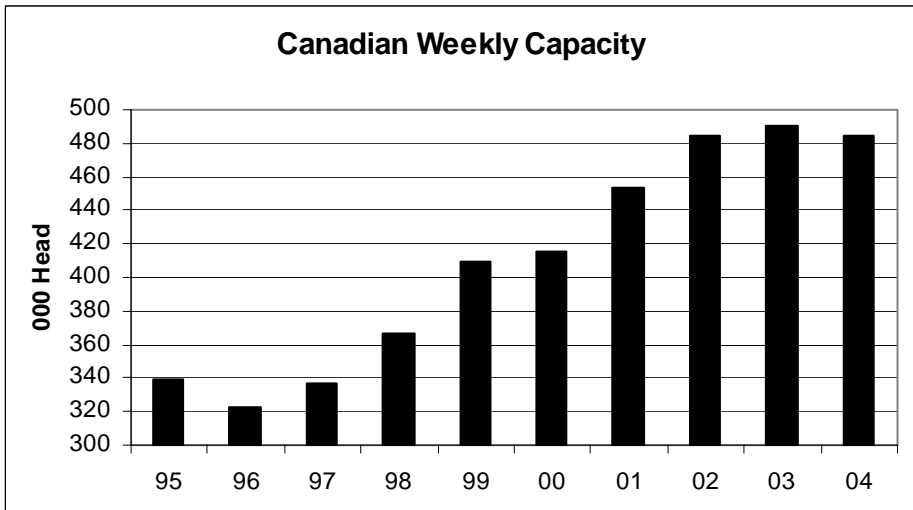


Figure 1. Canadian Weekly Capacity Source: George Morris Centre

Based on utilizing the largest kill per week method, it is estimated that in 2003, Canadian slaughter capacity reached over 490,000 head per week. This capacity rate compares to just 340,000 head in 1995, which represents an increase of over 45% over ten years. In contrast, US total US slaughter capacity has grown by less than 3% over the same time frame¹. Canadian hog slaughter did not reach the 490,000 level during 2004. That is because of production slowdowns at Springhill Farms, a mid-sized Manitoba operation, and the closure of a small plant in Ontario during the summer of 2003. Nevertheless, this capacity is available, and as such, overall capacity in 2004 and 2005 should be considered equal to 490,000. For perspective, however, it is of interest to note that Canadian *weekly* capacity is about 90-100,000 head greater than US *daily* capacity. Looked at another way, US daily capacity is approximately four times greater than Canadian daily capacity.

According to the Canadian Food Inspection Services, during 2004 there were 44 federally inspected hog slaughter operations. There are only 29 plants that the Canadian Pork Council (CPC) tracked in their tabulations of Canadian hog packer capacity for 2004 (**Table 1**). The smallest of those 29 plants slaughters 1,000 per week. It is inferred, therefore that the CFIA listed plants not counted by CPC are very small operations. Of those 29 plants listed by CPC, the following is a breakdown of size range:

The average weekly capacity of the 29 plants amounts to approximately 16,000 head per week or 3,200 per day. The five largest plants in Canada

¹ National Pork Board and Informa Economics tabulations

have an average weekly capacity of 42,000 head per week or 8,400 per day. In contrast to the Canadian plant size, the largest 29 US plants listed by the National Pork Board² have an average daily capacity of nearly 13,000 head per day. That is nearly 4 times greater than the largest 29 in Canada. The five largest US plants have a daily capacity of over 21,000 head per day or more than 2.5 times greater than the top five in Canada.

Table 1. Slaughter Capacity – 29 Canadian Plants, 2004 *Source: CPC*

| Weekly Slaughter, head | # of Plants |
|-------------------------------|--------------------|
| < 10,000 | 12 |
| 10,000-20,000 | 11 |
| 21,000-40,000 | 3 |
| > 40,000 | 3 |

As of mid-2005, 19 independent companies operate the 29 plants noted above. Of the 19 companies, Maple Leaf Foods operates seven plants in each region of the country except Quebec. The next largest firm, Olymel, operates five plants with one in Alberta and four in Quebec. The remaining 17 independent companies in Canada each own single slaughter plants.

Maple Leaf possesses about 31% of Canadian hog slaughter capacity while Olymel controls 34% for a grand total of 65% between the two firms. The remaining 17 companies in the business have 35% of the Canadian capacity. The next largest participant is Quality Meat Packers with one plant in Ontario with a listed capacity of 30,000 head or 7% of the total. Two firms, Breton in Quebec and Springhill in Manitoba are the next largest with less than 20,000 head capacity

The top four firms in Canada have a combined weekly slaughter capacity of 342,000 (68,000/day) head or 75% of federally inspected capacity. The average daily kill of the top four firms amounts to about 17,000 head per day per firm. As with plant size, company size in Canada also provides an interesting contrast with the US. The top four hog slaughter companies in the US in order of size are: Smithfield, Tyson, Swift and Excel. In the US, the top four firms have a total combined daily capacity of about 267,000 head or 65% of the total daily kill. On average, each of the four firms individually slaughter about 67,000 head per day or nearly 4 times more than the average of the top four Canadian firms.

² <http://www.dailylivestockreport.com/documents/dlr%208-12-04.pdf>

The packer situation in 2005 is in sharp contrast to the situation of less than ten years ago. During the early to mid-1990's, in addition to Maple Leaf, Olymel and Quality Meat Packers, there were at least eight other independent market participants that slaughtered hogs across Canada. One implication is that there are now eight fewer firms bidding on hogs. This is often argued as a negative to hog producers. A counter point to that however, is that today hog slaughter capacity is much greater than ten years ago and therefore the remaining firms have a greater need for hogs than the smaller firms of the past

■ Risks and Challenges

In 2004, Canada exported over 50% of its pork production. This is a 50% share of production from the nearly 23 million head slaughtered and does not include live exports. In 2004 live exports to the United States amounted to 8.5 million head, of which two-thirds were weaner/feeders. When live hogs are included in the export equation, approximately two thirds of Canada's hog production is exported in either live or meat form. Furthermore, between 2001 and 2004, the United States was the destination for about 48% of Canada's pork exports and of course all of the live exports. When pork and live exports are combined, the US is the ultimate destination for about 45% of Canada's hogs.

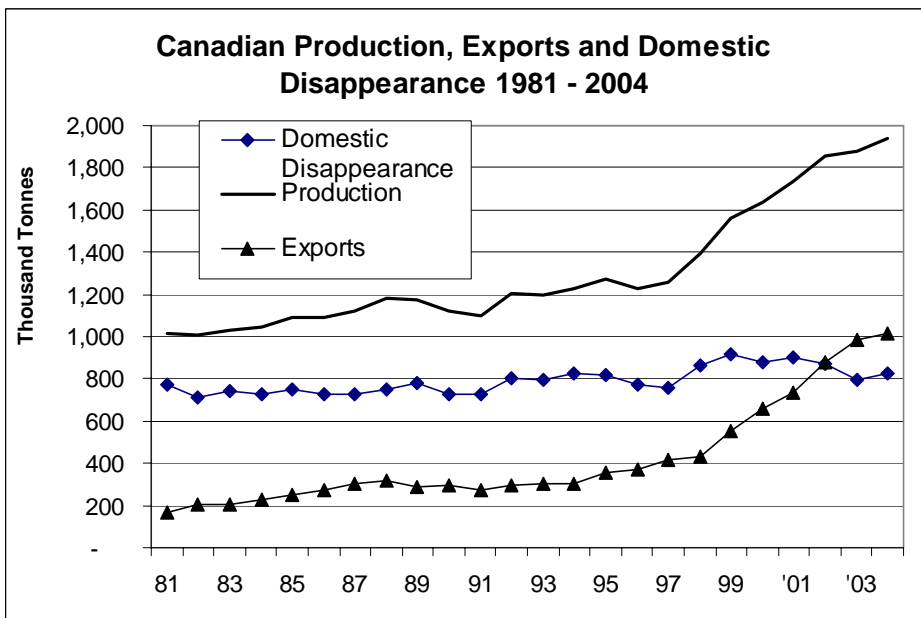


Figure 2. Canadian Production, Exports and Domestic Disappearance, 1981 – 2005 Source: Statistics Canada

There is much discussion and debate with regard to Canada's export dependency and more particularly its reliance on the US market. With regard to export dependency, the following graph essentially shows that exports are the source of all of Canada's growth. Unless Canadian's develop a much larger appetite for pork, the concept of "export dependency" is essentially a moot point. The industry either exports pork or it must become about 50% smaller.

*Exports are the source of
all of Canada's growth*

The recent US pork countervail and anti-dumping case increased already heightened awareness of how vulnerable Canada's live hog export are to the vagaries of US producer politics. Clearly there is a risk factor when 5.6 million head of 31 million marketed are exported in live form to the US. The trauma in the Canadian cattle industry caused by the BSE border closure shows what can happen when the US market is lost. Furthermore, any duties or tariffs on Canadian livestock are immediately and fully reflected in the price of the livestock on the domestic markets. No Canadian cattle or hog producer needs to be reminded of the importance or risks associated with the US market.

With that noted, there are logical, market oriented and structural reasons why this trade has developed. North America is really one market for hogs with different regions holding particular comparative advantages. The USDA's Economic Research Service in a November 2004 research paper entitled, "*Market Integration in the North American Hog Industries*", explained these reasons for trade very well. That paper cited the following grounds or rationale for the growth of the US imports of live hogs from Canada:

- Structural shift toward specialized operations in U.S. hog production
- Decline in U.S. breeding herd numbers and increased demand for feeder pigs in the United States,
- Policy changes in Canada created incentives to expand hog production (abolition of the Western Grain Transportation Act)
- Development of cost-competitive production in Canada
- Canadian proximity to major hog-finishing areas of the United States, and
- Favorable exchange rates between the U.S. and Canadian currencies.

The U.S. pork industry has also undergone significant changes in the last 20 years resulting in packer/processor demand for hogs in excess of U.S. supply. Higher hog prices in the U.S., due largely to aggressive packer/processor bidding to secure steady supplies of uniform, high-quality hogs, have driven U.S. imports of Canadian feeder pigs and slaughter hogs. Moreover, lower per-unit costs that derive from optimal slaughter plant throughput enable U.S.

processors to buy more hogs at higher prices than Canadian packer/processors.

The USDA paper effectively and authoritatively argued what Canadians had been saying for years. That is, that the increase in live hog imports was the result of structural and market forces. As such, while there are inherent risks, those risks are basically the cost of entry into that part of the industry.

Cost Competitiveness

Production Competitiveness

Inherent in much of the structural arguments is the issue of cost competitiveness. The George Morris Centre, and in particular, Senior Research Associate Al Mussell has been a leader in examining cost competitiveness of hog production in Canada and the United States. In Mussell's most recent analysis completed in mid-2004, he made the following conclusions:

- Manitoba, which is generally thought to be among the lowest-cost hog production regions in Canada, is not a lower-cost production region than southern Minnesota.
- Manitoba has been a lower cost producer of weanling pigs than southern Minnesota has been. This production cost advantage has been sufficient to more than cover the costs of shipping weanlings from Manitoba to southern Minnesota, so it explains the observed trade flow.
- Feed costs are the major driver of the above results. Contrary to expectations at the time of repeal of the Crow freight subsidy (and at the time of significant expansion in the Manitoba hog segment), Manitoba has not emerged as a low cost region for feed grains when compared with southern Minnesota. This has resulted from contamination with vomitoxin in barley and wheat over at least the 1999-2002 period, coupled with severe droughts in western Canada and the effects of the 1996 and 2002 US Farm Bills in suppressing corn prices in the US. Since 2001, Manitoba barley has been priced at a premium to Minnesota corn; in fact, the figure understates the case, because the extra costs associated with vomitoxin contamination in Manitoba are not accounted for, but were typically in excess of \$Can 13/tonne.
- While realized feed costs worked in favour of the US Midwest hog industry, it also influenced its structure. Feed costs are around 43% of variable costs in the nursery-finish stages of production, but only about 25% of variable costs in farrowing. Thus, given its comparative advantage in feed costs, an incentive existed for southern Minnesota to specialize to the extent possible in the stages of production most dependent on low feed costs. This helps explain the specialization of

grow-finish operations in southern Minnesota and the expansion in imports of Canadian weanling pigs.

Packer Competitiveness

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 are annually shipped south to the US. That fact suggests that Canadian packers are not competitive with their US counterparts.

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In some respects the issue of packer competitiveness is one of the most important factors facing the industry. As a starting point, consider that on the prairies for example, weekly slaughter marketings (domestic slaughter plus slaughter exports) exceed prairie packer capacity by about 10-15%. That does not even consider the weaner marketings. As such, the fact that hog supply exceeds demand in the form of capacity, it puts downward pressure on pricing. This is manifested in the fact that prairie prices are generally US Corn Belt (or some other region) less transport.

Another competitive factor is double shifting. Based on George Morris Centre research into packer costs, it is estimated that double shifting a large scale plant can reduce costs by over \$5 per hog. The fact that all major US plants double shift and no major Canadian plants double shift indicates that Canadian plants are at a competitive cost disadvantage.

A cost competitive packing sector translates into competitive hog pricing. If the industry does evolve slowly towards the double shift model, it will result in lower costs and greater demand for hogs. This in turn will result in higher hog prices and fewer hogs moving south.

■ References

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