COMPETITIVE ANALYSIS OF SASKATCHEWAN'S CATTLE AND HOG SECTORS

PREPARED BY

May 2009

FINAL REPORT

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DISCLAIMER

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I. EXECUTIVE SUMMARY

Saskatchewan cattle and hog producers face numerous challenges that place constraints on the ability of these sectors of agriculture to sustainably grow and prosper. Some of these factors include rising and volatile input costs, large currency fluctuations, a declining packing/processing sector, supply chain margin compression, a severe equity drain and market access issues. The province's livestock industry, however, has several inherent and developed competitive advantages in comparison to other major livestock producing regions in Canada and the US. Saskatchewan livestock producers and other industry participants, along with the Government of Saskatchewan, need to work together to develop strategies to further enhance and leverage these strengths in order to maintain a sustainable industry with the potential and opportunity for future growth. Some of the major advantages identified in this study as it relates to the Saskatchewan livestock sector are as follows:

- Land – plentiful, productive and relatively inexpensive
- Feedgrains – surplus supply, low cost
- Forage supply – surplus and low cost
- Water supply
- Hardy genetics
- Good herd health
- Strong management experience
- Excellent applied research and research facilities
- Low human population – less environmental/expansion constraints

In summary, the competitive assessment presented in this report reflects a strong and viable livestock production sector which gains competitive leverage from the key industry strengths identified above. This highly competitive production sector does not carry forward into other levels of the supply chain and therein lays huge challenges for the respective cattle and hog industries.

The request for proposals, upon which this research and analytic report addresses, posed a series of questions regarding the current state of affairs in the Saskatchewan cattle and hog industries as it relates to industry competitiveness. These questions are listed below and the project team's summarized responses to these questions serves as an executive summary of the broader body of work contained in this report.

1. **What are the current competitive advantages of Saskatchewan's cattle industry and hog industry?**

Saskatchewan's cattle industry benefits from an abundance of relatively inexpensive land that is marginal for crop production. This land tends to be amply suited to grazing and forage production which are of primary importance to the cow/calf sector as well as backgrounding operations based on grazing or high-roughage feeding rations. The crop growing capabilities of the province exceed the feed needs of all livestock species in Saskatchewan. With the second largest beef cow herd in the nation and ninth largest in combined US and Canada, there is a long history of cattle raising in the province with good management practices and environmental stewardship. Although the cold winters can increase and extend supplemental feeding requirements in comparison to other regions considered in this study, the climactic conditions lend to a good overall herd health status (relatively low disease and pests). The more moderate weather in the other seasons tend to mean less heat stress and dust in the summers and less mud problems for feedlots in the spring, especially in comparison to the US Midwest.

Saskatchewan's hog industry draws strength and competitive advantages from the extensive availability of key resources in the province which translate into highly abundant and competitively priced land, feed and water. The industry also has strong management, an excellent practical research and industry support group and a sufficiently skilled labour force. All of these factors translate into highly competitive farrowing operations with excellent sow herd productivity and relatively low costs of production- particularly in the production of isoweans and/or feeder pigs. Data would suggest that Saskatchewan has the potential to be highly competitive in the finishing of hogs as well although at present, the industry does possess higher finishing costs than other jurisdictions in North America (particularly Manitoba and the US Corn Belt region. The low population density and extremes in temperatures makes Saskatchewan an ideal location for genetic stock production due to excellent bio-security and high herd health.

2. **Do Saskatchewan's cattle and hog sectors have core economic advantages relative to Alberta, Manitoba and/or other regions in North America?**

Saskatchewan is a relatively low-cost region for producing feeder cattle and calves, with abundant land, water, forage and feedgrain production to support a large cow herd. In comparison to other regions, the province scores well in the areas of land base, roughage supplies, feed costs and herd productivity. There is sufficient carrying capacity to handle an even larger cattle industry. With plentiful supplies of feeder stock and reasonably priced feedgrains, there should be potential for development of more cattle feeding in the province, both backgrounding and finishing. With limited regional slaughter capacity, there is probably more potential for the backgrounding sector at this time. For the finishing sector, Saskatchewan tends to lag behind Alberta and the US Midwest in the areas of transportation/logistics, market structure and economies of scale.

It is the study team's conclusion that Saskatchewan does indeed have core economic advantages in the primary hog production segment of the hog and pork supply chain relative to neighboring Alberta and more distant Ontario and is on par with producers in Manitoba. The US Corn Belt is evaluated as having the most competitive production costs at present although the differentials relative to Saskatchewan are relatively small and could be at risk of being lost if corn based ethanol production in the Corn Belt raises corn prices in that region relative to feed cost equivalents in Saskatchewan.

3. **Can the Saskatchewan government and livestock producers leverage identified advantages to grow the cattle and hog sectors in the province?**

Cattle producers across Canada have endured large increases in input costs and squeezing of margins over the last few years, with Saskatchewan being no exception. The Government of Saskatchewan has responded in the short-run to producers' cash flow problems with the recently announced Saskatchewan Cattle and Hog Support Program. However, *ad hoc* programs tend to supply only temporary relief from negative market/industry problems and conditions. There is an identified need by both the Government of Saskatchewan and the cattle industry to work together on developing a long term strategy to maintain the viability of the industry and attempt to strengthen and expand the output. While the sector tends to be a relatively low cost producer of cattle and calves, there are factors outside the industry's sphere of influence that can negatively affect returns. Some of these include market access, exchange rate fluctuations, and regulatory impacts on cost of production (direct and indirect). Some of these are international/global in nature and are more in the venue of the Federal Government. Still, the Provincial Government can be a provider of input and advice to the Federal Government on such issues. As well, the Province can work with the industry on regional regulatory issues (including taxation) and other areas of development such as market strategy, risk management programs, support for research and technology, etc. As was mentioned in the producer interviews, "Government can't go it alone – Industry can't go it alone".

For the **hog and pork sector**, the immediate challenge is weathering the final stages of the current low spot in the hog price cycle and certainly the cash infusion that was recently provided by the province should help in providing a bridge for many producers to the next up trend in hog prices. Longer term, there are many challenges to create an environment that will be supportive of sustained industry growth. When an industry is neither the most productive NOR the lowest cost producer, efforts can always be extended to improve productivity and lower costs. Much of this can be accomplished by individual producers through better management and implementation of the latest technology whether this be in genetics, herd health, nutrition or risk management. Government can be a facilitator of such actions and can also have a positive impact on producer

costs by keeping cost burdens associated with regulatory issues, fees, taxes, etc as low as possible.

4. **Are there policy and/or regulatory impediments that would impact the ability to leverage these advantages?**

There does not appear to be significant policy or regulatory issues that would stifle or prevent growth of the livestock industry. Saskatchewan has a relatively business-friendly atmosphere. Environmental requirements are not overly burdensome. Producer efforts in land stewardship, animal health systems, safety and animal handling practices can be lauded as responsible and humane business practices that avert the likelihood of excessive or onerous regulations. Producers indicated regulatory "irritants" and certain issues that add costs were felt to be unnecessary. These included high land taxes (especially the education portion of property tax), the matter of dyed fuel and custom operators, PST on livestock facilities, out of province permitting, to name a few. The Government of Saskatchewan began addressing the property tax issue in the most recent budget. Producers are looking to work with the Provincial government on developing long term strategies for the cattle and hog sectors that would include keeping regulatory burdens to a minimum.

5. **What are the implications of the recently announced Alberta Livestock and Meat Strategy for Saskatchewan producers?**

At the outset, it is important to note that the Alberta Livestock and Meat Strategy is still evolving and while the basic objectives of the strategy have been identified, many operational details and provincial supply chain requirements are yet to be fully defined. Since the implementation of their strategy is a fluid work in progress, defining the implications that this strategy will have on Saskatchewan producers requires an element of speculation as to what the ultimate Alberta supply chain requirements will actually be. It should be noted that it is the opinion of the project team that most requirements impacting Saskatchewan will occur in the cattle and beef sector and lesser so in the hog and pork sector.

Apart from the immediate infusion of cash into the cattle and hog industries in Alberta, the ALMS has a strong focus on specific premise and hence, animal identification which will facilitate age verification and provide a means for full supply chain traceability. Given the large volume of feeder cattle and calves that move from Saskatchewan into Alberta for feeding purposes, there is certainly concern that the age verification objective based on animal ID will create a cross border trade barrier IF it becomes mandatory for Alberta backgrounders and feedlot operators to have means of documenting specific animal ages. Saskatchewan producers could quickly be put at a competitive disadvantage on

those animals lacking specific ID as market access could be denied. With cost elements associated with MCOOL in the US, final actions by Alberta regarding animal age verification could result in a huge setback to Saskatchewan's competitive positioning in feeder cattle and calf production until such time that Saskatchewan can fully meet the ID requirements set by Alberta.

6. How to preserve the cow/calf sector and improve profitability?

Of major importance to the cow/calf sector is access to land and forage. Management practices and environmental stewardship have improved over time. Yet more can be done to bolster productivity of the cow herd and ultimately improve profitability. Government needs to work with industry in areas of common interest/benefit, as a thriving cattle industry will provide economic benefits to the province. For example, the sale of Crown land to producers is considered a positive move by the industry. Providing ownership prompts increased land improvement to boost production capabilities. Research on various aspects of herd productivity, grazing strategies and forage production/use should be supported by the province, as well as working cooperatively with the industry on these matters. With the development of an ethanol industry (recent and future) and consequent output of co-products (DDGS), government and industry need to look at how best to integrate and utilize these feedstuffs in the production of cattle/beef. Further work on water management and water availability can assist to increase the productive capacity of the land.

7. Can a more robust cattle feeding sector be built?

There are several factors in place to support more cattle feeding in Saskatchewan, including plentiful supplies of feeder cattle/calves, feed, forage, water, and land plus regulations that do not overly burden the process of start-up or expansion. But there are limitations in access to large, efficient slaughter operations and general infrastructure conditions in comparison to regions such as Nebraska and southern Alberta. Some industry observers would suggest that the relatively strong Alberta cattle feeding sector was "bought" by the Alberta treasury with substantial and ongoing investment over the last 20 plus years. This has been viewed as making Alberta a "less risky" region to invest in, compared to Saskatchewan. The Government of Saskatchewan may not have the resources to follow such a route and there is no guarantee that such a direction would be fully successful. The Government can assist in providing a business climate that does not deter investment in building/expanding facilities or have monies flow to other regions for finishing of cattle. The Province can also

work with industry in areas of market access, developing branded beef programs, encouraging market alliances and coordination, developing better risk management programs and the lowering of regulatory burdens. Ultimately, it is up to industry participants to take the risk and make the investment in building a larger cattle feeding sector.

8. How can hog financial pressures and liquidation be addressed?

The hog and pork sector has been under severe financial stress for more than two years but this compression in margins is not unique to Saskatchewan and has been a feature of the broader North American industry. Canadian producers entered this down cycle in profitability earlier than their neighbors to the south as rather rapid appreciation in the Canadian dollar had major impacts on relative hog enterprise revenues in Canada. The reversal in that exchange rate the past 12 months now has Canadian producers in a stronger financial situation on current sales than US producers. Throughout this period of large North American supplies which did negatively impact hog prices, the hog sector has been forced to adjust to record high feed costs and a global recession with particularly negative GDP growth in the US which is still a major market for Canadian pork.

Markets have a tendency to solve imbalances in supply and demand and the combination of high costs, modest revenues and weak consumer demand (with export demand also being challenged) has resulted in production contraction in both Canada and the US. Supply cutbacks on both sides of the border (more so in Canada than the US) will result in very modest price and hog margin recovery in 2009 and a recovery in global and US demand by late 2009 and throughout 2010 will provide an economic environment for moderate to strong hog industry profitability moving forward. The cash infusion made by the Saskatchewan government in recent months will assist producers in making the transition from negative to positive market based margins. The Saskatchewan industry will emerge from this low point in the hog cycle smaller than it was when margins turned negative and the key to the future will be in defining a strategy for moving forward. This study attempts to identify the economic foundations upon which such a strategy can be designed but much work is still to be done.

9. Do alternative marketing/production strategies exist?

The development of alternative production/marketing strategies for **cattle** as compared to producing animals for the broader commodity market hinges on the ability to create effective alliances with the slaughter/processing segment of the supply chain. There do exist opportunities to produce beef animals that will meet

clearly defined end product specifications whether these are defined in a more generic way or through branded beef programs. Live animal protocols that incorporate specific requirements related to breed, animal handling and care, non-use of antibiotics, nutrition, animal ID, age verification etc. increase the costs of production but when tied to branded beef programs, can bring back a net return above costs for those willing to invest the management expertise to satisfy these requirements. In effect, the objective is to create a value added proposition on the raising of these animals as the end product becomes focused on meeting specific product specifications which will command a market premium. Such programs typically require strong coordination and cooperation between the cow/calf, backgrounding, feeding and slaughter segments of the industry.

For the Saskatchewan **hog and pork industry**, there are several key factors that have a direct bearing on the development of alternative marketing and production strategies. First and foremost, Saskatchewan has a small domestic population and hence, local demand base. Domestic consumption requirements are only 10-15% of current output which certainly indicates that Saskatchewan must market a large percentage of its hogs/pork to other provinces or foreign destinations. Being highly export dependent typically means that to have sustainability, you need to be cost competitive. It has been determined in this analysis that Saskatchewan is highly competitive in basic hog production.

For an export oriented industry to be competitive in the production and marketing of pork (rather than just hogs), scale of operations comes into play. To be competitive in export markets (whether other parts of Canada, the US or offshore), slaughter and processing costs become a key variable. Saskatchewan lacks the hog production base to support even a mid sized harvesting operation that could be quasi competitive on conversion costs and that would assume that all hogs produced in the province would be slaughtered in such a plant. With the current lack of slaughter/first stage processing given the exit of Maple Leaf Foods from Saskatoon in 2008, one must question HOW such a capability can be resurrected in the future at a scale that will provide an economic opportunity for such a plant to survive. This is a massive challenge.

If the feasibility study (which would need to be done) indicates that a commercial hog processing operation in the province is not economically viable, then the hog industry in Saskatchewan needs to focus on its strengths which lie in basic sow farrowing, feeder pig production and finishing of hogs. There may be opportunities for the development of niche operations to serve specific consumer needs with customized products but these will tend to be small volume, high cost operations that will have limited market reach.

10. Are there opportunities to develop slaughter/processing enterprises?

In the **beef slaughter and processing** sector, scale is the dominant factor in the determination of a processing entities cost structure and hence, competitiveness. At present, there exist huge barriers to entry in Western Canada for the development of a new slaughter/processing operation. While one could argue that a full push-back from MCOOL could result in an insufficient slaughter capacity to handle an expanded supply of fed cattle production in Western Canada, there is an insufficient supply of cattle available at this point to support another kill facility at the scale that would be required to be cost competitive. As the cattle industry on the prairies searches for a new balance, efforts should be extended to do more detailed assessments of the longer term need for added slaughter capacity. Saskatchewan could evolve as an excellent location to build a new plant but that would be contingent upon stabilizing and ultimately expanding the cow herd as well as increasing the volume of cattle being fed in the province. It is not clear that this is a path that the industry should be heading down at this point in time.

For the **pork industry**, there would appear to be limitations regarding the new development of slaughter/processing enterprises. Scale of operations is so important to being competitive at this level of the supply chain and since Saskatchewan would need to sell pork products at competitive pricing into out of province markets, costs at the processing level will be very critical to the ultimate success of any operation. There are economic reasons why MLF chose to shutter their Saskatchewan plant with the primary driver being the need to operate a double shifted, large scale slaughter operation in order to reduce kill/fabrication costs to competitive industry standards. The inability to put in place a slaughter/processing operation that can be cost competitive pretty much assures business failure for that operation. Smaller scale operations focused on producing pork products with custom oriented product specifications to meet attribute identified end market needs holds some potential but would need to be researched and analyzed closely to identify how much premium would need to be charged for the product from such an operation to cover the incrementally higher costs.

II. INTRODUCTION

Agriculture is an important component of the Saskatchewan economy, accounting for more than 10 percent of real gross domestic product in the province and 42 percent of primary industry. Saskatchewan farmers and ranchers hold more than 20 percent of the total cattle in Canada, along with nearly 30 percent of the national beef cow herd. Farm cash receipts[1] on sales of cattle and calves amounted to $1.12 billion in 2008. This accounted for more than 60 percent of total livestock sales and 12 percent of the total farm cash receipts of $9.4 billion[2].

Saskatchewan has the fifth largest swine herd in Canada at 810,000 total hogs (January 1, 2009) and breeding stock numbering 102,000 head. Hog marketings were just over 2.9 million head in 2008. Farm cash receipts from sales of hogs (weanling, feeder, market hogs and culled animals) amounted to $250 million in 2008, or about two and a half percent of total farm cash receipts in the province.

Saskatchewan cattle producers have faced several significant challenges over the last few years. The first Canadian BSE incident in May 2003 led to serious cattle and beef trade disruptions and market price variations that negatively impacted producer returns. While access to several key markets has been regained, there remain some trade barriers even at this date more than five years after the first BSE event. In addition to the lengthy fallout from BSE, the increasing value of the Canadian dollar, among other factors, has seriously affected the competitiveness of Canada's cattle and beef industry in comparison to the US and other countries. This loss of competitiveness is especially impactful on an export-dependent industry such as cattle/beef in Canada. Over the past two to three years, there have been significant increases in the costs of key inputs such as feed, labour, fertilizer, etc. and while these same factors have impacted production costs in virtually all regions of the world, they have been particularly harmful to the Canadian industry due to the synchronous rise in the Canadian dollar. And finally, over the years, cattle slaughter and beef processing operations in Saskatchewan have closed due to various economic pressures. This has made provincial cattle producers more dependent upon other jurisdictions for the feeding and slaughter of cattle born in Saskatchewan.

The Saskatchewan hog industry grew to peak numbers in 2005 of 1.4 million head of total hogs (October 1, 2005) and breeding stock over 136,000 head (July 1, 2005). Breeding stock and total inventories have been declining in recent years in response to declining producer margins. Being an export dependant industry, hog producers have been negatively affected by the rise in the value of

[1] Source: Statistics Canada.
[2] Crop receipts for grain and oilseed producers increased by 39 percent over 2007 to $7.05 billion, about three-quarters of total farm cash receipts in the province.

the Canadian dollar impacting their returns. There have also been significant increases in the cost of production, particularly in the areas of feed costs, energy and transportation. The financial situation had become extremely stressful by the fall of 2007 and returns continued to be negative through 2008. Reductions in the province's packing plant capacity have added to producer woes. As a result, many producers are exiting the industry, with Statistics Canada estimating there are 30 percent fewer hog producers in Saskatchewan (January 1, 2009) as compared to a year ago.

With these and other developing influences bombarding livestock producers, and the potential or likelihood of other challenges arising in the future, the government of Saskatchewan has expressed a strong desire to work with the provincial cattle and hog industries to develop a strategic plan that will capture and enhance the competitive advantages of these sectors, while endeavoring to mitigate disadvantages. In order to move forward in the development of such a plan, a thorough investigation and understanding of the current competitive position of the Saskatchewan livestock industry is desired and necessary.

III.PURPOSE AND GOALS OF STUDY

Competitiveness is a multi-dimensional concept that incorporates economic, political, technological, environmental and social elements, all of which can have direct or indirect impacts on the long-term sustainability of an industry's position vis-à-vis other industries (i.e. competing meats) or the same industry in different countries and regions. This project undertakes an evaluation of Saskatchewan's competitive position in comparison to other jurisdictions in Western Canada (particularly Alberta for cattle and Manitoba for hogs), as well as certain key regions of the United States. The primary focus of the cattle/beef portion of the analysis is the cow/calf, backgrounding and cattle feeding sectors of the Saskatchewan beef industry relative to parallel sectors in Alberta and the US. The hog portion of the analysis focuses at the producer level, including the production of weanling pigs and the production of slaughter weight market hogs, and includes comparisons to other key hog producing provinces in Canada as well as the upper Midwest US. Consideration is also given to the packer/processor sector given its importance to the other segments of the meat supply vertical.

The study provides an evaluation of the core input and broader macroeconomic factors and variables that impact the economics of primarily the live animal sector. The goal of the study is to provide specific answers to some questions that are key to the sustainability and growth of the cattle and hog sectors in Saskatchewan, including the following areas of importance:

- How to preserve the cow/calf sector and improve profitability?
- Is there opportunity to build a larger and more robust cattle feeding sector?
- How to combat the financial pressures on hog producers in the long term and end or slowdown the liquidation of this sector?
- Are there other marketing/production strategies that can improve the profitability of Saskatchewan hog producers?
- Are there opportunities to develop slaughter/processing enterprises?

A. Identification of Critical Issues

There are several key issues that were identified and addressed within the framework of developing a competitive landscape of the Saskatchewan cattle and hog sectors. They include but are not limited to the following:

- What are the current competitive advantages of Saskatchewan's cattle industry and hog industry?
- Do Saskatchewan's cattle and hog sectors have core economic advantages relative to Alberta, Manitoba and/or other regions in North America (i.e. cost of production)?
- Can the Saskatchewan government and livestock producers leverage identified advantages to grow the cattle and hog sectors in the province and if so, how?
- Are there policy/regulatory impediments that stand in the way of future industry growth?
- What are the implications of the recently announced Alberta Livestock and Meat Strategy for Saskatchewan producers, and how can Saskatchewan producers and government mitigate potential negative implications?

Sections V, VI and VII of this report provide information, analysis and supporting data for addressing the questions posed above as well as providing a framework for developing industry strategies for the Saskatchewan cattle and hog sectors. The analysis suggests that for issues as complex as those being faced by the Saskatchewan livestock industry, there is no simple answer yet Saskatchewan does possess inherent industry strengths from which future industry growth and prosperity can evolve. A cooperative supply chain approach for developing an industry strategy and solutions is the recommended path.

IV. METHODOLOGY

Conducting an evaluation of the structure, behavior and performance of industries as complex as the cattle and hog industries requires a rather disciplined research and analytic approach and that is the basic methodology that the study team applied to this study. An intensive data, information and business intelligence gathering effort was performed drawing on a broad cross section of existing research and information sources. In addition to the extensive desk research that went into this effort, study team members conducted multiple personal and telephone interviews with cattle and hog industry leaders in Saskatchewan as well as other geographical areas of Western Canada and the United States (see summary in Appendix I). Information previously developed by Informa on other Canadian cattle and hog industry consulting projects was also introduced into the Saskatchewan evaluation where appropriate.

This study had several key components all of which have critical bearing on developing a competitive assessment of the Saskatchewan cattle and hog sectors. For each industry, a basic profile was developed identifying the key structural elements of each industry—basically the number and size of industry participants; production and marketing activities and rankings relative to key competitors. Since the Saskatchewan Ministry of Agriculture had already developed a very detailed working document on the provincial cattle and hog sectors, Informa limited its industry profiling to some key summary elements which are presented in Section V.

There are many factors that impact the cost structure of any supply chain. The key competitive factors were identified and every effort was made to quantify differences in these costing elements between geographic areas. In many cases, factors that impact relative competitiveness are not quantifiable and in such cases, a qualitative index of measure was developed reflecting differential impacts of these factors from one jurisdiction to another.

In order to summarize and evaluate the broad range of factors impacting cattle and hog sector competitiveness in Saskatchewan, an industry competitive score card was developed for each industry. Since Saskatchewan is the focus of the analysis, the competitive scorecard used Saskatchewan as the "zero" or baseline in terms of scoring and then the other geographical jurisdictions were scored either positive to or negative to Saskatchewan. The higher the positive rating relative to "zero', the more competitive the jurisdiction is deemed to be and similarly, negative numbers reflect situations where the jurisdiction is less competitive than Saskatchewan. Key segments of each of the cattle and hog industries were scored over a range of factors and then an entire supply chain scoring and ranking was developed.

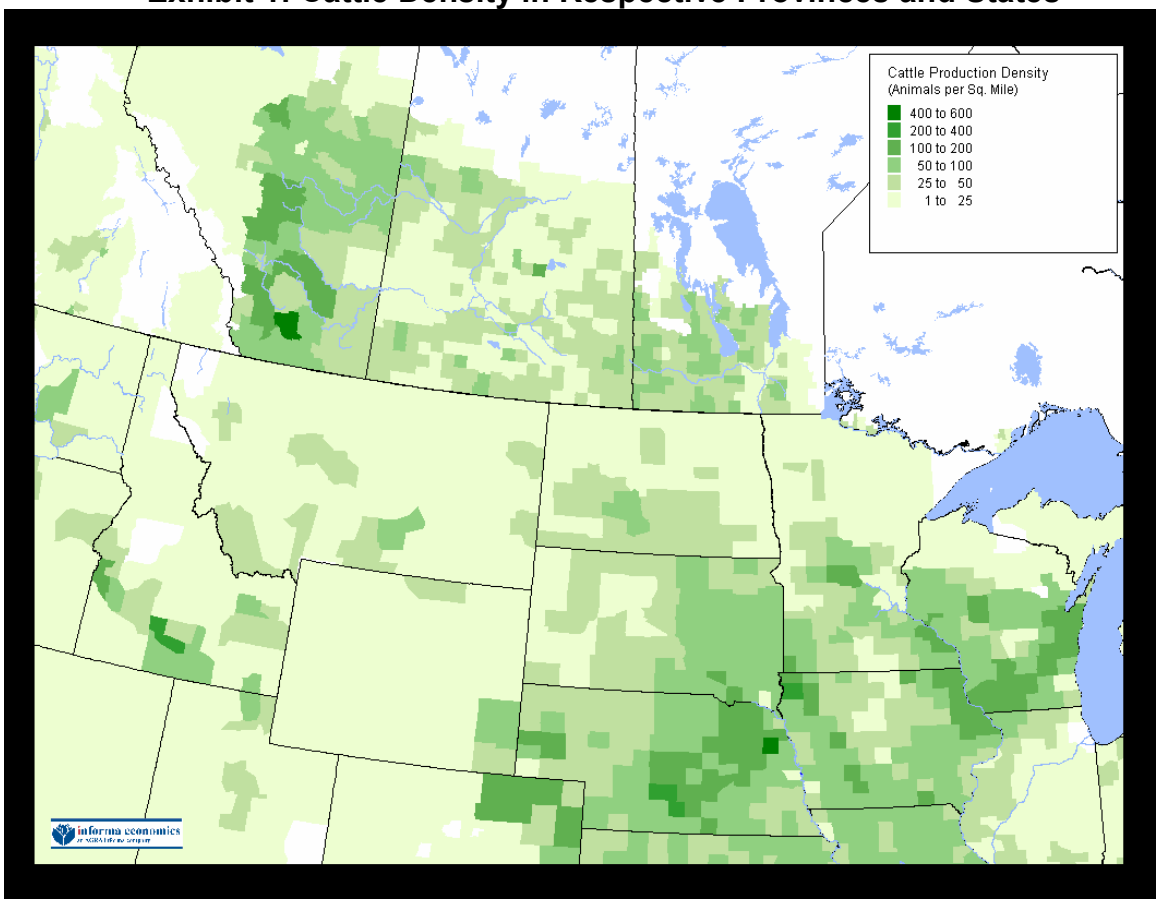
Going through the exercise of making relative comparisons between multiple competitive factors creates an information base from which an industry SWOT analysis can be performed. This was done and the results of this evaluation are presented in Section VI of the report. Section VII provides information and the study teams evaluation of the Alberta Livestock and Meat Strategy and implications of this strategy to Saskatchewan while Section VIII is a catch-all section dealing with the importance and implications of several new and evolving industry components.

The results of the extensive research and analysis conducted for this project and the study team's assessment of Saskatchewan's competitiveness in the beef and pork sectors are brought together into summary observations and conclusions as presented in Section IX of the report.

V. COMPETITIVE ASSESSMENT AND ANALYSIS

Due to time constraints and budget limitations, the competitive assessment and analytic components of this study were limited in scope to a manageable set of geographical regions. For the cow/calf and backgrounding segments of the cattle industry, pertinent information was developed for Alberta, Montana and the Dakotas in addition to information specific to the province of Saskatchewan. For the cattle feeding sector, core comparisons were primarily focused on competitive industries in Alberta and Nebraska.

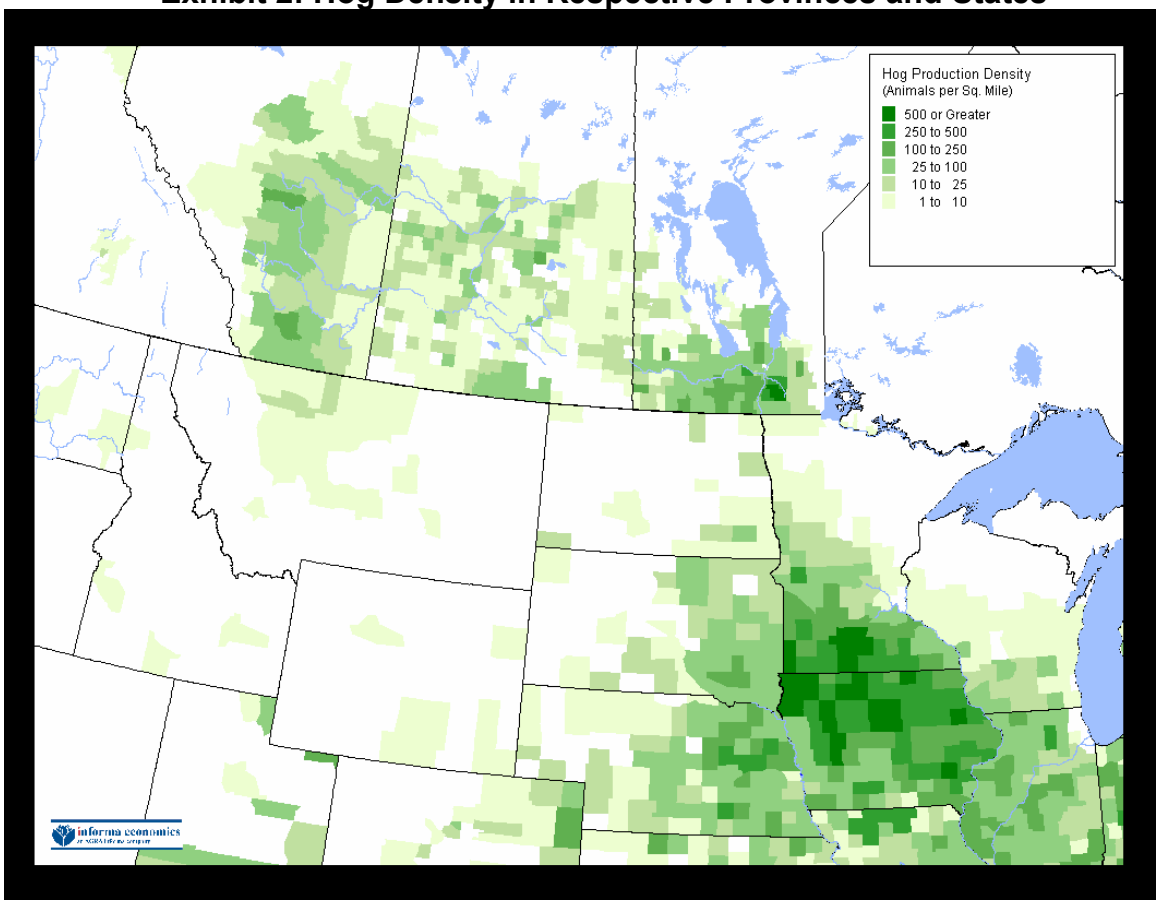
Exhibit 1: Cattle Density in Respective Provinces and States



Sources: Statistics Canada, USDA

For the hog industry, it was deemed beneficial to develop comparable data and information on neighboring provinces of Alberta and Manitoba and with in depth knowledge in hand on the Ontario industry, Ontario was included in the analysis as well. For the US, the upper Midwest states (Iowa/Minnesota) were evaluated and compared to the Saskatchewan hog industry.

Exhibit 2: Hog Density in Respective Provinces and States



Sources: Statistics Canada, USDA

A. Description of Provincial/State Agriculture

1. Saskatchewan Agriculture Overview

Saskatchewan covers an area of 651,900 square kilometers (251,700 sq mi). It is the 7th largest province in Canada. Saskatchewan is bounded on the west by Alberta, on the north by the Northwest Territories, on the east by Manitoba, and on the south by the American states of Montana and North Dakota. Saskatchewan has the 6th largest population of any province in Canada 1,023,810 according to a 2009 estimate.

Saskatchewan contains two major natural regions: the Canadian Shield in the north and the Interior Plains in the south. Northern Saskatchewan is mostly covered by boreal forest except for the Lake Athabasca Sand Dunes. Southern Saskatchewan contains another area with sand dunes known as the "Great Sand Hills" covering over 300 square kilometers (120 sq mi). The Cypress Hills, located in the southwestern corner of Saskatchewan and Killdeer Badlands

(Grasslands National Park) are areas of the province that remained unglaciated during the last glacial period. The province's highest point at 1,468 meters (4,816 ft) is located in the Cypress Hills and is the highest geographical point above sea-level between the Rocky Mountains and Quebec. The lowest point is the shore of Lake Athabasca, at 213 meters (700 ft). The province has fourteen major drainage basins made up of various rivers and watersheds draining into the Arctic Ocean, Hudson Bay, and the Gulf of Mexico.

Saskatchewan's economy is historically associated with agriculture; however, increasing diversification has meant that now agriculture, forestry, fishing, and hunting together make up only 9.5% of the province's GDP[3]. Saskatchewan grows more than one-third of Canada's grain. Wheat is the most familiar crop, but other grains like canola, flax, rye, oats, peas, lentils, canary seed, and barley are also produced. Beef cattle production in the province is only exceeded by Alberta. Mining is also a major industry in the province, with Saskatchewan being the world leader in potash and uranium exports. In the northern part of the province, forestry is significant. Oil and natural gas production is also a very important part of Saskatchewan's economy, although the oil industry is larger. Only Alberta exceeds the province in overall oil production.

Highway 1 is the Saskatchewan section of the Trans–Canada Highway mainland route. The total distance of the Trans–Canada Highway in Saskatchewan is 651.2 kilometers (404.6 mi). The highway traverses through Saskatchewan from the western border with Alberta, from Highway 1, to Manitoba where it continues as Highway 1, PTH 1.

Currently Saskatchewan Highways and Transportation operates over 26,000 kilometers (16,000 mi) of highways and divided highways. There are also municipal roads which comprise different surfaces. Asphalt concrete pavements comprise almost 9,000 kilometers (5,600 mi), granular pavement almost 5,000 kilometers (3,100 mi), non structural or thin membrane surface TMS are close to 7,000 kilometers (4,300 mi) and finally gravel highways make up over 5,600 kilometers (3,500 mi) through the province. TMS roads are maintained by the provincial government department: Saskatchewan Highways and Transportation. Saskatchewan consists of over 250,000 kilometers (150,000 mi) of roads and highways, the highest amount of road surface compared to any other Canadian province.

Only Highways 1, 11, and 16 contain sections of divided highway. Saskatchewan is the only province bordering the United States with no direct connection to the Interstate Highway system.

The Canadian Pacific Railway and Canadian National Railway companies operate railway freight across the province.

[3] Statistic Canada, http://www.statcan.gc.ca/pub/13-016-x/2008002/t/6100248-eng.htm

Exhibit 3: Saskatchewan Agriculture Census Highlights, 2006 vs. 2001

	2006	2001
Number of Farms	44,329	50,598
Land in Farms	64,253,845 acres	64,903,830 acres
Average Size of Farm	1,450 acres	1,283 acres
Market Value of Production	CN$6,626,761	CN$6,511,315,000
Crop Sales	74%	74%
Livestock Sales	26%	26%
Total Cropland (acres)	36,967,225	37,994,752
Gross Farm Receipts (2005 & 2000)	CN$6,338,334,378	CN$5,894,512,991
Average per Farm	CN$142,984	CN$116,497
Hogs and Pig Inventory	1,388,886	1,109,797
Cattle and Calves Inventory	3,363,235	2,899,502
Beef Cow Inventory	1,444,640	1,215,216
Value of Sales by Commodity Group (CN$000)		
Hogs and Pigs Sold	CN$287,321	CN$228,499
Cattle and Calves Sold	CN$1,126,217	CN$1,150,500
Grains, oilseeds, dry beans, and dry peas	CN$3,510,464	CN$3,757,931

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 4: Total cattle and calves: Farms reporting, Number of animals, and Percentage distributions by size class

	2006				2001			
Saskatchewan	**Farms reporting**	**Percentage distribution of farms by size class**	**Number of animals**	**Percentage distribution of animals by size class**	**Farms reporting**	**Percentage distribution of farms by size class**	**Number of animals**	**Percentage distribution of animals by size class**
Total	21,007	100.0%	3,363,235	100.0%	22,555	100.0%	2,899,502	100.0%
1 to 32 animals	4,330	20.6%	71,593	2.1%	5,345	23.7%	88,320	3.0%
33 to 77 animals	4,881	23.2%	260,359	7.7%	5,837	25.9%	310,724	10.7%
78 to 122 animals	3,416	16.3%	336,105	10.0%	3,904	17.3%	383,085	13.2%
123 to 177 animals	2,631	12.5%	389,582	11.6%	2,717	12.0%	400,941	13.8%
178 to 272 animals	2,555	12.2%	560,346	16.7%	2,444	10.8%	530,883	18.3%
273 to 527 animals	2,294	10.9%	839,851	25.0%	1,756	7.8%	635,710	21.9%
528 to 1,127 animals	730	3.5%	520,716	15.5%	456	2.0%	321,796	11.1%
1,128 animals and over	170	0.8%	384,683	11.4%	96	0.4%	228,043	7.9%

Exhibit 5: Total pigs: Farms reporting, Number of animals, and Percentage distributions by size class

	2006				2001			
Saskatchewan	Farms reporting	Percentage distribution of farms by size class	Number of animals	Percentage distribution of animals by size class	Farms reporting	Percentage distribution of farms by size class	Number of animals	Percentage distribution of animals by size class
Total	930	100.0%	1,388,886	100.0%	1,677	100.0%	1,109,797	100.0%
1 to 77 animals	658	70.8%	8,864	0.6%	1,160	69.2%	18,205	1.6%
78 to 272 animals	73	7.8%	10,754	0.8%	186	11.1%	27,384	2.5%
273 to 527 animals	36	3.9%	13,824	1.0%	111	6.6%	42,667	3.8%
528 to 1,127 animals	53	5.7%	40,328	2.9%	85	5.1%	66,487	6.0%
1,128 to 2,652 animals	30	3.2%	55,470	4.0%	40	2.4%	69,728	6.3%
2,653 to 4,684 animals	36	3.9%	136,088	9.8%	41	2.4%	154,366	13.9%
4,685 animals and over	44	4.7%	1,123,558	80.9%	54	3.2%	730,960	65.9%

Exhibit 6: Saskatchewan- Land use, census years 2006 and 2001

Saskatchewan	Land use					
	2006			2001		
	farms reporting	acres	hectares	farms reporting	acres	hectares
Total farm area	**44,329**	**64,253,845**	**26,002,605**	**50,598**	**64,903,830**	**26,265,645**
Land in crops (excluding Christmas tree area)	41,056	36,967,225	14,960,103	48,055	37,994,752	15,375,929
Summerfallow land	18,779	6,001,296	2,428,638	28,114	7,738,453	3,131,640
Tame or seeded pasture	14,396	4,848,757	1,962,222	14,045	3,473,646	1,405,734
Natural land for pasture	21,368	12,789,656	5,175,789	25,302	12,668,456	5,126,742
All other land (including Christmas tree area, woodlands and wetlands)	29,685	3,646,911	1,475,852	33,290	3,028,523	1,225,600

2. Manitoba Agriculture Overview

Manitoba has an area of 647,797 square kilometers (250,116 sq mi) and a population of 1,207,959, with more than half located within the Winnipeg Capital Region (which has a total population of 730,305). Manitoba is located in Western Canada and borders Saskatchewan to the west, Ontario to the east, Nunavut and Hudson Bay to the north, and the U.S. states of North Dakota and Minnesota to the south. Manitoba has the 5th largest population of any province in Canada.

The southern and western regions of the province are predominantly prairie grassland, while the eastern and northern regions are dominated by Canadian Shield lakes and forest. A small area of Manitoba's extreme north is Arctic tundra. The province is rich in natural resources including ample fresh water, fertile farmland, rich metal and mineral deposits, hydroelectric energy, forestry resources and abundant fish and wildlife. Manitoba's climate features four distinct seasons. Winter is cold and dry, spring and autumn are temperate, and summer is typically hot and dry.

Extensive agriculture is only found in the southern half of the province, although there is some grain farming found in the Carrot Valley Region. The most common type of farm found in rural areas is cattle farming (34.6%), followed by other grains (19.0%) and oilseed (7.9%). Manitoba is the nation's largest producer of sunflower seed and dry beans; and one of the leading potato producers. Around 12% of Canadian farmland is in Manitoba.

Trucks haul 95% of all land freight in Manitoba, and trucking companies account for 80% of Manitoba's merchandise trade to the United States. Five of Canada's twenty-five largest employers in for-hire trucking are headquartered in Manitoba, and three of Canada's 10 largest employers in the for-hire trucking industry are headquartered in Winnipeg.

Manitoba has two Class I railways. They are CN and Canadian Pacific Railway. Winnipeg is centrally located on the main lines of both of these continental carriers, and both companies maintain large intermodal terminals in the city. CN and CP operate a combined 2,439 kilometers of track within Manitoba.

Exhibit 7: Manitoba Agriculture Census Highlights, 2006 vs. 2001

	2006	2001
Number of Farms	19,054	21,071
Land in Farms	19,073,005 acres	18,784,407 acres
Average Size of Farm	1,001 acres	891 acres
Market Value of Production	CN$3,686,512,000	CN$3,698,409,000
Crop Sales	35%	41%
Livestock Sales	65%	59%
Total Cropland (acres)	11,616,450	11,650,599
Gross Farm Receipts (2005 & 2000)	CN$4,073,912,291	CN$3,529,222,171
Average per Farm	CN$213,809	CN$167,492
Hogs and Pig Inventory	2,932,548	2,540,220
Cattle and Calves Inventory	1,573,097	1,424,427
Beef Cow Inventory	655,587	563,300
Value of Sales by Commodity Group (CN$000)		
Hogs and Pigs Sold	CN$827,364	CN$803,974
Cattle and Calves Sold	CN$553,152	CN$575,163
Grains, oilseeds, dry beans, and dry peas	CN$1,026,336	CN$1,317,155

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 8: Total cattle and calves: Farms reporting, Number of animals, and Percentage distributions by size class

	2006				2001			
Manitoba	**Farms reporting**	**Percentage distribution of farms by size class**	**Number of animals**	**Percentage distribution of animals by size class**	**Farms reporting**	**Percentage distribution of farms by size class**	**Number of animals**	**Percentage distribution of animals by size class**
Total	10,217	100.0%	1,573,097	100.0%	11,333	100.0%	1,424,427	100.0%
1 to 32 animals	2,235	21.9%	35,773	2.3%	2,719	24.0%	45,075	3.2%
33 to 77 animals	2,256	22.1%	120,176	7.6%	2,944	26.0%	157,109	11.0%
78 to 122 animals	1,655	16.2%	164,162	10.4%	1,920	16.9%	188,895	13.3%
123 to 177 animals	1,251	12.2%	184,419	11.7%	1,349	11.9%	199,474	14.0%
178 to 272 animals	1,313	12.9%	286,356	18.2%	1,230	10.9%	267,076	18.7%
273 to 527 animals	1,117	10.9%	410,656	26.1%	926	8.2%	336,227	23.6%
528 to 1,127 animals	316	3.1%	223,174	14.2%	203	1.8%	145,377	10.2%
1,128 animals and over	74	0.7%	148,381	9.4%	42	0.4%	85,194	6.0%

Exhibit 9: Total pigs: Farms reporting, Number of animals, and Percentage distributions by size class

	2006				2001			
	Farms reporting	Percentage distribution of farms by size class	Number of animals	Percentage distribution of animals by size class	Farms reporting	Percentage distribution of farms by size class	Number of animals	Percentage distribution of animals by size class
Total	1,188	100.0%	2,932,548	100.0%	1,668	100.0%	2,540,220	100.0%
1 to 77 animals	310	26.1%	4,384	0.1%	461	27.6%	9,137	0.4%
78 to 272 animals	121	10.2%	19,632	0.7%	267	16.0%	45,774	1.8%
273 to 527 animals	130	10.9%	51,279	1.7%	240	14.4%	94,714	3.7%
528 to 1,127 animals	174	14.6%	141,210	4.8%	272	16.3%	221,688	8.7%
1,128 to 2,652 animals	167	14.1%	293,250	10.0%	181	10.9%	307,667	12.1%
2,653 to 4,684 animals	75	6.3%	273,238	9.3%	81	4.9%	286,232	11.3%
4,685 animals and over	211	17.8%	2,149,555	73.3%	166	10.0%	1,575,008	62.0%

Exhibit 10: Manitoba - Land use, census years 2006 and 2001

Manitoba	Land use					
	2006			2001		
	farms reporting	acres	hectares	farms reporting	acres	hectares
Total farm area	**19,054**	**19,073,005**	**7,718,570**	**21,071**	**18,784,407**	**7,601,779**
Land in crops (excluding Christmas tree area)	16,660	11,616,450	4,701,010	18,836	11,650,599	4,714,830
Summerfallow land	2,792	312,795	126,584	5,902	631,930	255,733
Tame or seeded pasture	5,819	1,231,313	498,295	5,980	947,585	383,474
Natural land for pasture	10,081	3,825,679	1,548,197	11,431	3,905,189	1,580,374
All other land (including Christmas tree area, woodlands and wetlands)	14,504	2,086,768	844,485	16,012	1,649,104	667,369

3. Alberta Agriculture Overview

Alberta covers an area of 661,848 square kilometers (255,541 sq mi). It is the 4th largest province after Quebec, Ontario, and British Columbia. To the south, the province borders on the 49th parallel north, separating it from the US state of Montana, while on the north the 60th parallel north divides it from the Northwest Territories. To the east is the province of Saskatchewan, while on the west it borders British Columbia. Alberta has the 4th largest population of any province in Canada with an estimate of 3,585,142.

Alberta is a fertile province, as the eastern and southern portions of its surface consist chiefly of plains that are almost entirely treeless. As the slopes of the Rocky Mountains to the west are reached, more trees are found until in the foothills of the mountains, bodies of forest timber occur. Trees also become more numerous in the northern part of the province, until in the region north of the North Saskatchewan River forests are met with again. From the southern boundary line north the prairie is dry, but of good soil, which grows excellent crops when irrigated. North of this region, the surface of the province is of the most fertile soil, with ordinary rainfall sufficing for agriculture.

Alberta's economy is one of the strongest in Canada, supported by the burgeoning petroleum industry and to a lesser extent, agriculture and technology. Agriculture has a significant position in the province's economy. The province has over three million head of cattle, and Alberta beef has a healthy worldwide market. More than one half of all Canadian beef is produced in Alberta. Wheat and canola are primary farm crops, with Alberta leading the provinces in spring wheat production; other grains are also prominent.

Alberta has over 180,000 km of highways and roads. The main north-south corridor is Highway 2, which begins at the Carway border crossing and is part of the CANAMEX Corridor. Highway 4, which effectively extends Interstate 15 into Alberta and is the busiest US gateway to the province. Highway 3 links Highway 4 to Highway 2. Highway 2 is supplemented by two more highways that run parallel to it: Highway 22, west of highway 2 and Highway 21, east of highway 2.

Alberta has two main east-west corridors. The southern corridor, part of the Trans-Canada Highway system, enters the province near Medicine Hat, runs westward through Calgary, and leaves Alberta through Banff National Park. The northern corridor, also part of the Trans-Canada network but known alternatively as the Yellowhead Highway (Highway 16), runs west from Lloydminster in eastern Alberta, through Edmonton and Jasper National Park into British Columbia. Another major corridor through central Alberta is Highway 11, which runs west from the Saskatchewan River Crossing in Banff National Park through Rocky Mountain House and Red Deer, connecting with Highway 12 west of Stettler.

There are over 9,000 km of operating mainline railway in Alberta. The Canadian Pacific Railway and Canadian National Railway companies operate railway freight across the province.

Exhibit 11: Alberta Agriculture Census Highlights, 2006 vs. 2001

	2006	2001
Number of Farms	49,431	53,652
Land in Farms	52,127,857 acres	52,058,898 acres
Average Size of Farm	1,055 acres	970 acres
Market Value of Production	CN$7,811,201,000	CN$8,368,417,000
Crop Sales	33%	28%
Livestock Sales	67%	72%
Total Cropland (acres)	23,775,509	24,038,861
Gross Farm Receipts (2005 & 2000)	CN$9,889,044,545	CN$9,919,447,223
Average per Farm	CN$200,058	CN$184,885
Hogs and Pig Inventory	2,052,067	2,027,533
Cattle and Calves Inventory	6,369,116	6,615,201
Beef Cow Inventory	6,369,116	6,615,201
Value of Sales by Commodity Group (CN$000)		
Hogs and Pigs Sold	CN$459,869	CN$572,119
Cattle and Calves Sold	CN$3,019,671	CN$3,918,165
Grains, oilseeds, dry beans, and dry peas	CN$2,097,091	CN$1,883,716

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 12: Total cattle and calves: Farms reporting, Number of animals, and Percentage distributions by size class

	2006				2001			
Alberta	**Farms reporting**	**Percentage distribution of farms by size class**	**Number of animals**	**Percentage distribution of animals by size class**	**Farms reporting**	**Percentage distribution of farms by size class**	**Number of animals**	**Percentage distribution of animals by size class**
Total	28,751	100.0%	6,369,116	100.0%	31,774	100.0%	6,615,201	100.0%
1 to 32 animals	6,660	23.2%	102,792	1.6%	7,114	22.4%	114,087	1.7%
33 to 77 animals	6,324	22.0%	335,088	5.3%	7,215	22.7%	387,759	5.9%
78 to 122 animals	4,059	14.1%	399,951	6.3%	4,850	15.3%	477,718	7.2%
123 to 177 animals	3,085	10.7%	456,412	7.2%	3,731	11.7%	553,172	8.4%
178 to 272 animals	3,454	12.0%	757,844	11.9%	3,754	11.8%	821,045	12.4%
273 to 527 animals	3,218	11.2%	1,192,806	18.7%	3,317	10.4%	1,213,856	18.3%
528 to 1,127 animals	1,322	4.6%	963,412	15.1%	1,243	3.9%	907,571	13.7%
1,128 animals and over	629	2.2%	2,160,811	33.9%	550	1.7%	2,139,993	32.3%

Exhibit 13: Total pigs: Farms reporting, Number of animals, and Percentage distributions by size class

	2006				2001			
	Farms reporting	Percentage distribution of farms by size class	Number of animals	Percentage distribution of animals by size class	Farms reporting	Percentage distribution of farms by size class	Number of animals	Percentage distribution of animals by size class
Total	1,576	100.0%	2,052,067	100.0%	2,677	100.0%	2,027,533	100.0%
1 to 77 animals	846	53.7%	11,092	0.5%	1,406	52.5%	22,038	1.1%
78 to 272 animals	130	8.2%	20,404	1.0%	354	13.2%	56,096	2.8%
273 to 527 animals	62	3.9%	25,130	1.2%	204	7.6%	80,249	4.0%
528 to 1,127 animals	105	6.7%	85,646	4.2%	249	9.3%	198,493	9.8%
1,128 to 2,652 animals	177	11.2%	319,537	15.6%	250	9.3%	441,354	21.8%
2,653 to 4,684 animals	128	8.1%	478,187	23.3%	120	4.5%	419,100	20.7%
4,685 animals and over	128	8.1%	1,112,071	54.2%	94	3.5%	810,203	40.0%

Exhibit 14: Alberta - Land use, census years 2006 and 2001

Alberta	Land use					
	2006			2001		
	farms reporting	acres	hectares	farms reporting	acres	hectares
Total farm area	**49,431**	**52,127,857**	**21,095,393**	**53,652**	**52,058,898**	**21,067,486**
Land in crops (excluding Christmas tree area)	41,172	23,775,509	9,621,606	46,028	24,038,861	9,728,181
Summerfallow land	8,390	2,239,633	906,347	13,268	3,053,214	1,235,592
Tame or seeded pasture	22,997	6,137,362	2,483,702	24,103	5,512,654	2,230,892
Natural land for pasture	27,466	16,135,646	6,529,863	31,438	16,503,920	6,678,899
All other land (including Christmas tree area, woodlands and wetlands)	36,206	3,839,707	1,553,874	38,322	2,950,249	1,193,923

4. Montana State Agriculture Overview

The state of Montana is the 4th largest in the United States in land area with 145,552 square miles (376,978 km²). Montana and Canada share a 545 mile (877 km) border. The state borders the Canadian provinces of British Columbia, Alberta, and Saskatchewan. To the east, the state borders North Dakota and South Dakota. To the south is Wyoming and to the west and southwest is Idaho. The state ranks 44th in population with an estimated population of 967,440.

Montana can be divided into two geographic areas in general. The eastern 3/5 of Montana is covered by the Great Plains and the western 2/5 of Montana is the Rocky Mountain Region. The Great Plains are made of high, gently rolling land interrupted by hills and wide river valleys including the Yellowstone and Missouri Rivers. The Rocky Mountain Region of Montana is covered by flat, grassy valleys and mountains blanketed in fir, spruce, pine, and other evergreens.

Exhibit 15: Montana 2003 Total Non-Federal Rural Land by Land Cover/Use

	Acres	Percent of Rural Land
Rural Land	**64,912,600**	
Cropland	14,526,600	22.4%
Pastureland	3,594,400	5.5%
Rangeland	36,697,900	56.5%
Forestland	5,402,000	8.3%
CRP	3,254,100	5.0%
Other Rural Land	1,437,600	2.2%

Source: National Resources Conservation Service

The economy is primarily based on agriculture, and major crops include wheat, barley, sugar beets, oats, rye, seed potatoes, honey, cherries, and cattle and sheep ranching.

Montana is ranked 12th in the US for value of sales of cattle and calves.

The majority of cattle in Montana are raised on rangeland and pastureland. There is only a small amount of feeding in Montana with less than 2% of cattle inventory on feed in 2007. Most cattle are shipped to other states for feeding and slaughter.

There are a minimal number of small packing plants in Montana but no large packing plants.

The BNSF Railway is the state's largest railroad.

The state's east-west travel corridor is served by Interstate 90 and Interstate 94. Montana's only north-south Interstate Highway is Interstate 15.

The USDA 2007 Census of Agriculture was released in February 2009 and includes the following information about Montana. The following is a comparison to the USDA 2002 Census of Agriculture.

Exhibit 16: Montana Agriculture Census Highlights, 2007 vs. 2002

	2007	2002
Number of Farms	29,524	27,870
Land in Farms	61,388,462 acres	59,612,403 acres
Average Size of Farm	2,079 acres	2,139 acres
Market Value of Production	US$2,803,062,000	US$1,882,114,000
Crop Sales	45%	39%
Livestock Sales	55%	61%
Average Per Farm	US$94,942	US$67,532
Total Cropland (acres)	18,241,710	18,315,514
Forage – land used for all hay and all haylage, grass silage, and greenchop (acres)	2,822,442	2,590,090
Net Cash Farm Income of Operation	US$827,156,000	US$350,334,000
Average per Farm	US$28,016	US$12,569
Cattle and Calves Inventory	2,589,679	2,396,764
Cattle and Calves Sold	1,842,159	1,770,727
Beef Cow Inventory	1,522,187	1,497,915
Value of Sales by Commodity Group (US$000)		
Cattle and Calves Sold	US$1,368,699	US$1,015,169
Grains, oilseeds, dry beans, and dry peas	US$1,009,039	US$507,090
Other crops and hay	US$187,672	US$157,980

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 17: Montana Cow Herd and Beef Herd Inventory by Size of Farm

	Cattle and Calves		Beef Cows	
	Farms	Number	Farms	Number
Total	12,341	2,589,679	11,162	1,522,187
Farms with-				
1 to 9	1,912	8,827	1,844	8,184
10 to 19	1,169	16,127	1,105	15,402
20 to 49	2,242	72,056	2,202	70,572
50 to 99	1,791	126,544	1,765	123,906
100 to 199	1,818	254,960	1,804	250,000
200 to 499	2,128	671,003	1,869	561,708
500 to 999	880	601,233	439	275,709
1,000 to 2,499	308	442,080	121	170,295
2,500 or more	93	396,849	13	46,411

Source: USDA Census of Agriculture 2007

5. North Dakota State Agriculture Overview

The state of North Dakota is the 19th largest in the United States in land area with 70,762 square miles (183,272km²). North Dakota and Canada share a 310 mile (499 km) border. The state borders the Canadian provinces of Saskatchewan and Manitoba. To the east, the state borders Minnesota. To the south is South Dakota and to the west is Montana. The state ranks 48th in population with an estimated population of 641,481.

From east to west, North Dakota is divided into three geographic regions. In the east is the Red River Valley. To the west of the Red River Valley is the Drift Prairie. The southwestern half of North Dakota is covered by the Great Plains.

The Red River Valley is flat. It lies along the border of Minnesota and is one of the most fertile areas in the world. This area of North Dakota is farm country and wheat and other crops cover the area along with livestock.

To the west of the Red River Valley is the Drift Prairie, rising from 200 to 2,000 feet over the Red River Valley. The Drift Prairie is separated from the Red River Valley in the north by the Pembina Hills. This area is marked by rolling hills, stream valleys, and numerous lakes. In the north are the Turtle Mountains.

About half of North Dakota is covered by the Great Plains. The Great Plains, in the southwestern section of the state, rise about 300 to 400 feet above the Drift Prairie east of the Missouri River. The area is hilly and rich in mineral deposits. Along the Missouri River, the land is lower. This area is called the Missouri Break. To the south and west of the river is an area of rugged valleys and buttes called the Slope.

Exhibit 18: North Dakota 2003 Total Non-Federal Rural Land by Land Cover/Use

	Acres	Percent of Rural Land
Rural Land	**41,374,400**	
Cropland	24,266,500	58.7%
Pastureland	951,200	2.3%
Rangeland	11,078,100	26.8%
Forestland	466,500	1.1%
CRP	3,203,500	7.7%
Other Rural Land	1,408,600	3.4%

Source: National Resources Conservation Service

Agriculture is the largest industry in North Dakota, with petroleum and food processing also being major industries. Crop sales account for 83% of the market value of production and livestock sales account for 17% of the market value. Wheat and soybeans are the top crop items in North Dakota.

North Dakota is ranked 15th in the US for value of sales of Cattle and Calves.

The majority of cattle in North Dakota are raised on rangeland and pastureland. There is only a small amount of feeding in North Dakota with less than 5% of cattle inventory on feed in 2007.

There are a minimal number of small packing plants in North Dakota but no large packing plants.

The largest rail systems in the state are operated by BNSF and the Canadian Pacific Railway.

The state's east-west travel corridor is served by Interstate 94. Montana's only north-south Interstate Highway is Interstate 29. The two interstates meet in Fargo on the eastern edge of the state.

The USDA 2007 Census of Agriculture was released in February 2009 and includes the following information about North Dakota. The following is a comparison to the USDA 2002 Census of Agriculture.

Exhibit 19: North Dakota Agriculture Census Highlights, 2007 vs. 2002

	2007	2002
Number of Farms	31,970	30,619
Land in Farms	39,674,586 acres	39,294,879 acres
Average Size of Farm	1,241 acres	1,283 acres
Market Value of Production	US$6,084,218,000	US$3,233,366,000
Crop Sales	83%	76%
Livestock Sales	17%	24%
Average Per Farm	US$190,310	US$105,600
Total Cropland (acres)	27,527,180	26,506,477
Forage – land used for all hay and all haylage, grass silage, and greenchop (acres)	2,525,213	2,827,815
Net Cash Farm Income of Operation	US$2,589,025,000	US$1,008,285,000
Average per Farm	US$80,983	US$32,972
Cattle and Calves Inventory	1,811,523	1,873,191
Cattle and Calves Sold	1,109,460	1,100,004
Beef Cow Inventory	930,023	982,270
Value of Sales by Commodity Group (US$000)		
Cattle and Calves Sold	US$856,489	US$625,070
Grains, oilseeds, dry beans, and dry peas	US$4,567,800	US$2,083,788
Other crops and hay	US$298,303	US$231,530

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 20: North Dakota Cow Herd and Beef Herd Inventory by Size of Farm

	Cattle and Calves		Beef Cows	
	Farms	Number	Farms	Number
Total	10,508	1,811,523	9,667	930,023
Farms with-				
1 to 9	688	3,664	775	3,909
10 to 19	746	10,421	924	12,633
20 to 49	1,990	65,688	2,300	74,241
50 to 99	1,996	142,220	2,366	164,777
100 to 199	2,320	325,486	2,039	273,533
200 to 499	2,054	624,053	1,126	309,673
500 to 999	543	357,352	127	76,957
1,000 to 2,499	156	209,142	9	14,300
2,500 or more	15	73,497	1	

Source: USDA Census of Agriculture 2007

6. South Dakota State Agriculture Overview

The state of South Dakota is the 17th largest in the United States in land area with 77,116 square miles (199,905km²). South Dakota is bordered to the north by North Dakota; to the south by Nebraska; to the east by Iowa and Minnesota; and to the west by Wyoming and Montana. The state ranks 46th in population with an estimated population of 804,194.

South Dakota is bisected by the Missouri River, dividing the state into two socioeconomically distinct halves, known to residents as "West River" and "East River". Fertile soil in the eastern part of the state is used to grow a variety of crops, while ranching is the predominant agricultural activity in the west. The Black Hills, a group of low pine-covered mountains, is located in the southwest part of the state.

Eastern South Dakota generally features higher precipitation and lower topography than the western part of the state. Smaller geographic regions of this area include the Coteau des Prairies, the Dissected Till Plains, and the James River Valley.

The Great Plains cover most of the western two-thirds of South Dakota. West of the Missouri River the landscape becomes more arid and rugged, consisting of rolling hills, plains, ravines, and steep flat-topped hills called buttes.

The Black Hills are in the southwestern part of South Dakota and extend into Wyoming. This range of low mountains covers 6,000 sq. mi (15,500 km².) with peaks that rise from 2,000 to 4,000 feet (600 to 1,200 m) above their bases.

Exhibit 21: South Dakota 2003 Total Non-Federal Rural Land by Land Cover/Use

	Acres	Percent of Rural Land
Rural Land	**44,384,500**	
Cropland	17,086,600	38.5%
Pastureland	1,985,400	4.5%
Rangeland	22,054,300	49.7%
Forestland	503,100	1.1%
CRP	1,296,900	2.9%
Other Rural Land	1,458,200	3.3%

Source: National Resources Conservation Service

The service industry is the largest economic contributor in South Dakota. This sector includes the retail, finance, and health care industries. Government spending is another important segment of the state's economy, providing over ten percent of the gross state product. Ellsworth Air Force Base, near Rapid City, is the second-largest single employer in the state.

Agriculture is also a key component of the South Dakota economy. Although other industries have expanded rapidly in recent decades, agricultural production is still very important to the state's economy. The five most valuable agricultural products in South Dakota are cattle, corn, soybeans, hogs, and wheat. Agriculture-related industries such as meat packing and ethanol production also have a considerable economic impact on the state.

South Dakota is ranked 8th in the US for value of sales of Cattle and Calves.

The majority of cattle in South Dakota are raised on rangeland and pastureland. There is a slightly larger amount of feeding in South Dakota than North Dakota with over 14% of cattle inventory on feed in 2007.

There are a minimal number of small packing plants in South Dakota but no large packing plants.

The BNSF Railway is the state's largest railroad.

The state's east-west travel corridor is served by Interstate 90. South Dakota's only north-south Interstate Highway is Interstate 29.

The USDA 2007 Census of Agriculture was released in February 2009 and includes the following information about South Dakota. The following is a comparison to the USDA 2002 Census of Agriculture.

Exhibit 22: South Dakota Agriculture Census Highlights, 2007 vs. 2002

	2007	2002
Number of Farms	31,169	31,736
Land in Farms	43,666,403 acres	43,785,079 acres
Average Size of Farm	1,401 acres	1,380 acres
Market Value of Production	US$6,570,450,000	US$3,834,625,000
Crop Sales	51%	41%
Livestock Sales	49%	59%
Average Per Farm	US$210,801	US$120,829
Total Cropland (acres)	19,094,311	20,318,036
Forage – land used for all hay and all haylage, grass silage, and greenchop (acres)	3,239,947	3,659,123
Net Cash Farm Income of Operation	US$2,217,996,000	US$902,091,000
Average per Farm	US$71,160	US$28,448
Cattle and Calves Inventory	3,687,728	3,695,877
Cattle and Calves Sold	2,745,227	2,707,872
Beef Cow Inventory	1,649,492	1,694,091
Value of Sales by Commodity Group (US$000)		
Cattle and Calves Sold	US$2,307,618	US$1,693,838
Grains, oilseeds, dry beans, and dry peas	US$3,238,162	US$1,406,137
Other crops and hay	US$121,272	US$145,766

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 23: South Dakota Cow Herd and Beef Herd Inventory by Size of Farm

	Cattle and Calves		Beef Cows	
	Farms	Number	Farms	Number
Total	15,667	3,687,728	13,802	1,649,492
Farms with-				
1 to 9	1,136	5,682	1,168	5,730
10 to 19	985	13,584	1,222	16,774
20 to 49	2,356	76,703	2,930	95,434
50 to 99	2,603	183,255	3,009	210,969
100 to 199	3,013	424,847	2,861	391,166
200 to 499	3,739	1,155,271	2,229	626,250
500 to 999	1,355	932,314	323	205,991
1,000 to 2,499	412	591,922	55	71,909
2,500 or more	68	304,150	5	25,269

Source: USDA Census of Agriculture 2007

7. Nebraska State Agriculture Overview

The state of Nebraska is the 16th largest in the United States in land area with 77,421 square miles (200,520 km²). Nebraska is bordered by South Dakota on the north and Colorado and Kansas on the south. On the east, Nebraska is bordered by Iowa and Missouri. On the west, Nebraska is bordered Colorado and Wyoming. The state ranks 38th in population with an estimated population of 1,783,432.

In the center of the continental United States, Nebraska is a land of plains; the Dissected Till Plains in the eastern part of the state rise to the Great Plains in the north central and northwest parts of the state.

The Dissected Till Plains cover the eastern fifth of Nebraska. This area consists of rolling hills criss-crossed by streams and rivers. The Dissected Till Plains are farm country and fields of corn, soybeans, sorghum grain, and other crops blanket the region.

The Great Plains of Nebraska lie to the west of the Till Plains and extend across the state into Wyoming and Colorado. A relatively flat area in the southeastern section, interspersed with lakes and wetlands, is farmed intensely. This area, about 7,000 square miles, is called The Loess Plains. This region is also sometimes referred to as the Rainwater Basin or the Rainbasin.

North of the Platte River in central Nebraska lies the largest area of sand dunes in North America. This area, about 20,000 square miles, is created of fine sand formed into hills by the wind. Most of the sand in the so-called Sand Hills, is held in place by grass. Exceptions occur due to overgrazing of cattle and this is cattle country supported by streams and abundant well water.

North and west of the Sand Hills are the High Plains, characterized by rising land up to over a mile above sea level in the west along the Wyoming border. This area receives little rainfall although some farming is accomplished with irrigation techniques. Rougher sections of the High Plains are used for cattle grazing.

Exhibit 24: Nebraska 2003 Total Non-Federal Rural Land by Land Cover/Use

	Acres	Percent of Rural Land
Rural Land	**47,154,600**	
Cropland	19,552,300	41.5%
Pastureland	1,849,900	3.9%
Rangeland	23,077,700	48.9%
Forestland	812,100	1.7%
CRP	1,083,200	2.3%
Other Rural Land	779,400	1.7%

Source: National Resources Conservation Service

Nebraska has a large agriculture sector, and is an important producer of beef, pork, corn, and soybeans. Other important economic sectors include freight transport (by rail and truck), manufacturing, telecommunications, information technology, and insurance. Crop sales account for 44% of the market value of production and livestock sales account for 56% of the market value.

Nebraska is ranked 3rd in the US for value of sales of Cattle and Calves. Nebraska ranks 2nd in the US for commercial cattle slaughter.

Close to 42% of the cattle in Nebraska are on feed. The beef industry is the largest single industry in Nebraska. Productive range and cropland supports close to 1.9 million beef cows in Nebraska. The abundant supply of water and generous feed and grain supplies have supported the expansion of the state's feedlot industry. Nebraska is the No. 3 marketer in fed cattle. There are close to 4,600 feeding operations in Nebraska and over 770 operations with over 1,000 head.

The Union Pacific Railway is the state's largest railroad. The BNSF and Canadian Pacific Railways also operate in Nebraska.

The state's east-west travel corridor is served by Interstate 80.

The USDA 2007 Census of Agriculture was released in February 2009 and includes the following information about Nebraska. The following is a comparison to the USDA 2002 Census of Agriculture.

Exhibit 25: Nebraska Agriculture Census Highlights, 2007 vs. 2002

	2007	2002
Number of Farms	47,712	49,355
Land in Farms	45,480,358 acres	45,903,116 acres
Average Size of Farm	953 acres	930 acres
Market Value of Production	US$15,506,035,000	US$9,703,657,000
Crop Sales	44%	35%
Livestock Sales	56%	65%
Average Per Farm	US$324,992	US$196,609
Total Cropland (acres)	21,486,025	22,520,874
Forage – land used for all hay and all haylage, grass silage, and greenchop (acres)	2,563,515	2,862,592
Net Cash Farm Income of Operation	US$3,966,860,000	US$1,225,016,000
Average per Farm	US$83,142	US$24,820
Cattle and Calves Inventory	6,576,950	6,202,947
Cattle and Calves Sold	7,620,019	7,351,398
Beef Cow Inventory	1,889,842	1,915,107
Value of Sales by Commodity Group (US$000)		
Cattle and Calves Sold	US$7,358,555	US$5,401,018
Grains, oilseeds, dry beans, and dry peas	US$6,528,508	US$3,091,884
Other crops and hay	US$206,577	US$201,613

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 26: Nebraska Cow Herd and Beef Herd Inventory by Size of Farm

	Cattle and Calves		Beef Cows	
	Farms	Number	Farms	Number
Total	21,424	6,577,050	18,233	1,889,842
Farms with-				
1 to 9	2,157	10,287	2,178	10,277
10 to 19	1,846	25,932	2,243	31,240
20 to 49	4,388	142,940	4,907	156,721
50 to 99	3,695	259,692	3,442	236,735
100 to 199	3,462	482,973	2,799	376,888
200 to 499	3,278	1,011,226	2,150	633,230
500 to 999	1,511	1,045,346	393	256,515
1,000 to 2,499	776	1,136,334	109	145,541
2,500 or more	311	2,462,320	12	42,695

Source: USDA Census of Agriculture 2007

8. Iowa State Agriculture Overview

The state of Iowa is the 26th largest in the United States in land area with 56,272 square miles (145,743 km²). Iowa is bordered by Minnesota in the north and by Missouri in the south. Wisconsin and Illinois are on the east and South Dakota and Nebraska border Iowa on the west. The state ranks 30th in population with an estimated population of 3,002,555.

Iowa can be divided into three main regions; the Young Drift Plains which cover most of the northern and central parts of Iowa, the Driftless Area parallel to the Mississippi River in the northeast, and the Dissected Till Plains in the southern area of the state.

Covering most of northern and central Iowa, the Young Drift Plains are mostly flat, fertile lands. This land was covered by clay, sand, gravel, and rocks, called drift, left by glaciers during the ice age. This drift became some of the most fertile topsoil in the world.

In northeastern Iowa, parallel with the Mississippi River, lies the Driftless Area. This area was not flattened to the extent of the Young Drift Plains and is characterized by rugged hills and cliffs. The soil is thin and not suited to farming.

The Dissected Till Plains stretch across the southern part of Iowa and extend north, along the Missouri and Big Sioux rivers into northwestern Iowa. Ice age glaciers left glacial "drift" consisting of clay, sand, gravel, and boulders intermingled. This deposit is called till. Over thousands of years, rivers and streams cut into (dissected) the terrain forming low, rolling hills and ridges.

Exhibit 27: Iowa 2003 Total Non-Federal Rural Land by Land Cover/Use

	Acres	Percent of Rural Land
Rural Land	**33,586,700**	
Cropland	25,511,100	76.0%
Pastureland	3,460,500	10.3%
Rangeland	-	0.0%
Forestland	2,301,300	6.9%
CRP	1,480,600	4.4%
Other Rural Land	833,200	2.5%

Source: National Resources Conservation Service

Iowa's main agricultural outputs are hogs, corn, soybeans, oats, cattle, eggs and dairy products. Its industrial outputs are food processing, machinery, electric equipment, chemical products, publishing and primary metals. Iowa produces the nation's largest amount of ethanol. Des Moines also serves as a center for the insurance industry.

Iowa is ranked 1st in the US for value of sales of Hogs and Pigs and 4th in the value of sales of Cattle and Calves.

Tyson has a large beef packing plant in Dennison, IA. There are 10 pork packing plants in Iowa with capacities over 2,500 head per day. Tyson, Cargill, Swift and Smithfield all have large facilities in Iowa.

Iowa is served by 17 railroad companies which operate 4,275 miles of track within Iowa. Three of these railroads are major national companies operating throughout much of the United States. These are the BNSF, Norfolk Southern (NS) and Union Pacific (UP) railways.

Iowa has four primary interstate highways. Interstate 29 goes along the western edge of the state. Interstate 35 goes from the southern border to the northern border through the center of the state. The state's east-west travel corridor is served by Interstate 80. Interstate 380 is an auxiliary Interstate Highway, which runs from Interstate 80 near Iowa City through Cedar Rapids ending in Waterloo.

The USDA 2007 Census of Agriculture was released in February 2009 and includes the following information about Iowa. The following is a comparison to the USDA 2002 Census of Agriculture.

Exhibit 28: Iowa Agriculture Census Highlights, 2007 vs. 2002

	2007	2002
Number of Farms	92,856	90,655
Land in Farms	30,747,550 acres	31,729,490 acres
Average Size of Farm	331 acres	350 acres
Market Value of Production	US$20,418,096,000	US$12,273,634,000
Crop Sales	51%	49%
Livestock Sales	49%	51%
Average Per Farm	US$219,890	US$135,388
Total Cropland (acres)	26,316,332	27,153,291
Forage – land used for all hay and all haylage, grass silage, and greenchop (acres)	1,125,565	1,533,027
Net Cash Farm Income of Operation	US$6,451,702,000	US$2,863,769,000
Average per Farm	US$69,841	US$31,592
Hogs and Pig Inventory	19,295,092	15,486,531
Cattle and Calves Inventory	3,982,344	3,535,945
Cattle and Calves Sold	3,635,880	2,929,704
Beef Cow Inventory	904,100	987,670
Value of Sales by Commodity Group (US$000)		
Hogs and Pigs Sold	US$4,827,224	US$3,078,455
Cattle and Calves Sold	US$3,606,633	US$2,119,935
Grains, oilseeds, dry beans, and dry peas	US$10,123,033	US$5,858,528
Other crops and hay	US$102,032	US$109,695

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 29: Iowa Cow Herd and Beef Herd Inventory by Size of Farm

	Cattle and Calves		Beef Cows	
	Farms	Number	Farms	Number
Total	32,090	3,982,344	20,809	886,562
Farms with-				
1 to 9	4,162	20,311	4,036	19,619
10 to 19	3,482	49,278	3,871	53,500
20 to 49	7,515	242,817	7,416	233,333
50 to 99	5,694	398,486	3,424	230,389
100 to 199	4,269	585,742	1,572	202,734
200 to 499	2,906	863,592	439	120,770
500 to 999	1,168	859,483	42	26,217
1,000 to 2,499	398	556,334	7	NA
2,500 or more	2,496	406,301	2	NA

Source: USDA Census of Agriculture 2007

Exhibit 30: Iowa Hog and Pig Inventory by Size of Farm

	2007		2002	
	Farms	Number	Farms	Number
Total	8,330	19,295,092	10,205	15,486,531
Farms with-				
1 to 24	780	6,803	821	7,154
25 to 49	245	8,643	297	10,439
50 to 99	340	23,489	432	30,340
100 to 199	529	73,412	733	101,516
200 to 499	1,318	439,822	1,999	651,802
500 to 999	1,171	804,492	2,047	1,421,544
1,000 or more	3,947	17,938,431	3,876	13,263,736

Source: USDA Census of Agriculture 2007

9. Minnesota State Agriculture Overview

The state of Minnesota is the 12th largest in the United States in land area with 87,014 square miles (225,365 km²). Minnesota and Canada share a 547 mile (880 km) border. Minnesota is bordered by Manitoba and Ontario on the north and by Iowa on the south. On the east, Minnesota is bordered by Lake Superior and by Wisconsin. On the west is North and South Dakota. The state ranks 21st in population with an estimated population of 5,220,393.

Most of Minnesota is comprised of gently rolling plains formed when glaciers moved over the area.

The northern part of Minnesota is the most rugged. The northeast section of the state has many rocky ridges and deep lakes and the area north of Lake Superior is the roughest and most isolated.

About half of Minnesota is covered by the rolling plains left by the ice age. These areas are covered by fertile topsoil. Though some sections are sandy and stony, this area has some of the richest farmland in the United States.

Along the Mississippi River, in the southeastern section of the state, the land is relatively flat, cut by deep valleys created by fast flowing rivers and streams.

In southwestern Minnesota, glaciers left thick deposits of sand, gravel, and clay. This area is criss-crossed by many streams. The few flat areas make good farmland.

Exhibit 31: Minnesota 2003 Total Non-Federal Rural Land by Land Cover/Use

	Acres	Percent of Rural Land
Rural Land	**45,210,700**	
Cropland	21,099,600	46.7%
Pastureland	3,590,600	7.9%
Rangeland	-	0.0%
Forestland	16,356,500	36.2%
CRP	1,422,700	3.1%
Other Rural Land	2,741,300	6.1%

Source: National Resources Conservation Service

Less than 1% of the population of Minnesota is employed in the agricultural sector, but remains a major part of the state's economy, ranking 6th in the nation in the value of products sold. The state is the US's largest producer of sugar beets, sweet corn, and green peas for processing, and farm-raised turkeys.

Minnesota is ranked 3rd in the US for value of sales of Hogs and Pigs and 10th in the value of sales of Cattle and Calves.

Hormel and Swift have pork slaughter facilities in Minnesota with capacities over 17 thousand head per day.

There are 4 major rail systems operating in Minnesota. The BNSF Railway is the state's largest railroad with 1,619 miles of track. The Canadian Pacific Rail (SOO) and UP lines also have a significant presence. The Canadian National (CN) operates 44 miles of track.

Principal transportation corridors radiate from the Minneapolis-St. Paul metropolitan area and Duluth. The major Interstate highways are I-35, I-90, and I-94, with I-35 and I-94 passing through the Minneapolis-St. Paul metropolitan area, and I-90 going east-west along the southern edge of the state.

The USDA 2007 Census of Agriculture was released in February 2009 and includes the following information about Minnesota. The following is a comparison to the USDA 2002 Census of Agriculture.

Exhibit 32: Minnesota Agriculture Census Highlights, 2007 vs. 2002

	2007	2002
Number of Farms	80,992	80,839
Land in Farms	26,917,962 acres	27,512,270 acres
Average Size of Farm	332 acres	340 acres
Market Value of Production	US$13,180,466,000	US$8,575,627,000
Crop Sales	53%	53%
Livestock Sales	47%	47%
Average Per Farm	US$162,738	US$106,083
Total Cropland (acres)	21,948,603	22,729,158
Forage – land used for all hay and all haylage, grass silage, and greenchop (acres)	1,716,693	2,112,533
Net Cash Farm Income of Operation	US$3,927,990,000	US$1,925,185
Average per Farm	US$48,498	US$23,831
Hogs and Pig Inventory	7,652,284	6,440,067
Cattle and Calves Inventory	2,395,217	2,265,997
Cattle and Calves Sold	1,356,142	1,385,740
Beef Cow Inventory	399,768	403,594
Value of Sales by Commodity Group (US$000)		
Hogs and Pigs Sold	US$2,139,877	US$1,398,234
Cattle and Calves Sold	US$1,385,740	US$873,074
Grains, oilseeds, dry beans, and dry peas	US$5,936,153	US$3,551,017
Other crops and hay	US$573,994	US$471,367

Note: As of March 9, 2009, US$1.00-CN$1.30

Exhibit 33: Minnesota Cow Herd and Beef Herd Inventory by Size of Farm

	Cattle and Calves		Beef Cows	
	Farms	Number	Farms	Number
Total	24,685	2,395,217	14,410	390,630
Farms with-				
1 to 9	4,187	21,286	4,657	23,018
10 to 19	3,737	51,471	3,478	47,093
20 to 49	6,132	194,869	4,260	127,158
50 to 99	4,101	287,570	1,357	88,881
100 to 199	3,629	497,594	487	62,030
200 to 499	2,118	618,927	158	42,450
500 to 999	600	414,195	11	NA
1,000 to 2,499	161	225,932	2	NA
2,500 or more	20	83,373	-	-

Source: USDA Census of Agriculture 2007

Exhibit 34: Minnesota Hog and Pig Inventory by Size of Farm

	2007		2002	
	Farms	Number	Farms	Number
Total	4,382	7,652,284	5,628	6,440,067
Farms with-				
1 to 24	1,089	8,399	1,320	9,620
25 to 49	210	7,500	294	9,991
50 to 99	191	12,987	320	21,376
100 to 199	184	25,822	420	56,550
200 to 499	494	160,952	900	287,157
500 to 999	459	321,766	750	521,358
1,000 or more	1,755	7,114,858	1,624	5,534,015

Source: USDA Census of Agriculture 2007

Competitive Summary

Agriculture is important in all of the regions under consideration in this study, in some cases being the largest industry. In terms of scale and structure, there is similarity among the hog sectors in the provinces and states reviewed above. For Iowa and Minnesota, 93 percent of the hog inventories are on farms with 1,000 pigs or more. A similar proportion is the case for Alberta and Manitoba (1,128 animals or more). The proportion is slightly higher in Saskatchewan at nearly 95 percent of hogs being on farms with 1,128 animals or more. The average number of hogs per farm grew in all regions between census periods. Saskatchewan has the highest number of hogs per farm among the larger size classes. While Saskatchewan hog operations have good or better scale in comparison to the other regions, the province has fewer hogs than Alberta or Manitoba. Minnesota has five times as many hogs and the Iowa hog sector is massive at nearly 14 times the number of hogs in Saskatchewan, along with a substantial infrastructure to support the industry.

Beef cattle herds tend to be more diverse in distribution of numbers among size classes. According to the 2007 US Census of Agriculture, the US had an average of 43 beef cows per reporting farm. This was very close to the average in the previous census (2002). For Canada, the number was 61 beef cows per reporting farm in the 2006 agriculture census, compared to 50 beef cows per farm in the 2001 census. Part of the reason for the increase in Canada was the holdback of "cull cows" on farms following the 2003 BSE incident. With increased cow slaughter and re-opening of the US border to trade on cattle over 30 months of age, the number of cull cows on farms has been reduced.

The three Prairie Provinces are somewhat similar in the average number of beef cows per farm in the 2006 census with 73 for Saskatchewan, 71 for Manitoba and 79 for Alberta. 27 percent of all cattle and calves in Saskatchewan are on farms with 528 head or more, a little higher than the proportion of just under 24 percent in Manitoba. Nearly half of Alberta's cattle and calves are on farms with

528 head or more, but this proportion is skewed higher by the large numbers of cattle in feedlots. Of the states under consideration, Montana had the largest number of beef cows per farm at 136 (2007 census), with nearly one-third of the cows on farms with 500 or more cows. Next was South Dakota with an average of 120 beef cows per farm and 18 percent being in herds of 500 or more. Nebraska had an average of 104 beef cows per farm and 24 percent in herds of 500 or more, while North Dakota had an average beef cow size of 96 head and just 10 percent of the beef cows being in herds of 500 or more. Iowa was the same as the national average at 43 beef cows per farm. Only five percent of Iowa's beef cows are in herds of 500 or more.

On a scale basis, Montana had the largest numbers of beef cows per farm and the biggest proportion in larger herds. South Dakota, Nebraska and North Dakota also had higher average herd sizes than the Canadian provinces. Within the Prairie Provinces, Saskatchewan was in the middle between Alberta and Manitoba in terms of average herd size, but probably not significantly different from the neighbouring provinces.

B. Common Livestock Industry Competitive Factors

1. Land

Saskatchewan encompasses an area of 651,000 sq km (more than 251,000 sq mi) and ranks fifth in size among the provinces of Canada. A little more than nine percent is freshwater area. Approximately forty-five percent of Saskatchewan's total land area is used for farming. With approximately 44,000 farms (2006), Saskatchewan has nearly 40 percent of all agricultural land in Canada. According to the 2006 Census of Agriculture, there were 12,469 farms involved in cattle ranching and 211 hog farms (21,007 Saskatchewan farms reported having cattle and 930 farms reported having hogs).

Exhibit 35: Saskatchewan Farm Land Use

	mln acres	Percent of Canadian Total
Farm Land Area	64.3	38%
Cultivated Farm Land Area	47.8	43%
Cropped Area	37.0	42%
Summerfallow Area	6.0	69%
Tame or Seeded Pasture	4.8	34%
Natural Land for Pasture	12.8	34%
Other	3.6	21%

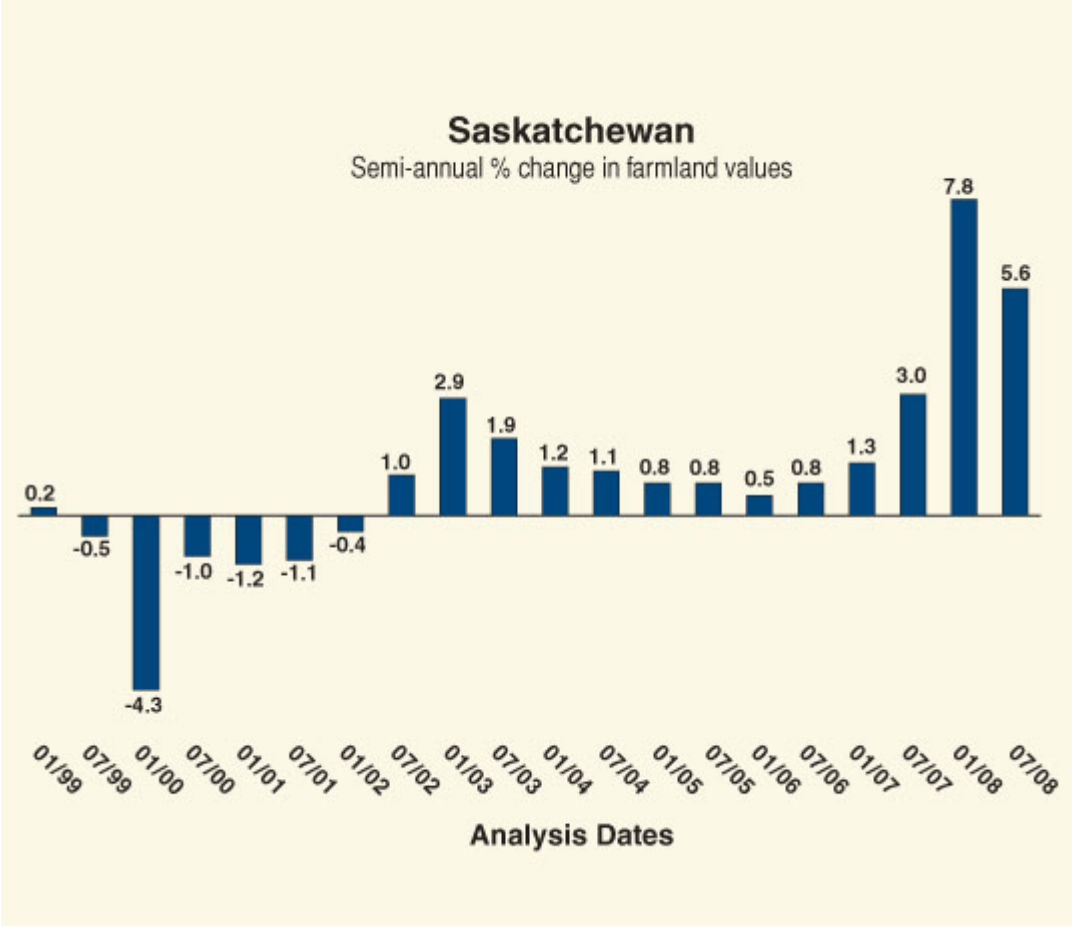
Source: Statistics Canada Census of Agriculture 2006

As part of this study, Informa conducted an informal survey of livestock producers and industry observers in Saskatchewan and other regions. There was a unanimous sentiment that Saskatchewan land costs are less than most other regions. For 1991-2004, Saskatchewan land values (in constant 1997 dollars/acre) averaged $308, compared to $592 in Alberta[4]. This was a difference of 52% between the two provinces.

Surveys by Farm Credit Canada would suggest that Saskatchewan farmland values have increased at much slower rates than in Alberta and at a more moderate rate than Manitoba (see charts below).

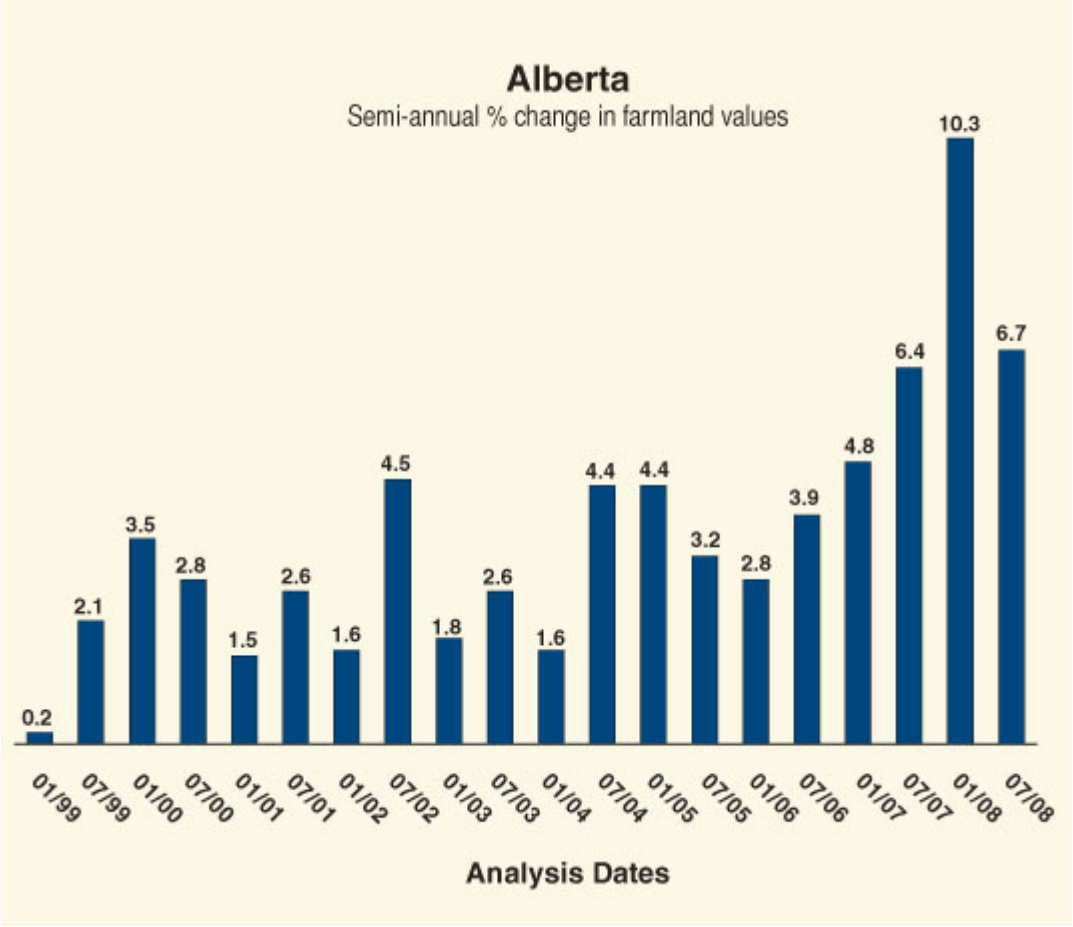
[4] Weerahewa, J. *et al.*, "The Determinants of Farmland Values in Canada". CATPRN Working Paper 2008-03, March 2008. http://www.uoguelph.ca/~catprn/PDF/Working_Paper_2008-3_Weerahewa.pdf

Exhibit 36: Changes in Saskatchewan Farmland Values



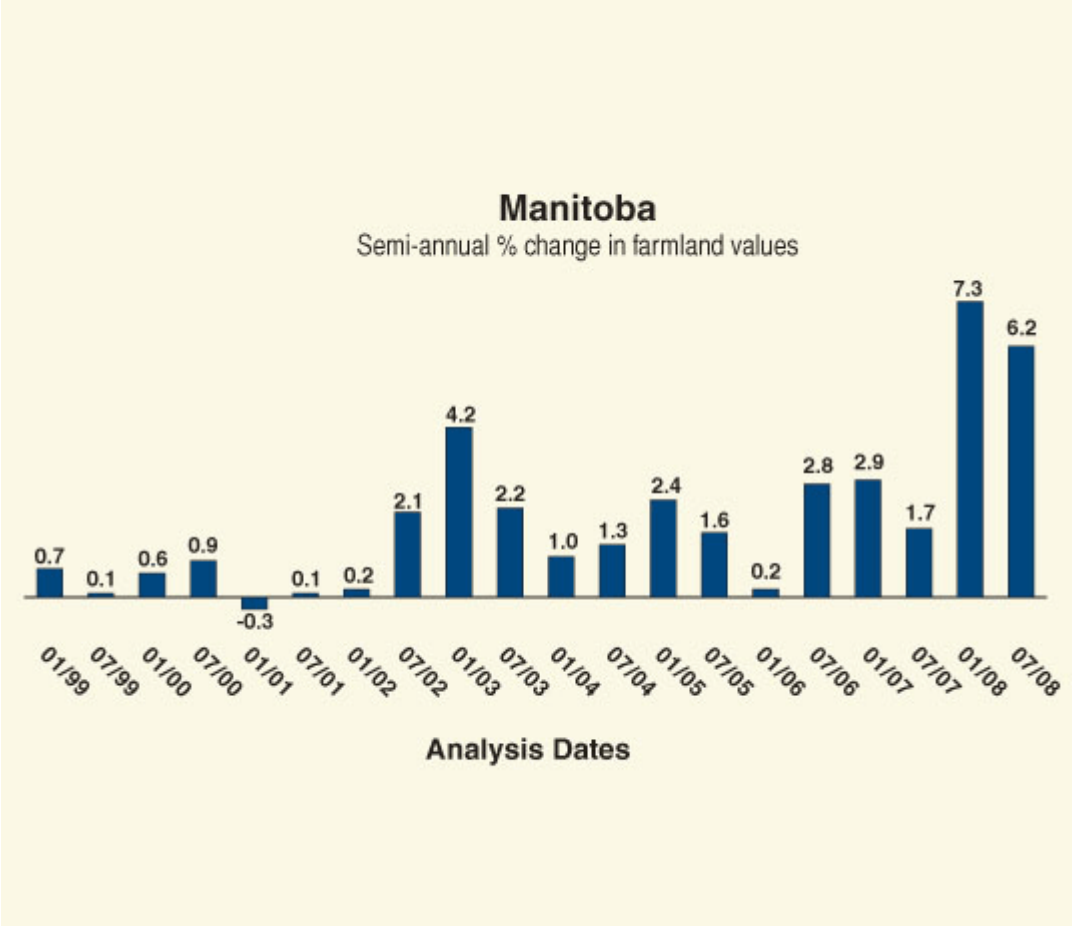
Source: Farm Credit Canada

Exhibit 37: Changes in Alberta Farmland Values



Source: Farm Credit Canada

Exhibit 38: Changes in Manitoba Farmland Values



Source: Farm Credit Canada

Attempting to make comparisons of average land values can be difficult due to differences in geography, soil conditions, climate and relative productivity between regions as well as within regions. Informa looked at actual real estate transactions on Saskatchewan agricultural land[5] by soil type[6] for 2007 and 2008. An historical series was then imputed using the semi-annual percentage changes in farmland values as reported by Farm Credit Canada (see chart above). The results were then compared with a data series from Alberta Agriculture[7] using the average of C.L.I. class 4 and 5 land. The results are shown below:

Exhibit 39: Pastureland Values ($/acre)[8]

Pastureland Values ($/acre)	2000	2001	2002	2003	2004	2005	2006	2007
Saskatchewan	299	292	291	304	312	317	322	332
Alberta	570	686	748	678	773	857	884	1032

[5] http://www.farmland.gov.sk.ca/
[6] Average values of soil types j-p.
[7] http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sdd1535
[8] The figures for Saskatchewan are preliminary. Informa is awaiting more detail and definition from Saskatchewan Ministry of Agriculture. Figures may be amended in final report.

Sources: Saskatchewan Ministry of Agriculture, AARD, Farm Credit Canada

The results of the preceding comparisons, along with the CATPRN working paper would support the statements of those interviewed in Alberta and Saskatchewan that Saskatchewan has a relative advantage in land costs in comparison to neighboring regions, particularly Alberta.

USDA-NASS provides surveys of agricultural land values and cash rents[9]. For pasture land values, the lowest values were found in North Dakota, followed by New Mexico, South Dakota, Wyoming, Nebraska, Nevada and Montana. The results for the US states being considered in this project are shown below:

Exhibit 40: US Pasture Values (CDN$/acre)

US Pasture Values (CDN$/acre)	2000	2001	2002	2003	2004	2005	2006	2007	2008
Montana	334	372	401	378	371	449	794	913	969
North Dakota	230	248	259	238	241	267	295	322	373
South Dakota	282	310	330	308	313	376	420	451	533

Source: USDA-NASS

The above two tables would suggest that pasture land in South Dakota, Montana and Alberta have higher values (costs) than pasture land in Saskatchewan, with North Dakota values being close to Saskatchewan. Again, caution needs to be used in looking at the comparisons in absolute amounts due to potential differences in the productivity or carrying-capacity of the land in different regions, as well as other market or economic conditions. A survey by Saskatchewan Ministry of Agriculture of private lease rates on pasture land[10] showed variation from $0.11 per cow per day to $1.20 per cow per day. The average amounts within regions also varied from a low of $0.39 per cow per day in the northeast (CD8) to $0.74 per cow per day in the southwest portion of the province (CDs 3 & 4). Cash pasture rental in Alberta varied from $10-30 per animal-unit-month (AUM) in the north to $20-30.75 per AUM in the south[11].

Competitive Implications:

Saskatchewan has a competitive advantage over most other regions in terms of land costs. This is especially helpful to cow/calf operators and backgrounding operators using grazing land, as the value of land and forage have significant influences on cost of production for cattle producers. There is also a relative abundance of marginal land that is best or better suited for production of grass and forage rather than row-crops.

[9] http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1446
[10] http://www.agriculture.gov.sk.ca/Default.aspx?DN=8186c534-812c-440c-a807-a05c380eabc6
[11] http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/inf11887

2. Feed Costs

As can be seen in the following table, Saskatchewan is a leading producer of grain and oilseeds, particularly wheat, barley, canola and oats. Only Alberta surpasses Saskatchewan in seeded acres and production of barley.

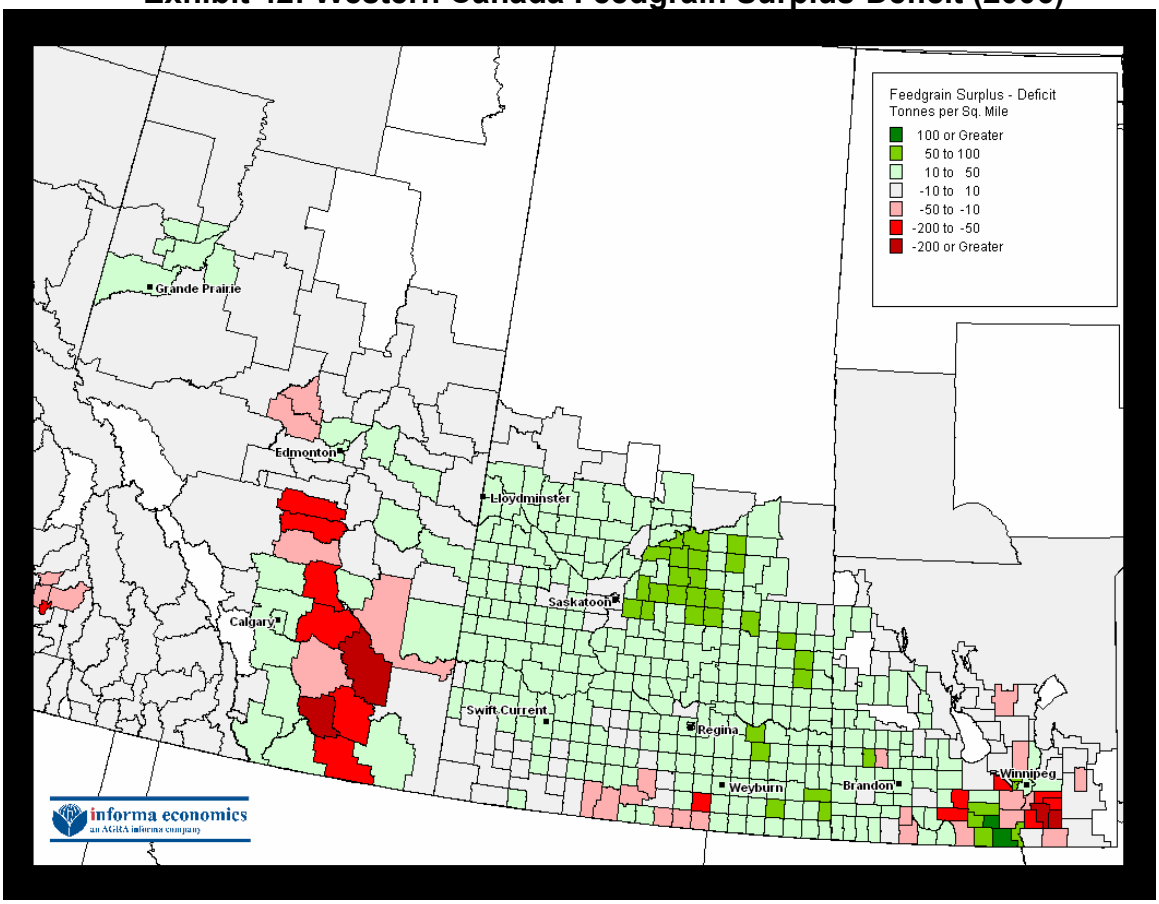
Exhibit 41: Prairie Grain and Oilseed Production as percent of Total Canada

	Alberta	Saskatchewan	Manitoba
	(five year average 03/04-07/08)		
Wheat - Total	30%	46%	14%
Wheat - ex Durum	33%	38%	18%
Wheat - Durum	20%	80%	0%
Oats	20%	43%	24%
Barley	45%	37%	10%
Corn for grain	0%	0%	3%
Soybeans	0%	0%	5%
Canola	37%	42%	20%
Flaxseed	4%	76%	20%

Source: Statistics Canada

Based on Canada's 2006 Census of Agriculture data on production, livestock populations and estimated feed usages, Informa has prepared the following exhibit of feedgrain surplus-deficit regions in Western Canada by census consolidated subdivisions.

Exhibit 42: Western Canada Feedgrain Surplus-Deficit (2006)



Source: Statistics Canada, Informa

Of course, grain and oilseed production is much larger in the US. In fact, the state of Iowa alone produces more corn than the production of the four major grain crops (wheat, barley, corn and oats) in Canada (see table below).

Exhibit 43: Comparison of Canada and US Grain Production

	Alberta	Saskatchewan	Manitoba	Canada
thousand tonnes	(five year average 03/04-07/08)			
Wheat - Total	7190	10974	3405	23782
Oats	764	1590	907	3735
Barley	5160	4269	1086	11391
Corn for grain	12	0	314	9679
Total Four Crops	13126	16833	5712	48587

	5-year Average (000 tonnes)
US Corn Production	287412
Iowa	54370
Nebraska	32333
Minnesota	28108
South Dakota	11641
North Dakota	4240

Sources: Statistics Canada and USDA

Still, with good productive capacity and only moderate livestock inventories, a considerable amount of Saskatchewan's grain and oilseed production is available for export to other regions of Canada and other parts of the world. Saskatchewan's feed ingredient industry is estimated to be valued at a little over one-third of the total value of crop production[12].

Exhibit 44: Farm Stocks of Grain December 31, 2008

(thousand tonnes)	All Wheat	Wheat (excluding durum)	Durum Wheat	Oats	Barley	Corn for Grain	Canola
Canada	17115	13385	3730	3074	7899	7005	8392
Ontario	850	850		30	120	4100	10
Manitoba	2450	2450		680	800	400	1600
Saskatchewan	7710	4810	2900	1600	2800		4100
Alberta	5980	5150	830	640	3900	19	2670

Source: Statistics Canada[13]

A considerable amount of Saskatchewan barley is shipped to the major cattle feeding region in Southern Alberta. The relative abundance of feed-grain production would suggest favorable pricing for Saskatchewan livestock producers in comparison to other provinces. The following tables provide annual average price comparisons (Canadian crop year basis) between the regions that are being investigated in this project. For the most part, Saskatchewan tends to have lower priced feed-grains, particularly feed barley and feed wheat, than Alberta and Manitoba. There are regions of Saskatchewan that are felt to be

[12] Source: The Encyclopedia of Saskatchewan
[13] Catalogue no. 22-002-X

distant from market destinations that would have local feed-grain pricing that would be even more advantageous than indicated by the following tables[14].

Exhibit 45: Feed Barley Prices ($/tonne)[15]

Crop Year (Aug-Jul)	Winnipeg	Calgary	Lethbridge	Saskatoon	Hunter, ND, Corn (Adjusted)	Humboldt, SD, Corn (Adjusted)
98/99	94.90	116.63	116.32	101.64	85.26	85.15
99/00	92.64	108.99	110.11	93.07	79.79	81.20
00/01	107.17	119.23	128.93	107.70	80.22	82.63
01/02	144.25	158.82	158.96	144.54	96.51	92.93
02/03	170.07	180.63	172.34	164.12	113.00	114.35
03/04	120.79	134.63	135.66	119.60	111.29	111.75
04/05	110.88	110.85	112.29	94.66	76.07	78.19
05/06	111.59	108.12	109.77	89.38	67.23	66.95
06/07	134.32	162.80	165.63	138.69	117.09	119.92
07/08	#NA	214.52	214.22	200.21	156.94	161.35

Sources: AAFC and USDA

Not surprisingly, the huge production of corn and soybeans in the US provides feed costs advantages on feed corn and soybean meal for livestock producers in several regions (Exhibit 45, Exhibit 47 and Exhibit 48). In the table above regarding feed barley prices, North Dakota and South Dakota corn prices were converted to Canadian dollars per tonne and then adjusted for the difference in feed value between corn and barley[16]. Canadian barley prices have tended to be higher than the adjusted US corn values (particularly in years when the Prairie Provinces suffered severe drought conditions). The growth in the US ethanol industry has been heavily concentrated in the Midwest where a large proportion of US corn is grown. This "new" and growing demand for corn pushed US corn prices to record levels in 2008, and had "spillover" effects into other grain markets. In the past couple of years, there are now some parts of the Midwest where the demand for corn for fuel is so significant that local corn prices (on a feed equivalent basis) are as high as levels seen for barley in Saskatchewan.

[14] Producer interviews
[15] FOB elevator.
[16] The US corn prices were adjusted by 10 percent for the higher energy value of corn in comparison to barley.

Exhibit 46: Feed Wheat Prices ($/tonne)[17]

Crop Year (Aug-Jul)	Winnipeg	Calgary	Saskatoon
98/99	116.91	131.92	121.46
99/00	103.03	115.27	107.84
00/01	108.03	121.54	121.18
01/02	148.02	158.57	153.62
02/03	177.46	194.76	175.79
03/04	150.41	150.30	146.35
04/05	132.11	111.15	99.70
05/06	139.33	106.66	99.58
06/07	160.94	162.80	148.50
07/08	#NA	247.70	237.59

Source: AAFC[18]

Exhibit 47: Corn Prices ($/tonne)[19]

Crop Year (Aug-Jul)	Winnipeg	Calgary	Saskatoon	Hunter, ND (CDN$/t)	Humboldt, SD (CDN$/t)
98/99	123.07	147.14	130.92	94.73	94.61
99/00	114.57	139.83	123.54	88.65	90.22
00/01	124.42	152.19	134.17	89.13	91.81
01/02	141.96	162.90	152.18	107.23	103.25
02/03	162.46	178.44	179.70	125.56	127.06
03/04	149.73	171.31	176.18	123.65	124.17
04/05	122.75	148.07	138.18	84.52	86.88
05/06	123.56	142.60	134.09	74.70	74.39
06/07	161.92	186.38	172.08	130.10	133.24
07/08	215.11	245.38	231.70	174.38	179.28

Sources: AAFC and USDA

[17] FOB elevator
[18] Price series for Winnipeg ceased to be reported November 2007.
[19] FOB elevator

Exhibit 48: Soybean Meal Prices ($/tonne)

Crop Year (Aug-Jul)	Calgary	Saskatoon	Winnipeg	Minneapolis Soybean Meal (CDN$)	Nearby Soybean Meal Futures (CDN$)
98/99	261.03	251.77	238.47	220.33	225.63
99/00	287.91	277.98	263.45	248.45	257.76
00/01	317.78	309.77	294.71	274.35	281.20
01/02	322.93	316.77	300.32	275.55	279.72
02/03	331.66	323.76	309.66	287.51	291.12
03/04	410.05	391.90	375.22	372.20	371.31
04/05	287.80	290.12	270.23	238.41	245.28
05/06	264.19	266.39	250.29	215.23	227.51
06/07	278.59	279.59	261.38	229.00	246.14
07/08	393.13	397.13	378.72	343.91	361.09

Sources: AAFC and USDA

Competitive Implications:

In most years, Saskatchewan has lower feed costs than its neighbouring provinces. The abundance of grain and oilseed production with smaller cattle and hog populations than Alberta puts the province in a relative surplus feed situation, especially in comparison to the cattle feeding region of southern Alberta. Portions of upper Midwest and northern Plains states (Dakotas) have lower feed costs, both in absolute dollar terms and in relative feed value costs between corn and barley. But there are also parts of the Midwest where demand for corn for ethanol production has pushed up local corn costs over the last couple of years to levels similar to above those for similar feedgrains in Saskatchewan.

3. Taxation

The Frontier Centre for Public Policy is an independent public policy think tank based in Winnipeg. Founded in 1997, the centre has compiled what it calls "a simple measure of tax competitiveness across Western Canada"[20] since 2001. The latest report that Informa could obtain on the centre's calculations and comparisons of the tax load index was for June 2006.

[20] http://www.fcpp.org/pdf/FC202006TaxLoadIndexjun2006final.pdf

Exhibit 49: 2006 Northern Plains Tax Load Index

June 2006 Rates	BC	AB	SK	MB	ON	ND	MN	MT	WA
Personal Income Tax	14.70%	10.00%	15.00%	17.40%	17.41%	5.54%	7.85%	6.90%	0.00%
Health Tax	0.70%	0.57%	n/a	n/a	1.32%	n/a	n/a	n/a	n/a
Corporate Income Tax	12.00%	10.00%	14.00%	14.50%	14.00%	10.50%	9.80%	7.00%	5.03%
Small Business Tax	4.50%	3.00%	5.00%	4.50%	5.50%	2.60%	0.00%	0.00%	0.00%
Provincial Sales Tax	7.00%	n/a	7.00%	7.00%	8.00%	5.00%	6.50%	0.00%	8.75%
Capital Tax	0.30%	n/a	3.60%	3.50%	1.20%	2.00%	2.00%	3.00%	0.00%
Payroll Tax	n/a	n/a	n/a	2.15%	1.95%	0.00%	0.00%	0.00%	0.00%
Employment Insurance	2.62%	2.62%	2.62%	2.62%	2.62%	10.09%	9.00%	6.50%	6.50%
Total	**41.82%**	**26.19%**	**47.22%**	**51.67%**	**52.00%**	**35.73%**	**35.15%**	**23.40%**	**20.28%**
Change since 1999	**-17.92%**	**-14.47%**	**-10.69%**	**-5.93%**	**-5.13%**	**-0.32%**	**1.85%**	**-3.85%**	**2.25%**

Source: The Frontier Centre for Public Policy, June 2006

The above table allows for comparison of the top marginal tax rates among several of the regions being investigated in this project. The tax load index is simply the sum of each jurisdiction's key rates. The table shows the situation in 2006 for Saskatchewan having a lower overall "tax burden" than Manitoba and Ontario, but higher than BC and Alberta. The rates in the Northern Plains states and the state of Washington are generally lower than the Canadian provinces. Alberta has a lower index than North Dakota and Minnesota, but slightly higher than Montana and Washington. Of note is that the tax load index for each of the provinces has declined since 1999, with the largest decline being BC, followed by Alberta and Saskatchewan. The US states have shown relatively minor changes in their respective indexes since 1999.

A recent study by the Fraser Institute[21] looked at ways to improve Saskatchewan's "economic environment for lasting prosperity". One of the major areas of analysis in the study was tax policy. The authors noted that recent changes in personal income and business taxes "have made the province's tax system more competitive and more supportive of investment. However, additional steps are required to fully harness the potential and opportunity facing the province".

In the course of interviews with Saskatchewan livestock producers, some specific concerns regarding tax issues were often mentioned. This was especially the case for education property taxes. The Greater Saskatoon Chamber of Commerce point out that Saskatchewan has the highest education property tax load in Canada[22]. Various livestock organizations acknowledge that the government of Saskatchewan is reviewing the education tax system and have requested a reduction of the education portion on property tax. Another tax issue of concern to livestock producers is payment of provincial sales tax (PST) on building materials used for building or expanding livestock facilities. Producers would like to see re-instatement of the PST rebate on livestock and horticultural buildings and make the program permanent. Another point of contention that came up in several of the interviews was Saskatchewan not allowing custom agricultural contractors to use farm licenses and dyed diesel when performing custom services for agricultural producers. Further, the current rule that custom operators from other provinces are required to purchase daily permits from the Saskatchewan Department of Highways to have farm plates on highway vehicles was felt to unnecessarily raise costs to Saskatchewan producers.

The Government of Saskatchewan unveiled a new budget on March 18, 2009. Saskatchewan is one of the few Canadian provinces with a balanced budget for the next fiscal year. The Provincial Government began addressing some of the issues described above, mainly in the form of the largest property tax reduction in

[21] Veldhuis *et al*, "Saskatchewan Prosperity: Building on Success", Studies in Economic Prosperity, Fraser Institute, February 2009.

[22] http://www.eboardoftrade.com/files/Media_Releases_2007/MR_03_16_07_Saskatchewans_Property_Tax_Policy_Results.pdf

the province's history[23]. Education property tax rates will be cut for each the three major property classes (residential, agricultural and commercial). The reduction will amount to $103 million, or 14 percent, in 2009 compared to last year, with a further reduction of $53 million for next year. The budget also included nearly $87 million of additional funding for road and highway work, plus $108 million more for farm income stabilization programs ($102 million for AgriStability and $6 million for AgriInvest).

Some analysis work provided by the Saskatchewan Ministry of Finance provides more up-to-date comparisons with other provinces regarding business tax rates (although there were no comparisons with the northern states). The results are shown in Exhibit 50, along with accompanying notes. In general, the table would indicate that the difference in corporate income tax in Saskatchewan has narrowed with Alberta since the 2006 comparison shown in Exhibit 49, as has corporation capital tax. Overall business tax rates look equitable to reasonable in comparison to several of the other provinces.

[23] http://www.gov.sk.ca/news?newsId=72208821-0f48-4a06-b2ce-f98c9bf9ffed

Exhibit 50: Interprovincial Comparison of Business Tax Rates
Rates on April 1, 2009

(As known on March 27, 2009, Source: Saskatchewan Ministry of Finance)

	Federal	British Columbia	Alberta	**Sask-atchewan**	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland & Labrador
Corporation Income Tax[a]											
(% of Corporate Taxable Income)											
General Rate	19.0	11.0	10.0	**12.0**	13.0	14.0	11.9	13.0	16.0	16.0	14.0
Manufacturing and Processing	19.0	11.0	10.0	**10.0**	13.0	12.0	11.9	13.0	16.0	16.0	5.0
Small Business	11.0	2.5	3.0	**4.5**	1.0	5.5	8.0	5.0	5.0	2.1	5.0
Small Business Threshold	$500,000	$400,000	$500,000	**$500,000**	$400,000	$500,000	$400,000	$500,000	$400,000	$400,000	$500,000
Corporation Capital Tax[b]											
(% of Taxable Paid-up Capital)											
General Rate	0.00	0.00	0.00	**0.00**	0.1/0.3	0.225	0.24	0.00	0.20	0.00	0.00
General Exemption	-	-	-	-	$10 million	$15 million	$1 million	-	$10 million	$2 million	$5 million
Small Financial Institutions	1.00	0.33	0.00	**0.70**	3.00	0.45	0.48	3.00	3.00	5.00	4.00
Large Financial Institutions	1.25	1.00	0.00	**3.25**	3.00	0.675	0.48	3.00	3.00	5.00	4.00
Payroll Tax[c]											
(% of Gross Wages and Salaries)	0	0	0	**0**	2.15	1.95	4.26	0	0	0	2.0
Health Care Premium[d]											
($ Annual)	0	1,296 family 1,152 couple 648 single	0	**0**	0	900	[d]	0	0	0	0
Retail Sales Tax[e]											
(% of Retail Sales Price)	5	7	0	**5**	7	8	7.5	8	8	10	8
Insurance Premiums Tax[f]											
(% of Premiums Written)	0	2-4.4	2-3	**3-4**	2-3	2-3	2-3	2-3	3-4	3	4

BUSINESS TAX RATES – NOTES

a. Corporation Income Tax (CIT)

- The federal CIT rate as shown has been reduced by a 10% abatement to allow for income earned in a province and subject to provincial CIT. The federal government has previously announced a phased reduction in its general CIT rate to 15.0% by 2012 (18.0% for 2010, 16.5% for 2011, and 15.0% for 2012).
- BC has previously announced that, as part of its revenue neutral carbon tax plan, its general CIT rate will be reduced to 10.5% on January 1, 2010 and to 10.0% on January 1, 2011, and its small business CIT rate will be reduced to 3.0% on January 1, 2010 and to 2.5% on January 1, 2011.
- SK's effective general CIT rate on M&P profits may be reduced to as low as 10%, depending on a company's allocation of income to the province.
- MB has previously announced that its general CIT rate will be reduced to 12% effective July 1, 2009. In its 2009-10 budget, MB announced that it will reduce its small business CIT rate to zero on December 1, 2010.
- ON announced in its 2009-10 budget that on July 1, 2010 it will reduce its general CIT rate to 12.0%, its M&P CIT rate to 10.0%, and its small business CIT rate to 4.5%. It will further reduce its general CIT rate to 11.5% on July 1, 2011, to 11.0% on July 1, 2012, and to 10.0% on July 1, 2013.
- NB announced in its 2009-10 budget that it will be reducing its general and M&P CIT rate to 12.0% on July 1, 2009, to 11.0% on July 1, 2010, to 10.0% on July 1, 2011, and finally to 8.0% on July 1, 2012.
- PE will reduce its small business tax rate to 1% on April 1, 2010.

b. Corporation Capital Tax (CCT)

- BC has previously announced that it is phasing out its CCT on financial institutions. Effective April 1, 2010, the tax on small financial institutions will be fully eliminated, and the remaining 1% tax on large financial institutions (capital in excess of $1 billion) will be converted to a minimum tax, with a deduction allowed for BC CIT payable, to ensure that large financial institutions continue to pay a minimum amount of tax each year.
- MB has previously announced that its CCT rate on paid-up capital between $10 million and $20 million will be reduced to 0.0% and 0.2% respectively, effective January 1, 2010, and fully eliminated on January 1, 2011.
- ON has previously announced and legislated the full elimination of its CCT by July 1, 2010.
- QC has previously announced the elimination of its CCT on a phased out basis, with its general rate being reduced to 0.12% and its financial institutions rate reduced to 0.24% on January 1, 2010, and both being fully eliminated on January 1, 2011.
- NS has previously announced that it will eliminate its general CCT on a phased out basis, with the rate being reduced to 0.15% on July 1, 2009, to 0.10% on July 1, 2010, to 0.05% on July 1, 2011, and fully eliminated on July 1, 2012.

c. Payroll Tax

- MB's Payroll Tax is a sliding scale rate on gross wages and salaries between $1,000,000 and $2,000,000, to a maximum of 2.15% of gross wages and salaries over $2,000,000.
- ON's Payroll Tax (called the Employer Health Tax) is 1.95% of gross wages and salaries over $400,000.
- QC's employer contribution to Health Services Fund is 4.26% of gross wages and salaries for large companies.
- NL's Payroll Tax is 2.0% of gross wages and salaries over $700,000, with a ramp-up rate scale between $600,000 and $700,000, and an exemption below $600,000.

d. Health Care Premium

- ON's health premium is levied as part of its PIT system, rising in steps from $300 to $900 as individual taxable income rises from $20,000 to $200,000.
- QC collects a Health Services Fund contribution from individuals, at a rate of 1% of non-employment income in excess of $5,000 to a limit of $150, plus 1% of non-employment income in excess of $35,000 to a limit of $850.

e. Retail Sales Tax

- ON announced in its 2009-10 budget it will harmonize its sales tax with the federal GST effective July 1, 2010, at its current rate of 8.0%.
- Retail sales taxes in QC, NB, NS and NL are all harmonized with the federal GST. QC announced in its 2009-10 budget that it will increase its retail sales tax rate by one percentage point, to 8.5%, effective January 1, 2011.

f. Insurance Premiums Tax

- ON, QC and NL also include insurance premiums in their retail sales tax bases.

Competitive Implications:

Most of the tax rates in Saskatchewan do not appear to be overly onerous in comparison to other provinces, although Alberta tends to have lower rates in most categories and no PST. The "tax load index" would suggest that Saskatchewan citizens fare better on taxes than Manitoba, but less so than many of the northern states. One factor that stood out was the relatively high property taxes (particularly the education portion). The Government of Saskatchewan has begun to address this major concern with reductions of the education property tax rates in the recently released budget. In general, Saskatchewan's tax structure does not seem to put up major impediments or disincentives for doing business in the province. Still, the province of Alberta has the lower overall tax structure of the Canadian provinces and fares well against the states in the northern portion of the US.

4. Labour Costs

Statistics Canada reported Canada's unemployment rate[24] for January 2009 at 7.2%. Saskatchewan had the lowest rate of unemployment at 4.1%, followed by Alberta at 4.4%. Not surprisingly, Saskatchewan had one of the highest employment rates at 67.4%, only exceeded by Alberta's employment rate of 71.6%.

Soaring values in the energy markets in recent years have led to increased exploration and production in resource rich regions such as Alberta and Saskatchewan. This has drawn a huge amount of labour from other sectors of the economy and other regions of Canada. This type of development tends to make regional labour markets relatively tight for other businesses, including farming and ranching. While the declines in energy values since last summer has eased some of this pressure, Saskatchewan still has a low unemployment rate compared to most other regions of North America.

The aforementioned study by the Fraser Institute also looked at labour market regulation in Saskatchewan and concluded there was need for "fundamental large-scale change". Saskatchewan was found to have a "pronounced history of maintaining labour laws and regulations that impede flexibility and that are decidedly biased". While acknowledging that there were several improvements made in May 2008 to provincial labour-relations laws, the study recommended more broad-based reforms that recognize "the benefits of and begin focusing on

[24] Statistics Canada, Labour Force Information – January 11 to 17, 2009, Catalogue no. 71-001-X http://www.statcan.gc.ca/pub/71-001-x/71-001-x2009001-eng.pdf

labour market flexibility". The authors suggested changes to collective bargaining agreements in the areas of union membership and dues-payment clauses, successor rights, technological changes, arbitration and a freeze of the minimum wage.

Saskatchewan Ministry of Agriculture estimated the 2008 average farm wage rate at $13 per hour[25]. Alberta Agriculture reported general farm labour in a slightly different manner, on a per month basis[26]. The average farm labour rate per month for 2008 calculated to $2467. Depending upon assumptions for vacation time and weekly hours, this would work back to an hourly rate in the area of $14.20-14.80 per hour. Manitoba Agriculture published budget guidelines for 2008 that indicated wage rate of $12 per hour for cow/calf and feedlot operations[27]. A comparison of hired worker wage rates for field and livestock operations in the US is shown in the following table.

Exhibit 51: US Hired Worker Wage Rates: Field & Livestock 2008

	US$/hr	US$ = CDN$1.10	US$ = CDN$1.20
Montana	9.72	10.69	11.66
North Dakota	11.10	12.21	13.32
South Dakota	10.14	11.15	12.17
Nebraska	10.49	11.54	12.59
Iowa	10.80	11.88	12.96
US	9.89	10.88	11.87

Source: USDA-NASS, Informa calculations

Competitive Implications:

Saskatchewan would appear to have a slight advantage over Alberta in regards to farm labour costs, but a bit higher than Manitoba. Farm wage rates look to be generally lower in the US, unless the Canadian dollar is at a substantial discount to the US dollar.

5. Transportation Costs

With the lack of slaughter facilities in the province, the vast majority of Saskatchewan cattle and hogs are shipped to other regions for slaughter or further feeding. This adds to transportation costs for Saskatchewan livestock producers in comparison to other jurisdictions being considered in this study.

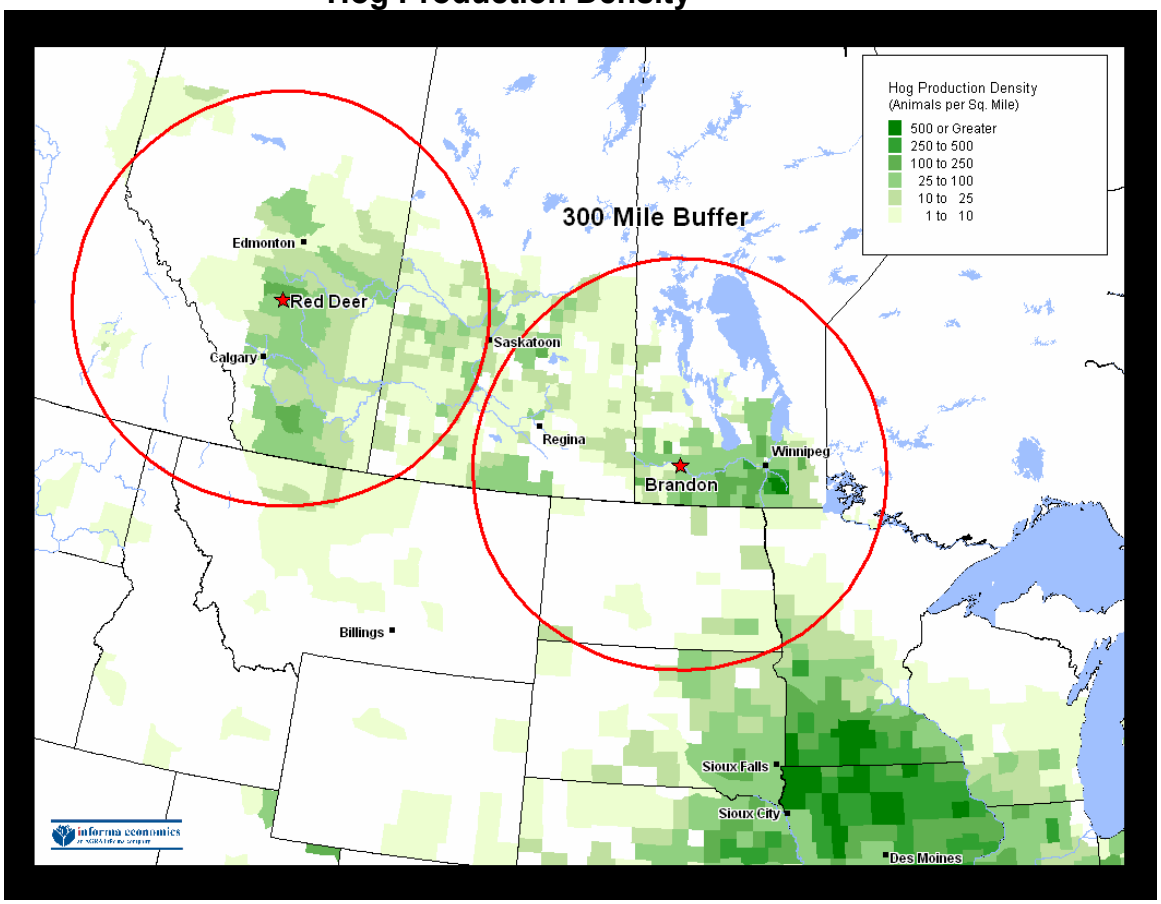
[25] 2009 Saskatchewan Agriculture Crop Planning Guides
[26] Alberta Agriculture and Rural Development, Alberta Farm Input Prices – An Overview of 2007-2008
[27] Manitoba Agriculture, Food and Rural Initiatives, Budget Guidelines and Guidelines for Estimating Costs of Production

The major destinations for cattle are Alberta and the US. Feeder cattle being shipped to Alberta would not have much difference in travel distance in comparison to shipments from Montana and North Dakota to feedlots in the central plains. Cattle from South Dakota would have a shorter distance to travel. Feedlot producers in Nebraska have the advantage of several packing plants in relatively close proximity in comparison to most of Saskatchewan.

With the 2007 closure of the hog slaughter facility in Saskatoon, more Saskatchewan hogs are being shipped to Red Deer, AB and Brandon, MB, with some hogs shipped to other plants in Manitoba as well. Interviews with Saskatchewan hog producers indicated that those producers who used to ship their hogs to Saskatoon are now faced with extra transportation costs in the neighborhood of $3-6 per hog. Still, the main producing regions of Saskatchewan fall within what would be considered a normal draw area for a large double shifted hog plant (See Exhibit 52). Also, a stronger market in Manitoba could be offsetting some or all of the additional transportation costs, depending on individual circumstances, as discussed elsewhere in this document.

There were a number of smaller producers who were using their own transport, usually much smaller than a pot-belly trailer, to take their hogs to Saskatoon and then pick up supplies for the farm on the return trip. They are now faced with hiring transport or taking hogs to an assembly point to be put onto larger trucks for shipping out of province. These smaller producers representing about 25% of the provinces' swine herd would benefit the most from a new slaughter facility(s) in the province. There may be opportunities for smaller processing firms focusing on the local (Saskatchewan) market to partner with these producers in the future.

Exhibit 52: Red Deer and Brandon Plant Locations in Comparison to Hog Production Density



Competitive Implications:

Saskatchewan cattle and hog producers are faced with extra transportation costs for livestock shipped out of province. This is particularly the case for animals destined for immediate slaughter. Even for feeder cattle and feeder/weaner pigs, they tend to be geographically farther away from destinations (feedlots or hog feeding barns) than producers in neighbouring provinces or states.

6. Ag Policy

a) US Farm and Energy Policy

- The United States, like other developed countries, maintains strong supports for its agricultural and food sector, reflecting both the political and economic importance of the sector itself and the government's natural interest in assuring adequate supplies of healthful food and fiber.

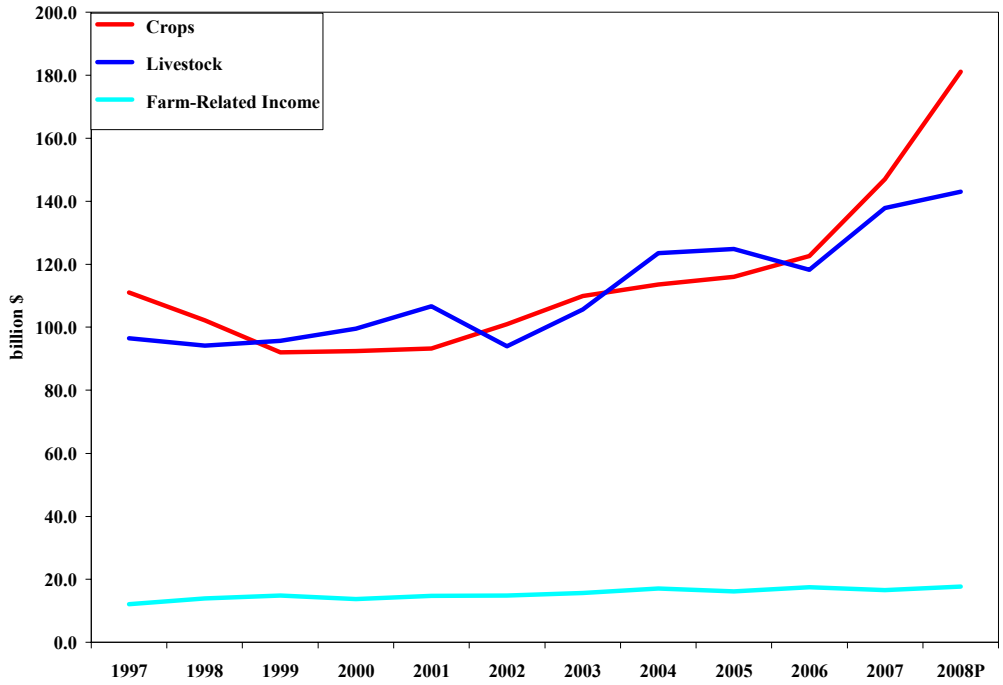
- US policies traditionally intervened in most commodity markets[28] in efforts to control supplies and support prices. However, these policies were changed beginning in the mid- -1980s to:

    - De-emphasis of public stock-holding—market intervention policies
    - Terminate most acreage restrictions
    - Emphasize direct producer supports

- The 2002 law primarily extended the market-oriented reforms already underway but it also modified the marketing loan structure and added counter-cyclical payments for major commodities. It provided income support for wheat, feed grains, upland cotton, rice, peanuts and oilseeds through three programs; direct payments, counter-cyclical payments and marketing loans. Under that law, the sector was relatively stable and prosperous.

[28] More so in the crop sector rather than livestock markets.

Exhibit 53: Producer Cash Receipts from Crops and Livestock plus Farm Related Income, 1990-2008



b) US Renewable Fuels Market Growth

Since the 1990s, the US market for renewable fuels has been increasing and more recently, has become a major factor in grain and oilseeds markets.

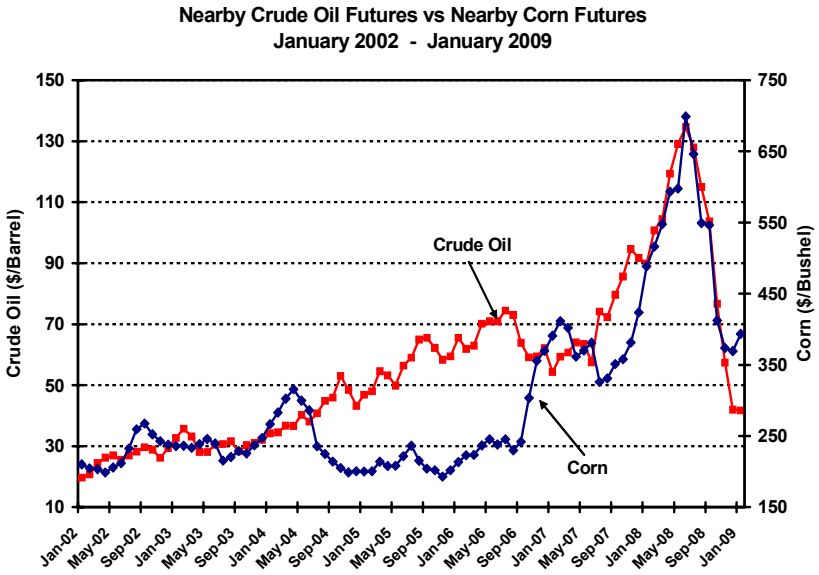
Ethanol demand was driven initially by its use as a replacement for the fuel additive MTBE which had been the oxidant of choice by the petroleum industry, but which was banned because of concerns over its health impacts. In addition, national concerns over dependence on petroleum from the Middle East and greenhouse gas emissions led to national policies in support of renewable fuels use as motor fuels. As a result, the production of automotive fuel has been the fastest-growing use of US corn in recent years and has changed the structure of US agriculture.[29]

Public policy, especially the Renewable Fuel mandates have driven investment in the industry, trends accelerated during the sharp petroleum price run-up during 2002-08 (Exhibit 54). Current renewable fuels policies include:

[29] In addition to the renewable fuel mandates in the 2005 and 2007 Energy Policy Acts, the main ethanol programs include the winter oxygenated-gasoline program and mandated market-use programs. Ethanol is also a substitute for MTBE (methyl tertiary butyl ether), a gasoline additive made from methanol.

- Annual mandates for blending renewable fuels with gasoline that require more than 9 billion gallons in 2009 and 36 billion, largely "advanced" biofuels by 2022;
- Blending subsidies of $0.45 per gallon for ethanol, and $1.01 per gallon for "advanced" biofuels;
- Tariff of $0.54 per gallon on ethanol imports; and
- Additional mandates and subsidies in various states.

Exhibit 54: Petroleum and Corn Price Volatility, 1992-09



In response to both public policies and market factors, production of renewable fuels has become the second most important use for US corn—above exports, for example, and, by far the fasting growing. These policy impacts are expected to continue for the foreseeable future (Exhibit 55 and Exhibit 56).

Exhibit 55: US Corn Usage, 1990-09

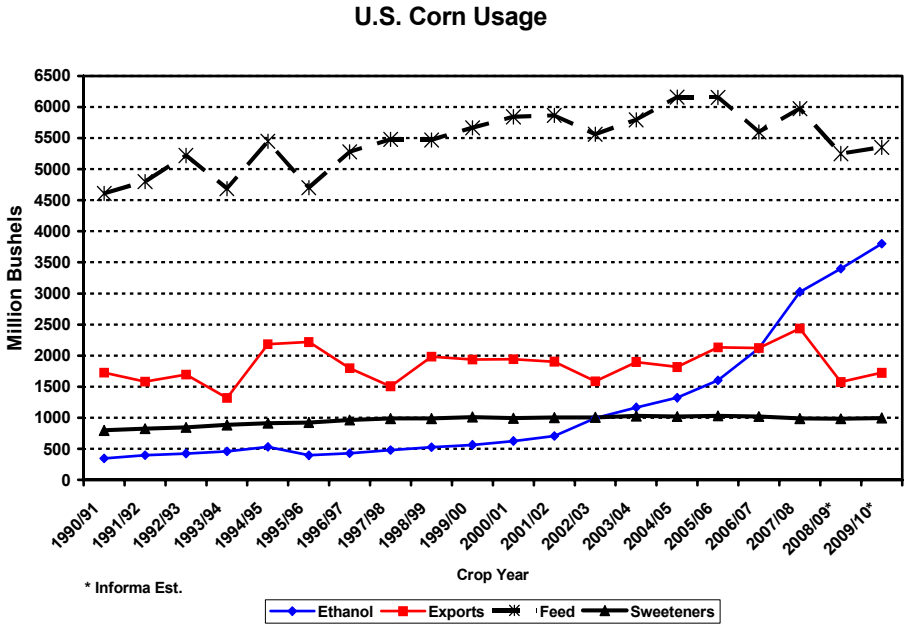
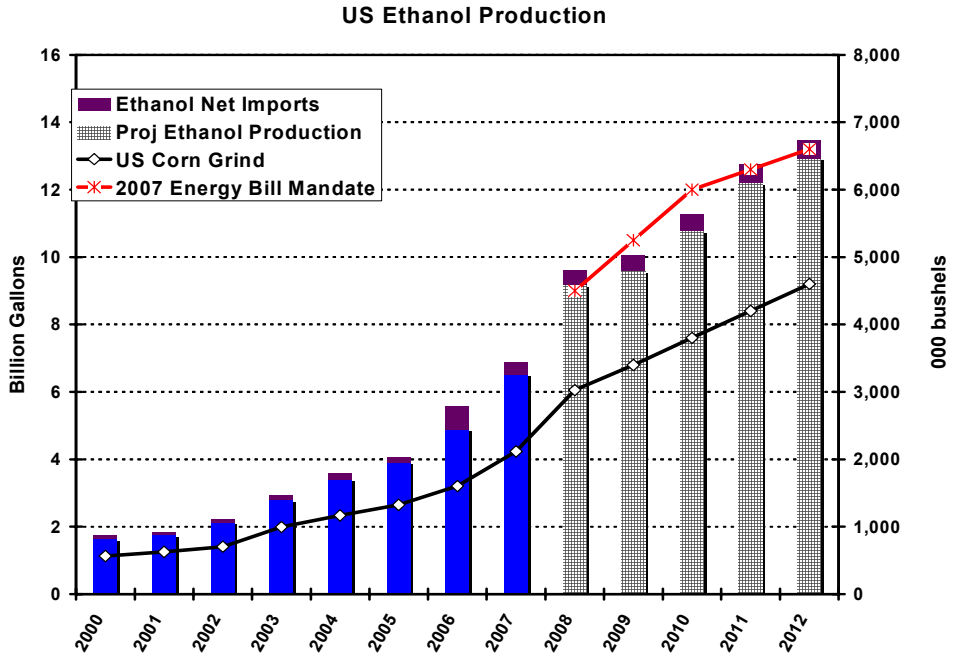


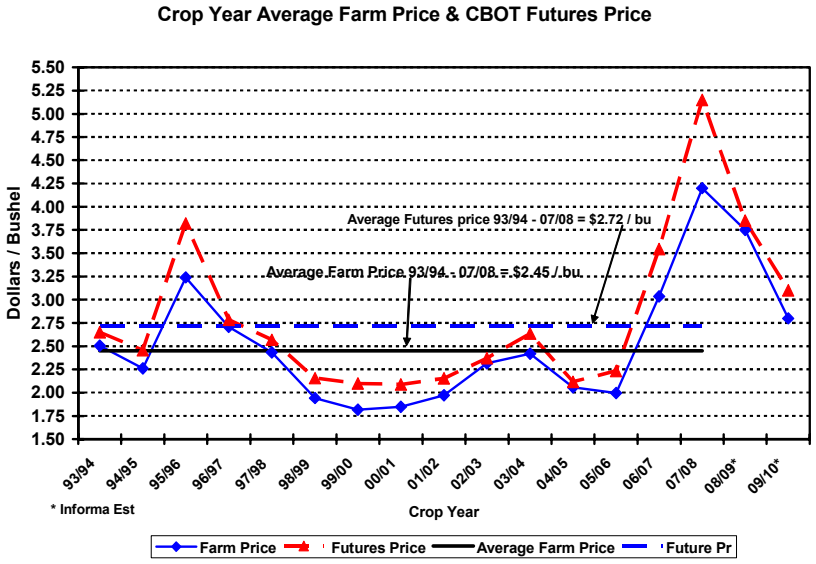
Exhibit 56: US Ethanol Production, Corn Use for Ethanol, Ethanol Imports and Ethanol Mandates, 2000-12



- Two trends--the emergence of US renewable fuels markets together with growth in global export markets are restructuring the US crop and livestock production systems—in spite of recent commodity price downturns. For example, expected 2009/10 farm and futures prices, while significantly lower

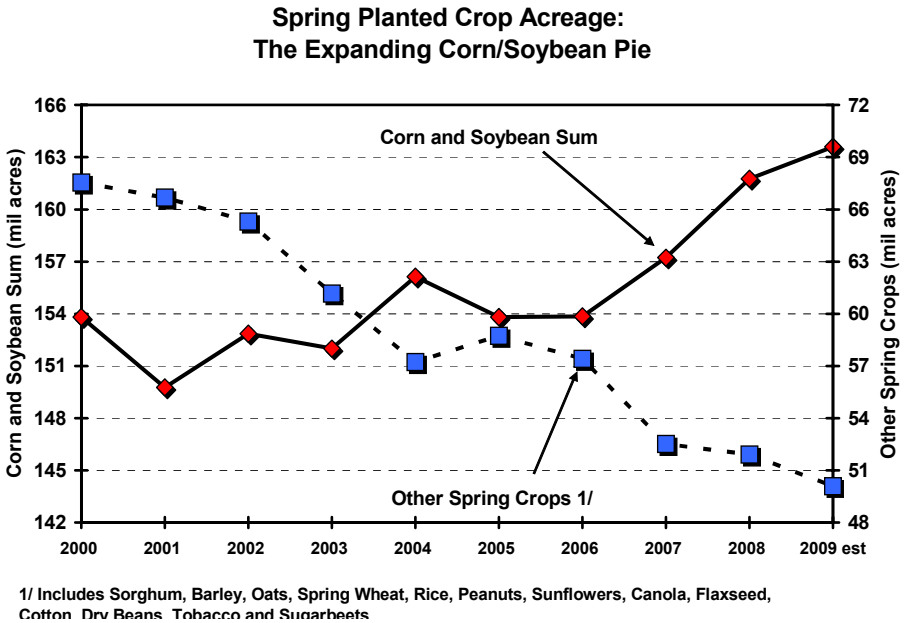
than they were in 2007 and 2008 appear likely to remain well above their recent averages (Exhibit 57).

Exhibit 57: Farm and Futures Prices, 1993/94-2009/10.



- These market changes have led to significant and continuing pressure to adjust US land resource use significantly. For example, the share of spring-planted acreage devoted to soybeans and corn has increased sharply—from about 56 percent in 2001 to more than 69 percent estimated for 2009 (Exhibit 58 and Exhibit 60). While the trends have boosted corn and soybean acreage, they have combined with other market trends to steadily reduce acreage for cotton, wheat, the minor feed grains and minor oilseeds.

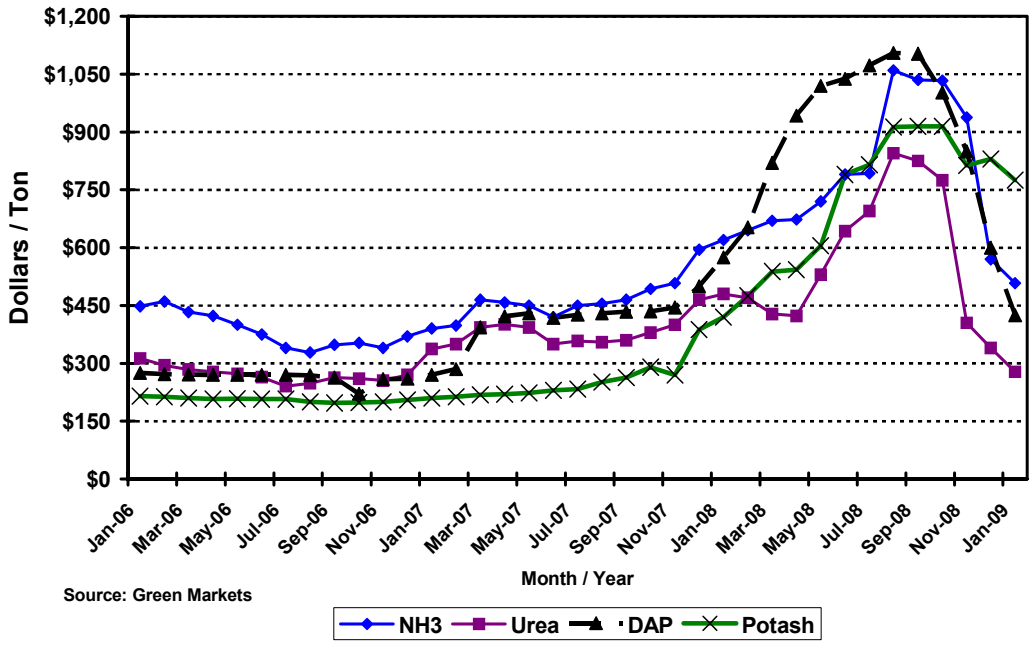
Exhibit 58: Share of Spring Planted Crop Acreage for Corn and Soybeans



1/ Includes Sorghum, Barley, Oats, Spring Wheat, Rice, Peanuts, Sunflowers, Canola, Flaxseed, Cotton, Dry Beans, Tobacco and Sugarbeets

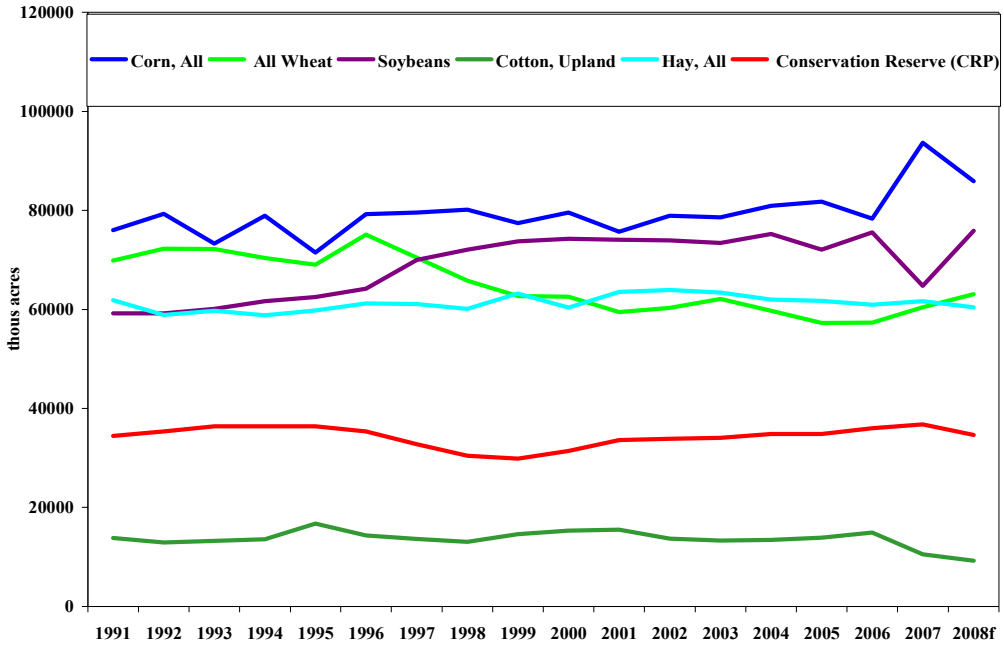
- The growing pressures for intense crop production, together with the run-up in petroleum prices have not only led to increases in corn acreage, but also have increased pressure on input prices—especially fertilizers (Exhibit 59). However, these have now begun to diminish as crop prices have declined in late 2008 and early 2009.

Exhibit 59: Fertilizer Prices, Selected Corn Belt States



Source: Green Markets

Exhibit 60: Planted Acreage, Main US Crops, 1991-08

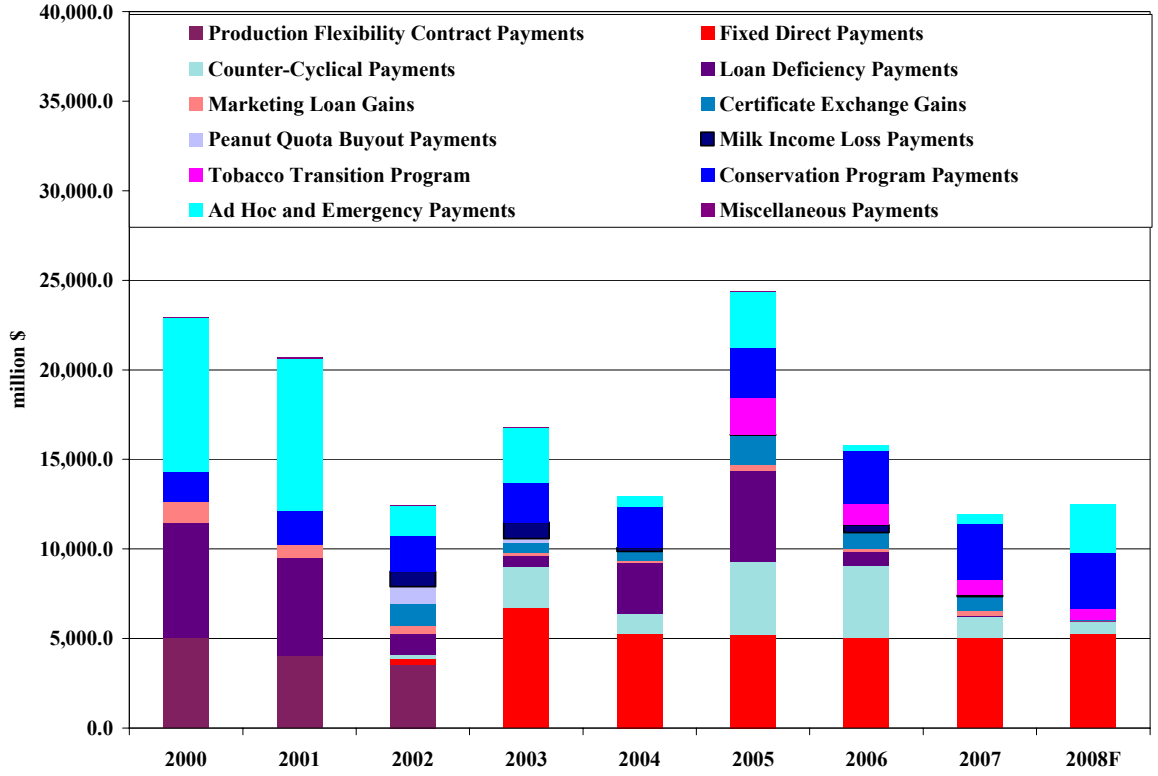


c) The New Farm Act

- The 2008 Farm Act mainly reauthorized programs already in operation. It will be in effect for the 2008-12 period.
    - Act included new support for conservation, nutrition, specialty crops and rural development;
    - It generally continues farm commodity price and income support framework, with modification;
        - Continues direct payments, counter-cyclical and marketing loan programs
        - Adjusts target prices for some commodities—most supports are well below expected market prices;
    - Creates voluntary revenue-based counter-cyclical program (ACRE) to start for 2009 crops; Creates new "permanent" disaster programs;
    - Creates a pilot program for planting flexibility on program acres;
    - Creates new restrictions on base acreage developed for residential use;
    - Originally eliminated benefits for farms with fewer than 10 acres of program crops, although Congress later backtracked on that change.

- Direct payments—the main source of farm payment support under the later years of the 2002 Act, and for the new 2008 Act. (see Exhibit 61). During the life of the 2002 Act, significant payment levels were infrequent under the price support provisions (counter-cyclical payments, marketing loan gains and loan deficiency payments), although they were very large in 2005, for example. For 2008, the first year under the 2008 Act, payments are expected to be mainly limited to Fixed Direct Payments, Conservation Payments and ad hoc emergency payments (Exhibit 61)

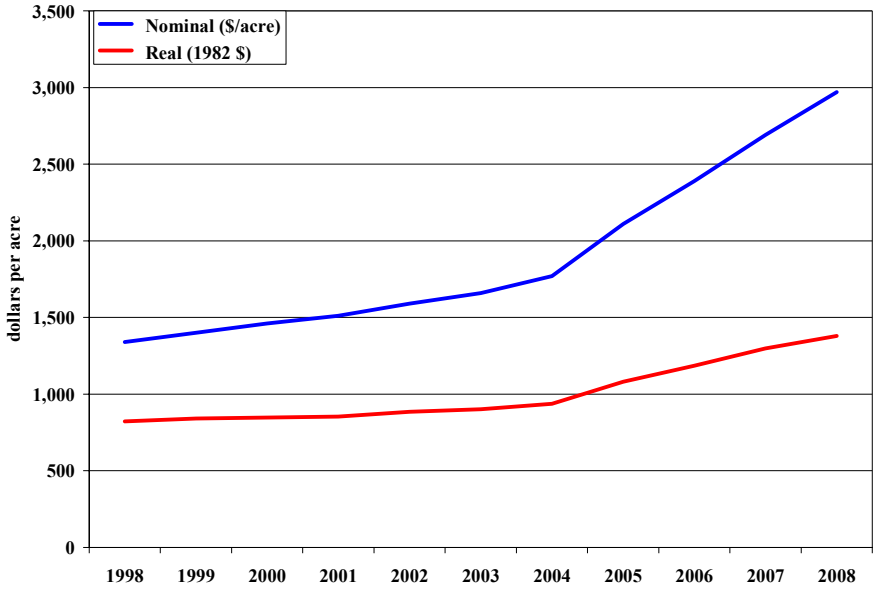
Exhibit 61: Direct Payments to US Producers, 12 Selected Programs, 2000-08



Source: USDA

- Land values have increased steadily in the United States in recent years, in response to expectations regarding returns from a broad range of uses—as production resources, non-agricultural uses such as home sites, roadways among others, and as the source of capitalized government payments. Farmland comprises the largest expense in agricultural production, but it also provides collateral for loans and an investment for retirement. The purchase or rental of land is a major production expense, and that capital requirement constitutes a major barrier to entry to many who wish to become farmers (Exhibit 62).

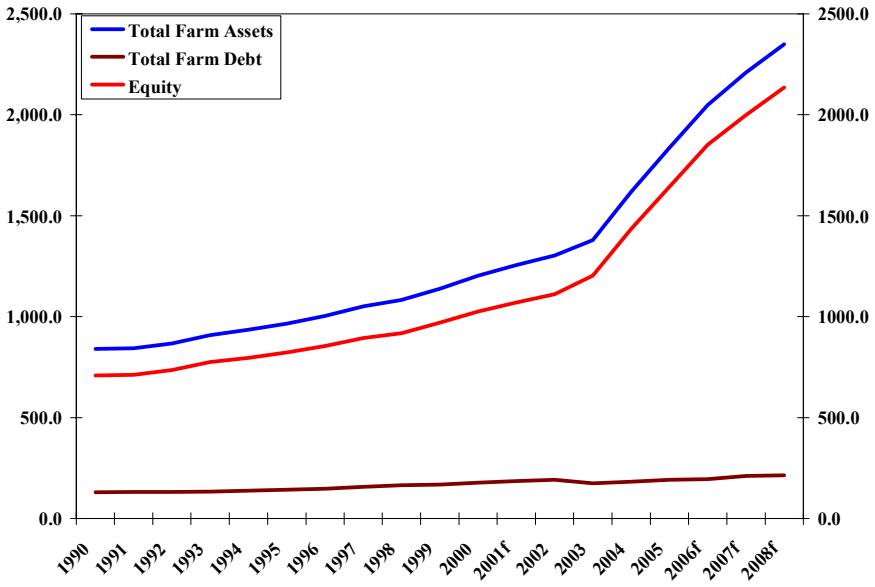
Exhibit 62: US Cropland Values, Nominal and Real, 1998-08



Source: USDA/NASS

- The agricultural sector today reports assets of nearly $2.35 trillion with liabilities of $0.2 trillion, so that equity is $2.14 trillion (Exhibit 63). Both assets and debt have been increasing rapidly in recent years, but asset values (mainly land) have been growing most rapidly. More than 85% of the sector's assets are land values, up from about 75% 15 years earlier.

Exhibit 63: US Farm Balance Sheet, 1990-2008



Source: USDA/NASS

d) Canadian Farm Policy

Since 2003, Canada's federal farm policy framework has been guided by the ***Agricultural Policy Framework*** (APF), a five-year federal-provincial-territorial agreement designed to create a national approach to agriculture policy. On April 1, 2009 the ***Growing Forward*** policy Framework and programs took effect, replacing the *Agricultural Policy Framework* (APF). The *Growing Forward* framework continues and builds upon many of the concepts and programs established under the APF, including relatively modest changes and modifications to reflect some inadequecies of the former program, and current market conditions.

In addition to the funding of ongoing business risk management programming (BRM), governments are investing $1.3 billion in non-BRM programming over five years in *Growing Forward* programs. The funding represents $330 million more than the Agricultural Policy Framework (APF) and will be cost-shared between the Government of Canada, as well as provincial and territorial governments on a 60:40 basis.

e) Farm Income Protection Policies

Continuing the tradition established under the APF, income support and risk management activities under the Growing Forward policy framework focus heavily on stabilizing farm revenue—as opposed to targeting protection toward individual prices and/or commodities. The primary income support programs include (1-5, below):

(1) The AgriStability Program (formerly the Canadian Agricultural Income Stabilization Program)

- In 2003, the Canadian federal government launched the Canadian Agricultural Income Stabilization (CAIS) Program. This program was established to work alongside production insurance with the goal of stabilizing whole-farm income. As such, it is designed to avoid distorting the market or influencing a particular agricultural sector. This concept is continued under the AgriStability program.

- AgriStability differs only modestly from the CAIS program. Like CAIS, it is a cost-shared (between farmers and federal/provincial governments) initiative intended to compensate a farmer when whole-farm income falls below an insured level of the farm's recent income history. Income is defined as a gross margin calculated using a modified cash accounting approach.

- AgriStability is based on margins. Farmers receive an AgriStability payment whenever current year program margin falls below 85% of their reference margin[30]. Margins are defined as follows:
- Program margin – Each farm's allowable income minus allowable expenses in a given year, with adjustments for changes in receivables, payables and inventory.
- Reference margin – Each farm's average program margin for three of the past five years (the lowest and highest margins are dropped from the calculation).
- Whan a farm's production margin falls below 85% of its reference margin in a given year, it is eligible for a program payment.

➢ AgriStability is delivered in British Columbia, Saskatchewan, Manitoba, New Brunswick, Nova Scotia, Newfoundland and Labrador and Yukon by the federal government (NOTE: Saskatchewan is negotiating to take over the administration of AgriStability within the province). In Alberta, Ontario, Quebec and P.E.I., AgriStability is delivered provincially.

(2) AgriInvest

➢ AgriInvest is a farm saving account-based program designed to help producers protect their margin from small declines. AgriInvest replaces the coverage for margin declines of less than 15%, previously covered by the Canadian Agricultural Income Stabilization (CAIS) program.

➢ Each year, producers will make a deposit into an AgriInvest account, and receive a matching contribution from federal and provincial governments. Producers have the flexibility to use the funds to cover small margin declines or for risk mitigation and other investments.

(3) AgriInsurance

➢ The program includes existing production insurance, and provides coverage for production and asset losses caused by natural perils. Coverage is expanding to include other products such as livestock and additional horticultural crops. Under the program, producers pay premiums to protect their commodities. Producers get a payment when they experience a production loss during the year.

(4) Advance Payment Program

[30] The maximum payment under AgriStability is either $3 million or 70% of the margin decline, whichever is lower, thus limiting possible payments to larger operators.

- The Advance Payments Program (APP) is a financial loan guarantee program that gives producers easy access to credit through cash advances. The intent is to allow farmers improved cash flow throughout the year and better opportunities for marketing agricultural products.

- The program is adminstered provincially through indivdual producer organizations. It is available in most provinces for most crops, including—specifically—cattle and hog producers in all provinces.

Program details include:

  - The limit on cash advances is $400,000 with the first $100,000 interest-free.
  - Producers have up to 18 months (generally April to September of the following year) to get and repay their cash advances.
  - Hog and cattle producers can receive emergency advances under conditions of severe economic hardship until March 31, 2009.
  - Cattle and hog producers now have until September 30, 2010, to repay cash advances under the Advance Payment Program (APP).

(5) AgriRecovery

- AgriRecovery is a new business risk management program that allows federal and provincial governments to jointly respond to natural disasters (e.g., disease, weather) with quick, targeted assistance. The purpose of the program is to help affected producers resume business operations and/or take actions to mitigate the impacts of a disaster as quickly as possible.

- AgriRecovery is a framework that provides a process for governments to quickly determine whether or not further assistance beyond existing programming already in place (e.g., AgriStability, AgriInsurance) is warranted and if so, what form that assistance should take. Where federal and provincial governments agree that assistance is warranted, the form of assistance will be unique to the specific disaster situation

- AgriRecovery was developed specifically to reduce the need for ad-hoc disaster assistance, by providing a more formal framework for determining the need for assistance and appropriate course of action when a disaster strikes.

f) Other Policy Tools

(1) Crop Insurance

- Insurance against production losses is viewed by the Canadian government as being complementary to the revenue insurance offered by CAIS. Provincial governments administer crop insurance, and the cost-sharing formula is such that the federal government and provinces each pay 25% of total premiums and 50% of administration costs.
- As part of the Agricultural Policy Framework (APF), governments are beginning to explore the feasibility of extending production insurance for livestock. The objectives of this initiative would be to eliminate gaps between grain and livestock operations and reduce the need for ad hoc programs.

(2) Canadian Wheat Board

- The Canadian Wheat Board (CWB) is responsible for exports and domestic human consumption of wheat and barley. At times, the CWB may get involved in domestic feed markets for wheat and barley but is not considered a significant participant in this sector. This lack of involvement however, does not mean the CWB doesn't exert influence over domestic feed grain markets through its price signals and pricing mechanisms.
- The CWB has the ability to affect domestic wheat and barley markets through the release of Pool Return Outlooks (PROs) and, to a lesser extent, initial payments. While the accuracy or usefulness of these signals is questionable, farmers in many areas of Saskatchewan and Manitoba refer to the PROs when making planting decisions. In Alberta, where the non-board feed market is more significant, cash prices are more important as decision-making tools.
- In the past several years, the CWB has been increasingly cautious in setting PROs and initial payments, as they are concerned about running pool deficits. Deficits in the pools require that the federal government covers the shortfall, but would also trigger WTO trade challenges and increase pressure on the government to eliminate the CWB. The result is that low initial payments and PROs are not a useful mechanism for sending price signals to farmers or attracting deliveries of feed grains. The CWB has developed several contracting and pricing tools (Early Payment Options, Fixed Price Contracts, Basis Contracts and Guaranteed Delivery Contracts) designed to be more market responsive but their impact has been limited so far.
- The domestic livestock industry is the dominant price-setter for Canadian feed grains. As such, the CWB is often a market of last resort for feed

barley and feed wheat, especially in the feed grain deficit regions of southern Alberta and southern Manitoba. The CWB becomes a significant feed grain exporter only during times of burdensome supplies or when world prices are high.

- The Conservative federal government included the elimination of the CWB's monopsony among their campaign promises, but there has been little action in this direction so far. Whether the Conservatives will implement the changes before another election is called remains to be seen.

(3) Transportation Policy

- The Western Grain Transportation Act (WGTA) freight subsidies were removed in 1995 as a response to pressure from WTO negotiations to remove export subsidies. Removal of the subsidy was also intended to encourage diversification into higher value crops and spur on value-added industry including livestock production.
- Since the freight subsidies were removed, significant changes include growth in livestock production, a drop in wheat acreage and an increase in oilseed and special crop production. While other market factors have also had an impact over this time period, the changes to the WGTA certainly accelerated the trends, if nothing else. Elimination of freight subsidies has had a more limited impact on value-added food processing, however.
- In spite of the loss of freight subsidies, the grain transportation system is viewed as only partially deregulated. Revenue caps for the railways, the continuing dominance of the CWB in managing the car supply and lack of running rights continue to be significant issues for the industry.

(4) Environmental Regulation

- Under the Growing Forward framework, the federal government is continuing to provide incentives for farmers to complete environmental farm plans.

- An environmental farm plan is a voluntary and confidential process used by individual farmers to systematically identify environmental risks and benefits from their own farming operation, and to develop an action plan to mitigate the risks. The EFP process allows farmers to identify and implement Best Management Practices (BMPs) and set priorities for actions which address on-farm environmental concerns, as well as those which serve the public interest.

- Pressure is increasing on governments to pass environmental-related legislation that would restrict farm practices In particular, farm practices

that have the potential to affect water quality are receiving significant attention. The Manitoba government has enacted legislation that will significantly impact hog operations.

- Producers who develop EFPs may be eligible for technical and financial assistance to implement their on-farm action plans through the National Farm Stewardship Program

- A more detailed evaluation of the regulatory issues related to environmental policy is addressed in a subsequent section of this report.

(5) Ad Hoc Programs

- Due to the extraordinary nature of the BSE crisis in 2003, the federal government announced several ad hoc programs with associated payments. Reviews of the effectiveness of the programs are, at best, mixed. In addition, ad hoc programs tend to be price-related, commodity specific or regional in nature, all of which run counter to "acceptable" farm support as defined by the WTO. The general direction taken by the previous federal government and favored by the Conservative government is to develop support programs that will reduce, if not eliminate, the need for ad hoc payments.

g) Analysis

- Grain and oilseed prices in the US and Canada are determined both by global supply/demand conditions, and by:
  - A large number of local supply and market factors, including natural advantages in terms of soils, rainfall and others along with local, national and internal markets.
  - Infrastructure support that reduces costs of distribution and purchase of inputs and collection and distribution of products;
  - Existence of "price" and risk safety nets for producers' prices under US federal programs which allow US commodities compete on global and regional markets, but provides protections against "low" prices through the marketing loan program.
  - Direct payments for producers for a variety of purposes, including conservation cost-share programs that reduce the cost of program compliance and other federally programs.
- For US producers, a combination of natural soil and climate advantages and federal policy supports do reduce production risk for US farmers which in turn supports larger production levels (and presumably, lower grain prices) than would exist without the programs. Measurement of the magnitude of these impacts on grain prices, and hence, feed costs for

livestock and poultry, is difficult as the direct impact will differ depending upon whether grain and oilseed prices are above or below loan support levels and by how much.

- At least part of this advantage is offset by the fact that US natural advantages and policy advantages are fairly quickly capitalized into rents and land costs.
- In addition, US energy policies are increasing the competition for grains, especially, and, indirectly for land and other resources to produce grain—and, as a result, are increasing grain and feed prices in the United States and reducing their competitiveness in export markets.
- Because very large grain and oilseed flows occur between surplus and deficit regions both within the United States and Canada, Canadian livestock producers also benefit from positive natural and policy advantages in the United States. Thus, feed deficit regions in Canada tend to reflect US feed costs plus transportation costs, surplus grain production regions in Canada would be freight off those areas reflecting feed deficits. The efficiency in the grain marketing system on each side of the border would determine the effectiveness of the actual arbitraging of grain prices/costs.
- A more specific evaluation of regional grain costs and basis levels is presented in other segments of this study. Suffice it to say that on a net basis, the US cattle and hog industries may have a minor cost advantage as it relates to feed costs but policy is not the only factor that impacts relative feed costs. Therefore, drawing a direct inference that US Farm Policy creates a measurable and distinct feed cost distortion that favors the US cattle and hog producers is not warranted.

h) Conclusions

- US Farm Policy has the effect of reducing US feed grain and protein prices relative to those that would generally exist without the programs. Canadian Farm Policy tends to be price neutral.
- Grain and oilseed production in the US is stimulated by the safety nets that exist within US farm policy and this added production tends to add pressure to grain and oilseed prices relative to prices that would exist without these safety nets

i) Competitive Implications

Analysis indicates that US Farm Policy does have the effect of supporting grain production volumes, but US energy policies create competition for US grains and land resources that are buoying feed costs modestly. Policy in Canada lacks

equivalent impacts on prices and consequently, the US cattle and hog industries does have an incremental advantage in terms of costs of key feed inputs to the livestock sector. Canadian industry can do little to influence US Farm Policy suggesting that any action to be taken to mitigate these cost advantages will need to be focused on policy changes that could provide cost offsets to Canadian industry.

7. Environmental Regulations

a) Brief Overview of US Environmental Regulations

In the United States, environmental regulations for CAFOs are generally dictated by the 2002 EPA CAFO rule. This rule—in part—was meant to harmonize the patchwork of state regulations that existed prior to 2002. This rule has not been amended or otherwise changed in the past five years. The rule treats all species of livestock similarly, subject to the size thresholds established for each species that determine the definition of a CAFO. To be designated a "large CAFO" (and therefore subject to NPDES permitting and formal nutrient management plans, etc) the following size thresholds must be met:

A large CAFO has at least:

- 700 mature dairy cows
- 1,000 beef cattle or heifers
- 2,500 swine of 55 lbs or more
- 10,000 swine under 55 lbs
- 30,000 chickens (liquid manure system)
- 125,000 chickens except laying hens (other than liquid manure system)
- 82,000 laying hens (other than liquid manure system)
- 1,000 veal calves
- 500 horses
- 10,000 sheep or lambs
- 55,000 turkeys

(lower size thresholds define "medium" or "small" CAFO's, which under certain circumstance could be subject to the same regulation as large CAFOs, particularly if the operation discharges waste directly into a stream or waterbody).

Individual states still have authority to enact their own regulations that go beyond the EPA CAFO rule. Among the states of particular interest (Montana, ND, SD, Iowa, Minnesota), only Iowa and Minnesota appear to have regulations that are somewhat tighter then EPA rules.

(1) Iowa

Iowa maintains a 500 animal unit minimum threshold (compared to the federal limit of 1000) for the requirement of filing a nutrient management plan with the Iowa Department of Natural Resources (DNR) and the local county board of supervisors. Specifically, a manure management plan (MMP) is required for a confinement feeding operation with formed manure storage and a capacity of more than 500 animal units (1,250 head of swine weighing more than 55 pounds or 5,000 head of swine weighing 15 to 55 pounds) if the operation was constructed or expanded after May 31, 1985.

As set by DNR rules, animal capacity is the maximum number of animals that will be confined at any one time. Animal capacity is not determined by the dimensions of the building. Thus, even though a confinement operation with concrete manure storage could possibly hold more than 1,250 head weighing more than 55 pounds, if the operation is never stocked with more than that number an MMP is not required.

In December 2005, the Iowa DNR also implemented a new process of reviewing construction permit applications for new construction, expansion or modification of confinement feeding operations in December 2005. The process is intended to provide local and state authorities oversight in determining whether any proposed expansion or changes to CAFOs might adversely affect the environment. The permitting process is quite extensive, requiring detailed design plans, engineering studies, a manure management plan, and analysis of local soil conditions.

(2) Minnesota:

Minnesota's environmental regulations pertaining to livestock appear to be among the most stringent of many livestock producing states. State regulations are administered by county offices, and there appears to be a fair amount of flexibility provided to the counties to interpret state rules to reflect local conditions.

Minnesota also has relatively low thresholds to determine the need for Manure Management Plans and other regulatory criteria. Specifically,

The Minnesota Pollution Control Agency (MPCA) recommends that a manure management plan be developed for all livestock operations. However, the MPCA does not require plans at all facilities. Manure management plans are required when:

- An NPDES, SDS, interim or construction short form permit application is submitted from an operation with 100 or more animal units (AU), or

- Manure from a feedlot capable of holding 300 or more AU is applied after January 1, 2005 by someone other than a certified commercial animal waste technician or certified private manure applicator.

Once a manure management plan is required for a facility, the plan must be kept updated and retained on file at the animal feedlot or manure storage facility.

Minnesota also specifically targets odor/air quality in its livestock regulations.

Specifically, the Pollution Control Agency must:

(1) monitor and identify potential livestock facility violations of the state ambient air quality standards for hydrogen sulfide, using a protocol for responding to citizen complaints regarding feedlot odor and its hydrogen sulfide component, including the appropriate use of portable monitoring equipment that enables monitoring staff to follow plumes;

(2) When livestock production facilities are found to be in violation of ambient hydrogen
sulfide standards, take appropriate actions necessary to ensure compliance, utilizing appropriate technical assistance and enforcement and penalty authorities provided to the agency by statute and rule.

Odor estimates/modeling is also considered in determining the appropriate set-back for siting of new or expanded confined livestock operations.

Minnesota detail at: http://www.pca.state.mn.us/hot/feedlot-rules.html

b) Additional/Emerging issues in the US Regulatory and Policy Environment

(1) US ethanol policy

An obvious implication of expanded ethanol production is tighter feed supplies. Iowa's ethanol industry is the largest and fastest growing in the nation, but expansion has also occurred in the Dakota's and Minnesota. Presumably, feed prices and availability across the entire Upper Midwest have been affected.

Increased US ethanol production also affects feed supplies/prices for export to Canada, so the net effect on the relative competitiveness between US and Canada is somewhat ambiguous—producers in both countries presumably face a similar, higher feed cost structure. However, the regions farthest from the primary corn (and ethanol) production regions (such as Canada) likely see a

greater *relative* increase in the price of corn, since local markets are always served first and prices in distant locations must rise to cover transport costs.
Other indirect impacts:

- US producers increased access to DDGS supplies as a substitute for corn/soybeans: favors lower feed costs in the US.

- However, DDGS use in feed rations *could* increase costs/concerns about environmental compliance. For instance, some studies suggest use of DDGS in hog rations will increase the dietary crude protein or nitrogen content in an animal's manure because they are a poor lysine source. The increase in dietary crude protein is moderated in DDGS by using higher levels of synthetic lysine. A 15 percent DDGS diet with high synthetics will increase crude protein by one percent. This increase in crude protein could increase odor and ammonia emissions by as much as 10 percent—increasing pressure for regulations on air/odor emissions.

  Hogs fed DDGS also defecate more. Daily fecal excretion will increase 15 percent for every 10 percent of DDGS added to a swine diet. This is due to increased fiber content and reduced amino acid digestibility compared to corn and soybean meal. This—combined with the higher nitrogen content of the manure—*could* affect nutrient management plans, and increase the land area necessary to dispose of manure, effectively increasing the cost of environmental compliance, at least marginally.

(2) Increased Interest/Focus on Air Quality Regulations

Federal environmental law pertaining to CAFOs currently only targets water quality. EPA is in the process of studying air emissions from CAFOs (and the methods to monitor those emissions) to determine whether regulatory control over air quality (particularly ammonia, hydrogen sulfide) is warranted. Minnesota already monitors/regulates CAFO air emissions, and Iowa is studying the issue, as well. Presumably, new air quality-based regulations could affect the ability to locate new facilities (particularly near urban areas) and they could result in various new fixed and variable costs of production to mitigate emissions including (perhaps) construction of closed manure storage tanks, development of odor management plans, and modifications to feed rations to reduce excretion of nitrogen or other compounds.

Background: EPA began to realize in the late 1990's that it didn't have sufficient air emissions data to determine potential regulatory requirements for AFOs under the Clean Air Act (CAA), so to resolve the situation it began discussions with AFOs owners in 2001.

These discussions led to a Jan. 31, 2005 EPA Federal Register notice offering individual AFOs an opportunity to voluntarily sign-- by Aug. 12, 2005-- a consent agreement committing them to conduct a nationwide study to monitor and better understand the nature of their air emissions. This consent agreement also resolved certain air violations under the Clean Air Act, as well as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – also known as Superfund – and the Emergency Planning and Community Right-to-Know Act (EPCRA).

As of the Aug. 12 deadline, EPA's Environmental Appeals Board (EAB) had approved a total of 2,568 voluntary agreements, representing 1,856 swine, 468 dairy, 204 egg-laying, and 40 broiler chicken (meat-bird) operations. These 2,568 agreements represent 6,267 farms (an AFO can include more than one farm). A later signup in 2006 included an additional 702 agreements, consisting of 48 operations that raise egg-laying birds, which represents 333 farms, and 654 swine-raising operations, representing 2,143 farms.

As an incentive for AFOs to participate, EPA agreed not to bring certain enforcement actions against participating AFOs during the course of the monitoring survey; however, all participants must pay a penalty that is based on the number of animals maintained at the operation and must assure compliance with the CAA, CERCLA, and EPCRA once EPA publishes the emissions methodology.

EPA's intent is to evaluate all data collected from the AFOs that signed up for the voluntary monitoring study and publish emission-estimating methods for AFOs. These methods will allow AFOs to estimate their emissions and comply with applicable federal regulatory requirements as appropriate. The final results of this study are not yet known.

c) Canadian environmental regulations, by province

Alberta: The Agricultural Operations Practices Act (AOPA) continues to be the primary law governing confined livestock operations in Alberta. Details on the AOPA can be found at: http://www.nrcb.gov.ab.ca/rules/AgriculturalOperationPracticesAct.aspx and http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/epw9844 (cow/calf, specifically).

Saskatchewan: Details about Saskatchewan's regulations are included in two attached documents. Nothing "overly restrictive" relative to the US jumps out. Key size threshold for regulation appears to be 300 animal units (some what less than in the US). But basic provisions (permits, nutrient management plans, etc) are roughly equivalent, although NMPs consider nitrogen only (US included

phosphorous). In practice, our interviews suggested the permitting process for hog barns in Saskatchewan is more straightforward and much less prone to costly delays which impact almost every new project in the Midwest or most other provinces.

Manitoba: Manitoba's regulatory language for livestock operations is attached. It appears to be slightly more stringent than Alberta or Saskatchewan, including NMPs that include phosphorous. Furthermore, Manitoba has placed a moratorium on new barn construction in high density production areas of the province, which basically includes the bulk of the industry as it is currently situated.

8. Weather

Weather has significant impacts on cattle in the areas of performance, health and general well-being. Through the 1990s and even in recent years, adverse climatic conditions at various times of a year and in various regions have resulted in economic losses in the US feedlot sector averaging between US$10 million to US$20 million per year[31]. With every animal that dies from climatic stress, there are corresponding losses of about US$5,000 from the mortality and various associated live animal performance losses (i.e. other animals sick or suffering from climatic stress). One of the most important weather factors on cattle performance is the ambient air temperature. Optimal cattle feeding performance generally occurs when the temperature is between 4 degrees and 16 degrees Celsius[32]. As temperatures decline, the need for energy for maintenance purposes increases, while hotter temperatures result in reductions in feed intake. Both conditions result in lower weight gain. Precipitation can also affect cattle performance by increasing stress from muddy pen conditions and wet, matted hair coats. The effects of temperature and precipitation tend to be more pronounced in the early and late stages of the feeding period. For cow/calf operators, the number of cold days and the temperature can influence not only the amount of feed needed by wintering animals to maintain their body condition, but will also impact on the length of the time necessary for supplemental feeding and ultimately the amount of feed utilized.

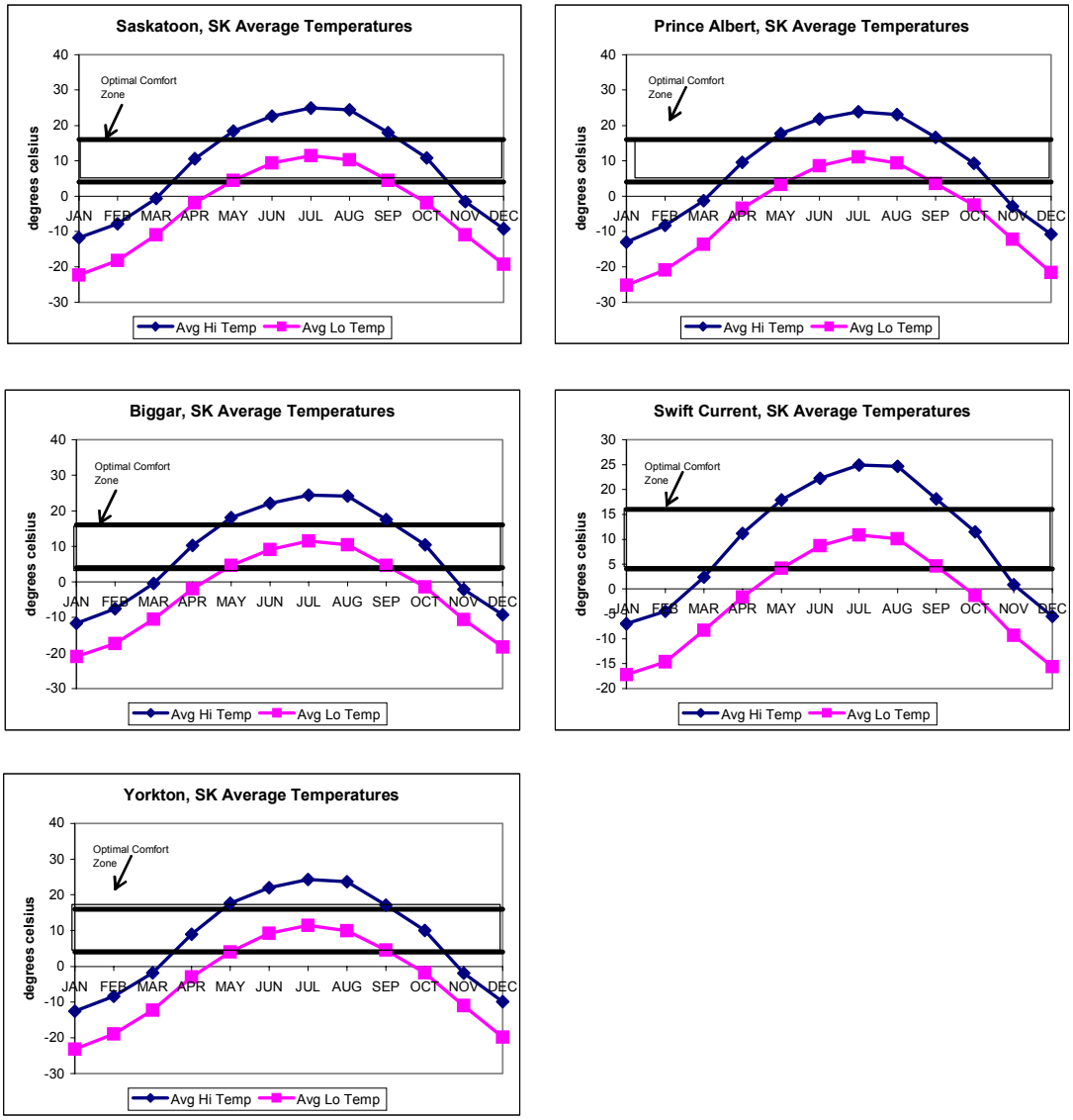
Insects (pests) can pester cattle and reduce productivity. In Western Canada, relatively short growing seasons and cold winters restrict most insects to one generation annually. This tends to reduce the number of pest species and the amount of damage they can cause in comparison to the impact of pests in warmer parts of the world (with the other extreme being hot, tropical regions). In relation to climate, the effect of pests on cattle would likely be similar in the

[31] Mader, T.L., "Environmental Stress in Confined Beef Cattle", Journal of Animal Science, 81 (E. Suppl. 2): E110-E119, 2003.
[32] Mark, D.R. and Schroeder, T.C., http://agecon.unl.edu/mark/papers/cattleday.pdf

northern states to the Prairie Provinces. However, as one moves farther south in the US, the need to treat cattle for pests (preventative and/or therapeutic) would tend to increase, as would the potential for greater impacts on production.

Long term (30 years) averages for temperature and precipitation were collected for selected weather stations in major livestock regions. Of the five weather stations looked at for Saskatchewan, Swift Current had the warmest average temperatures, while Yorkton and Prince Alberta had the lowest average temperatures. Saskatoon was the driest among these locations, with Yorkton and Prince Albert also have the most amount of precipitation. Prince Alberta had the most number of months (nine) with average low temperatures below 4 degrees C. All of the five locations had the same number of months with average high temperatures above 16 C (May through September).

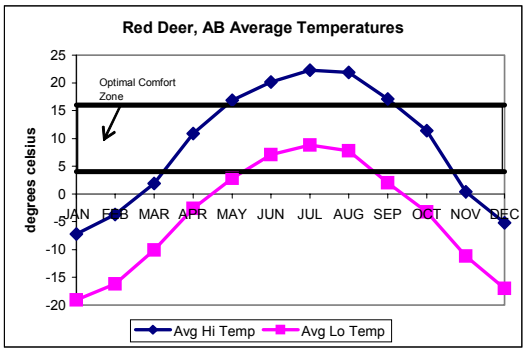
Exhibit 64: Average Temperatures at Selected Saskatchewan Weather Stations

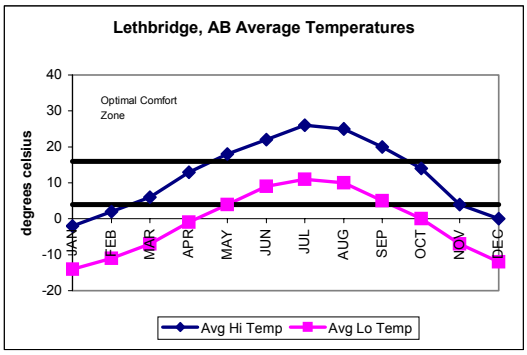


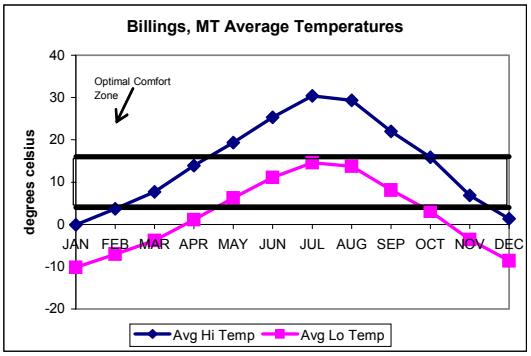
Source: World Meteorological Organization (WMO) Weather Data

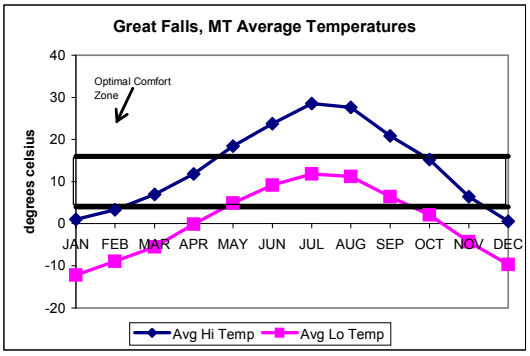
The temperature situation in Red Deer, AB is similar to several of the Saskatchewan locations. The number of months with average lows below 4 degrees C matches the number for Yorkton, while the number of months with average highs above 16 degrees C is the same as the Saskatchewan stations. Precipitation is greater in Red Deer. Temperatures are warmer (both average highs and average lows) in Lethbridge, AB, but the number of months with average highs above 16 degrees C and average lows below 4 degrees C match all of the Saskatchewan locations except for Yorkton. Annual precipitation for Lethbridge is similar to Saskatoon, Biggar and Swift current, but lower than Prince Albert and Yorkton.

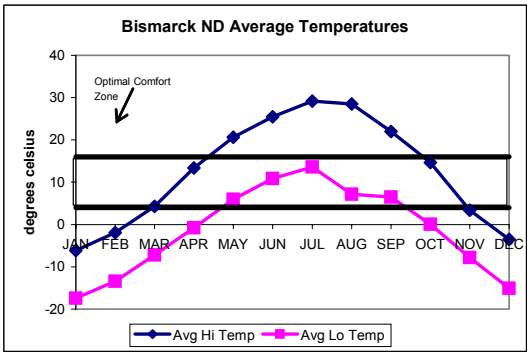
Exhibit 65: Average Temperatures for Selected Weather Stations (Part 2)







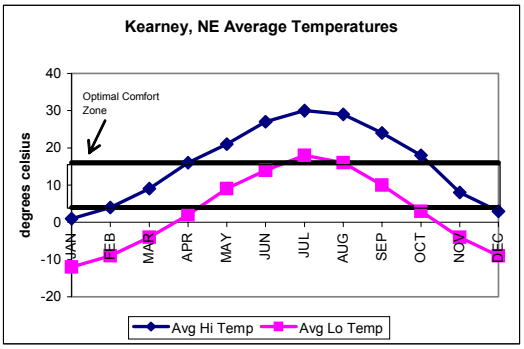


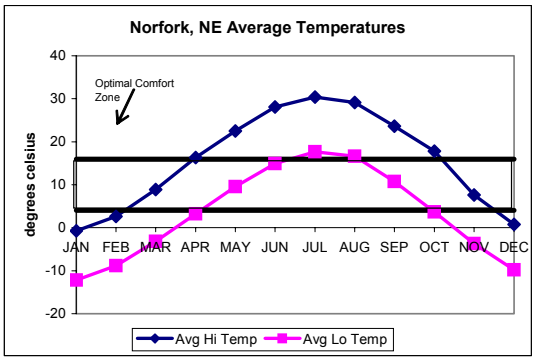


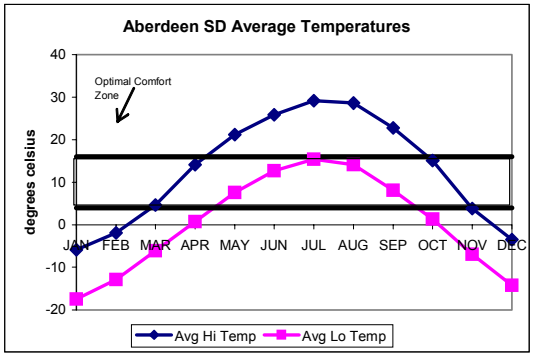
Source: World Meteorological Organization (WMO) Weather Data

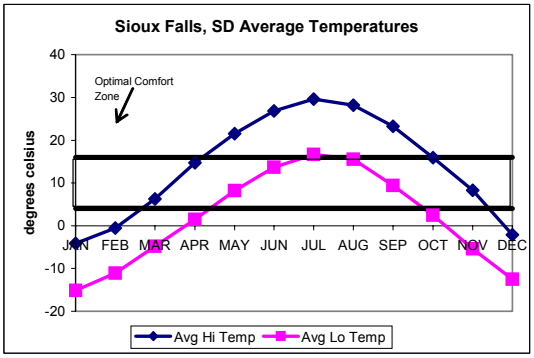
Temperatures for the US locations were warmer than for the Canadian stations. In most cases, precipitation was also greater, except for Great Falls and Billings being lower than Yorkton and Prince Albert. For Montana and North Dakota, there were the same number of months averaging above 16 degrees C and the same number of months averaging below 4 degrees C as most of the Alberta and Saskatchewan locations.

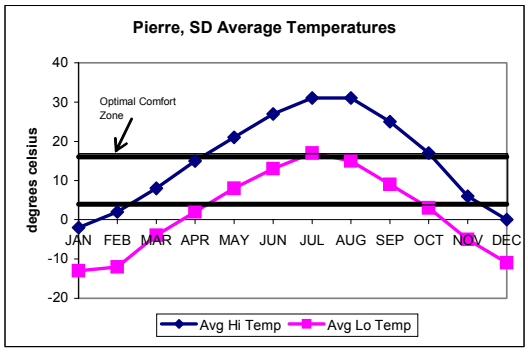
Exhibit 66: Average Temperatures for Selected Weather Stations (Part 3)











Source: World Meteorological Organization (WMO) Weather Data

Pierre, SD has one more month with average temperatures above 16 degrees C in comparison to the Saskatchewan locations, but the same number of months with average temperatures below 4 degrees C. Aberdeen and Sioux Falls, SD have the same number of months above 16 degrees C and below 4 degrees C as the Saskatchewan stations. Annual precipitation was identical for Pierre and Aberdeen, while Sioux Falls gets about 20 percent more precipitation (and 50 percent more precipitation than most locations in Saskatchewan).

Kearney, NE gets one more month with average temperatures above 16 degrees C than the Saskatchewan locations and the same number of months with average temperatures below 4 degrees C as most of the Saskatchewan stations

(except Prince Albert). Norfolk, NE has two more months (seven) with average temperatures above 16 degrees C and the same number of months with average temperatures below 4 degrees C in comparison to the Saskatchewan locations. Annual precipitation for both Nebraska stations is about 50 percent greater than Saskatchewan. Overall average temperatures are higher than all other locations that were considered in this study.

All of the sites were considered to be affected by mid continent climate conditions, where maximum precipitation normally occurs during the warm periods. From a cattle feeding standpoint, Lethbridge has colder temperatures in the late fall and winter than Nebraska that could cause increased feed consumption for maintenance purposes. But there are milder temperatures in the summer that would mean less days of heat stress. Further, there is a drier climate in Lethbridge as evidenced by the lower precipitation throughout much of the year. Further, the greater amount of precipitation in Nebraska could cause more mud problems in feedlots. Lethbridge is probably more conducive to feedlot performance than Kearney or Norfolk. Most of the Saskatchewan locations have similar precipitation to Lethbridge, but all have much colder temperatures in the winter. Average temperatures through the summer are only slightly warmer in Lethbridge (about one degree C). For average temperatures and annual precipitation, Swift Current is closest to Lethbridge. For the cow/calf operator, most of the Saskatchewan locations have colder winter temperatures that would likely create the need for more winter feeding than in the US locations, although North Dakota is not far behind. Climate conditions for feedlot and cow/calf operations in the Red Deer area look fairly similar to most of the Saskatchewan locations, although Red Deer does get about 50 to 100mm more annual precipitation.

The following table shows the comparisons of precipitation for the selected weather stations.

Exhibit 67: Average Precipitation

millimetres	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Saskatoon	15	10	15	24	49	61	60	39	31	17	13	16	350
Prince Albert	16	12	16	27	48	73	77	58	40	24	17	18	424
Biggar	20	11	15	26	46	60	63	45	31	15	15	18	366
Swift Current	17	14	20	24	52	68	55	44	31	17	15	21	377
Yorkton	17	13	22	23	48	79	74	62	50	24	17	20	450
Lethbridge	18	12	24	31	54	63	48	46	40	19	17	17	386
Red Deer	19	11	17	23	56	92	93	70	50	20	16	17	483
Billings, MT	23	16	29	44	64	50	24	25	34	29	21	20	377
Great Falls, MT	23	14	28	35	63	60	31	39	31	20	17	21	380
Bismark, ND	11	13	21	37	56	65	65	54	40	32	18	11	421
Aberdeen, SD	12	12	33	45	68	86	72	61	45	44	19	10	505
Sioux Falls, SD	13	13	45	66	85	87	73	75	65	48	34	13	618
Pierre, SD	13	14	30	51	80	89	70	47	39	42	18	12	505
Kearney, NE	14	15	51	61	103	93	86	72	51	39	30	16	630
Norfolk, NE	14	19	49	65	98	106	94	70	56	43	36	16	667

Source: World Meteorological Organization (WMO) Weather Data

Competitive Implications:

The cold winters in Saskatchewan would tend to increase feeding costs in comparison to many of the other regions considered in this study. But an offsetting factor would be the milder summer temperatures that would cause less stress on animals, especially in comparison to areas further south. In fact, the lack of heat and dust in most of the cattle feeding areas of Saskatchewan were felt to be an advantage. There also tends to be fewer problems with muddy conditions in feedyards in the spring, especially compared to Nebraska. The coldness of the winters is probably an advantage in the health status of animals compared to regions to the south (less disease and pests).

9. MCOOL

The final rule for mandatory country of origin labeling in the US went into effect on March 19, 2009. The rule calls for retailers to identify the country of origin of certain covered commodities. Covered commodities include muscle cuts of beef (including veal), lamb, pork, goat, and chicken; ground beef, ground lamb, ground pork, ground goat, and ground chicken; farmraised fish and shellfish; wild fish and shellfish; perishable agricultural commodities (i.e. fruits and vegetables); peanuts; ginseng, pecans and macadamia nuts. Processed food items are not included in this rule, nor are food items or commodities sold through foodservice establishments.

The law expressly establishes four general categories of meat products:

- Product of the United States – a covered commodity is eligible for designation as "Product of U.S." only if it is derived "exclusively from an animal that is exclusively born, raised and slaughtered in the United States. (Category A)

- Multiple countries of origin – a product is deemed to have multiple countries of origin if the animal from which it was derived was born and/or raised in a different country or countries and then slaughtered in the U.S. Covered commodities in this category would have to identify all the relevant countries. (Category B)

- Animals imported for immediate slaughter – covered commodities from animals raised in another country but slaughtered in the U.S. (Category C)

- Imported finished products to be sold at retail – meat products imported from another country would be labeled as a product of that country. (Category D)

Thus this law affects not only meat products that are exported from Canada to the US, but also live animals (especially cattle and hogs) that are shipped to the US for slaughter or further feeding and subsequent slaughter in the US. Part of the final rule was the condition that all animals present in the US on or before July 15, 2008 were considered to qualify for the product of US label (Category A) following slaughter. Although the final rule did not become fully implemented until March 19, 2009, retailers were expected to start labeling covered commodities with respect to the country of origin starting on September 30, 2008.

Prior to the final rule on COOL, many US packers were accepting Canadian born cattle and hogs into their operations, either directly from Canadian farms and feedlots, or from US operations that had imported Canadian livestock for further feeding in the US. With the complexities of the law and the need for segregation and identification of product under the categories outlined above, some US companies are no longer accepting Canadian born livestock and some multi-plant companies are only taking Canadian born livestock into certain plants or on certain days. The following explanation on the reaction of US beef packers was taken from the Canfax website[33]:

> "The following summary provides an overview of procurement practices at U.S. plants. This information is subject to change as plants continue to adjust to country of origin labeling (COOL) requirements. Historically U.S. plants would have bought Canadian cattle when local supplies were tight and the price was right. Therefore some plants rely on Canadian cattle due to geographical closeness, while C cattle are not typically bought by other plants due to distance.
>
> **Cattle Classification under COOL**
> **A** – born and raised in the U.S.
> **B** – Canadian born feeders, fed in the U.S.
> **C** – Canadian fed cattle imported for immediate slaughter
> **'D'** – foreign meat imported into the U.S. labeled 'Product of Canada'
> **'E'** – ground beef must be labeled with all countries that may be reasonably contained; may be in any order.
> Note: foodservice and processed foods are exempt.
>
> **Cargill** - They expect to be taking B cattle at Plainview, TX (Mexician born) starting in March labeled "Product of the US and Mexico". B cattle are not expected to start being taken at Fort Morgan, CO until April or May due to available supplies, these will be labeled "Product of the US and Canada". Contracts on B cattle starting February 1st will have a $4 under basis for Canadian cattle and $5 under basis on Mexican cattle. These animals will probably be slaughtered in batches on a separate day. These cattle will not be sorted as much

[33] http://www.canfax.ca/

– as they will not be used in branded or premium programs. Cargill is taking cows at Wyalusing, PA. Cargill has announced they will comply with the intent of the MCOOL law and expect to have a minimum of 70% of product meeting the "Product of the USA" labeling standard by January 2009.

Tyson is taking Canadian B and C cattle at Pasco, Lexington and Geneseo (Joslin). At Pasco C cattle are being taken on Tuesdays and Fridays. While age verification is not required it is preferred for shipping to Japan. The B label cattle will have a -$5 basis. Tyson intends to use the U.S. or Category A label on all premium beef programs in early 2009 and label all beef and pork cuts from livestock born, raised and processed in the US with the Category A label by mid- 2009. It is estimated that 90% of fresh, retail beef and pork cuts in the US will qualify for the US label. Cattle and Hogs will be labeled as Category B or C in the least cumbersome manner allowed by USDA.

JBS is taking B cattle at Hyrum and Greeley, slaughter will be daily. Age verification is not required. Only B cattle imported before July 15th 2008 are being taken at Grand Island. C cattle are being taken at Hyrum daily. C cattle which were being taken at Greeley on Fridays will be shipped to Hyrum as of Oct 31st 2008. JBS maybe taking C cattle at Greeley after March 16th but they do not have the go ahead yet.

Smithfield is taking C cattle at Moyer (both cash and contract cattle) with slaughter 4-5 days per week. Contracts are being made up to July. Cash cattle are being taken at Packerland (Green Bay). (*Note: The Sale of Smithfield Beef Group and Five Rivers Cattle feeding operations to JBS was approved by the DOJ and the sale completed on October 23rd*).

National Beef are not currently and will not be taking Canadian cattle after January 1st at any of their plants. (*Note: The Sale of National Beef to JBS was challenged by the DOJ and the acquisition terminated on February 23rd*).

Washington Beef has not made any changes to their procurement policy for Canadian cattle; they will continue accepting Canadian fed and feeder cattle on limited days.

American Foods Group is taking Holsteins and second cut cattle at Greenbay for grinding and foodservice where no label is required as well as some very good quality fed cattle for trim.

In general, we are seeing segregation of plants and shifts with U.S. packing plants:
1) Not slaughtering Canadian cattle, taking only A cattle for ease of reporting;
2) Slaughtering B or C cattle on certain days in order to separate labels; or

3) Purchasing Canadian cattle, mostly cows, for grinding or foodservice where the country of origin label is not required.

The flexibility in the Final Rule has encouraged plants that were intending to accept only B or C cattle to accept both with processing on the same production day."

An assessment of the strategies for US pork packers was done by Informa in late 2008 and is shown in the table below:

Exhibit 68: US Pork Plant Capacities and MCOOL Strategy, 2008

Ownership	Location	Estimated Daily Capacity	Estimated Annual Capacity	COOL Label	A Plants	A&B Plants	Unknown	All Labels
	Plant	head	mln head		million head			
Smithfield	Tar Heel, NC	32000	8.96	A	8.96			
	Gwaltney, VA	9500	2.66	A	2.66			
Morrell	Sioux Falls, SD	19000	5.32	A	5.32			
	Sioux City, AI	8000	2.24	A	2.24			
Farmland	Crete, NE	10400	2.91	A	2.91			
	Denison, IA	9200	2.58	A	2.58			
	Monmouth, IL	10400	2.91	A	2.91			
Premium Standard	Milan, MO	10200	2.86	A	2.86			
	Clinton, NC	10000	2.80	A	2.80			
Tyson Foods (IBP)	Waterloo, IA	19350	5.42	A&B		5.42		
	Logansport, IN	14500	4.06	A&B		4.06		
	Storm Lake, IA	15500	4.34	A&B		4.34		
	Col. Junction, IA	9800	2.74	A&B		2.74		
	Madison, NE	7750	2.17	A&B		2.17		
	Perry, IA	7400	2.07	A&B		2.07		
JBS Swift	Worthington, MN	18700	5.24	A&B		5.24		
	Marshalltown, IA	18700	5.24	A&B		5.24		
	Louisville, KY	10500	2.94	A&B		2.94		
Cargill (Excel)	Beardstown, IL	18000	5.04	A&B		5.04		
	Ottumwa, IA	18000	5.04	A&B		5.04		
Hormel	Austin, MN	19000	5.32	A&B		5.32		
	Fremont, NE	10500	2.94	A&B		2.94		
Farmer John	Los Angeles, CA	7300	2.04	A	2.04			
Triumph	St. Joseph, Missouri	18700	5.24	A	5.24			
Seaboard	Guymon, OK	18700	5.24	A	5.24			
Indiana Pack	Delphi, IN	16000	4.48	??			4.48	
Hatfield	Hatfield, PA	10600	2.97	A	2.97			
J.H. Routh	Sandusky, OH	4200	1.18	??			1.18	
Meadowbrook Farms	Rantoul, IL	4200	1.18	A	1.18			
Sioux-Preme	Sioux Center, IA	3500	0.98	??			0.98	
Greenwood	Greenwood, SC	3000	0.84	A	0.84			
Pork King Packing	Marengo IL	2000	0.56	??			0.56	
	Spring, TX	1500	0.42	A	0.42			
Fisher Harnand Meat	Navasota, TX	500	0.14	A	0.14			
USA Pork Products	Hazelton, PA	2000	0.56	??			0.56	
Spectrum Meats	Mount Morris, IL	1600	0.45	??			0.45	
	Hospers, IA	1600	0.45	??			0.45	
Yosemite Meat	Modesto, CA	1500	0.42	??			0.42	
Leidy's	Souderton, PA	1400	0.39	??			0.39	
Vin-Lee-Ron	Mentone, IN	1300	0.36	??			0.36	
Martin's Pork Products	Falcon NC,	1200	0.34	A	0.34			
	Orland, Calif	1200	0.34	??			0.34	
Verschoor Meats	Sioux City, IA	800	0.22	??			0.22	
Peoria Packing	Chicago, IL	750	0.21	??			0.21	
The Pork Company	Warsaw, NC	900	0.25	A	0.25			
Independent Meat	Twin Falls, ID	650	0.18	??			0.18	
Cloverdale Foods	Minot, ND	600	0.17	All				0.17
Masami Meat Co.	Klammath Falls, OR	550	0.15	??			0.15	
Dekalb Co. Packing	De Kalb, IL	500	0.14	??			0.14	
	Atwater, CA	450	0.13	??			0.13	
Parks Family Meats	Warsaw, NC	450	0.13	A	0.13			
Callhan	Peoria, IL	425	0.12	??				
Carleton Packing	Carleton, OR	375	0.11	??			0.11	
	Gasden, AL	205	0.06	A	0.06			
Morris Meat packing	Morris, IL	200	0.06	??			0.06	
	Warren, NJ	200	0.06	??			0.06	
	Minden City, MI	175	0.05	??			0.05	
Southern Quality Meats	Pontotoc, MS	130	0.04	A	0.04			
	Total, Butcher Hogs	**415760**	**116.4**		**52.10**	**52.56**	**11.47**	**0.17**
	Total, Sow Plants	**15200**	**4.1**					
	Estimated Industry Capacity	**430960**	**120.5**					

Label	Description
A	US Only
B	US Fed & Slaughtered
C	Foreign Fed, US Slaughtered

Note: Daily fall output may exceed estimated capacity by up to 2%

Source: Informa Economics (Subject to Change)

Implementation of the MCOOL law and the reaction of US beef and pork packers is having an effect on Canada's exports of live cattle and hogs to the US. Through the first half of 2008, exports of Canadian cattle and hogs were generally larger than the first half of 2007 (small declines in animals for immediate slaughter were more than offset by large increases in feeder animal exports). But for the second half of 2008, exports of slaughter and feeder animals declined sharply in comparison to the second half of 2007.

The table below does not include the summary for exports of slaughter cows to the US. Following the 2003 BSE incident, Canadian live cattle over 30 months of age were prohibited from the US until November of 2007. Since then, the exports of slaughter cows to the US have recovered to levels similar to the pre-BSE levels at the beginning of this decade. Most of the beef from cows is used for manufacturing purposes (especially for ground beef) and can be segregated relatively easily for sale to foodservice establishments where the MCOOL law does not apply. In fact, very little of the beef from Canadian slaughter cows will fall under the rules of country of origin labeling.

Exhibit 69: Exports of Canadian Cattle and Hogs to the US

	Exports of Fed Cattle to US (000 head)	Exports of Feeder Cattle to US (000 head)	Exports of Slaughter Hogs to US (000 head)	Exports of Feeder Pigs to US (000 head)
January -June 2008	369	416	1412	3681
% change 08/07	-7%	91%	-1%	12%
July-December 2008	318	270	895	3414
% change 08/07	-27%	-20%	-51%	-4%
January-December 2008	687	686	2306	7095
% change 08/07	-18%	23%	-29%	4%

Source: USDA

As can be seen from the above table, exports of Canadian slaughter steers and heifers were down by seven percent in the first half of 2008, but declined by a further 27 percent in the second half of the year. There was a huge increase in feeder cattle exports to the US in the first half of 2008 (up 91 percent), followed by a year-over-year decline of 20 percent in the second half of the year. Indications in the early part of 2009 would suggest that the export of fed cattle and feeder cattle to the US is continuing to decline.

Exports of slaughter hogs in the first half of 2008 were not much different from the previous year. But there was a 51 percent decline in the second half of last year in comparison to 2007. The 12 percent increase in feeder pig exports through the first half of 2008 was followed by a four percent decline in the second half of the year. As in the case of fed cattle and feeder cattle exports, the trend of smaller exports for feeder pigs and slaughter hogs is continuing in the early part of 2009.

Not only is the trade of Canadian live cattle and hogs to the US more restrictive as packers react to the MCOOL rules prohibiting Canadian born animals in some plants or only taking these animals on certain days in some plants, there are also negative price implications on Canadian livestock. With the price discovery process on Canadian cattle and hogs being significantly affected by the US market and the actions of US packers, the price gap between Canadian and US cattle and hogs has widened. This issue is discussed in further detail in the sections on Price Realization.

In late 2008, the Government of Canada took a complaint to the WTO over the preliminary rule regarding the MCOOL law in the US, contending that the law was effectively a trade barrier. The Government of Mexico also requested to be included in the complaint. Some US producer organizations and representatives of the US meat industry worked together with USDA to work out a compromise on the labeling issues in attempts to minimize the impacts and costs of the rule to the US beef value chain (from producer to packer to retailer to consumer). Following the release of the final rule in mid January 2009, the Government of Canada shelved its request for formal consultations with the US. The Federal Minister of Agriculture has indicated that the effects of full implementation of the law in March 2009 would be evaluated over the next several months and a complaint regarding the final rule could be implemented if there was evidence of the law creating a trade barrier on Canadian livestock and meat.

In late February, the newly appointed US Secretary of Agriculture, Tom Vilsack, met with meat industry representatives to request the industry voluntarily agree to follow stricter guidelines that would be more precise regarding the animals' origin and raising[34]. He also wanted the industry to voluntarily label processed meat products, which the current rule exempts. As well, he asked that the time that ground beef makers can hold inventories for labeling purposes be narrowed. The law went into full effect on March 19th in accordance with the final rule. Secretary Vilsack has indicated his department will monitor the labeling activities over the next several months to determine whether there is any need for further revisions or changes of the rule. Some Canadian livestock producer groups have already requested the Government of Canada to reinstitute the complaint with WTO regarding MCOOL and its impact as a trade barrier to Canadian livestock and meat.

Competitive Implications:

The MCOOL rules can act as an impediment and irritant to open and free trade within North America. The effects are being spread across all Canadian cattle and hog producers. The decisions by certain US meat companies to cease slaughter of Canadian born livestock or restricting them to certain plants or shifts has caused Canadian producers to look for alternative markets or strategies.

[34] Cattle Buyers Weekly, February 23, 2009

This has resulted in less livestock being exported to the US. At the same time, there are indications of added costs to producers due to MCOOL and some price discrimination or discounts[35].

[35] http://www.financialpost.com/news-sectors/economy/story.html?id=1502598

10. Public Grazing

a) United States

Grazing is allowed on Bureau of Land Management (BLM) and Forest Service lands for the purpose of fostering economic development for private ranchers and ranching communities by providing ranchers access to additional forage. That is particularly important in the western states where the federal agencies may manage anywhere from 30% to about 85% of the available land. Access to federal forage increases the total forage base available; enabling ranchers to increase the number of livestock they can support and sell. BLM and Forest Service permits and leases are set for not more than 10 years and can be renewed without competition at the end of that period, which gives the permittee or lessee a priority position against others for receiving a permit or lease. Despite this "preference," ranchers do not obtain title to federal lands through their grazing permits or leases, nor do they have exclusive access to federal lands, which are managed for multiple purposes or uses.

Changing social values with respect to environmental protection and conservation of natural resources, as reflected by Federal Land Policy and Management Act (FLPMA), have brought more scrutiny to livestock grazing practices and the level of livestock grazing on public lands. Also, just the increase in the nation's population has created more public-land-use conflicts as more people seek to use the public lands for a variety of purposes. Because of these changes, livestock grazing, as a legitimate use of public lands, is increasingly competing with other legitimate uses of public lands, such as recreation, wildlife habitat, riparian management, endangered species management, mining, hunting, cultural resource protection, wilderness, and a wide variety of other uses.

The federal government manages more than 680 million acres of land in the US, including land in national forests, grasslands, parks, refuges, reservoirs, and military installations. Of the total federal lands, the BLM (Bureau of Land Management) and the Forest Service manage almost 450 million acres for multiple uses, including timber harvest, recreation, grazing, minerals, water supply and quality, and wildlife habitat. The majority of the federal lands are located in the western half of the country.

Most rangelands used to raise livestock in the US are privately owned, and as a result, only a portion of the cattle herd is grazed on public land. In the West, livestock operations typically involve larger areas of land and ranchers often depend on a mix of public and private land to graze cattle seasonally—using federal lands for grazing in the summer and fall, while hay crops are grown on private lands to provide winter forage. In some areas of the Southwest, grazing

of federal lands may occur year-round. For the cattle inventory in the 11 Western states, less than 10 percent of grass requirements have been available from Federal lands.

The Federal grazing fee for 2009 will be $1.35 per animal unit month (AUM[36]) for public lands administered by the Bureau of Land Management and $1.35 per head month (HM) for lands managed by the Forest Service. The grazing fee for 2009 is the same as it was in 2008. The fee is based on the following formula established in the Public Rangelands Improvement Act of 1978:

Fee=$1.23 x (FVI + BCPI –PPI)/100

Where

FVI = Forage Value Index. This index is based on the weighted average estimate of the annual rental charge for cattle on private rangelands in the 11 western stares.

BCPI = Beef Cattle Price Index. This index is based on the weighted average selling price for beef cattle in the 11 western states.

PPI = Prices Paid Index. This index includes items monitored and reported by USDA, such as fuel, tractors, machinery, interest, and farm wage rates.

Annual changes in the grazing fee on federal lands are limited to 25 percent and cannot drop below US$1.35 per AUM.

The $1.35 per AUM/HM grazing fee applies to 16 Western states on public lands administered by the BLM and the Forest Service. The states are Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming. The Forest Service applies different grazing fees to national grasslands and to lands under its management in the Eastern and Midwestern states and parts of Texas.

Surcharge for Authorized Grazing in accordance with 43 CFR 4130.8-1(d), BLM adds a surcharge to the grazing fee bill for authorized grazing of livestock owned by persons other than the permittee or lessee except where such use is made by livestock owned by sons and daughters of permittees and lessees as provided in 43 CFR 4130.7(f). 43 CFR 4130.7(d) specifies the requirements that apply to pasturing agreements. When pasturing agreements are in effect, BLM adds the

[36] Animal Unit Month is the amount of forage that a cow and her calf eat in a month—or one bull, one steer, one horse, or five sheep

surcharge to the permittee's or lessee's grazing fee billing based on the number of AUMs being billed. The surcharge must be paid before grazing use begins, except where "after the grazing season" billing occurs under the terms of an approved allotment management plan or other activity plan intended to serve as a functional equivalent.

The following table lists the grazing fee surcharge rates in effect for the 2006 grazing fee year. They vary by state and equal 35 percent of the difference between the 2006 grazing fee and the 2005 private land lease rate for the state where the pasturing agreement occurs. Surcharge rates are calculated automatically by BLM's Rangeland Administration System (RAS) and the appropriate state rate(s) are assessed based on the state distribution entered in RAS.

Exhibit 70: 2009 Surcharge Rates

State	$/AUM	State	$/AUM	State	$/AUM	State	$/AUM
AZ	2.50	CA	5.76	CO	4.60	ID	3.94
KS	4.43	MT	5.86	NE	8.28	NV	4.25
NM	3.38	ND	5.06	OK	2.68	OR	4.43
SD	7.12	UT	4.08	WA	3.55	WY	5.02

Source: BLM

Private treaty grazing fees are higher than the BLM and Forest Service fees, reflecting market value for that land and/or the services provided. The average private grazing fee is determined annually through USDA surveys of private ranchers in 16 western states. As shown in the table below, the private grazing fees for the states scrutinized in this study ranged from US$15.80 per AUM (North Dakota) to US$25.00 per AUM (Nebraska).

Exhibit 71: Average Private grazing land lease rate per AUM by state

State	$/AUM	State	$/AUM	State	$/AUM	State	$/AUM
AZ	8.50	CA	17.80	CO	14.50	ID	12.60
KS	14.00	MT	18.10	NE	25.00	NV	13.50
NM	11.00	ND	15.80	OK	9.00	OR	14.00
SD	21.70	UT	13.00	WA	11.50	WY	15.70

Source: BLM

While federal public lands comprise approximately 26 percent of the nation's lands estimated to be dedicated to livestock production, they provide only 2% of the feed for domestic livestock.

b) Alberta

The situation of Public Grazing and Land Use Policies in Alberta and Saskatchewan is in many ways very similar to that in the United States. Grazing

in Alberta is allowed under a variety of arrangements as outlined in the table below. Nearly 80% of the available AUMs are covered by the grazing lease arrangement with an additional 14% covered by grazing reserve head tax permits. The management of these two arrangements is very similar and will be discussed here as one. Public land grazing is but one of a host of legitimate uses of public lands in Alberta, as in the U.S.

The federal and provincial governments have managed grazing on these lands for more than 100 years. Government grazing leases are among the oldest administrative tools connected with settlement of the prairies, rural development, development of a livestock economy and a broad suite of public values and benefits. With the formation of the Province of Alberta in 1905 and the subsequent transfer of responsibility for natural resources to the provinces in 1930, the original federal leases were transferred to provincial jurisdiction. The grazing leases were one of the tools the federal government used in the late 1800's and early 1900's to settle the west. As in the U.S. situation the more agronomically desirable lands were converted during settlement (through the Homestead Act and other instruments) to freehold, and governments were left to manage the lands that were not as suitable for settlement. As a result, the public lands used for grazing are often drier; less productive; and located at higher elevations or farther from water. Changing social values are not confined by international borders and are similar with respect to environmental protection and conservation of natural resources in the two countries.

The term of grazing leases in Alberta is generally ten years and the leases are renewable dependent upon compliance with the terms and conditions of the grazing lease contract. This includes satisfactory management of the lands as determined by periodic inspections by trained government staff. Grazing lease contracts can and have been cancelled for cases of mismanagement.

In Alberta grazing fees have not changed in more than 10 years. In theory, rates are determined by a formula based on value of forage and cattle prices, but since 1994, the rates have been set each year by a decree of the Minister. The current fees range from $2.05 to $3.50 per AUM in the province[37]. Survey work by AAFC would suggest commercial pasture fees range from $20-25/AUM for unsupervised pasture, to $25-30/AUM for supervised pasture.

Grazing leases in Alberta are assignable. As such, when they are traded they are normally traded in the open market environment. The province collects an assignment fee on such transactions. The fee is variable across the province and ranges as high as $100 per AUM of grazing lease capacity. The assignment fee is a source of significant income for the province from the grazing lease system.

As in the U.S. situation, it can be argued that Alberta ranchers have paid a quasi "market price" for their public land grazing by paying: 1) grazing fees; 2) property

[37] Ted Nibourg, Alberta Agriculture, personal communication, February 9, 2009.

taxes; 3) assignment fees; 4) non-fee grazing costs, including the costs of operating on public lands, such as protecting threatened and endangered species, and on site management of recreational and exploratory access.

Grazing dispositions occur on more than six million acres of public land in Alberta[38]. An additional two million acres of land in the Rocky Mountains Forest reserve is designated for grazing use through allotments. Public land provides over 1.6 million AUMs of forage each summer to about 14 percent of all Alberta's beef cattle. The province of Alberta receives over $4 million in revenue each year from grazing on public land.

Grazing leases, which account for most of the public land grazing, are long-term authorizations to individuals, corporations or associations. Lease size ranges from an average of less than a section (640 acres) in central Alberta to almost three sections (1920 acres) in the southern Alberta grasslands.

Grazing permits are issued on an annual basis, often on land such as fragmented parcels and periodically wet areas.

Head tax permits (HTPs) are issued on a short-term basis, granting the right to forage grazing only. They are used for areas where grazing is only occasionally available, or where grazing must be coordinated with other priority land uses (such as military use at Camp Wainwright). These permits are also used to authorize grazing on provincial grazing reserves (see below).

Grazing licenses are long-term authorizations used predominantly in forested areas where access for other priority activities, such as forest management, need to be accommodated.

Grazing allotments are large areas of forested range in the central and southern foothills of the Rocky Mountains. They have minimal fencing, are defined by natural barriers such as rivers and mountain ranges and cattle only graze a small portion in any given summer.

Provincial Grazing Reserves (PGRs) are community pastures located throughout the province, providing a significant amount of local public land grazing. HTPs issued to the reserve association are used to authorize the grazing. The associations pay additional fees for rental of government buildings, corrals and maintenance of the pastures.

The table below provides information about numbers, acres and AUMs for each type of grazing authorization on public land.

38 http://www.srd.gov.ab.ca/lands/formspublications/aboutpublicland/grazingstatisticspublicland.aspx

Exhibit 72: Numbers, Acres and AUMs on Public Land

	Dispositions Totals	Grazing AUMs	Disposition Acres	Approximate AUMs/Disposition	Approximate Acres/Disposition
Grazing Leases	5700	1.3 million	5 million	200	900
Grazing Permits	560	28,000	119,000	50	200
Head Tax Permits	30[1]	13,000	110,000	N/A (variable)	N/A (variable)
Grazing Licenses	160	20,000	114,000	100	700
Grazing Allotments	270 [2]	75,000	2 million	300	N/A
Grazing Reserve Head Tax Permits	32	240,000	720,000	160 [3]	N/A

Figures are approximate and based on LSAS data as of November, 2003

[1] Includes Camp Wainwright Grazing
[2] Indicates the number of allotments
[3] Indicates the number of AUMs per patron

Informa estimates that public grazing supplies a little over two percent of the total forage requirements for the Alberta cattle industry.

c) Saskatchewan

The Saskatchewan Pastures Program (SPP) is established under the Pastures Act and is operated under the Provincial Community Pastures Regulations. The program promotes environmental and agricultural sustainability of marginal Crown lands through good range land planning and forage management.

In an overview of the pastures program[39], Saskatchewan Ministry of Agriculture points out that the "program has been in operation since 1922, with a primary focus of supporting livestock producers through the provision of summer grazing on Crown lands on a fee for service basis. Livestock are managed by professional employees, hired by the ministry, with particular skills in livestock care and handling and pasture and range management.

Most pastures operate from mid-May to mid-October, with the numbers of livestock grazing on each pasture dependent on the pasture size and the

[39] http://www.agriculture.gov.sk.ca/pastures

available forage. Grazing privileges are assigned each fall for the following year, based on an application process that gives priority to existing patrons and producers with smaller operations.

Advisory boards, made up of, and elected by, the pasture patrons, are established at each pasture to work with and provide advice to ministry staff on local issues. Breeding services are provided at all pastures through patron run programs.

To ensure that the pasture's productivity is maintained, improvement and maintenance are ongoing and include: brush clearing; weed control; fire guarding; forage seeding and rejuvenation; provision of good quality, permanent water supplies; and construction and maintenance of livestock handling facilities.

Some pastures are operated year round and provide wintering for bulls that are used in the program.

The pastures also provide areas for a variety of non-agricultural activities, such as hunting, tourism, mineral extraction, oil and gas exploration and development, research, recreation, and preservation of archeological and historical sites. Pasture managers and regional staff work with the various users to ensure economic and environmental sustainability is maintained.

SPP pastures have always been important as wildlife habitat, and for maintaining the environmental integrity and diversity of the landscape. Pastures provide year round habitat for wildlife, including endangered species, such as the burrowing owl, piping plover and ferruginous hawk. SPP is strengthening its partnership with organizations such as Saskatchewan Environment, Ducks Unlimited Canada, Saskatchewan Watershed Authority, Saskatchewan Wildlife Federation and other conservation organizations interested in protecting and conserving habitat and biodiversity. Ducks Unlimited has developed wetland projects in co-operation with SPP to enhance duck production and strengthen the environmental focus and management of the local ecosystem, while maintaining sustainable grazing as the prime objective. Saskatchewan Pastures have been recognized as contributing to the Saskatchewan Representative Areas Network.

This integrated approach to pasture management ensures patrons will have access to healthy Crown lands and the public will benefit from the use of these lands for generations to come."

When the Province of Saskatchewan was formed in 1905, Crown land and mineral resource titles remained with the Canadian Government. In 1930, the remaining titles were transferred to the province, bringing about the formation of a Lands Branch in the Department of Natural Resources. The Branch not only administered unpatented public

lands, but also inspected homesteads and issued certificates of title to those meeting cultivation and residency requirements.

In 1946 the Lands Branch was transferred to the Department of Agriculture and then to Saskatchewan Rural Development of Agriculture and then to Saskatchewan Rural Development in 1988. Today the Saskatchewan Ministry of Agriculture administers
approximately 6.5 million acres of rangeland. About five million acres of provincial Crown land are presently leased to livestock producers, 459,000 acres are leased to PFRA for community pasture purposes, and 660,000 acres are leased to grazing associations and cooperatives. Nearly 768,000 acres of grazing lands are managed directly by Lands Branch in the form of provincial community pastures.

Of the 60 Saskatchewan federally managed PFRA pastures, 46 are composed of open grasslands. Forty of the 56 provincially managed community pastures are aspen grove or bush pastures. In these provincial pastures, large areas have been seeded to tame grasses.

Exhibit 73: Schedule of Services

Service	$ per Head
Grazing Season	
Cows - includes take-in and take-out days	0.38/day
Cows - season minimum	41.80 (110 days)
Calves	$18.00/season
Calves born prior to January 1	0.38/day
Handling charge for pasture born calves	$10.00
Feeders/grassers	0.38/day
Bulls	0.50/day
Cattle - after take out date	0.50/day
Horses	0.48/day
Horses - season minimum	50.00 (110 days)
Colts	18.00/season
Sheep	0.09/day
Sheep - season minimum	9.90 (110 days)
Lambs	5.00/season
Under-delivery penalty - sheep	5.00/head

Under-delivery penalty - cattle	30.00/head/adult

Wintering Season	
Bulls - includes feed and handling	3.33/day
Bulls - client provides hay	425.00/season
Bulls - client provides feed and treatments	275.00/season
Bulls yearly maximum - grazing and wintering seasons	600.00/year

Handling charge for extraordinary services:	
Chute run for pregnancy testing	2.00
Late pasture entry - cattle and horses	5.00
Early/late take-out - cattle and horses	5.00
Client not participating in take-out	5.00
Municipal Taxes	Prorated to number of adults
General	
Non-family assignment fees (Cattle)	100.00/head
Non-family assignment fees (Sheep)	20.00/head
Non-family assignment fees (Horses)	125.00/head
Veterinary treatments	Cost
Treatments (footrot, fly control, pinkeye, antibiotics, etc.)	Cost
Salt, minerals, supplements	Pro-rated by number of adult head (not including sires)
Miscellaneous handling charges	As determined by the Minister

In November, 2008, the Government of Saskatchewan announced a five-year program to help put agricultural Crown land back into the hands of producers. Crown land lessees will be offered an incentive to purchase their leased agricultural Crown land. The program is called the Agricultural Crown Land Sale Program. There will be a sliding scale incentive for purchase, involving a 10 percent discount on the sale price of the land in the first year, and then sliding down by two percentage points each year to a two percent discount in the fifth year of the program. 1.6 million acres will be eligible for sale out of the approximately 7.2 million acres of agricultural Crown land owned by the Province. The program began on November 15, 2008. The program was part of

a commitment made in the 2007 Throne Speech and is being viewed positively by Saskatchewan cattle producers.

Grazing on public lands in Saskatchewan provides approximately 1.6 million AUMs per year, similar to the amount in Alberta. This works out to about five percent of total forage requirement for the Saskatchewan cattle industry, a little more than double the proportion in Alberta and the US.

Competitive Implications:

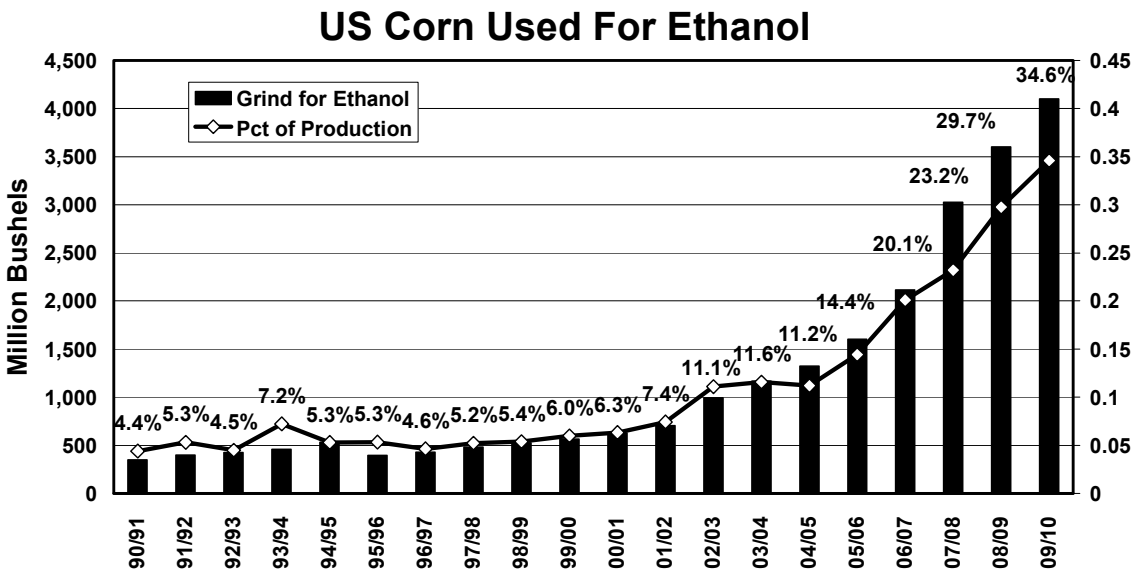
Public grazing generates discussion and controversy for many reasons, not the least of which is ongoing conflicts among various uses of public land. Comparisons between private and public grazing costs are difficult in both countries, primarily because one is attempting to compare different entities. Direct comparisons of $/AUM are incomplete and may very well be flawed. Public grazing fees tend to be similar in the various regions. Private grazing fees appear to be higher than public fees in both countries, although differences in productivity and other costs associated with use of public lands need to be considered. Evaluation of such differences is outside the mandate of this study, but such an exercise could result in much closer figures than those shown in the previous section. In the US, Alberta and Saskatchewan, public grazing accounts for a relatively small percentage of total annual forage needs. Informa views it is not a significant factor in the competitiveness of the Saskatchewan cattle industry.

11. Ethanol/Biofuels

a) US Midwest

The production of ethanol as an energy source in the US has been heavily promoted by US government policy, particularly by mandated usage levels, substantial blending credits and punitive duties on imports of ethanol. This has led to a "building boom" of ethanol production plants in recent years. With corn being the primary source of raw material for these plants, there has been increasing demand for corn as a fuel source versus a food source for livestock and humans. For the 07/08 crop year, 23 percent of US corn production was used for ethanol production, compared to four to seven percent prior to 02/03.

Exhibit 74: US Corn Used for Ethanol



Source: USDA, Informa

Not surprisingly, the vast majority of the ethanol plants have been built near the source of raw material. There is a large concentration of ethanol plants in the Midwest states where the bulk of corn is grown and harvested. The following table shows Informa calculations of ethanol production capacity for the region encompassing Iowa, Minnesota, Nebraska and South Dakota. There is very little production of ethanol in North Dakota or Montana.

Exhibit 75: Regional Production of Ethanol and DDGS

IA, MN, NE, SD REGION CALENDAR YEAR	2000	2001	2002	2003	2004	2005	2006	2007	2008
CAPACITY (MIL. GAL./YR.)	1,323	1,473	1,631	1,952	2,459	3,003	3,585	4,725	6,544
OF WHICH:									
WET MILL	667	667	667	667	667	667	667	667	712
DRY MILL	656	806	964	1,285	1,792	2,336	2,918	4,058	5,832
IMPUTED PRODUCTION									
DRY MILL ETHANOL PROD'N (MIL. GAL.)		535	705	1,037	1,465	1,875	2,479	3,321	4,449
ETHANOL YIELD (GAL/BU)	2.60	2.60	2.60	2.64	2.65	2.69	2.70	2.70	2.70
CORN USED BY DRY MILLS (MIL. BU.)		206	271	393	553	696	918	1,230	1,648
DDGS EQUIVALENT PROD'N (MIL. TONS)		1.8	2.4	3.4	4.8	6.1	8.0	10.8	14.4
DDGS RAIL SHIPMENTS OUT OF REGION					1.1	1.7	2.4	3.1	4.6
IMPUTED DDGS CONSUMPTION IN REGION					3.7	4.4	5.6	7.6	9.8

Sources: USDA, Informa Economics

The increased demand for corn by these ethanol plants has pushed corn prices vastly higher in the last few years. Even with more acres planted and more corn production, concerns that the increased production would not be sufficient for total demand for corn as feed/food and fuel resulted in record prices for corn in the first half of 2008. Although corn prices have fallen by more than half since June 2008, they remain at relatively high levels on an historic basis.

The rise in corn prices has put severe economic strains on livestock producers, where feed makes up a substantial portion of the cost of production. In response to increasing financial woes, livestock producers have been decreasing animal

inventories in efforts to reduce meat and poultry production and boost the prices they receive. For 2008, production us expected to decline for all three major species (beef, pork and broilers). This is an unprecedented event for production of all three species to decline at the same time.

A co-product of ethanol production is Distillers Dried Grains with Solubles (DDGS). Nearly a third of the grain that goes into ethanol production comes out as DDGS. More than 98 percent of the DDGS in the US come from plants that produce ethanol for oxygenated fuels. The alcoholic beverage industry produces the remaining one to two percent. The product is high in protein, energy, minerals and vitamins. DDGS is used in livestock rations, particularly for cattle. The product can also be formulated into rations for hogs and poultry, although at lower inclusion rates than cattle rations.

The preceding table shows Informa calculations of DDGS production four Midwest states being considered in this study. These four states have the capacity to produce about 70 percent of the ethanol in the US. Thus production of DDGS is very large. Informa estimates that about 30 percent of the DDGS production is shipped out of the region, with the remaining 70 percent being consumed in these states. For those producers close to ethanol plants, the relatively abundant supply of DDGS partly offsets some of the upward pressure of higher corn costs on livestock production costs. This is particularly the case for those close to wet milling plants, where there is further savings from not having to dry the co-product for shipment over distances.

b) Canada

The Canadian crop processing sector has experienced expansion phases in the past. More recently however, the pace of growth has begun to accelerate, beginning with corn ethanol production in eastern Canada and canola crushing in western Canada. Over the next several years, additional processing capacity is expected to come on-stream and cause substantial shifts in agriculture and related sectors. By 2015/16, the domestic processing sector is expected to consume nearly 22 million tonnes of crops[40], compared to 15 million tonnes in 2007/08.

Ethanol and biodiesel facilities are being built mainly in response to government usage mandates, with the forecasted production volumes expected to remain close to the mandated levels. By 2015/16, approximately 3.9 million tonnes of feedgrains will be consumed for ethanol production in eastern Canada and 2.7 million tonnes will be used in western Canada.

[40] Source: Informa Economics, Inc., Expansion in the Canadian Crop Processing Sector: A Multi-Client Study, December 2008.

The volume of crops required by the larger domestic processing industry is expected to be met mainly through productivity gains, although some shifts in acreage are also anticipated. Shifts in acreage and other changes to cropping practices are anticipated that would enable crop production to adjust to the new level of demand. The most significant acreage changes are expected in western Canada, with declines projected for non-durum wheat and barley and increases seen for canola acres.

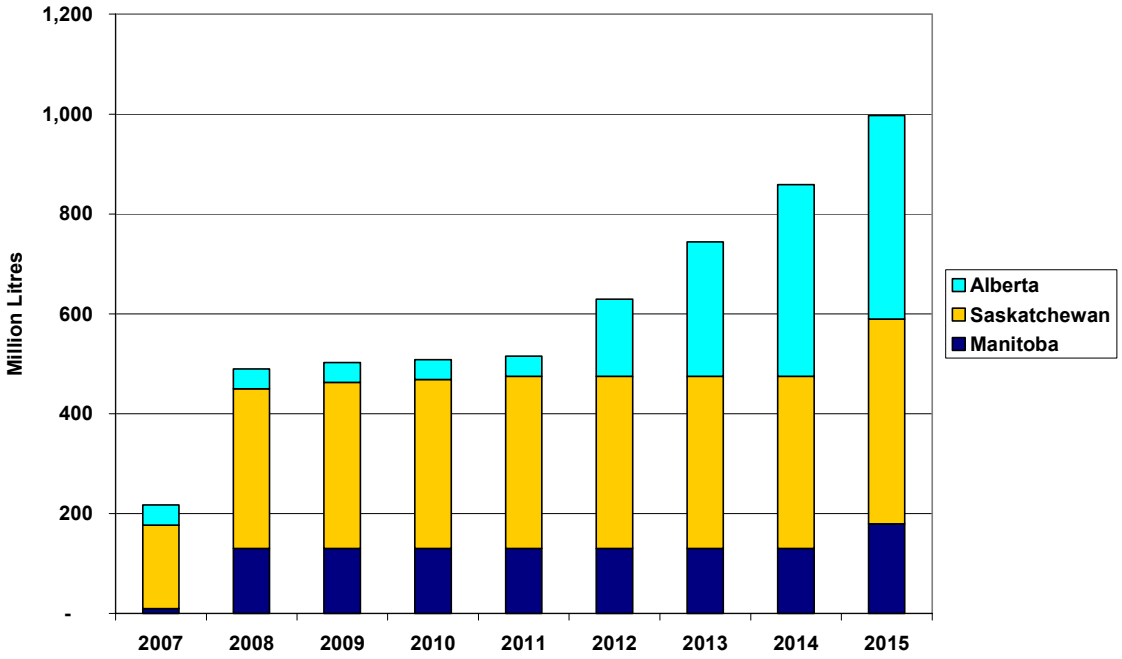
The livestock industry in Canada is expected to make changes to feeding practices in response to the reduced acreage of feedgrain crops and increased competition from ethanol makers. A key challenge will be the increased cost of energy ingredients in rations. At the same time, increased availability of distillers' grains and canola meal is expected to reduce the relative cost of protein ingredients. Higher inclusion rates of distillers' grains for cattle (especially beef) mean that this sector will be better able to deal with this ingredient than hog or poultry producers. Because of its larger ethanol industry and the composition of its livestock industry, Ontario may be faced with an oversupply of distillers' grains later in the forecast period.

In June of 2008, the Canadian federal government passed Bill C-33 which mandated a minimum of 5% for renewable fuel content in all transport gasoline sold in Canada by 2010 and 2% renewable content in all transport diesel and home heating oil by 2012.

Additionally, several provincial governments have enacted ethanol mandates that require 5% or more fuel ethanol in all gasoline sold. Manitoba and Saskatchewan have each implemented a mandate surpassing the federal level, at 8.5% and 7.5% respectively. A 5% mandate was implemented in Ontario in January of 2007 and the provincial government had indicated its desire to increase the mandate to 10% by 2010. Recent announcements however suggest this further mandate will not be legislated. Quebec and British Columbia have each set a 5% ethanol mandate and Alberta has announced its intention to do the same.

When these mandates are applied against gasoline consumption projections by Natural Resources Canada, ethanol volumes required to meet legislated minimums are expected to reach 2.3 billion litres per year (bly) by 2015. The federal 5% mandate is a national average that could be met by concentrating ethanol production and distribution in major population centres. The provincial mandates however, will result in ethanol production being dispersed in various regions.

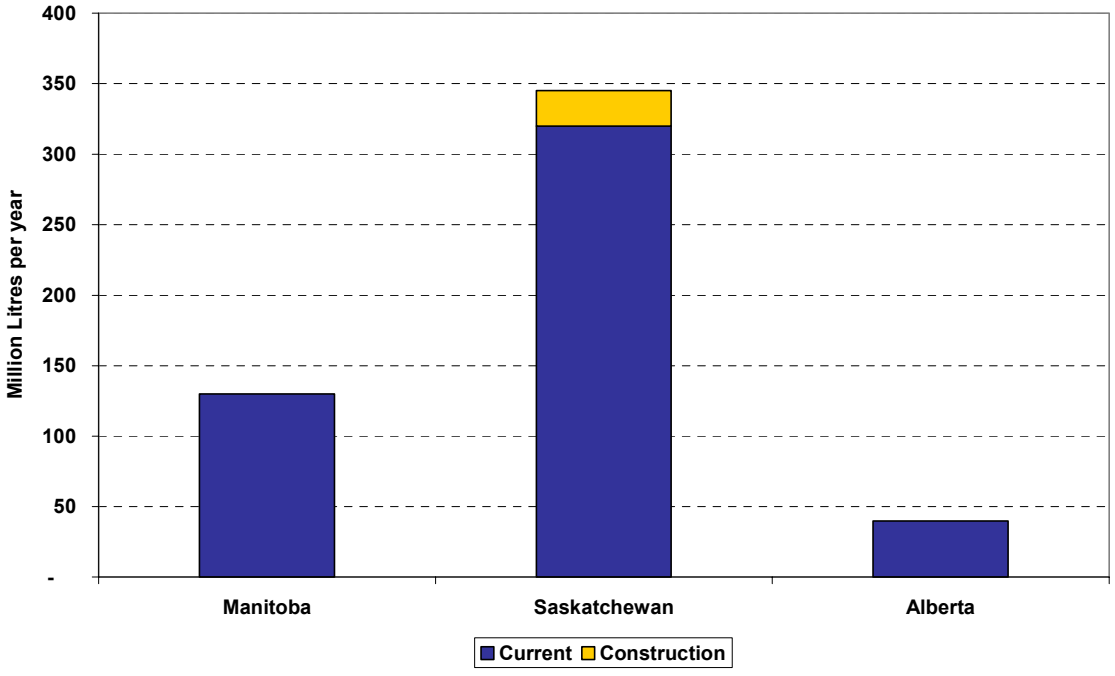
Exhibit 76: Projected Ethanol Production



Source: Informa

Ontario currently has the largest production capacity for ethanol, as well as the most capacity under construction. Among the Prairie provinces, Saskatchewan has by far the largest production capacity.

Exhibit 77: Ethanol Production Capacity



Source: Informa

With the uncertainty surrounding the ethanol industry, predicting which facilities will come on stream over the forecast period is difficult. The list below of facilities that are operating, under construction, or proposed is based on available information and the status of many of the proposed facilities is questionable. In addition, several other facilities for which planned capacity or feedstocks have not been disclosed are not included on this list.

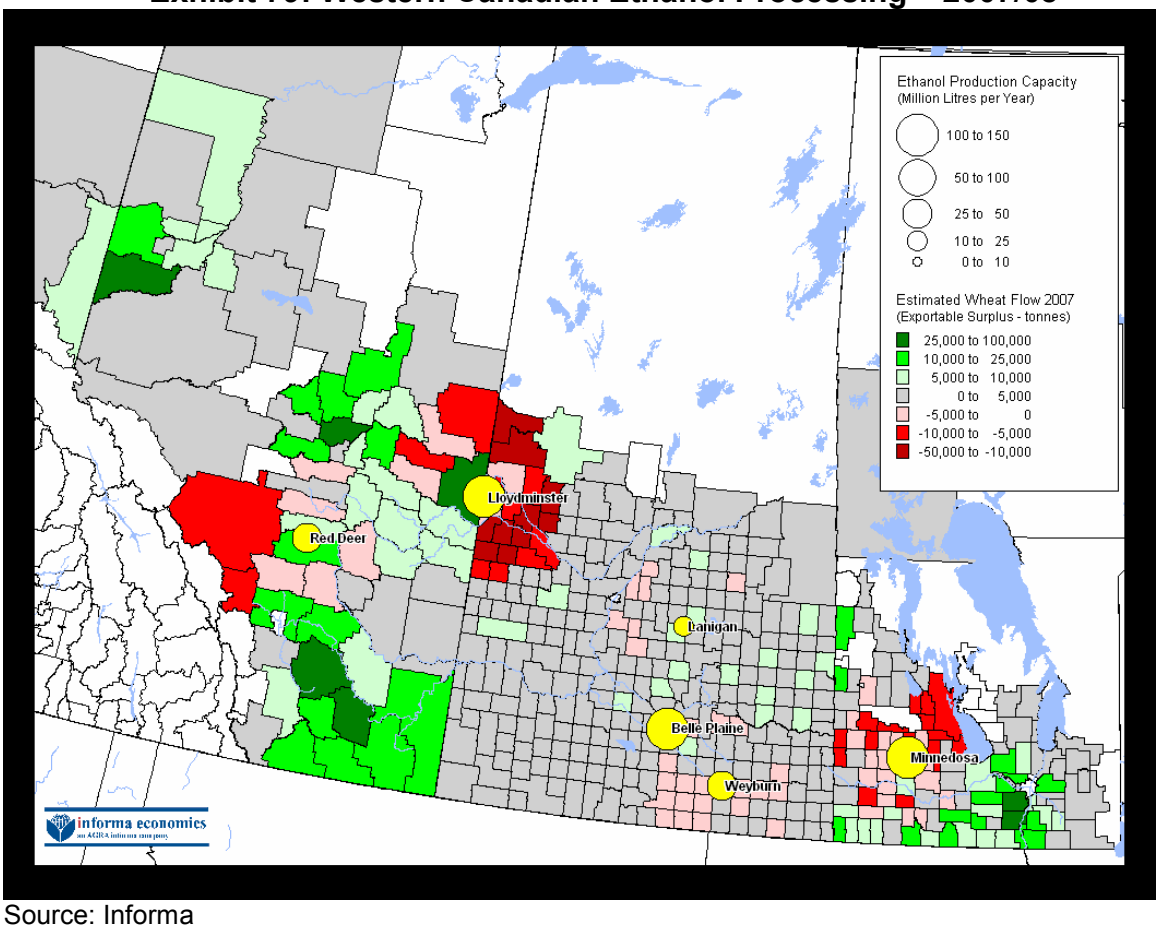
Exhibit 78: Canadian Ethanol Facility List

Status	Company Name	City	Province	Feedstock	Current Cap (mly)	Construct Cap (mly)	Proposed Cap (mly)
Operating	Permolex	Red Deer	AB	wheat	40		80
Proposed	GreenField Ethanol	Edmonton	AB	waste			36
Proposed	Highmark Renewables	Hairy Hill	AB	wheat			40
Proposed	Winfield Resources Limited	High Level	AB	wheat			20
Proposed	Dominion Energy Services, LLC	Innisfail	AB	wheat			379
Proposed	Peace River Oil	McLennan	AB	wheat			140
Proposed	Sears Ranches Group	Nanton	AB	wheat			25
Proposed	Rimbey Biofuels	Rimbey	AB	cellulose			30
Proposed	CR Fuels Inc.	Strathmore	AB	wheat			95
Proposed	EnerGreen Power Inc.	Dawson Creek	BC	wheat			40
Proposed	Okanagan Biofuels Inc.	Kelowna	BC	wheat			115
Operating	Husky Energy Inc.	Minnedosa	MB	wheat	130		
Proposed	Parkland Agricultural Coop	Grandview	MB	wheat			80
Proposed	Clean Country Resources Ltd	Hartney	MB	barley/peas			204
Proposed	Southwest Fibre Coop	Killarney	MB	straw			220
Proposed	Turtle Mountain Sustainable Ventures	Killarney	MB	wheat			100
Proposed	Manitoba BioRefiners Inc	Russell	MB	wheat			24
Proposed	Froese Enterprises Inc	Winkler	MB	corn			200
Proposed	AgriBiofuels Ltd	Truro	NS	root waste			6
Construction	Kawartha Ethanol Inc.	Havelock	ON	corn		80	
Delayed	GreenField Ethanol	Hensall	ON	corn		198	
Operating	GreenField Ethanol	Johnstown	ON	corn	198		
Operating	IGPC Ethanol	Aylmer	ON	corn	150		
Operating	GreenField Ethanol	Chatham	ON	corn	187		
Operating	Blackstone Energy	Collingwood	ON	corn	54		
Operating	Iogen Corp.	Ottawa	ON	straw	3		
Operating	GreenField Ethanol	Tiverton	ON	corn	28		
Operating\Expansion	Suncor Energy Products	Sarnia	ON	corn	200	200	
Proposed	Hearst Ethanol One	Hearst	ON	wood waste			450
Proposed	Upper Canada Ethanol Inc.	Napanee	ON	corn			400
Proposed	FarmTech Energy Corp	Oshawa	ON	corn			208
Proposed	Northern Ethanol Inc.	Sarnia	ON	corn			409
Proposed	GreenField/Sunopta	Unknown	ON_QC	woodchips			200
Operating	GreenField Ethanol	Varennes	QC	corn	145		
Proposed	9043-3616 Quebec Inc.	St Alexis de Montcalm	QC	corn			9
Proposed	Belmat Energy Canada Corp	St. John Sur Richelieu	QC	beets			146
Construction	Northwest Terminal	Unity	SK	wheat		25	
Operating	Terra Grain Fuels	Belle Plaine	SK	wheat	150		
Operating	PoundMaker Agventures	Lanigan	SK	wheat	15		
Operating	Husky Energy Inc.	Lloydminster	SK	wheat	130		
Operating	NorAmera BioEnergy Corp	Weyburn	SK	wheat	25		
Proposed	Highway 32 feeders	Abbey - Cabri	SK	wheat			24
Proposed	Prairie Ethanol Consortium	Bengough	SK	wheat			25
Proposed	Prairie Ethanol Consortium	Debden-Canwood	SK	wheat			25
Proposed	Prairie Green Renewable Energy	Hudson Bay	SK	various crops			190
Proposed	Prairie Ethanol Consortium	Kindersley	SK	wheat			25
Proposed	Prairie Ethanol Consortium	Meadow Lake	SK	wheat			25
Proposed	Blue Sky BioEnergy Ltd.	Melville	SK	wheat			40
Proposed	Paradigm Energy Corp	Moosomin	SK	wheat			40
Proposed	Nipawin Biomass	Nipawin	SK	forest			80
Proposed	279 Beef Producers Inc	Nokomis	SK	wheat			23
Proposed	Canadian BioEnergy	Porcupine Plain	SK	wheat			23
Proposed	Iogen Corp.	Prince Albert	SK	cellulose			90
Proposed	International Debranning Inc	Rosthern	SK	wheat			110
Proposed	Cypress Agri Energy Inc.	Shaunavon	SK	wheat			150
Proposed	101090319 Saskatchewan Ltd	Unknown	SK	wheat			25

Source: Various industry

There are currently four ethanol plants in Saskatchewan, varying in size from 15 to 150 million litres per year. An operation is under construction in Unity, with 15 or so proposals still in the works.

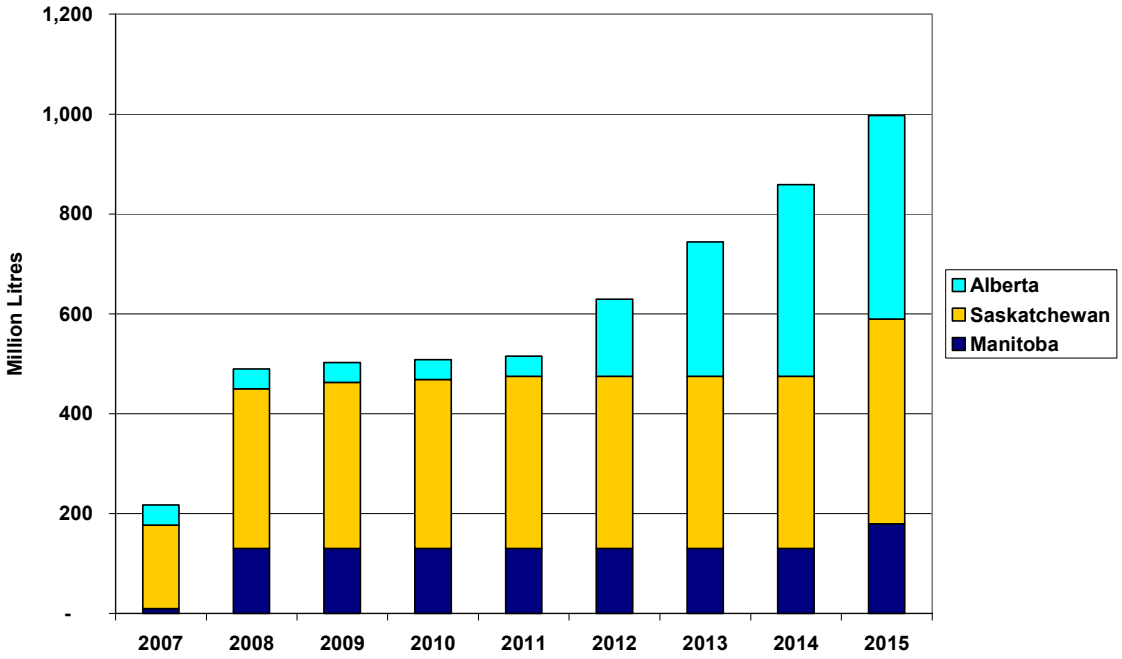
Exhibit 79: Western Canadian Ethanol Processing – 2007/08



Source: Informa

The projection below includes the currently operating ethanol facilities, supplemented by facilities under construction, followed later in the forecast period by a small portion of the facilities that are still at the proposal stage.

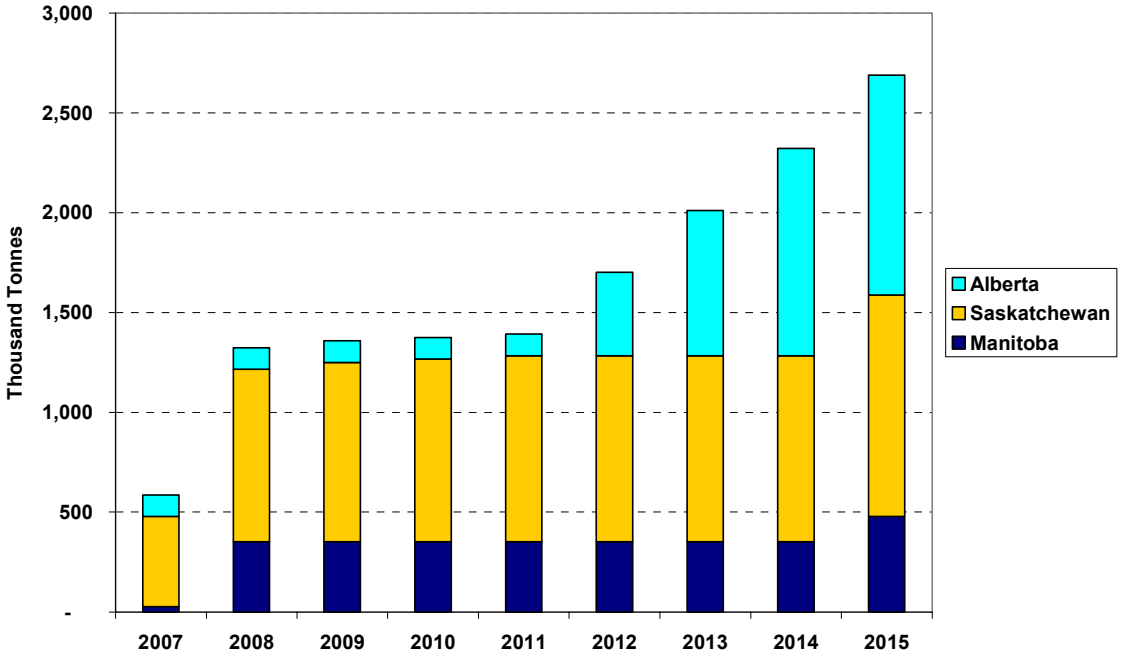
Exhibit 80: Projected Ethanol Production



Source: Informa

In western Canada, wheat has been the basis for the majority of the ethanol production however ethanol makers have also been incorporating corn into the grind depending on the relationship between wheat and corn prices. Based on the ethanol production outlook described earlier, feedstock consumption is projected to grow as shown in the chart below. By 2015, ethanol makers in western Canada will be consuming approximately 2.7 million tonnes of predominantly wheat per year for ethanol production.

Exhibit 81: Projected Feed-grain Consumption for Ethanol



Source: Informa

Because wheat yields less ethanol than corn, production of distillers' grains from wheat is higher. For each tonne of wheat processed for ethanol, 0.38 tonnes of distillers' grains are produced, compared to 0.32 tonnes for corn. Based on the federal and provincial mandates and the assumption that the vast majority of ethanol production in western Canada will be wheat-based, production of DDGS in the three Prairie provinces could exceed 1 million tonnes by 2015, with Saskatchewan accounting for more than 40 percent of that amount..

Exhibit 82: Estimated Production of DDGS

000 tonnes	2007	2008	2009	2010	2011	2012	2013	2014	2015
Manitoba	10	134	134	134	134	134	134	134	175
Saskatchewan	172	329	341	348	354	354	354	354	421
Alberta	41	41	41	41	41	159	277	394	419

Source: Informa

DDGS will replace feed-grain in livestock rations to some extent. Inclusion rates of distillers' grains vary by livestock species and the type of ration required. The table below is based on experience in the US feed sector with corn distillers' grains and shows inclusion rates that are used typically by feeders as well as rates that are deemed to be maximum levels, based on nutritional and feed intake research.

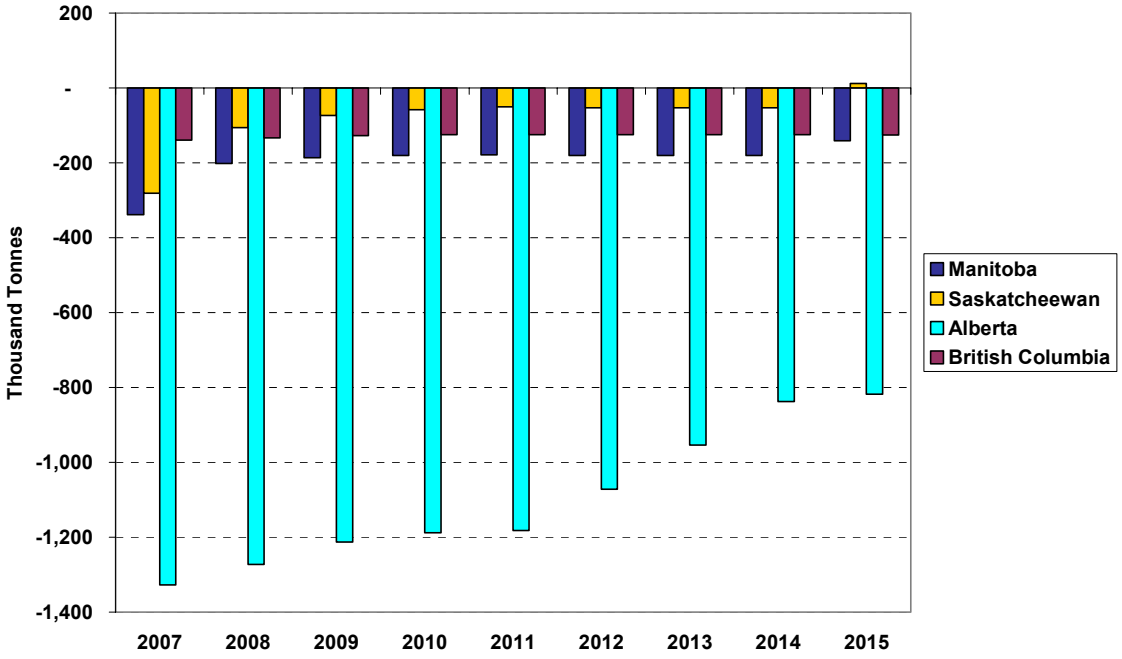
Exhibit 83: Typical & Maximum Distillers' Grains Inclusion Rates

Ration	Typical Inclusion	Maximum Inclusion
Dairy	15%	22%
Cattle on Feed	20%	40%
Stocker/Backgrounder	20%	25%
Feeder Hogs	11%	20%
Gestating Sows	11%	50%
Lactating Sows	11%	20%
Layer Hens	10%	15%
Broiler Chickens	10%	13%
Turkeys	10%	13%

Source: Informa with industry sources

Informa went through the exercise of calculating the potential consumption of DDGS based on current livestock inventories and typical inclusion rates. If all animals and birds were being fed DDGS at the typical inclusion rates shown in the above table, the potential consumption of DDGS for 2008 would have exceeded 2 million tonnes for the three Prairie provinces. This would be a deficit to the estimated production of 500,000 tonnes. Under this scenario, Saskatchewan would have the smallest deficit (100 tonnes) while Alberta would have by far the largest deficit (1.27 million tonnes). Taking this exercise out through 2015 would show a continuous deficit for the region, while Saskatchewan could come into balance or a small surplus situation by the end of the forecast period.

Exhibit 84: Provincial Distillers Grains Surplus/Deficit



Source: Informa

The growth in ethanol production is expected to result in two main changes that will affect the Canadian livestock industry:

- Reduction in feed-grain supplies as grain is processed into ethanol, and;
- Increased availability of distillers' grains

Of the western provinces, Saskatchewan would have the best advantage when it comes to production of DDGS versus ration needs for feeding livestock.

Competitive Implications:

Due to mandated biofuel usage in both the US and Canada, the demand for feedgrain stocks and oilseed stocks for production of ethanol and biodiesel will continue to take a significant portion of row crop production in the US Midwest and a growing proportion in western Canada. This factor will continue to elevate feedgrain and oilseed prices above levels seen prior to the last two to three years. The resulting increased cost of producing meat protein is leading to declines in production across all three major proteins: beef, pork and poultry. A partly offsetting factor is the production of DDGS from the ethanol process that can provide a high protein, nutrient dense feedstuff to livestock. Cattle producers have the largest advantage in the usage of DDGS due to the higher degrees of inclusion rates that ruminant animals can utilize in feed rations in comparison to the hog industry (and even lower proportions in chicken rations). The large ethanol production in the Midwest provides competitively priced DDGS for cattle and hog rations in comparison to other regions of the US, particularly the Southern Plains. For Canada, DDGS production will be just a fraction the US

Midwest. But on a relative basis to neighbouring provinces, Saskatchewan should have better opportunities to utilize local production of DDGS that could be in surplus to the potential feed needs of the province's livestock producers.

12. Packing/Processing

The last major hog packing/processing plant in Saskatchewan was the Maple Leaf Foods plant in Saskatoon (formerly Mitchell's Gourmet Foods) that was closed in 2007. The bulk of Saskatchewan's market hogs now go to the Maple Leaf Foods plant in Brandon, MB and the Olymel plant in Red Deer, AB. There are also shipments to other provinces as well as export to US plants.

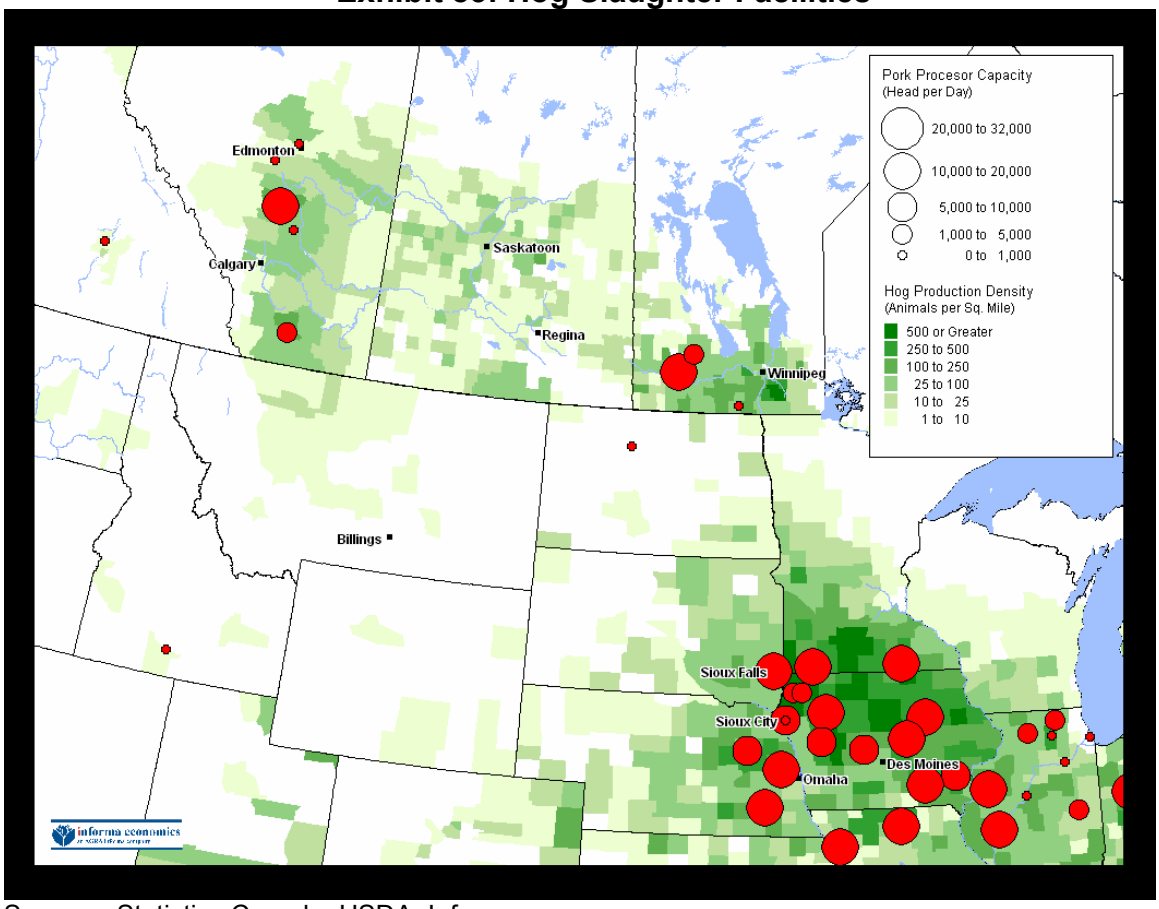
The Maple Leaf Foods facility in Brandon is a large, double shift facility that has been considerably upgraded in the last few years to become an efficient world-class operation. There is a smaller facility in Neepawa (Springhill Farms) was purchased by one of Canada's largest hog production companies in 2007 and has been upgraded and expanded. Hog slaughter in Manitoba for 2008 was estimated in excess of 4.5 million head.

The Olymel plant in Red Deer, AB is owned by Olymel L.P. of Quebec. Maple Leaf Foods has a small hog plant in Lethbridge, AB that is mostly dedicated to export markets, particularly Asia. Alberta plants slaughtered approximately 2.7 million head of hogs in 2008.

Several companies have large, efficient hog plants in the US Midwest, including Tyson, Smithfield, Cargill and JBS-Swift. 2008 hog slaughter in Iowa was nearly 32.8 million head, or 28 percent of total US hog slaughter, making Iowa the #1 state for hog slaughter. Minnesota was fourth largest at just under 10 million head, or a little less than nine percent. Nebraska was sixth largest at eight million head of hogs slaughtered last year, seven percent of the US total. Only the Maple Leaf Foods plant (Brandon) approaches the economies of scale found in many of the plants in the US Midwest.

The following exhibit shows the location of various hog slaughter facilities in comparison to hog production:

Exhibit 85: Hog Slaughter Facilities



Sources: Statistics Canada, USDA, Informa

The beef slaughter/processing sector in Saskatchewan has also declined over time. The largest federally inspected beef plant in the province is the XL Foods operation in Moose Jaw, with daily capacity of 1000 head. The plant runs mostly a mixed slaughter of fed cattle and cull animals. There are no sizeable beef plants in Manitoba.

IMPORTANT NOTE: In late April 2009, XL Foods announced the temporary closure of the cattle slaughter plant in Moose Jaw[41]. XL Foods management indicated the shutdown was due to a shortage of cattle supply, with expectations to re-open by late September of this year.

Alberta has two large plants for slaughtering cattle. Cargill in High River is capable of slaughtering 4700 head per day, with the majority being fed cattle and a small amount of cows. The Lakeside plant in Brooks was recently sold by Tyson Foods to Nilsson Bros. Inc, a company that also owns the XL Foods plants

41 http://www.canadianmanufacturing.com/foodincanada/news/industrynews/article.jsp?content=20090430_113309_9256

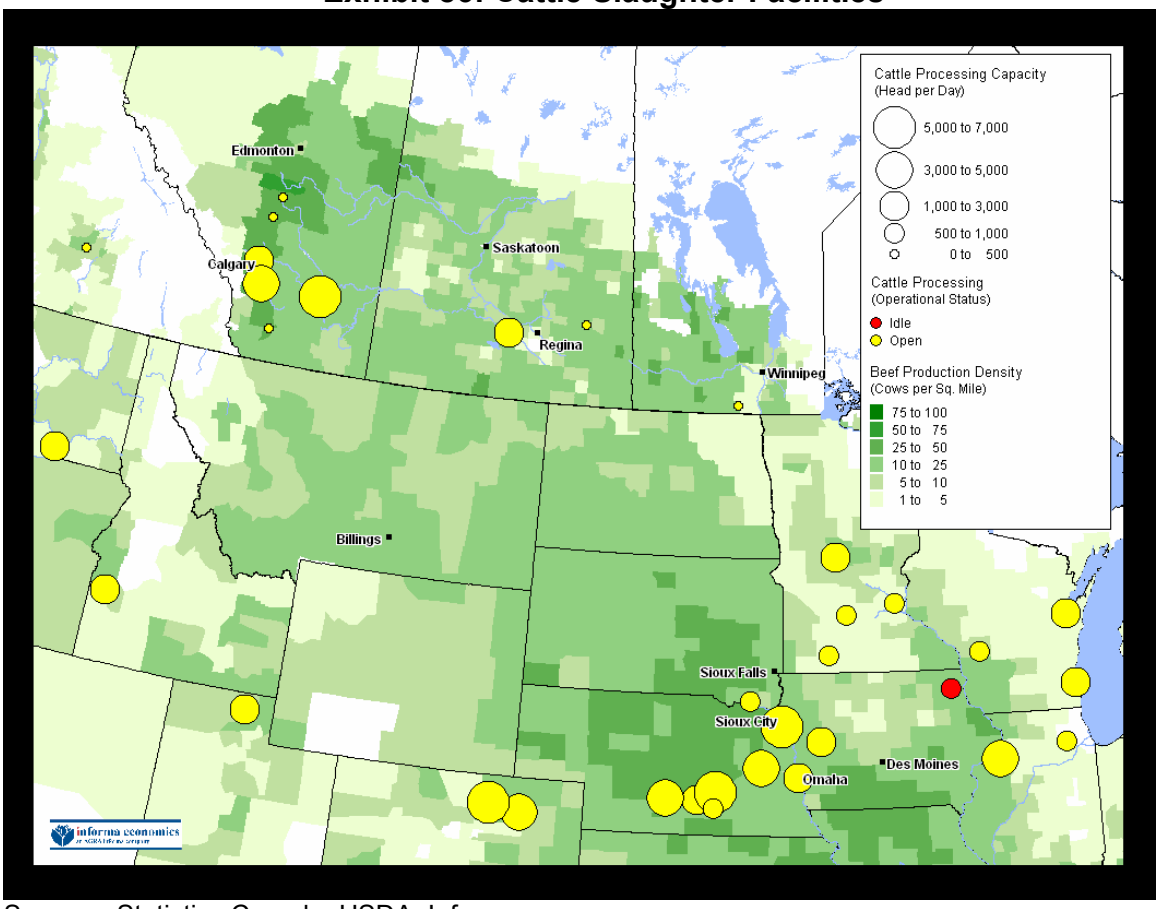
in Moose Jaw, SK and Calgary, AB. The Brooks plant can slaughter 4000 head or more per day, with the bulk being fed cattle, along with some cow slaughter. The XL Beef plant in Calgary runs a mixed slaughter of fed cattle and cull animals, with capacity of 1000 head per day. There is a small plant in Innisfail owned by Sunterra Beef that can slaughter about 200 head per day. Cattle slaughter in federally inspected facilities totaled nearly 2.3 million head in Alberta for 2008, or 70 percent of Canada's cattle slaughter.

Nebraska had the largest commercial cattle slaughter in 2008 at 7.1 million head, more than 20 percent of the US total. The state contains four plants with daily capacity between 4500 and 6000 head. Two are owned by Tyson (Dakota City at 5000 head, Lexington at 4800 head), one is owned by Cargill (Schuyler at 4500 head) and the largest one is the JBS-Swift plant at Grand Island (6000 head). These are all fed cattle plants. Other fed cattle plants of note are Greater Omaha Packing (2800 head) and Nebraska Beef (2600 head), both in the Omaha area. There are also a couple of good sized cow slaughter plants with American Foods Group in Gibbon (1700 head) and XL Four Star Beef[42] in Omaha (1150 head). Only the Brooks and High River plants in Alberta approach the economies of scale in the large Nebraska plants.

The following exhibit shows the locations of cattle slaughter plants (fed cattle and non fed) in comparison to cattle numbers:

[42] Owned by Nilsson Bros. Inc

Exhibit 86: Cattle Slaughter Facilities



Sources: Statistics Canada, USDA, Informa

Competitive Implications:

Saskatchewan lacks packing/processing facilities for hogs and has limited capacity for cattle slaughter. This puts the provincial sectors at distinct disadvantages to Alberta (cattle and hogs), Manitoba (hogs) and Nebraska (cattle and hogs). The necessity to truck livestock longer distances (cost/stress/shrinkage) impedes further development of finishing facilities for cattle and hogs. The lack of packing/processing in the province means there is less value-added production in comparison to other regions.

13. Currency

Informa Economics, in conjunction with the George Morris Centre and Dr. Kurt Klein of the University of Lethbridge, completed a study in 2006 on the effects of

exchange rate on the Canadian cattle and beef industry[43]. Some of the key conclusions of the study are repeated below:

1. "The exchange rate is an important component of the cattle and beef price discovery process in Canada. The exchange rate helps to explain a significant portion (30-40%) of the change in cattle prices. Essentially, if other factors are held constant, a one percent change in the exchange rate leads to a one percent change in the price of cattle and beef. This is due to the industry's ability to trade cattle and beef openly across borders, which results in a very strong, pricing arbitrage.
2. The exchange rate has a varying influence on cattle and beef industry production factors. For example, there was no relationship found in the relationship between the exchange rate and land, but a reasonably strong relationship between the exchange rate and farm machinery. Farm labour rates on the other hand were not closely related to changes in the exchange rate. As a guide, it is realistic to suggest that if the input is mobile or can be readily traded across borders, then the exchange rate will have an impact on the price of the input.
3. Contrary to conventional wisdom, the exchange rate does not make Canada more competitive. Instead this paper argues and demonstrates that the depreciation of the exchange rate during the 1990's and early 2000's was a symptom of the lack of competitiveness in Canada. This paper has shown that as Canada's productivity and competitiveness declined, the exchange rate declined. The paper shows in particular that Canada's red meat sector is relatively uncompetitive compared to the United States, although much of that is likely due to the pork sector, not the beef sector."

In a previous section on price realization, examples were shown on how closely Canadian cattle prices moved with US prices, when adjusted for the exchange rate, during times when the US/Canada border was open for relatively free trade. Of course, there was a huge disconnect between the markets when trade was disrupted following the first domestic BSE case in Canada in May 2003. As trade restrictions have been removed, the Canadian market has reverted to moving in close concert with US prices, although the relative spreads have changed (widened).

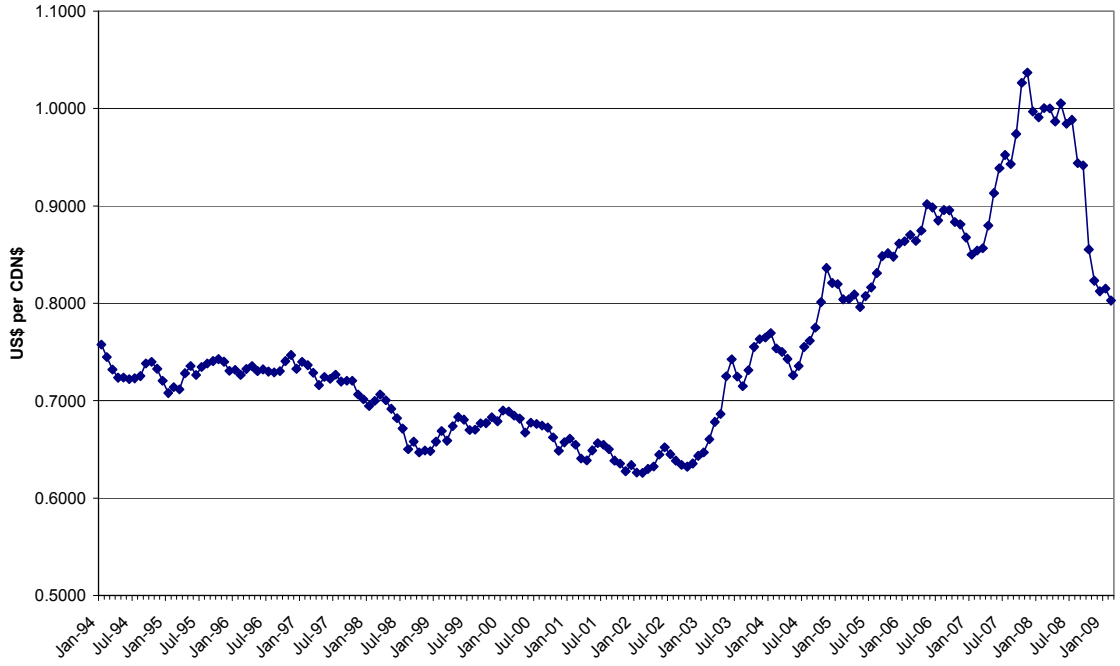
For much of the last 30 years, the Canadian dollar has traded at a lower level than the US dollar in international financial markets. There were some periods in the mid 1970s when the Canadian dollar went premium to the US dollar. From 1977 through 2008, the Canadian dollar has averaged a little under US$0.80. But there has been considerable variation over that time period. The Canadian dollar got down into the low US$0.60s in 2002. The Canadian dollar then began increasing in value against the US dollar in 2003 and continued in a mostly

[43] Klein, K., McGivern, D. and Grier, K. "Exchange Rate Impacts on the Canadian Beef Industry", prepared for the National Beef Industry Development Fund, 2006.

upward trend to a recent peak in late 2007 at levels above the US currency. There were several factors involved in the increasing value of the Canadian dollar, including increasing investment in Canada from 2002/03 onward, oil industry growth and widening of the interest spread between the countries. The US dollar was declining in value against several major currencies during this time period.

After remaining near par through the first half of 2008, the Canadian dollar had dropped sharply back to the US$0.80 level by the beginning of 2009, and was trading below US$0.78 in early March. The US dollar has also been gaining strength against other major currencies, except for the Japanese yen. The rapid decline in the Canadian dollar has also been attributed to weakening energy prices.

Exhibit 87: US Dollar vs. Canadian Dollar



Source: Informa data files

All other things remaining equal, changes in the value of the Canadian dollar are quickly translated into changes in cattle prices in Canada. When the Canadian dollar is gaining in value on the US dollar, Canadian cattle prices will go down, and vice versa. With more than half of Canada's cattle and beef production being exported, the vast majority of these exports destined for the US and the reliance upon price discovery taking place for the most part in the US, Canadian cattle producers can be vulnerable to significant price variance/risk when there are relatively rapid changes in the exchange rate between the two countries.

For January 2007, the Canadian dollar was at US$0.85. Saskatchewan slaughter steers were reported at $86.61/cwt and Nebraska steers were US$86.75. This put the Canadian value for Nebraska steers at CDN$102.06/cwt and the basis at -15.44CDN$/cwt. By the end of 2007, the Canadian dollar was about on par with the US dollar. The Saskatchewan slaughter steer price was at $83.31/cwt ($3.30/cwt lower than in January. But the Nebraska steer price was US$91.14 (US$4.39/cwt higher than in January). The equivalent value of Nebraska steers in Canadian dollar terms was CDN$91.42/cwt. The basis had narrowed to -8.32CDN$/cwt. Even with the narrowing of the basis, the Canadian cattle price was lower while the US cattle price was higher.

Exhibit 88: Selected Cattle Prices and Exchange Rates

	US$/CDN$	Saskatchewan Steer Price (CDN$/cwt)	Nebraska Steer Price (US$/cwt)	Nebraska Steer Price (CDN$/cwt)	Price Difference (CDN$/cwt)
Jan-07	**0.850**	**86.61**	**86.75**	**102.06**	**-15.44**
Dec-07	**0.997**	**83.11**	**91.14**	**91.42**	**-8.32**
Dec-08	**0.812**	**85.87**	**83.46**	**102.74**	**-16.87**

Sources: Canfax, USDA, Informa data files

Suppose the price basis in December 2007 had remained the same as January 2007 and the exchange rate had also remained the same. Under that type of scenario, the Nebraska steers would have been valued at CDN$107.10/cwt and the Saskatchewan slaughter steer price would have been $91.66/cwt., a difference of $8.35/cwt from the actual market in December 2007. On a 1250 pound animal, this would have amounted to $104 more value per head in Saskatchewan.

As shown in the table above, the value of the Canadian dollar fell back into the low US$0.80s by the end of 2008. The basis widened once again and was even wider than the end of 2007. The Nebraska steer price was more than US$3/cwt below the level of late 2007, but the Saskatchewan steer price in Canadian dollars was down by less than $1/cwt. One could say that the decline of the Canadian dollar, especially through the last half of 2008, partly cushioned the blow of weaker US cattle prices and a weaker basis.

The advancement of the Canadian dollar through the latter part of 2007 above US$0.90 and eventually above par, coincided with some very large losses for Western Canadian feedlot operators[44] in late 2007 and early 2008. Canadian slaughter steer prices declined to a greater degree than would otherwise have been the case and in fact reached their lowest levels in since the summer of 2004 when BSE-related trade restrictions were still causing large negative effects

[44] Canfax Trends reports, based on feeding yearling steers

on the Canadian market. Saskatchewan prices for feeder cattle and feeder calves were also reaching their lowest levels in more than four years.

Competitive Implications:

Canadian cattle producers (cow/calf, backgrounders, feedlot operators) are exposed and vulnerable to exchange rate risk. When the Canadian dollar is advancing on the US dollar, Canadian slaughter cattle prices and feedlot profits will decline. Feedlot operators will react by bidding lower on feeder cattle and calves. US buyers will be offering less money in Canadian-dollar equivalents due to the change in the exchange rate. When the Canadian dollar is declining against the US dollar, Canadian cattle producers will benefit in the short-run from relatively better cattle prices. The same scenarios hold true for the hog sector. With a much lesser degree of reliance on export markets, US livestock producers are less affected by changes in the value of the US against other foreign currencies.

C. Cattle and Beef Industry

1. Structural Issues

Saskatchewan's fed cattle marketings peaked in 2004 at a little over 300,000 head (Exhibit 90) and have declining since then to just 173,150 head estimated for 2008 (Exhibit 89). This was the smallest number since 2002. While in years past, nearly half of Saskatchewan's fed cattle marketings have been destined for Saskatchewan plants, that percentage has dropped dramatically in the last two years, with proportionately more cattle going to Alberta. Shipments to the US jumped to their highest level in 2007 and then dropped dramatically in 2008. Part of the reason for this is likely due to MCOOL rules in the US that have caused reductions in Canadian live cattle and hog exports to the US. This situation is likely to continue in the foreseeable future.

Exhibit 89: Saskatchewan Fed Cattle and Feeder Cattle Marketings

	2008		2007		2006	
Fed Cattle Marketings	#	% of Total	#	% of Total	#	% of Total
Saskatchewan	58,060	34%	79,470	38%	129,360	54%
Alberta	91,360	53%	58,300	28%	62,090	26%
Other Canadian Provinces	2,520	1%	7,440	4%	9,520	4%
USA	21,210	12%	66,520	31%	37,810	16%
Total Fed Cattle	173,150		211,730		238,660	

	2008		2007		2006	
Feeder Cattle Marketings	#	% of Total	#	% of Total	#	% of Total
Saskatchewan	390,520	27%	426,910	30%	461,920	33%
Alberta	550,610	38%	**543,010**	**38%**	596,080	43%
Other Canadian Provinces	246,090	17%	239,920	17%	223,720	16%
USA	256,550	18%	225,710	16%	111,830	8%
Total	***1,443,770***		***1,435,550***		***1,393,550***	

Source: Saskatchewan Ministry of Agriculture Cattle Marketing Report

Feeder cattle marketing have held up fairly well in recent years. Alberta has traditionally been the largest destination for Saskatchewan feeder cattle and will likely continue to be so in the future. While feeder cattle exports to the US were up in 2008 to the highest level since 2002 (major drought year), these numbers are expected to decline this year, again due to the MCOOL rule as discussed previously in this report. Exhibit 90 shows a more detailed and longer history of Saskatchewan cattle marketing by destination, including slaughter cows and bulls.

Exhibit 90: Saskatchewan Cattle Marketings by Destination

Slaughter Steer & Heifer Marketings by Destination

	2000	2001	2002	2003	2004	2005	2006	2007
Saskatchewan	81690	76620	76450	75380	151300	126850	129120	79230
Exports	78630	93440	93310	110870	155550	157290	109120	132070
Alberta	39020	40470	59220	93630	147370	123210	61910	58110
Manitoba	3880	3350	2700	990	880	2510	600	430
Ontario	3800	8520	7780	12300	6930	8910	8660	6920
Other Provinces	280	60	30	140	370	1230	260	90
US	31650	41040	23580	3810	0	21430	37690	66520
Total	160320	170060	169760	186250	306850	284140	238240	211300

Slaughter Cow & Bull Marketings by Destination

	2000	2001	2002	2003	2004	2005	2006	2007
Saskatchewan	68080	82290	90340	63050	16330	133550	168900	156800
Exports	49850	89580	103090	34260	62170	30200	41220	64300
Alberta	18420	22500	17680	10810	56620	23690	38700	60550
Manitoba	6420	10560	14280	3980	1270	1940	1330	1380
Ontario	0	10	200	50	290	1000	640	710
Other Provinces	10	100	790	2000	3990	3480	430	270
US	25000	56410	70140	17420	0	90	120	1390
Total	117930	171870	193430	97310	78500	163750	210120	221100

Feeder Cattle Marketings by Destination

	2000	2001	2002	2003	2004	2005	2006	2007
Saskatchewan	377980	336790	425480	521060	497450	574040	461920	426910
Exports	770980	811770	945500	724520	812040	982000	931630	1008640
Alberta	600000	570420	421110	493250	625510	641290	596080	543010
Manitoba	52720	64520	61510	54020	53160	60140	63980	60740
Ontario	99940	115490	139150	116970	101220	105350	115580	138590
Other Provinces	2240	4840	26560	19290	32150	35620	44160	40590
US	16080	56500	297170	40990	0	139600	111830	225710
Total	1148960	1148560	1370980	1245580	1309490	1556040	1393550	1435550

Source: Saskatchewan Ministry of Agriculture, Policy Branch

Marketings of slaughter cows and bulls to Saskatchewan destinations have varied considerably over the years. While the one major slaughter facility in the province normally runs a mixed kill of fed cattle and non fed cattle, the proportions can vary according to management decisions. With the plants in Moose Jaw and Calgary owned by the same company, there can be shifting strategies between the plant operations. This type of flexibility has allowed these plants to survive and continue operating in spite of lacking the type of economies of scale found in the larger plants in Brooks and High River, or in Nebraska and other major cattle slaughter states.

IMPORTANT NOTE: In late April 2009, XL Foods announced the temporary closure of the cattle slaughter plant in Moose Jaw[45]. XL Foods management indicated the shutdown was due to a shortage of cattle supply, with expectations to re-open by late September of this year.

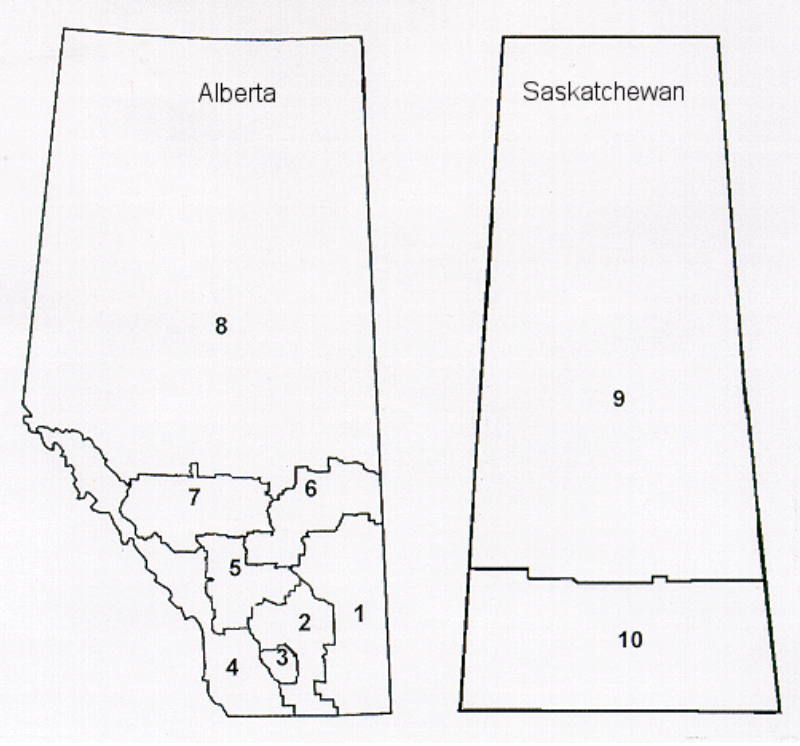
The cattle feeding sector is relatively small (Exhibit 91), both in terms of number of operations as well as size of lots. According to the Canfax cattle on feed bunk capacity summary, there are only four feedlots with bunk capacity over 10,000 head and five with capacity between 5000 and 10,000 head. Alberta has 36 feedlots with capacity over 10,000 head (13 over 20,000 head) and 41 lots with capacity between 5000 and 10,000 head. Nebraska has 42 feedlots with capacity of 16,000 head or more, with 13 having capacity of 32,000 head and over[46]. There are 203 lots in the state with capacity of 4000-15,999 head.

45 http://www.canadianmanufacturing.com/foodincanada/news/industrynews/article.jsp?content=20090430_113309_9256

46 USDA-NASS, http://usda.mannlib.cornell.edu/usda/nass/CattOnFe//2000s/2009/CattOnFe-02-20-2009.pdf

Exhibit 91: Cattle on Feed
January 1, 2008
Alberta and Saskatchewan
Feedlot Capacity by Region

ALBERTA		
Region	**# of Lots**	**Capacity**
1	4	15,500
2	27	244,300
3	65	567,300
4	13	85,700
5	28	369,100
6	21	126,100
7	19	66,300
8	17	120,050
Total	**194**	**1,594,350**
SASKATCHEWAN		
Region	**# of Lots**	**Capacity**
9	14	100,100
10	10	53,300
Total	**24**	**153,400**
ALBERTA AND SASKATCHEWAN		
Total	**218**	**1,747,750**

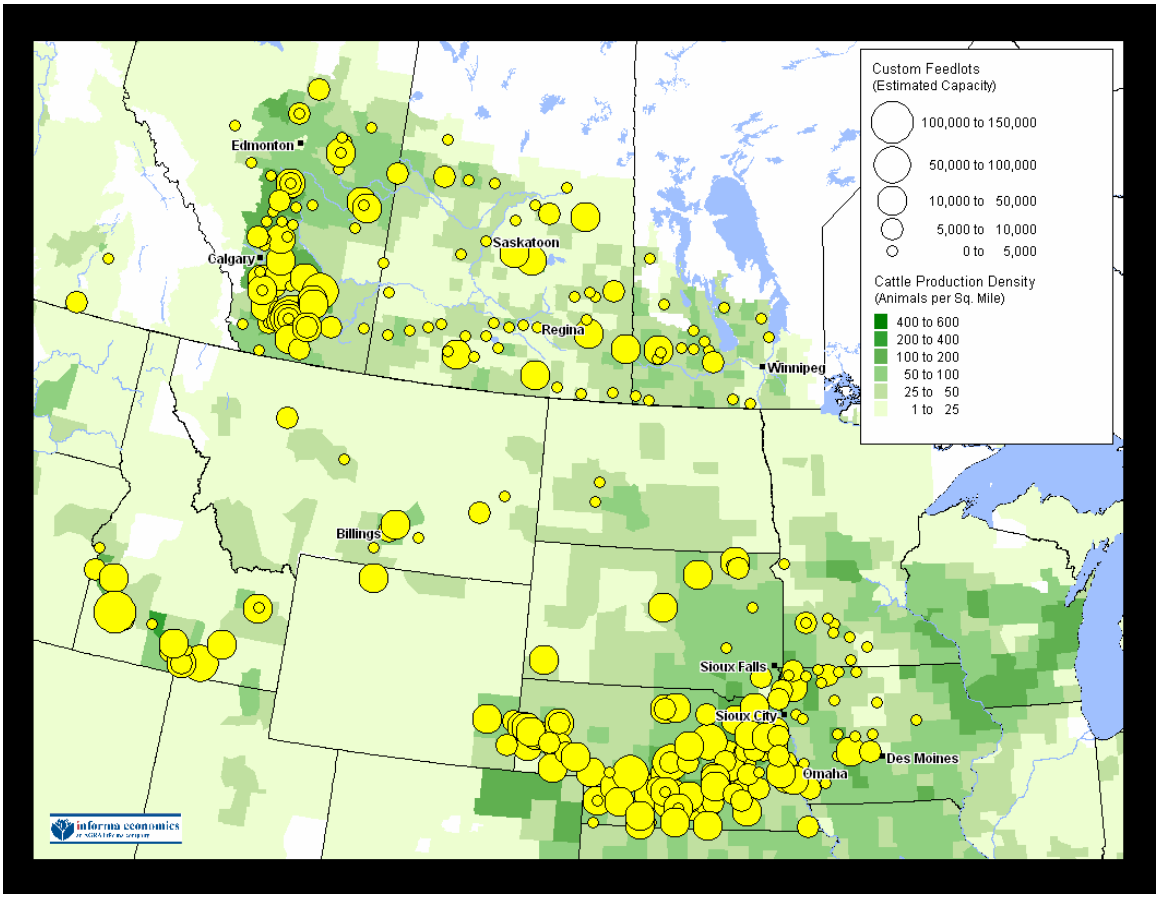


Source: Canfax

The preceding exhibit is taken from the Canfax survey group that includes finishing lots with bunk capacity of 1000 head or more. Information provided by the Saskatchewan Ministry of Agriculture would indicate there were 75 feedlots (finishing and backgrounding) spread around the province in the summer of 2008 with one having capacity over 20,000 head, six at 10,000-20,000 head, six at 5,000-10,000 head, 22 with capacity of 2,500-5,000 and 42 between 1,000-2,500 head. Pen capacity has been added to some feedlots and a couple of new feedlots were completed last fall. Using the Ministry figures, the bunk capacity is probably closer to 300,000 head, in comparison to Alberta's capacity near 1.6 million head.

While there are feedlots spread out across the various regions being considered in this study, there are concentrations of feedlots in Southern Alberta and certain parts of Nebraska as shown in the following exhibit:

Exhibit 92: Feedlot Locations and Cattle Numbers



Source: USDA, Statistics Canada, Informa Economics

Texas had the largest fed cattle marketings in 2007 (Exhibit 93), followed by Kansas and Nebraska. When looking at both Canada and the US, Alberta would come in at the fourth position, ahead of Colorado and Iowa. Ontario was in the

top ten provinces/states for fed cattle marketings, with Saskatchewan at 17th, just ahead of new Mexico and Illinois.

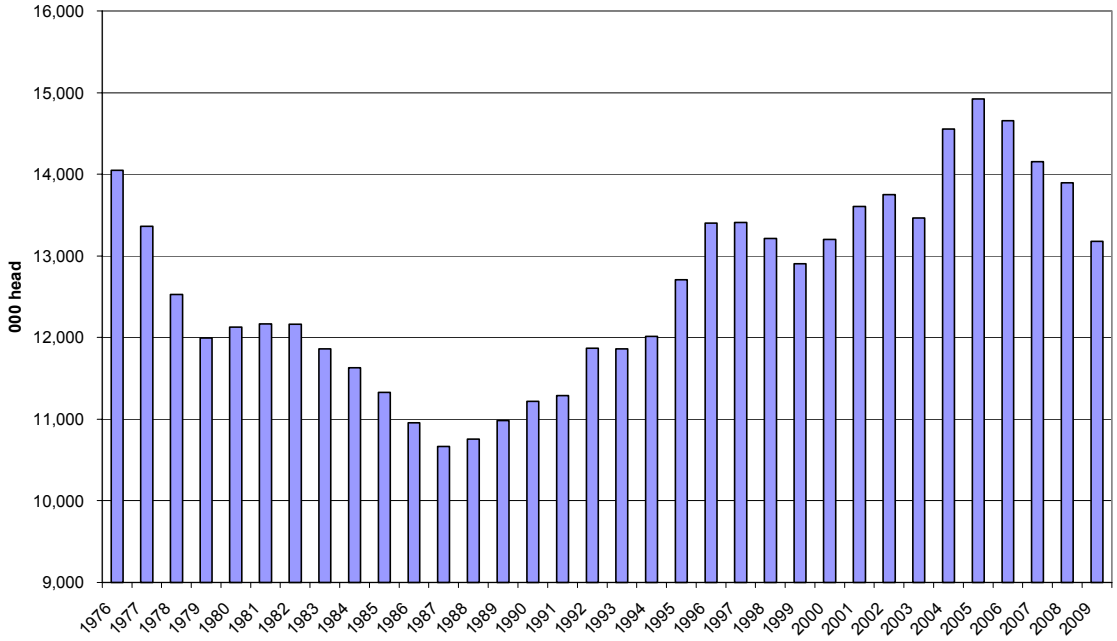
Exhibit 93: Fed Cattle Marketings by Province/State

		2007 (000s)
1	Texas	5685
2	Kansas	5140
3	Nebraska	5130
4	**Alberta**	**2281**
5	Colorado	1940
6	Iowa	1860
7	South Dakota	759
8	California	734
9	Oklahoma	714
10	**Ontario**	**672**
11	Idaho	524
12	Wisconsin	380
13	Washington	369
14	Arizona	353
15	Minnesota	310
16	Ohio	290
17	**Saskatchewan**	**211**
18	New Mexico	208
19	Illinois	200
20	Michigan	190
21	Indiana	160
22	Pennsylvania	120
23	Missouri	80
24	North Dakota	60
	Other States	1540
	United States	26746
	Canada	3459
	Combined	30205

Sources: AAFC, Canfax, USDA

The January 1, 2009 cattle inventory report was released by Statistics Canada on February 17th. The total inventory of cattle and calves on farms declined by 5.1% to 13.18 million head from January 1 2008. This brings the national herd back down to levels prior to the first domestic BSE case in May 2003 (Exhibit 94).

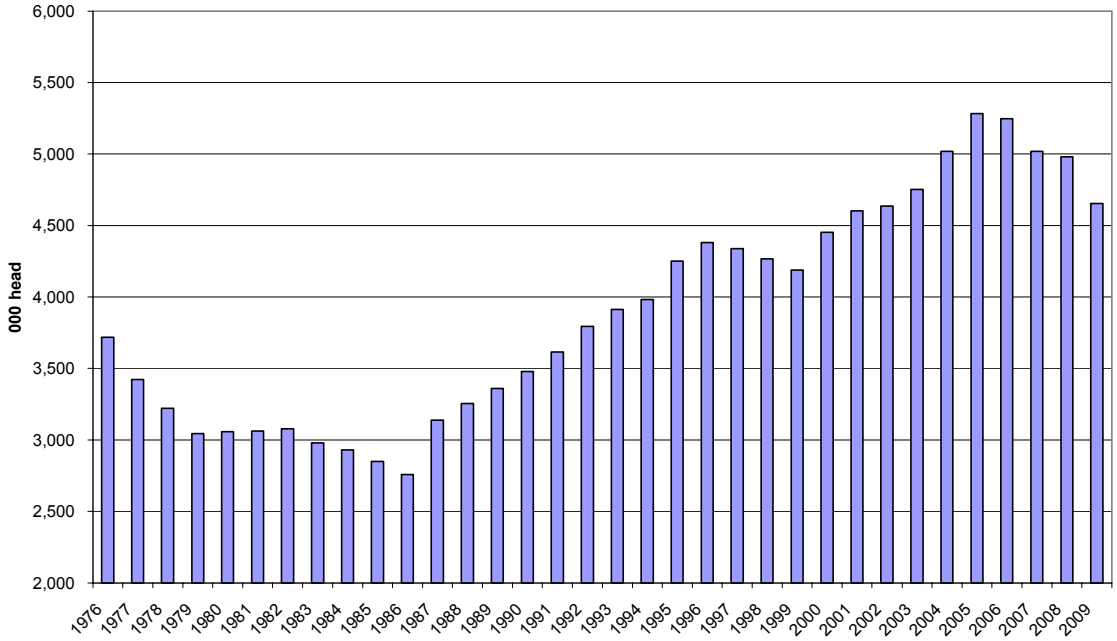
Exhibit 94: Canadian Cattle Inventory
January 1



Source: Statistics Canada

Canadian beef cow numbers were down by 6.6% to 4.65 million head, also back to pre-BSE levels (Exhibit 95).

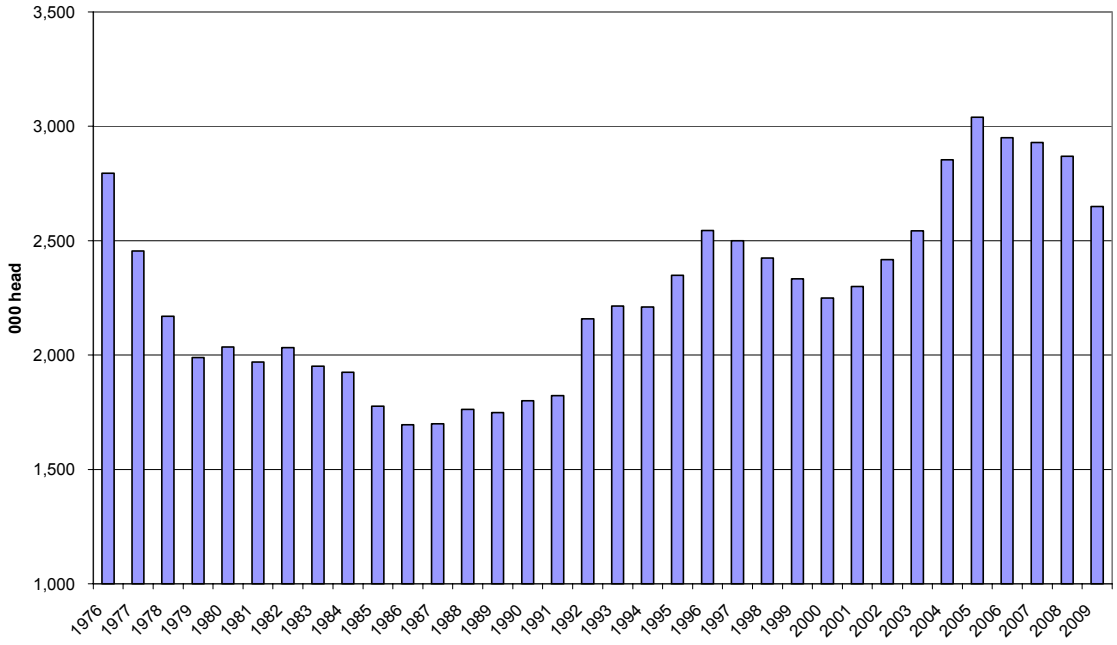
Exhibit 95: Canadian Beef Cow Inventory
January 1



Source: Statistics Canada

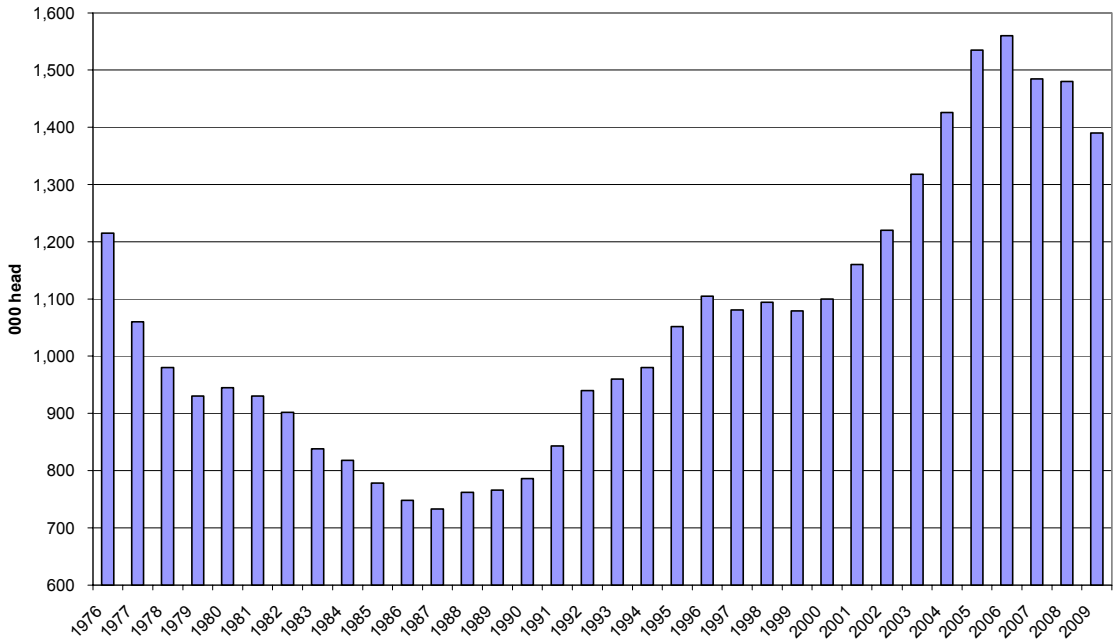
For Saskatchewan, the cattle inventory was down by 220,000 head or 7.7% smaller at 2.65 million head (Exhibit 96). The number of beef cows declined by 90,000 head or 6.1% to 1.39 million head (Exhibit 97). This was still 72,000 head more beef cows than on January 1, 2003. Saskatchewan continues to have the second largest cattle herd in Canada, with 20.1% of total cattle and almost 30% of the beef cows. For combined Canada and US, Saskatchewan has the 10th largest cattle herd and the 9th largest number of beef cows.

Exhibit 96: Saskatchewan Cattle Inventory
January 1



Source: Statistics Canada

Exhibit 97: Saskatchewan Beef Cow Inventory
January 1

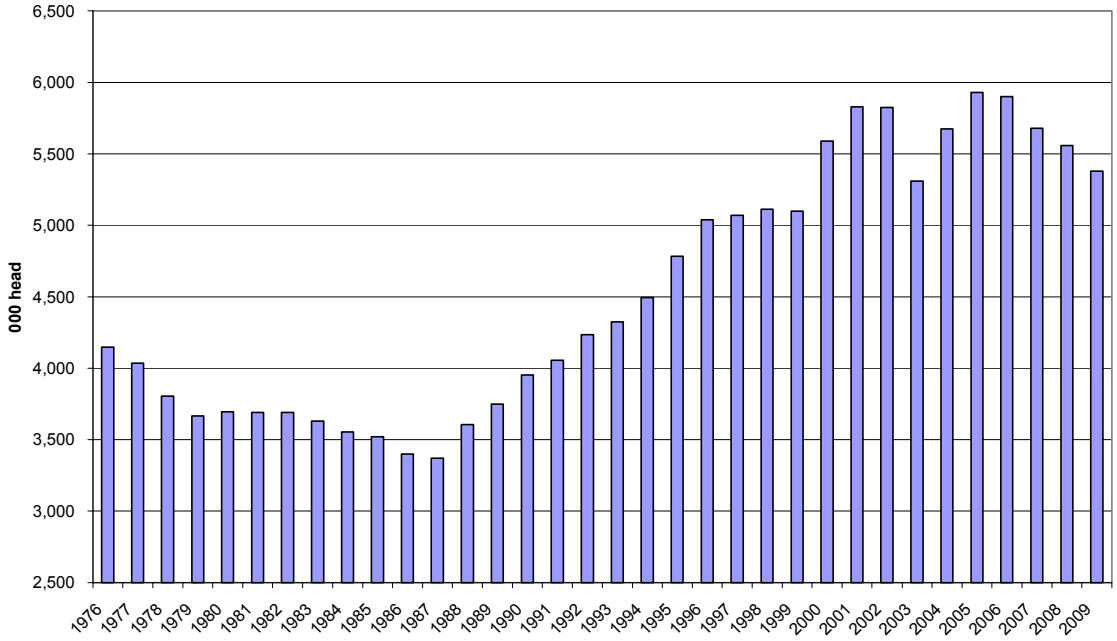


Source: Statistics Canada

The cattle inventory in Alberta declined by 180,000 head to 5.38 million head, 3.2% smaller than last year (Exhibit 98). There were 140,000 head less beef

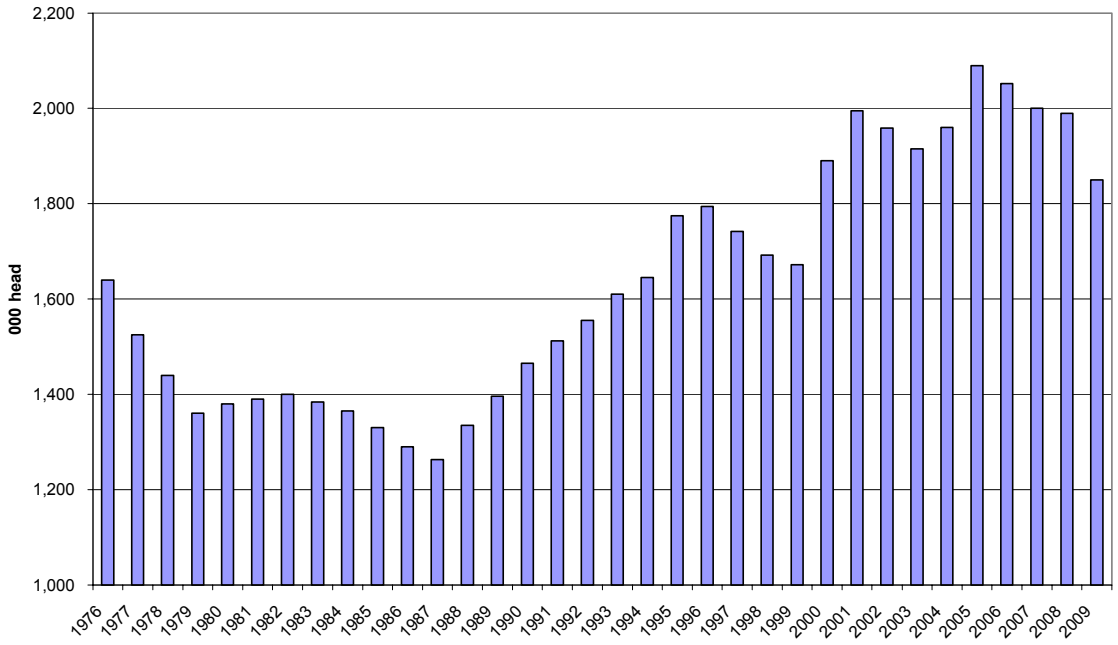
cows at 1.85 million head, down 7% (Exhibit 99). This was 65,000 head smaller than the beef cow numbers on January 1, 2003. Alberta has 40.8% of the Canadian cattle herd and 39.7% of the beef cows. For combined Canada and US, Alberta has the 5th largest cattle inventory and beef cow herd.

Exhibit 98: Alberta Cattle Inventory
January 1



Source: Statistics Canada

Exhibit 99: Alberta Beef Cow Inventory
January 1



Source: Statistics Canada

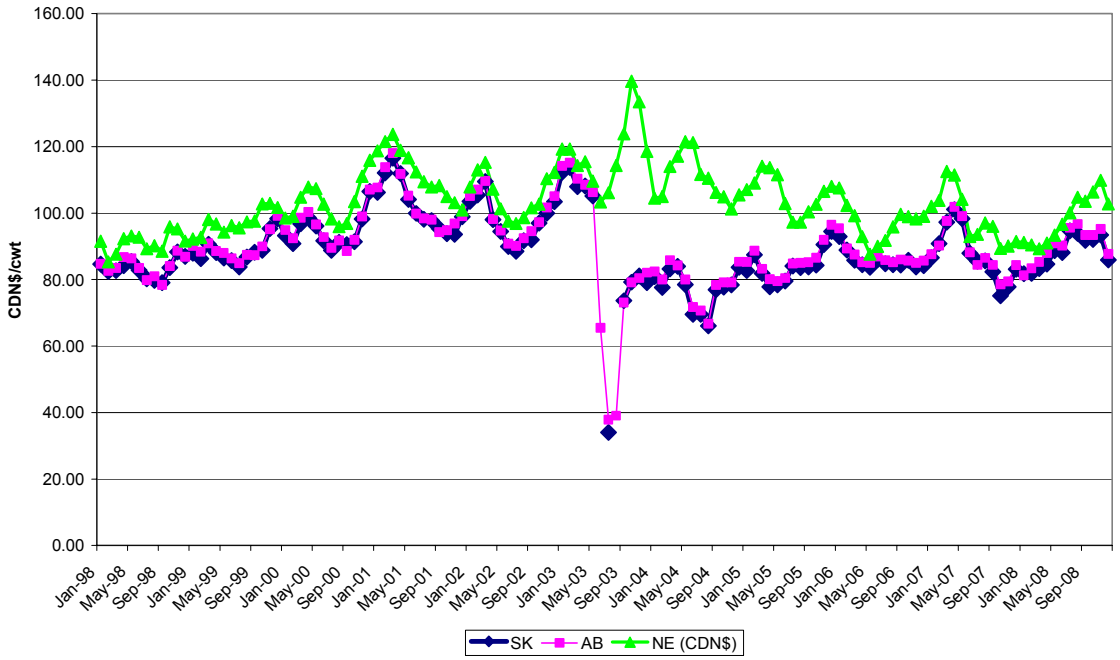
In summary, Saskatchewan has a good sized beef cattle herd (among the top 10 in North America) that has been well established over the last 100 plus years. Except for a dip in 2008, nearly a third or more of the feeder cattle are kept in the province for backgrounding. Although in previous years approximately 15-20 percent of the feeder cattle produced in the province have been kept in Saskatchewan for finishing, that proportion dropped to a calculated 12 percent in 2008. The feedlot sector in Saskatchewan lacks the size (number) and scale of other regions, particularly Alberta and Nebraska. The industry is further limited in terms of further value-added production by a relatively small packing/processing sector.

2. Price Realization

Except in periods of trade disruption, the market for cattle in the various regions of Canada is tightly linked to the price discovery process in the US. In essence, Canada is an important subset of the large North American market for cattle and beef. Western Canada produces more than three-quarters of Canadian fed cattle. One-quarter of the fed cattle produced in the West in 2007 were exported to the US for slaughter. For Saskatchewan, the proportion was more than 30 percent.

Looking at monthly data from 1998 through 2008, there is a near perfect correlation (0.996) between slaughter steer prices reported by Canfax for Saskatchewan and Alberta.

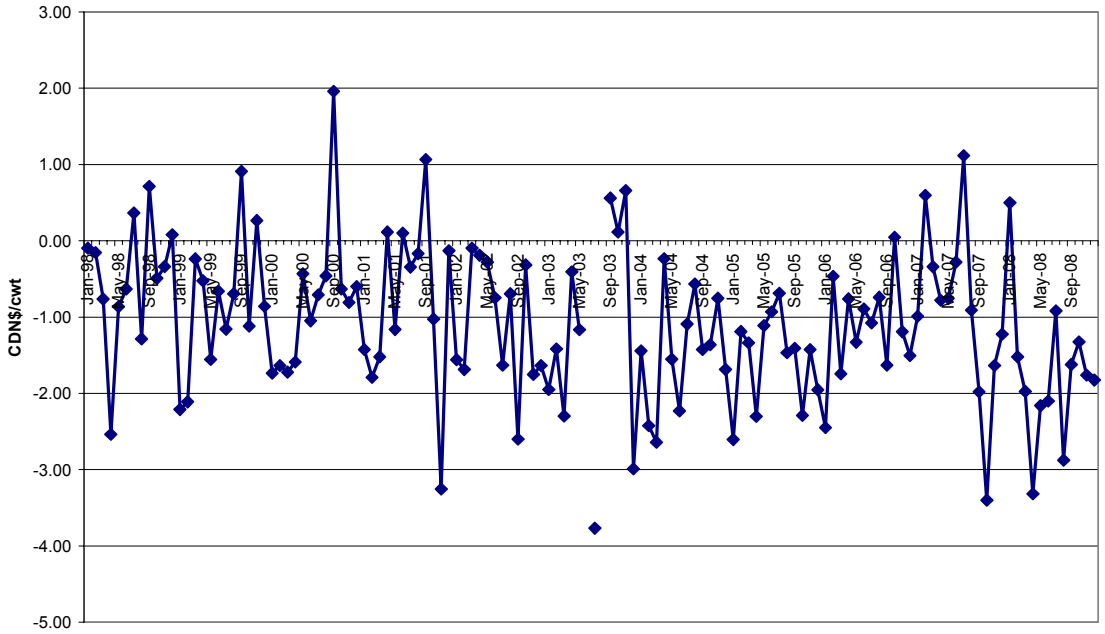
Exhibit 100: Slaughter Steer Prices
(Saskatchewan, Alberta & Nebraska)



Sources: Canfax, USDA

The average difference in price was Saskatchewan cattle selling for $1/cwt less than Alberta. Although the prices between the provinces are not significantly different, one would expect to see a slightly lower price in Saskatchewan due to the cost of freight to move animals to Alberta for slaughter. During 2007, Saskatchewan producers only marketed 37.5 percent of fed cattle for delivery within the province, with 27.5 percent going to Alberta and 31.5 percent exported to the US.

Exhibit 101: Fed Cattle Basis
(Saskatchewan minus Alberta)



Source: CanFax

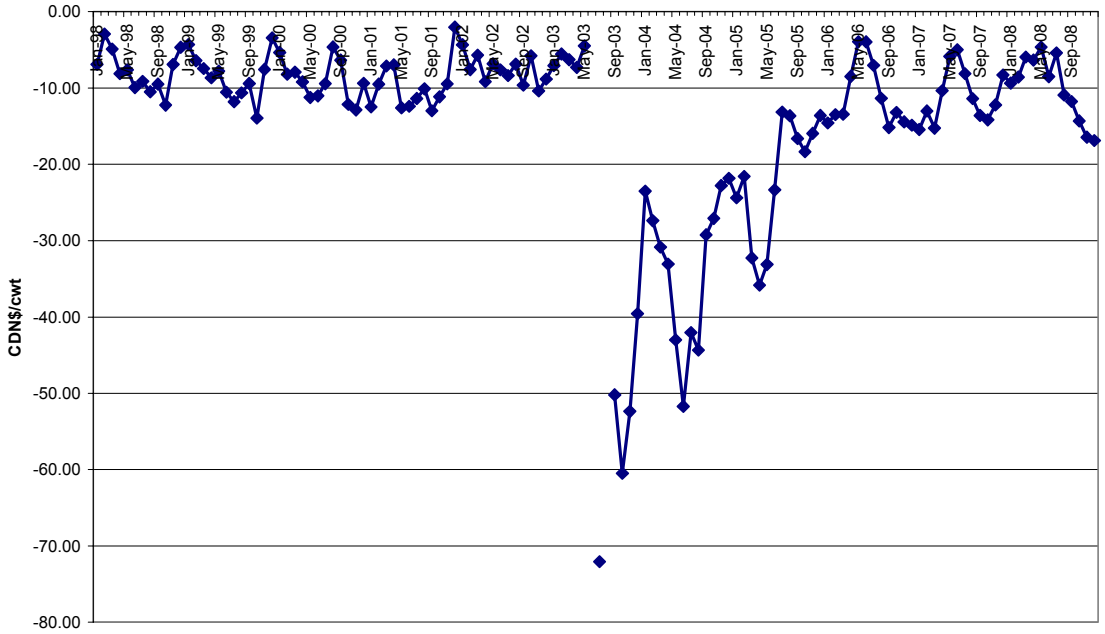
Up until the first domestic BSE case in Canada in May 2003, there was also a strong correlation between the prices of fed cattle in Saskatchewan and Nebraska (adjusted for currency exchange). The correlation from January 1998 through May 2003 was 0.96. The average price difference for that time period was Saskatchewan slaughter steers selling for $8/cwt below steers in Nebraska. This more significant difference is mostly due to freight costs from Saskatchewan to Nebraska slaughter plants.

The BSE incident in 2003 sent the Canadian cattle market into disarray and near collapse as the borders of the US and several other countries were closed to Canadian cattle and beef. Being highly dependent upon export markets, Canadian cattle producers suffered severe financial losses that have been documented in other studies. Even though some major markets have been at least partially re-opened over the last five plus years, several markets remain closed or highly constrained, plus there are added restrictions and regulations that continue to have lingering effects on the Canadian industry. While the US market was re-opened by the fall of 2003 to Canadian boneless boxed beef from cattle under 30 months of age, resumption of trade in fed cattle and feeder cattle was delayed into 2005.

As can be seen in the following chart, the Saskatchewan-Nebraska basis widened tremendously after the BSE case and remained abnormally wide for more than two years. Since the partial resumption of live cattle trade, the Canadian markets have become more aligned with US prices, although the

variation has become more volatile. The correlation from August 2005 through December 2008 only returned to 0.80. The average difference in price widened to more than $11/cwt. Not only have freight costs increased over the last few years, but there are added costs and regulatory requirements that have hampered a return to historic price realization. Since the late summer of 2008, the price difference has widened from about $12/cwt in September to nearly $17/cwt in November and December. Many producers and Canadian cattle organizations would contend that this recent widening of the basis has been due to US packers' reaction to the mandatory country of origin labeling (MCOOL) law that went into full effect in March 2009.

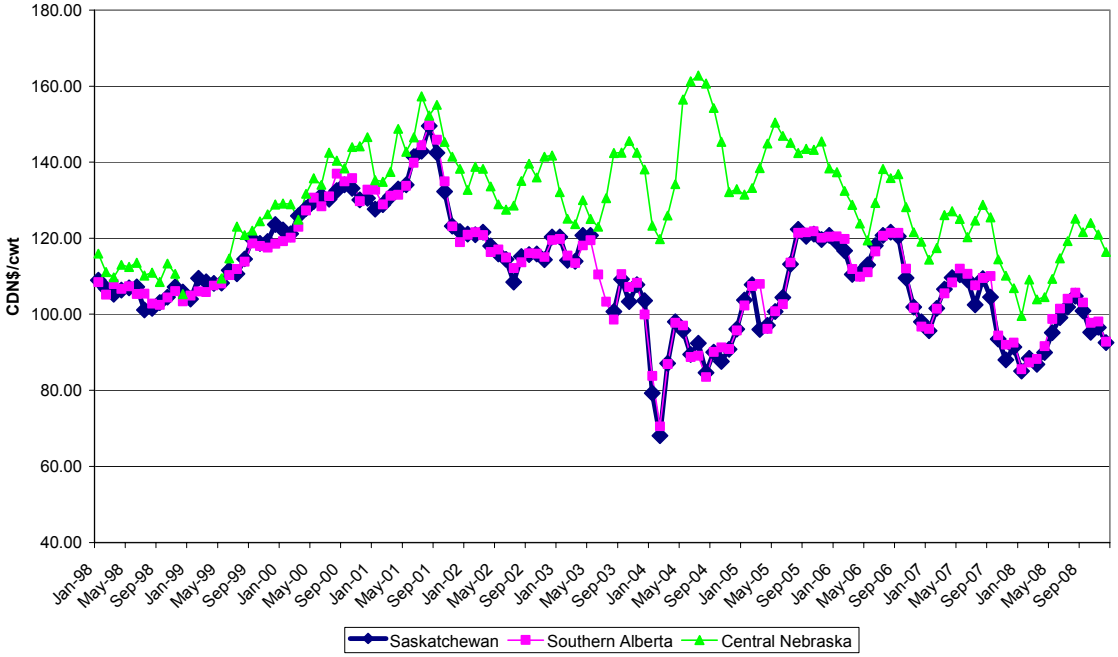
Exhibit 102: Fed Cattle Basis
(Saskatchewan minus Nebraska)



Sources: USDA, CanFax

Similar to the situation with fed cattle, there are strong correlations between Saskatchewan and Alberta feeder cattle prices. For yearling steers weighing 700-800 lbs, the correlation coefficient for 1998 through 2008 was 0.99. The price difference between Saskatchewan and Alberta feeder cattle is very small. There are numerous sources of buyers for Saskatchewan feeders. By destination, 30 percent of feeder cattle marketings in 2007 stayed within the province, with 38 percent going to Alberta, 16 percent to the US, 10 percent to Ontario, four percent to Manitoba and the remainder to other provinces.

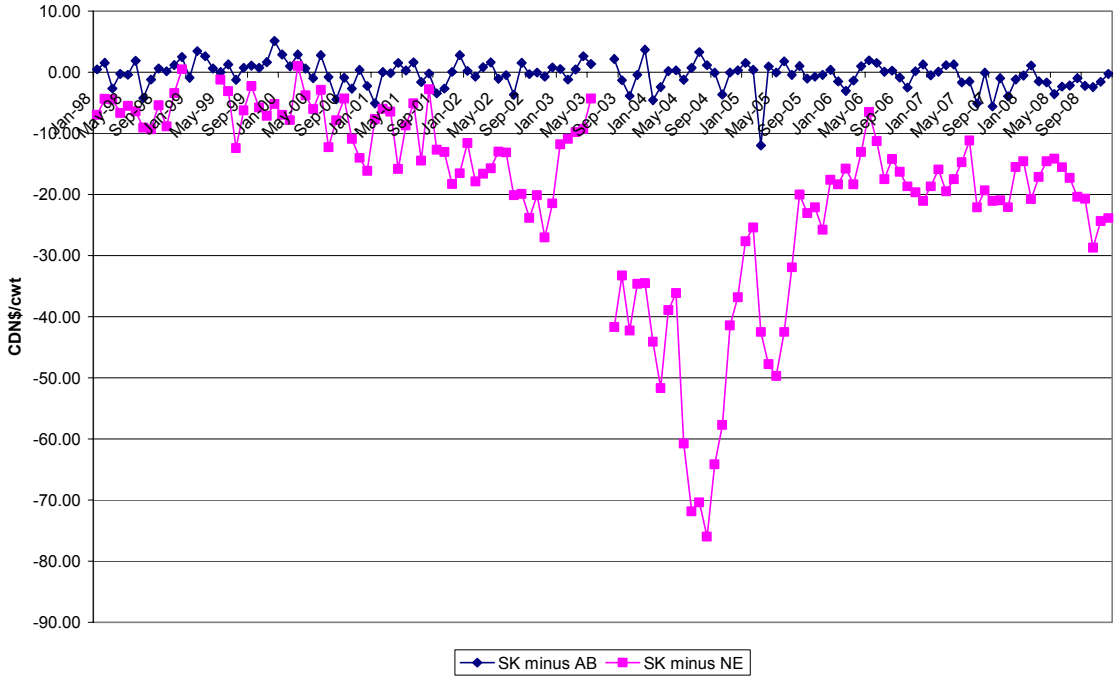
Exhibit 103: Feeder Steers 700-800 lbs
(Saskatchewan, Alberta & Nebraska)



Sources: Canfax, USDA

For the pre-BSE period, the correlation coefficient between Saskatchewan and Central Nebraska yearling steers was 0.92. Saskatchewan prices averaged $10/cwt below Nebraska, although the spread widened in 2002 when a severe drought on the Canadian Prairies caused increased movements of cattle to other regions. The basis averaged $18/cwt under the Nebraska price for that year, with 22 percent of the feeder cattle marketings destined for the US and only 31 percent going to Alberta.

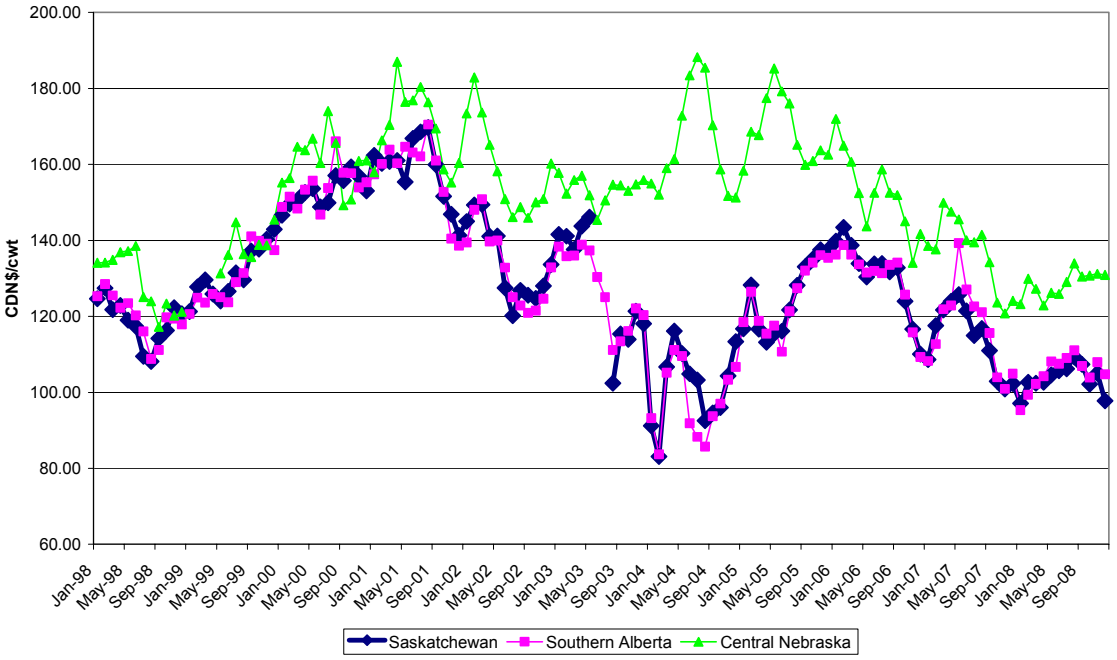
Exhibit 104: Saskatchewan Feeder Steer Basis



As was the case with the fed cattle market, the basis widened considerably after May 2003 as the Canadian market collapsed. Even with the re-opening of the US border to feeder cattle trade, the basis has remained wider than the pre-BSE period, averaging $18/cwt below the Nebraska price between August 2005 and December 2008. Further, the basis has remained wider than $20/cwt since August 2008. The US government allowed all cattle within the US born or imported before July 15, 2008 to be considered of US origin. Meat from cattle imported after than date would eventually have to be identified under the MCOOL law, once it came into effect. Along with the wider and more variable basis, the correlation coefficient for the period from August 2005 through December 2008 declined to 0.70.

The trends were the same for feeder steer calves 500-600 lbs. The correlation coefficient for Saskatchewan and Alberta steer calves for 1998 through 2008 was 0.97 and the average price difference was near zero.

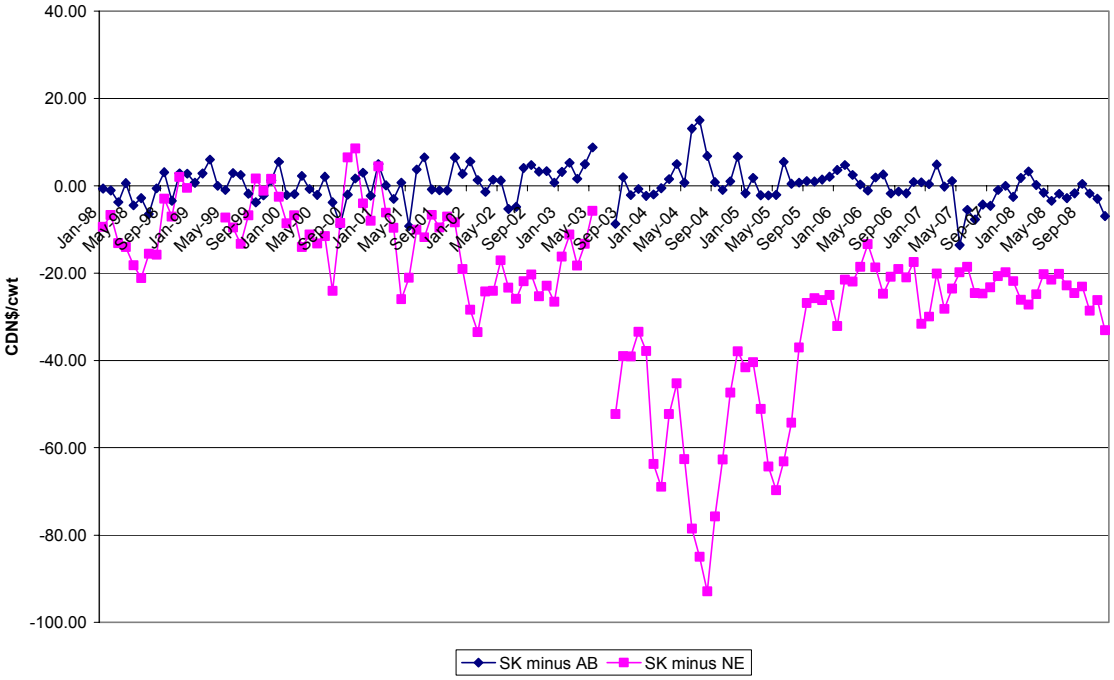
Exhibit 105: Steer Calves 500-600 lbs
(Saskatchewan, Alberta & Nebraska)



Sources: Canfax, USDA

The correlation coefficient for Saskatchewan and Nebraska steer calves from January 1998 through May 2003 was 0.85 and the average difference in price was $12/cwt. As was the case for the yearling steers, the basis widened in the drought year of 2002, averaging $24/cwt that year. Since the renewal of live cattle trade, the correlation coefficient has been 0.80. From the extreme levels from mid 2003 through the summer of 2005, the basis moved back toward the $20/cwt level, but has averaged $24/cwt through the end of 2008. The basis has widened since July of last year and was more than $30/cwt in December.

Exhibit 106: Saskatchewan Feeder Calf Basis



3. Productivity

With a wide diversity of genetics, climate, geography and management (to name just a few factors), comparisons of cattle productivity between regions is very difficult. There can be as much or more variability within a region as would be a comparison of "averages" between regions. Specific measures of productivity are not generally reported. For instance, average weaning weights of calves are not available. To look at a proxy for herd productivity for the cattle industry, Informa calculated the number of calves born in a year as a percent of breeding females (January 1 inventory of beef cows, dairy cows, beef heifers for breeding, dairy heifers for breeding). The averages for 2001 through 2008 were compared across regions. This rather crude calculation shows the Saskatchewan cow/calf sector to be somewhat more "productive" than the other provinces and states being considered in this project.

Exhibit 107: Calves Born as Percent of Breeding Females

	Average 2001-08
Saskatchewan	86%
Alberta	82%
North Dakota	82%
South Dakota	81%
Montana	79%
Nebraska	78%

Sources: USDA, Statistics Canada

4. Cost of Production Evaluation

Direct comparisons between regions in regards to cost of production are very difficult to make. There is not only a lack of data or comparative "budget information", there is considerable variability in the types of operating configurations (cow/calf, backgrounding, feedlot, and in varying combinations) in comparisons to the hog sector. The vast majority of hogs are born for the purpose of feeding to slaughter weight at approximately six months of age (relatively small breeding herd with multiple births). More complete and direct comparisons between regions were available for the hog sector.

In the cattle sector, a limitation is getting only one calf per breeding female per year (not including death loss). The calf can be put on feed following weaning, with growth to slaughter occurring at approximately one year of age. But many calves are put on some type of backgrounding program before being placed into a finishing lot. A winter backgrounding program can also be extended into summer grazing before the finishing stage. Many of the slaughter steers and heifers in North America would be in an age range of 16-24 months, with a few getting up toward 30 months of age at slaughter.

The approach taken by Informa was to evaluate some of the key components of the cost of producing feeder cattle and fed cattle across the regions. With relatively inexpensive land costs and mostly plentiful supplies of forage and feed, Saskatchewan is assumed to be a relatively low-cost producer in the cow/calf and backgrounding stages of the beef supply chain.

The feedlot sector has the advantage of relatively plentiful supplies of feedgrains and a good local supply of feeder cattle. Feedlot costs of gains are probably negatively impacted in comparison to other regions during the colder periods in the winter. But the summers tend to be milder than other regions and not much problem with dust. There tends to be, on average, less management experience in Saskatchewan as compared to other regions with larger operations and numbers, more well-developed infrastructure and just being in the business of feeding cattle for a longer period of time. While overall cost of gains have the potential for being lower in Saskatchewan, the lack of scale and distance from markets (only one medium sized packing plant in the province) tends to put the sector at a disadvantage to areas such as Southern Alberta and Nebraska.

D. Competitive Score Card- Cattle and Beef-2009

1. Cattle & Beef Supply Chain

The competitiveness index approach developed by Informa Economics, Inc. to measure relative competitiveness of industry supply chains or segments of a supply chain are discussed below as it relates to the cattle and beef industry. The analytic approach for the cattle and beef supply chain requires identifying the key competitive factors that influence an industries competitive profile; assessing a factor weight to each of these competitive components and then scoring each of these factors across geographic boundaries. Due to the complexity of the cattle and beef supply chain, several sub indices were developed with the summary scoring from these sub indices being carried forward and included in the total supply chain evaluation.

As can be seen in the chart following, Informa has identified three competitive factors which are considered minor in nature and assigned a factor weight of 1. These are government policy, industry product quality and industry product differentiation. Two additional competitive components have been assigned a competitive factor weight of 3 including general business climate of the geographic region and what we call "social factors" which are described in more detail in sub-section 3 of this evaluation. Finally, a listing of key competitive factors is provided and assigned a strong factor weighting of 5. These factors include a sub-index score covering the cow/calf and backgrounding segment of the industry, a sub-index for the feedlot sector of the industry; an additional sub-index for the processing sector of the industry and finally, an exchange rate factor.

Scoring of each competitive region is done utilizing a range from +5 to -5 relative to a base line or "Zero" line which represents the Saskatchewan cattle and beef supply chain. Since Saskatchewan is the focal point of this competitive evaluation, other geographic jurisdictions are scored in relationship to the measured or perceived positioning of Saskatchewan as it pertains to any particular factor. If a jurisdiction is given a positive score on a factor, that reflects a positive competitive position of that jurisdiction relative to Saskatchewan and similarly, a negative scoring would reflect an assessment that Saskatchewan is at a competitive advantage on that particular factor.

In looking at the chart following, you will note that we have selected several provinces (Alberta and Ontario) and US geographic regions for making the competitive evaluation of the Saskatchewan cattle and beef supply chain. In summary, Alberta would seem to have a more competitive cattle and beef supply chain than Saskatchewan. The US Midwest is slightly higher due to the strength of the feedlot and packing sectors, but the US northern plains are evaluated as being less competitive. From a ranking perspective, Alberta would be given the highest ranking while Ontario receives the lowest ranking of those regions evaluated. It is important to note that the three US regions are all modestly impacted in a negative way by the current weak Canadian dollar. Given the high

factor weight (5), currency values can have a huge and changing impact on relative competitiveness. Even modest renewed strength in the Canadian dollar could quickly change the impact of the exchange rate on overall industry competitiveness and alter the rankings between Saskatchewan and the US.

Exhibit 108: Cattle and Beef Supply Chain Competitive Index - 2009

	Government Policy	Product Quality	Product Differentiation	Business Climate	Social Factors*	Cow-calf/Backgrounding*	Processing Sector*	Feedlot Sector*	Exchange Rate/Risk	Composite Beef Index	Rank
Factor Weight	1	1	1	3	3	5	5	5	5		
REGIONS											
Alberta	2	1	2	1	1	-2	3	4	0	36	1
US South Plains	0	-2	2	-1	-2	-2	5	3	-1	16	2
US North Plains	0	0	0	-2	-1	0	2	0	-1	-4	5
US Corn Belt	0	2	2	-2	-2	-5	5	3	-1	2	3
Ontario	-1	-1	1	-1	-1	-5	2	-1	0	-27	6
SASKATCHEWAN							**BASELINE "ZERO"**			**0**	4

Competitve Importance
High (4-5)
Medium (3)
Low (1-2)
* = From Subindex

Driver Rankings
5 High Competitive Advantage
-5 High Competitive Disadvantage

As discussed earlier, several of the key factors identified in the supply chain competitive index are components of competitiveness that are comprised of many additional sub factors. In particular, there are a wide range of issues and factors that we have identified as being social factors and in the pages following, a breakdown and competitive scoring of these individual factors have been made. Only the summary index for social factors is carried forward into the supply chain evaluation. We have used a similar approach for evaluating the impact on competitiveness of multiple factors at various levels of the cattle and beef supply chain and once again, these are rolled into summary indices which are then integrated into the overall supply chain evaluation. The scoring of the various factors has been done based on quantified levels of relative costs or impacts as well as qualitative assessments where the variable does not lend itself to specific measurement.

2. Cow/Calf & Backgrounding Production

An evaluation of the economic competitiveness of the cattle and beef supply chain by necessity requires a detailed assessment of those factors and variables that impact cost of production and marketing efficiencies at various levels of the supply chain. In the following chart, specific variables have been identified as they relate to competitiveness at the cow/calf level of production as well as at the backgrounding level. The variables that are considered as being of major importance at each production level have been identified and each has been assigned a relative factor weight as some costs or factors are of more importance than others. Many of the factors are of importance at both the cow/calf level of production as well as at the backgrounding stage of production and are included in the scoring of each sector. Items of a more macro nature such as exchange rates or general business climate transcend all levels of the supply chain so are incorporated only in the summary supply chain index.

Exhibit 109: Cow/Calf and Backgrounding Competitive Index - 2009

	COW-CALF SECTOR - 2009								BACKGROUNDING SECTOR - 2009									
Factor Weight	2	2	3	5	5	5			3	3	3	4	4	5				
REGION	Labor Costs/Availability	Ind. & Market Structure	Disease Status	Land Base (pasture)	Herd Productivity	Roughage Supply	Cow Calf Live Animal Cost Sub Index	Rank	Disease Status	Labor Costs/Availability	Ind. & Market Structure	Feed Costs	Production Efficiency	Feeder Animal Cost	Backgrounding Live Animal Cost Sub Index	Rank	Combined Live Animal Cost Sub Index	Rank
Alberta	-2	2	0	-1	-1	0	-10	4	0	-2	2	-1	0	-1	-10	2	-20	3
US South Plains	1	3	1	1	-2	-3	-9	3	1	1	2	-2	-1	-3	-15	4	-24	4
US North Plains	2	2	1	2	-1	-1	11	1	1	2	2	-2	-1	-2	-14	3	-3	2
US Corn Belt	1	1	1	-2	-2	-2	-23	4	1	1	1	-3	-2	-3	-33	5	-56	5
Ontario	-2	-1	0	-3	-2	-3	-46	5	0	-2	-1	-3	-2	-3	-46	6	-92	6
SASKATCHEWAN	BASELINE "ZERO"						0	2							0	1	0	1

Competitve Importance	High (4-5)	5 High Competitive Advantage
	Medium (3)	-5 High Competitive Disadvantage
	Low (1-2)	
	Carried Forward	

As shown in the chart above, the study team has identified 3 factors which have been assigned a medium weighting for both the cow/calf and backgrounding sectors and 3 factors that are of high importance from a competitive perspective. For the geographic areas identified, each was assigned a positive, negative or "0" score relative to Saskatchewan which serves as the "zero" baseline for ranking purposes. The sub index for the cow/calf sector reflects a relatively strong competitive rating for Saskatchewan as the study team scored only the US Northern Plains above Saskatchewan. This region basically represents Montana and the Dakota's and many of the positive features that exist in this

region for basic cow/calf operations exist in Saskatchewan as well. It was the study team's assessment that Saskatchewan had a costing structure and competitive edge over Alberta as well as the US Corn Belt region, the US southern Plains and Ontario.

When the focus was shifted to the backgrounding segment of calf/yearling production, the study team's evaluation reflected Saskatchewan as being at the top of the ladder as all other jurisdictions scored negative relative to Saskatchewan. There are some regions that are at a distinct disadvantage in the backgrounding area and particularly Ontario and the US Corn Belt region.

Finally, the cow/calf and backgrounding index scores were summed together across the various geographic jurisdictions with the end result being a slight competitive edge for the US Northern Plains. Saskatchewan ended up with an index scoring reflecting moderate competitive advantages to both Alberta and the US southern Plains and a strong advantage to the US Corn Belt region and Ontario. Of importance is the positive edge that appears to exist for Saskatchewan relative to Alberta in basic calf production and the backgrounding of those calves. There are obviously cost factors and productivity issues that put Saskatchewan in a very favorable position as it relates to this segment of the supply chain and this in itself suggests that a strategic focus on the cow calf business is warranted.

3. Feedlot Production

The cow/calf and backgrounding sectors of the cattle and beef supply chain are but the first and second stages of production. Many of the competitive elements that are of importance at this level of the supply chain remain important as animals move through the supply chain to the feedlot sector. Many new competitive elements unique to the cattle feeding sector also come into play. The following chart provides the study team's assessment of the feedlot sector in Saskatchewan relative to other major cattle feeding jurisdictions in North America. Of importance to Saskatchewan's cattle feeding industry is how their competitive positioning stacks up against neighboring Alberta as well as the US Corn Belt region and the US northern Plains. We have included a competitive assessment for the US southern Plains as well as Ontario as these two areas of North America would tend to define the "most" competitive and "least" competitive cattle feeding regions.

As with the primary production phases of the cattle industry, key production, cost and marketing variables have been identified and given a factor weight based on the study teams assessment of their relative importance to overall competitiveness at the feedlot level of production. The factors that are given the highest factor weights are economies of scale (which impact costs); feed supplies and their cost as well as labour costs and associated feedlot

management capability. Technology at the feedlot is certainly of moderate importance while overall transportation/logistics and general regional market structure and/or access to slaughter and processing facilities has a somewhat lesser magnitude of impact on overall sector competitiveness.

As before, the study team gathered available background information and data on the various geographic jurisdictions and utilized this information along with team knowledge and industry experience to rate each of the areas under review relative to the feedlot situation and profile in Saskatchewan. The scoring values assigned to each of the competitive factors once again ranged from a potential -5 to a potential +5 based on any regions measured or perceived competitiveness relative to Saskatchewan.

Exhibit 110: Feedlot Sector Competitive Index - 2009

Factor Weight	1	2	3	5	5	4			
REGION	Transportation/Logistics	Market Structure & Access	Technology	Economies of Scale	Feed Supplies and Cost	Labor Costs & Management		Feedlot Sector Costs	Rank
Alberta	3	4	2	4	-1	1	4	36	1
US South Plains	4	4	2	4	-3	2	3	31	2
US North Plains	1	1	0	0	-2	1	0	-3	5
US Corn Belt	3	3	2	2	-1	2	3	28	3
Ontario	2	1	1	1	-3	-1	-1	-7	6
SASKATCHEWAN				**BASELINE "ZERO"**				**0**	4

Competitve Importance		High (4-5)
		Medium (3)
		Low (1-2)
		Carried Forward
Driver Rankings	5	High Competitive Advantage
	-5	High Competitive Disadvantage

While it would be a long and tedious process to explain and justify each individual scoring value for each factor and each region, the cumulative index developed for the 5 areas relative to Saskatchewan really identify two situations

which appear both realistic and logical based on where cattle feeding is concentrated within North America. Alberta, the US southern Plains and the US Corn Belt all have cumulative positive index scores well above the "0" base for Saskatchewan. All are currently major cattle feeding areas within North America with large scale and highly concentrated feeding activities. The scoring process shows the US northern Plains at a very slight competitive disadvantage to Saskatchewan while Ontario is a notch lower on the rating scale than either Saskatchewan or the northern Plains. This outcome is not unexpected given current feed costs, labour values, industry structure and the like. While the US southern Plains scores strongest in terms of feedlot competitiveness, this ranking is being challenged by the US Corn Belt region, in particular, as the relative advantage on the feed cost factor is shifting more and more to the Corn Belt with feedlot access to and utilization of the by-products from the rapidly expanding US ethanol industry. This is a trend that is likely to continue.

While access to moderate to large supplies of feeder cattle and calves along with access to a relatively low cost feed grain and roughage base does exist in Saskatchewan, the historical business climate and lack of investment in large scale feedlots has resulted in only a modest level of cattle feeding activity. The opportunity to establish critical mass in fed cattle production passed and the resultant expansion in southern Alberta reduced the need for either a larger cattle feeding sector as well as a slaughter/processing sector. The fact that the Saskatchewan industry lacks scale in operations and does not have a large and efficient cattle slaughter and processing sector dramatically reduces the competitive positioning of the Saskatchewan cattle feeding industry that actually is in place. With total cattle inventory levels in both the US and Canada in decline and excess cattle feeding and cattle slaughter capacity already in existence, the need for new assets just does not exist. On top of that, significant global economic uncertainty and tight credit and investment markets create constraints that will certainly define the economic landscape for the next 3-5 years.

4. Packer/Processing Sector

Key factors were identified that impact the competitiveness of the beef packing and processing sector and like the other sub indices developed, these factors were assigned relative weights for scoring purposes. The chart following provides the analytic structure and subsequent results of the study team's evaluation of the cattle slaughter and beef processing sector for the various jurisdictions under review in this study. As before, for each geographic region and for each competitive factor, a score ranging from -5 to +5 was assigned to each cell in the matrix and then an index of processing sector competitiveness was derived.

The key finding when looking at the slaughter/processing segment of the North American industry is the rather significant "lack" of competitiveness in the Saskatchewan industry. All of the provinces/US regions evaluated had relatively large and positive index scores when compared to the "0" baseline for Saskatchewan. In general, the US cattle slaughter and beef processing sector scores well above even the most competitive area in Canada which is southern Alberta. There are no cells in the scoring matrix for the three US areas showing a negative rating relative to Saskatchewan and the only competitive factor for competing provinces in Canada is labour costs.

The lack of any sizeable cattle slaughter and beef processing operation in Saskatchewan puts this entire sector in the province at a major competitive disadvantage to other regions. Not only does the lack of current facilities result in a weak industry position, it also has negative impacts in terms of competitive positioning of both the cow calf industry and the cattle feeding sector. Access to markets (slaughter plants) is an important factor for the cattle feeding sector as lack of local slaughter facilities means that local cattle prices will be at a discount to the area where the cattle are actually slaughtered. This discount tends to reflect the cost of additional transportation and handling as well as added shrink in getting the cattle to market. If feedlots in Saskatchewan are selling fed cattle discount to other areas, then there is also a strong tendency for feedlots to pay a discount for yearling cattle and calves entering their lots which in turn puts the Saskatchewan cow/calf and backgrounding operations at a revenue disadvantage. One can certainly make the argument that a strong and viable cattle feeding industry is highly dependent on a strong and viable cattle slaughter and processing industry. Saskatchewan is lacking on the slaughter/processing side which in turn creates added financial difficulties on the cattle feeding side. In essence, neither segments are robust in nature as they are mutually dependent on each other and neither one exists.

Exhibit 111: Beef Processing Factors - 2009

Factor Weight	1	2	3	4	4	5			
REGION	Transportation/Logistics	Ind. & Market Structure	Further Processing	Economies of Scale/Speed	Technology	Labor Costs		Processing Sector Costs	Rank
Alberta	3	3	1	4	2	-2	3	26	3
US South Plains	3	3	2	4	3	1	5	48	1
US North Plains	1	1	0	1	1	2	2	21	4
US Corn Belt	3	3	3	3	3	1	5	47	2
Ontario	2	1	2	2	2	-1	2	21	4
SASKATCHEWAN				**BASELINE "ZERO"**				**0**	6

Competitve Importance		High (4-5)
		Medium (3)
		Low (1-2)
		Carried Forward
Driver Rankings	5	High Competitive Advantage
	-5	High Competitive Disadvantage

5. Social Factors

In recent years, many outside factors which we group into a category called "Social Factors" have become increasingly important to relative livestock industry competitiveness. Due to a certain level of harmonization within countries, the importance of these social factors primarily comes into focus when comparing industries or segments of industries from one country to another although some minor differences can and do exist across provincial boundaries within Canada. As outlined in the following chart, the study team has identified 6 factors which are deemed important to evaluating the competitiveness of Saskatchewan's cattle and beef industries. Two are given a relatively low factor weight; two a mid range rate while two factors are considered highly important.

Exhibit 112: Social Factors - 2009

Factor Weight	1	1	3	3	5	5			
REGION	Other Regulations	COOL	SMPV (Traceability)	Animal Welfare	Food Safety	Environmental Regulations		Social Factor Index	Rank
Alberta	0	0	2	0	1	-1	1	6	1
US South Plains	-1	3	-2	-1	-1	-2	-2	-22	6
US North Plains	-1	3	-1	-1	-1	-1	-1	-14	4
US Corn Belt	-1	3	-1	-1	-1	-2	-2	-19	5
Ontario	0	0	0	0	1	-2	-1	-5	3
SASKATCHEWAN				**BASELINE "ZERO"**				**0**	2

Competitve Importance	High (4-5)	
	Medium (3)	
	Low (1-2)	
	Carried Forward	
Driver Rankings	5	High Competitive Advantage
	-5	High Competitive Disadvantage

As before, the study team evaluated each of the social factors for each of the geographic jurisdictions and scored each cell in the matrix with scores ranging from -5 to +5 with Saskatchewan assumed to have a baseline score of "zero". The end result of this evaluation would suggest that Saskatchewan falls about in the middle of the various regions rated with the US jurisdictions all having a slight advantage in terms of social factor burdens while Alberta and Ontario are rated negative to Saskatchewan. The US regions tend to have an advantage with respect to MCOOL, animal welfare and environmental regulations but come up slightly short in the food safety area. Many of these social factors result in added cost burdens to the cattle and beef supply chain but quantifying these costs is very complex and difficult to do and falls outside of the scope of this evaluation. In short, there are not huge differences in requirements as it relates to social factors within the broader North American jurisdiction. Such would not be the case if Western Europe or parts of Asia were similarly rated. The social burden for the livestock sectors in Europe and Asia is significantly higher than in North America.

E. Hog and Pork Industry

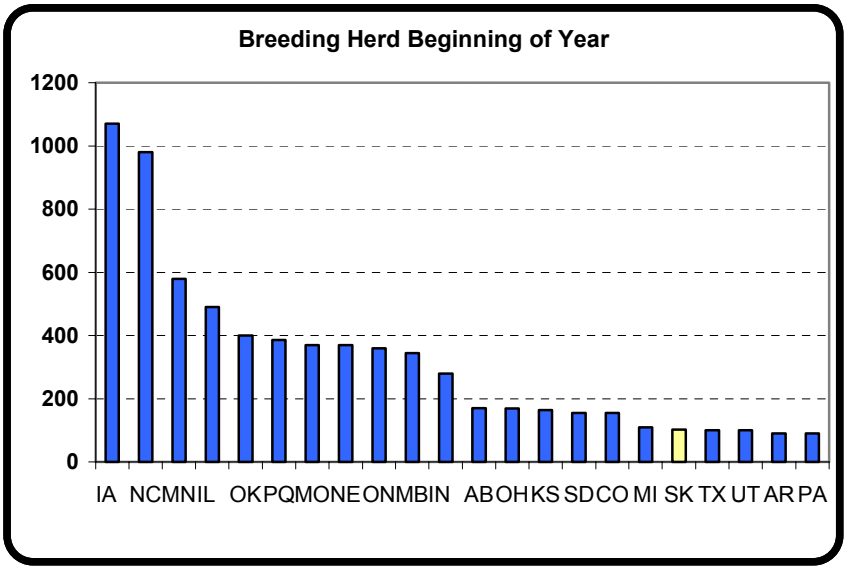
1. Structural Issues

The Saskatchewan swine industry is not large by North American standards, last estimated at 99,000 breeding females or 102,200 total breeding herd. It currently ranks in 18th place among the main producing states and provinces, with a similar breeding herd size to Texas and Utah, but well below the traditional Midwest hog states. The pig crop (pigs weaned) in 2008 was 2.7 million head, equivalent to about 2.5 million head slaughter hog production if the entire pig crop were fed out in the province.

Exhibit 113: Key North American Swine Breeding Herds, 2009

Ranked by Breeding Herd (Beginning of Year)

	States and Provinces with > 50,000 Sows	Breeding Herd Beginning of Year ('000 Head)
1	IA	1070.0
2	NC	980.0
3	MN	580.0
4	IL	490.0
5	OK	400.0
6	PQ	386.2
7	MO	370.0
8	NE	370.0
9	ON	359.7
10	MB	344.6
11	IN	280.0
12	AB	170.3
13	OH	170.0
14	KS	165.0
15	SD	155.0
16	CO	155.0
17	MI	110.0
18	**SK**	**102.2**
19	TX	100.0
20	UT	100.0
21	AR	90.0
22	PA	90.0
	Group	7038.0
	US	6081.4
	CANADA	1404.5

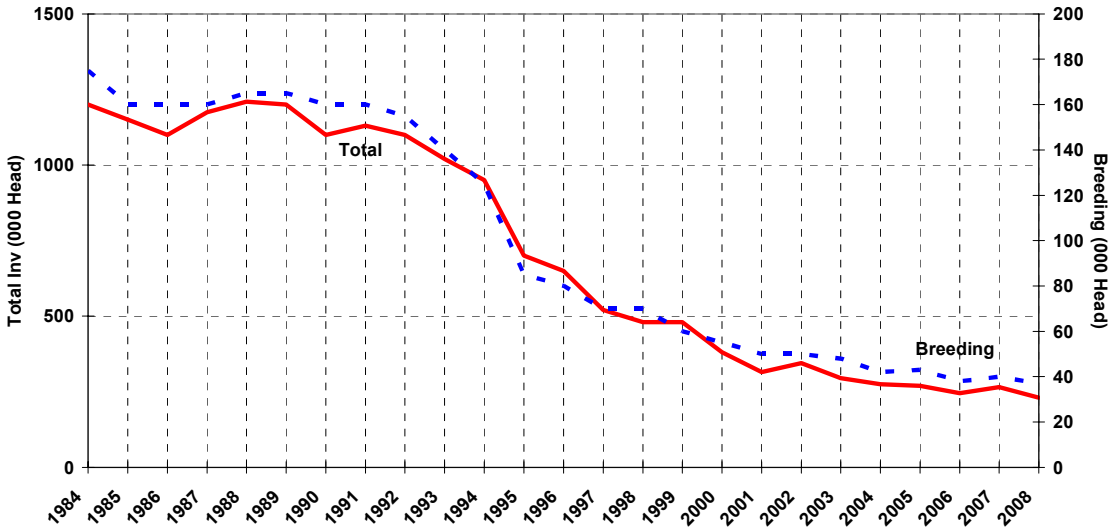


By comparison to 2.5 million annual hog production from Saskatchewan, a typical double shifted modern hog plant processes 4 million head or more per year. In its current scale the industry would not attract a state of the art full scale plant, even putting aside consideration of competition with the plants already in existence on the prairies. Smaller plants are likely to have a higher cost structure, which they will try to overcome through specialized cutting, exports, or otherwise adding value to their production, as well as by operating as close to capacity as possible. Success is possible, but by no means guaranteed. Without exception, the numerous North American slaughter plants that have failed and been closed in the past 20 years have been smaller, mostly single shift, operations. The most recent casualty in 2009 was a cooperative venture with rated capacity of 4,000 per day, or about 1 million head per year.

Because of the relatively small size of the Saskatchewan industry, the support industries such as trucking, veterinary, etc, are not as well developed as would be the case in a larger producing region such as Manitoba or the US Midwest, another possible disadvantage for producers in the province.

Is there a "critical mass" for modern hog production on a regional level? Is the loss of in-province packing capacity in 2007 a likely death blow to the Saskatchewan industry? The answer is not clear cut, as we can show examples of regions that have perished without slaughter facilities and others which continue in production despite the lack of a nearby plant. As an example of the former, consider the state of Georgia, which for many years supported a moderate sized hog production industry, supported by a single plant in the Southern part the state. In the 1990s, that plant began to struggle and was closed in June 1996. Georgia's hog production industry never recovered from that setback, and is now hovering at 40,000 sows. It should be noted that Georgia did not have some of the key input advantages to offset the negatives created by the lack of slaughter capacity and in particular, feed costs were well above average in the region. This is certainly NOT the case in Saskatchewan and with production advantages as it relates to basic input costs, producers could very well sustain a strong and viable production base until such time that new investment into processing activity in the province is made.

Exhibit 114: Georgia Swine Inventories



Colorado has some of the same hog production attributes as Saskatchewan. It is considered a good place to produce a weaned pig, with a relatively cool climate, high herd health, and low hog density. Herd productivity is above average compared to other regions. Like Saskatchewan, the state is challenged with no large federally inspected hog slaughter plant within its boundaries. There is one large plant just south of the state in the Oklahoma Panhandle; otherwise hogs must be trucked basically across the Great Plains to reach a slaughter location. Colorado did attract considerable commercial investment and growth during the 1990s, although several firms did not survive the 1998 hog cycle, as the industry downsized for several consecutive years. Subsequently, the Colorado herd has stabilized in size. The industry has tended to put more focus on exporting feeder pigs to finishing barns in Iowa and other states rather than feeding out in Colorado, a trend which will likely continue given recent high corn prices. Unlike Saskatchewan, Colorado is a feed deficit area and hence, is subject to relatively high corn and soybean meal costs.

Exhibit 115: Colorado Swine Inventories

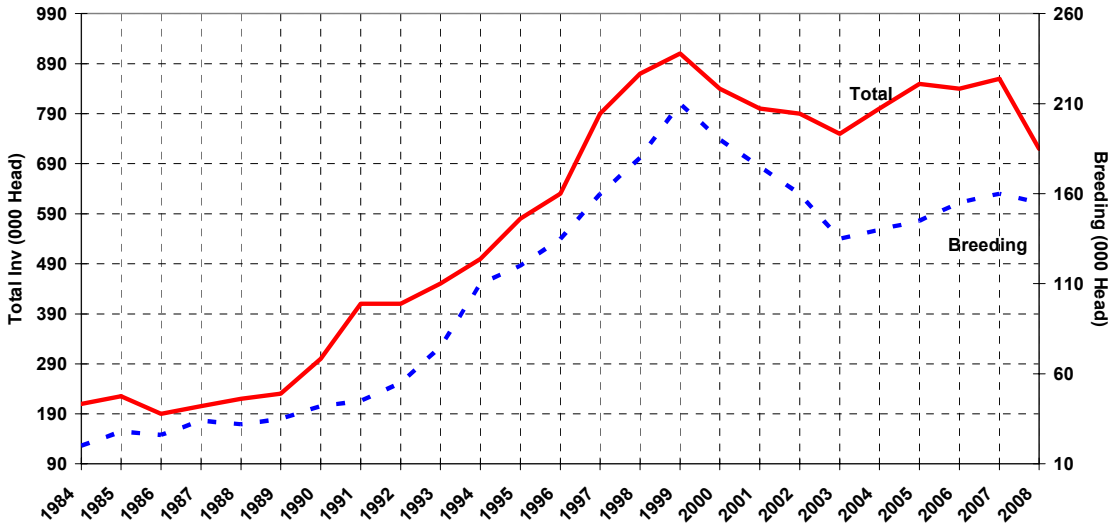
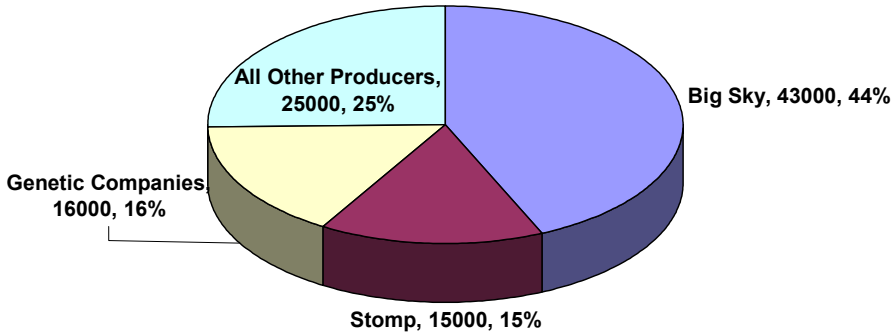


Exhibit 116: Saskatchewan Sow Herd Structure
Jan 1, 2009



Sources: Statistics Canada, Sask Ag.

The Saskatchewan swine industry has a unique market structure that must be considered when assessing industry competitiveness, as well as when developing strategies for the sector. In comparison to other hog producing regions, particularly in Canada, the province's industry is highly concentrated. The top producer holds a 44% share of the breeding female inventory; the top two producers combine for a 59% market share. The top six, including three genetics companies, are estimated to hold an additional 16% market share, thus the combined large producers account for 75% of the sow herd. All other production entities, including Hutterite colonies and small to medium sized independent producers, collectively account for only 25% of the province's output. According to Statistics Canada, this group would contain 484 producers, for an average farm size of only 51 sows. In reality, there are probably several

dozen producers that comprise the bulk of the 25,000 herd size for the "others" group, plus a large number of farms with only a few sows and whose output is currently of no real consequence to the industry.

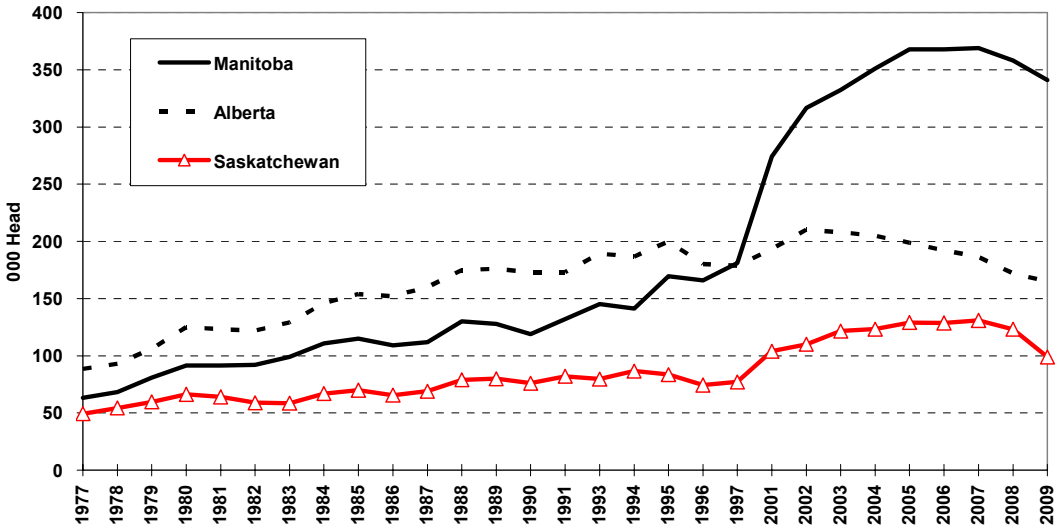
The current farm structure shows large farm size and good economies of scale for at least 75% of the industry, comparable to top producers elsewhere in North America. But unfortunately the largest two producers, comprising the bulk of the industry, have business weaknesses that could affect their survival and competitiveness, at least in their current form. The largest producer, Big Sky, is majority owned by the provincial government of Saskatchewan. This is an unusual business structure not seen elsewhere in North America, or even in Europe outside of the former Soviet Union. Public ownership of Big Sky was not planned at the outset and it is difficult to identify any significant benefits to the province or the industry to maintaining this unique ownership structure over the long term. Government ownership could be viewed as an impediment or otherwise detrimental to the investment by other private companies in the industry, because of the perceptions or realities of unfair competition. Whatever strategies the industry develops, the ownership status of the largest producer is a structural issue which cannot be ignored.

The second largest Saskatchewan hog producer is currently going through bankruptcy reorganization, obviously calling into question its survival as a going concern. However, as economic conditions improve (assuming they do) good production assets will likely remain in production or move back into production after an idle period, as we recently saw for some finishing barns in Southern Saskatchewan.

Of the three large producer groups, the genetics companies appear to have the most viable structure and business model today, as well as relatively strong ownership. Herd development facilities in Saskatchewan take advantage of the wide open spaces and low herd densities so often cited as an advantage for Saskatchewan hog production, in order to maintain high health status and productivities. Primarily, they export breeding females to other production regions. The genetics industry will continue to benefit from these advantages, and is likely to grow further in the coming years.

During the interview process, some producers viewed the cap on program benefits, particularly for Agristability, as a disadvantage to the larger producers. However, larger producers in the US have no access to income stabilization schemes, while large producers elsewhere in Canada face the same limitations as in Saskatchewan for this federal program. Thus this disadvantage is not unique to Saskatchewan and should not affect its relative competitiveness to other locations. In terms of industry structure, it could prove advantageous for the industry to organize at the largest scale which can still take advantage of the Agristability program, i.e. in units of about 2400 sows given the current $3 mln annual revenue cap.

Exhibit 117: Prairie Province Sows and Bred Gilts



Up to 1997, Alberta was the leader in hog production for the Prairie Provinces, with that industry doubling in size over the span of two decades of gradual growth. Alberta's industry crested in 2002 well before the other provinces, and has been trending downward in size ever since then. In contrast to the other Prairie Provinces, Alberta did not attract significant expansion investment during the late 1990s. However, the pace of contraction in the most recent two years has been slower than the other provinces, while the province's slaughter industry has remained intact, at least so far.

Manitoba entered a period of rapid growth in the late 1990s, doubling the size of the breeding inventory in a few years, with growth in both domestic-finished production and in the production of isoweans for export to the US. In addition, the province attracted investment in a new plant, although for the first several years the plant operated at half of its potential capacity. Breeding inventories in Manitoba crested in 2007 at 369,000 bred females, declining quite sharply over the next two years to 341,000 head at last count. Although Manitoba is the clear industry leader in Canada in terms of production volumes, their future is uncertain with a moratorium on expansion in the main producing areas of the province, as well as MCOOL jeopardizing the isowean export industry. Responding to these threats, top Manitoba producers have already begun to look west to Saskatchewan as a location for production expansion; this trend could continue in coming years.

Saskatchewan has always had the smallest swine herd of the Prairie Provinces, sometimes blamed on the "wheat mentality" which for years put top priority on grain production. Nonetheless, the province's industry did expand during the late 1990s and beyond, on both private and public sector investment as recognition

was given to the advantages that occur from having a diversified agricultural sector that lends itself to more value added activity. According to Statistics Canada, the January 1 breeding herd peak was 131,000 sows as of 2007, but herd size has declined rather dramatically in the past two years to 99,000 sows. In addition to the severely challenging economic conditions for all Canadian producers, declines in Saskatchewan were accelerated owing to the loss of packing capacity within the province in 2007 as Maple Leaf Foods consolidated their slaughter/processing activity into their Brandon operations. Unfortunately, It seems likely that most or all of the hog production gains of the past decade will be wiped out during the current period of industry retrenchment.

Competitive Implications

Saskatchewan is not a dominant participant in the North American hog production sector from a volume metrics perspective yet has many core production attributes that would suggest that the industry can and will remain an important player from a live hog production point of view. The Saskatchewan industry is highly concentrated and the current business situation of the top two players will need to be addressed. Ownership of a large percentage of the breeding herd by the public sector and financial difficulties of the second largest industry participant suggests that the industry will have a difficult time attracting new private sector investment to underwrite long term industry growth. With 75% of the provinces production tied to six production entities, it is difficult to envision a growth strategy for the industry that can address the differential needs of the top tier players yet create an economic environment to stimulate expansion of the remaining industry participants.

One of the key shortcomings of the Saskatchewan pork supply chain at this point in time (Q1 2009) is the lack of commercial hog slaughter and primary processing. This is a structural impediment that will limit but not necessarily stymie growth opportunities of the production sector. Lack of a viable primary processing sector creates competitive disadvantages for the hog production sector in terms of production based revenues yet current production volumes are borderline insufficient to support a slaughter operation that could operate at a scale to be competitive with other efficient slaughter operations in both Canada and the US. This would suggest that any strategy developed to grow and expand the production base in Saskatchewan must be cognizant of the benefits that would accrue to the industry if an efficient slaughter operation could eventually be built within the province to slaughter not only Saskatchewan hogs but possibly hogs from other neighboring provinces as well.

2. Productivity

Saskatchewan breeding herd productivity is clearly above average for North America, at 20.8 pigs weaned per breeding animal in the most recent year for which comparable data is available (See Exhibit 118). This is not only an important competitive advantage for the province; it is arguably a necessity for the industry to compete effectively and on a sustainable basis in a North American context. Based on official government statistics, Saskatchewan nonetheless falls well behind Manitoba in breeding herd productivity, as does every other province and state within the US. Although some would cast doubt on the accuracy of this data, the Manitoba productivity gap has persisted for a number of years and in our opinion reflects tremendous industry-wide accomplishments in that province, which other producing regions would do well to emulate. After all, productivity advantages of that magnitude have a tremendous impact on per unit costs of production and hence, relative industry competitiveness.

There is no public data on hog finishing productivity nationally, much less at a regional level. We speculate that given Saskatchewan's reduced disease pressures and high quality feeds and genetics, the province will certainly not be at a disadvantage to other areas in rate of gain and feed conversion. Neighboring province Manitoba has tended to have more issues with feed quality than Saskatchewan, particularly relating to fusarium.

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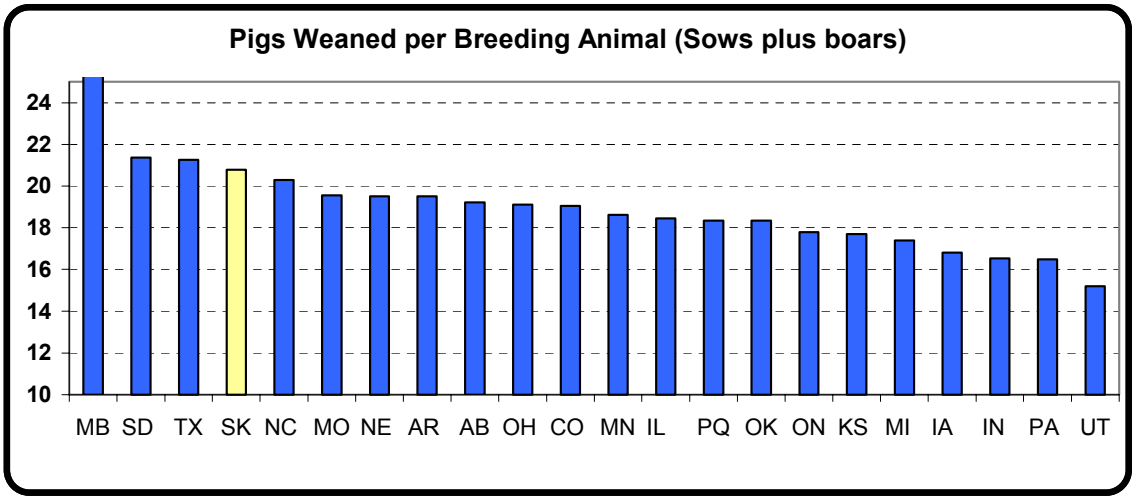
Exhibit 118: Key North American Swine Breeding Herds, 2007

Ranked by Productivity

	States and Provinces with > 50,000 Sows	Breeding Herd Beginning of Year ('000 Head)	Annual Pig Crop (Dec-Nov US) ('000 Head)	Pigs Weaned per Breeding Animal (Sows plus boars)
1	**MB**	373.8	9492.4	25.4
2	**SD**	140.0	2991.0	21.4
3	**TX**	90.0	1914.0	21.3
4	**SK**	**135.8**	**2822.9**	**20.8**
5	**NC**	1010.0	20504.0	20.3
6	**MO**	360.0	7041.0	19.6
7	**NE**	365.0	7120.0	19.5
8	**AR**	85.0	1658.0	19.5
9	**AB**	193.4	3719.3	19.2
10	**OH**	165.0	3153.0	19.1
11	**CO**	155.0	2952.0	19.0
12	**MN**	580.0	10803.0	18.6
13	**IL**	470.0	8671.0	18.4
14	**PQ**	403.2	7394.5	18.3
15	**OK**	390.0	7152.0	18.3
16	**ON**	422.7	7524.4	17.8
17	**KS**	180.0	3186.0	17.7
18	**MI**	110.0	1913.0	17.4
19	**IA**	1060.0	17814.0	16.8
20	**IN**	320.0	5290.0	16.5
21	**PA**	105.0	1731.0	16.5
22	**UT**	103.0	1565.0	15.2
	Group	7216.9	136411.5	18.9
	US	6232.6	112873.8	18.1
	CANADA	1512.2	31831.5	21.0



Competitive Implications

Industry data would suggest that Saskatchewan is in the top tier of hog production regions in North America from a productivity perspective as shown in Exhibit 118 above. This would suggest that Saskatchewan producers are utilizing their core resources and management abilities to the fullest and are

getting best practices support from the various private and public sector institutions within the province. This high level of productivity provides a strong advantage to Saskatchewan in the competitive index scoring conducted as part of this overall industry assessment.

3. Cost of Production Evaluation

There exists several published cost of production (COP) estimates for the hog production sector. Informa also calculates a proprietary estimate of costs and returns for the US commercial sector. In this section we explore some of the regional cost of production issues in more detail in an attempt to shed some light on Saskatchewan's competitiveness in hog production.

a) 2006 Regional Analysis

In recent work, Informa estimated costs and returns on a regional basis across North America based on 2006 data. Ideally, it would have been desirable to repeat this rather extensive regional COP analysis but such work fell outside of the scope of this project. Needless to say, all hog production regions in North America have undergone significant external economic shocks ranging from a surge in grain and oilseed prices to all time record highs; record high crude oil and other energy costs which supported significant advances in labour and other key input costs; to the global economic meltdown which has disrupted global trade in pork; impacted currency values throughout the world and resulted in the worst recession in the US in many decades. No doubt there have been differential impacts from these monumental changes although all hog production regions within North America were impacted in a like manner.

Unlike most such studies, which employ fixed productivity assumptions, Informa's cost estimates for this study were based on breeding herd productivities which varied by region according to published government estimates. This somewhat unusual approach was intended to reflect the reality that not all hog operations or regions are equal in terms of herd productivity. All costs and returns were brought back to a US equivalent based on the prevailing exchange rate in 2006. The rankings for various categories for 2006 are presented. Please recognize that this is a one year snapshot and that factors and conditions that impact costs of production can and do change. In particular, the exchange rate has undergone some major gyrations since 2006, advancing to a modern record well above par and then retreating to under 80 cents US.

Exhibit 119: North American Crop Districts
Ranked by Cost to Produce Weaned Pig
Based on 2006 Feed Costs & Exchange Rate

Rank	State or Province		Weaned Pig COP (US$/head)
1	Manitoba	Crop District - 8	26.37
2	Manitoba	Crop District - 9	26.40
3	Manitoba	Crop District - 7	26.44
4	Manitoba	Crop District - 1	26.47
5	Manitoba	Crop District - 2	26.51
6	Manitoba	Crop District - 10	26.55
7	Manitoba	Crop District - 11	26.58
8	Manitoba	Crop District - 3	26.72
9	Kansas	Northeast	26.82
10	North Carolina	Central Coastal	26.88
11	North Carolina	Southern Coastal	26.88
12	North Carolina	Northern Coastal	26.89
13	Manitoba	Crop District - 6	26.96
14	Manitoba	Crop District - 4	26.99
15	Kansas	Northwest	27.02
16	Nebraska	Northeast	27.02
17	Manitoba	Crop District - 5	27.03
18	Oklahoma	Northeast	27.08
19	Nebraska	North	27.10
20	Manitoba	Crop District - 12	27.14

The next table shows Canadian rankings from the same study. Locations in Saskatchewan do make the top 20 within Canada. If you were to juxtapose Manitoba productivity levels to Saskatchewan locations, the result is Saskatchewan would be equally advantageous for weaned pig production. Of course, with reduced demand for young pigs from the US due to MCOOL, it is not clear if a ready market still exists for producers specializing in weaned pig production. Finishing barns in Saskatchewan and other prairie provinces may be a more sustainable market for isoweans in the long run.

Exhibit 120: Canadian Crop Districts
Ranked by Cost to Produce Weaned Pig
Based on 2006 Feed Costs & Exchange Rate

Rank	State	District	Weaned Pig COP (US$/head)
1	Manitoba	Crop District - 8	26.37
2	Manitoba	Crop District - 9	26.40
3	Manitoba	Crop District - 7	26.44
4	Manitoba	Crop District - 1	26.47
5	Manitoba	Crop District - 2	26.51
6	Manitoba	Crop District - 10	26.55
7	Manitoba	Crop District - 11	26.58
8	Manitoba	Crop District - 3	26.72
9	Manitoba	Crop District - 6	26.96
10	Manitoba	Crop District - 4	26.99
11	Manitoba	Crop District - 5	27.03
12	Manitoba	Crop District - 12	27.14
13	Saskatchewan	Ag Region 1A = 1	30.80
14	Saskatchewan	Ag Region 1B = 2	30.84
15	Saskatchewan	Ag Region 2A = 3	30.88
16	Saskatchewan	Ag Region 2B = 4	30.92
17	Saskatchewan	Ag Region 3AN = 5	30.97
18	Saskatchewan	Ag Region 3 AS = 6	31.01
19	Saskatchewan	Ag Region 3BN = 7	31.08
20	Saskatchewan	Ag Region 3BS = 8	31.13

The next table includes a recalculation of weaned pig cost of production, assuming the same number of pigs per sow per year (PSY) in Saskatchewan as was used in the calculation for Manitoba. In this case, the cost of production in Saskatchewan would be very competitive with the various regions within Manitoba. In fact, a re-ranking based on this calculation would put five locations in Saskatchewan among the top ten places.

Exhibit 121: Weaned Pig Cost Adjusted for Productivity
Canadian Crop Districts
Ranked by Cost to Produce Weaned Pig
Based on 2006 Feed Costs & Exchange Rate

Rank	State/Province	District	Weaned Pig COP (US$/head)	Assume same PSY as Manitoba (US$/head)
1	Manitoba	Crop District - 8	26.37	
2	Manitoba	Crop District - 9	26.40	
3	Manitoba	Crop District - 7	26.44	
4	Manitoba	Crop District - 1	26.47	
5	Manitoba	Crop District - 2	26.51	
6	Manitoba	Crop District - 10	26.55	
7	Manitoba	Crop District - 11	26.58	
8	Manitoba	Crop District - 3	26.72	
9	Manitoba	Crop District - 6	26.96	
10	Manitoba	Crop District - 4	26.99	
11	Manitoba	Crop District - 5	27.03	
12	Manitoba	Crop District - 12	27.14	
13	Saskatchewan	Ag Region 1A = 1	30.80	26.33
14	Saskatchewan	Ag Region 1B = 2	30.84	26.37
15	Saskatchewan	Ag Region 2A = 3	30.88	26.41
16	Saskatchewan	Ag Region 2B = 4	30.92	26.45
17	Saskatchewan	Ag Region 3AN = 5	30.97	26.49
18	Saskatchewan	Ag Region 3 AS = 6	31.01	26.53
19	Saskatchewan	Ag Region 3BN = 7	31.08	26.60
20	Saskatchewan	Ag Region 3BS = 8	31.13	26.64

In our previous analysis of 2006 data, Saskatchewan did not fare as well from a margin perspective on the finishing side. A weaker selling basis and a less than favorable exchange rate (relative to US production points) severely challenged the revenue side, with the result that no Canadian region was ranked in the top 20 for hog finishing profitability. Owing to higher market hog prices primarily and hence, revenues, Manitoba and Eastern Canadian locations were preferable for finishing hogs to Saskatchewan, with Alberta even further behind. B.C. fared surprisingly well in this analysis, due to that province having the highest market hog price in Canada which more than offset higher production costs.

In evaluating the competitiveness of the finishing sector, a lot of attention is rightfully paid to feed costs, but the revenue side can have an even larger impact on financial results. In Informa's opinion, the greatest advantage of the Western Cornbelt for hog finishing is probably not the ample supplies of corn and relatively low feed costs but the quantity of large efficient slaughter plants within a relatively small geographic area, competing for hog supplies.

Shifting forward from 2006 to 2009, the Saskatchewan hog price has effectively become the higher Manitoba market hog price less a transportation differential

given the closure of the Saskatoon plant. The Brandon plant is now running at full double shift capacity and is the first Canadian plant able to go toe to toe with the large US plants in terms of operating efficiencies and scale. Although the added transportation costs hit home with Saskatchewan producers, the positive impact of having a large efficient plant in proximity, as well as an expanding smaller operation, is significant as well, and could be offsetting most or the entire transportation differential related to the movement of hogs to Manitoba for slaughter.

Exhibit 122: Canadian Crop Districts

Ranked by Finishing Margin
Based on 2006 Feed Costs & Exchange Rate

Rank	Province	District	Finishing Return ($/head)
1	British Columbia	Crop District - 2	9.47
2	Manitoba	Crop District - 9	8.70
3	Manitoba	Crop District - 8	7.82
4	Manitoba	Crop District - 7	6.94
5	Manitoba	Crop District - 1	6.06
6	Manitoba	Crop District - 2	5.17
7	Ontario	Southern Ontario Region	4.50
8	Quebec	Estrie - (CAR)	4.40
9	Manitoba	Crop District - 3	4.29
10	Ontario	Western Ontario Region	3.87
11	Quebec	Lanaudière - (CAR)	3.78
12	Quebec	Montréal/Laval - (CAR)	3.52
13	Manitoba	Crop District - 10	3.41
14	Ontario	Central Ontario Region	3.25
15	Quebec	Mauricie - (CAR)	3.15
16	Quebec	Centre-du-Québec - (CAR)	2.89
17	Quebec	Montérégie - (CAR)	2.64
18	Manitoba	Crop District - 11	2.53
19	Quebec	Québec - (CAR)	2.34
20	Quebec	Outaouais - (CAR)	2.27

Exhibit 123: North American Crop Districts
Hog Revenue Comparisons
Based on 2006 Prices & Exchange Rate

Rank	Region		Hog Revenue (US$/head)
1	Texas/Oklahoma		135.26
2	Iowa/S Minnesota		132.94
3	Western Cornbelt		132.45
4	Eastern Cornbelt		128.35
5	British Columbia		122.19
6	Eastern Seaboard US		121.93
7	Manitoba		114.11
8	Quebec		113.63
9	Ontario		110.09
10	Saskatchewan		105.13
11	Alberta		104.55
1-11	Difference (Highest-Lowest)		30.71
11/1	Ratio (Lowest/Highest)		0.77

b) Review of Historical Published Data

Next we compared two published sources of farrow-finish COP and returns for the hog sector with internal estimates from the Saskatchewan Ministry of Agriculture. For US operations we used the Iowa State monthly data, probably the most respected, and definitely the longest-running time series on Midwest hog production costs and returns. Data published by the Ontario government (OMAFRA) was used to give some perspective on Eastern Canadian costs and margins. While it would have been useful to have another prairie benchmark, Manitoba discontinued its monthly COP calculations several years ago, while Alberta has never offered a comparable published service.

We recognize that because of different data sets and methodologies, COP estimates from different jurisdictions may not be directly comparable. Furthermore, it is well known that every producer's circumstances and management techniques are unique and not reflected in a generic calculation. Yet we also recognize that the researchers and analysts compiling this information are employing their best efforts to model the economic conditions of their industry. Furthermore, the practices of hog production, in contrast to cattle, do not vary dramatically from region to region. Beyond the substitution of various local feedstuffs, there are more similarities than differences in the production process and the end result. In this spirit, we believe that some direct comparisons are both defensible and worthwhile where published data is available.

In our COP review we focused on the most recent five years of annual averages, based on the monthly data series collected. We brought everything back to dollars per head in local currency in order to simplify comparisons between Canada and the US. Our rationale is that each individual hog production business will evaluate its financial performance based on returns in the currency of the country in which it is operating, making decisions to grow or cut back accordingly.

Saskatchewan cost and returns data is summarized in the table below. The last five years show a classic hog cycle, with two "fat" years and two "lean" years, as well as one year in between, more or less at breakeven. Unfortunately, the losses in the recent down years have been more severe than gains in previous good years, leading to a net equity drain and a downsizing and restructuring of the industry. Conditions in 2009 appear to be improving compared to the past two years, suggesting 2009 could prove to be a transition year possibly as the industry heads towards more favorable returns in 2010 and 2011.

Exhibit 124: Summary of Saskatchewan Hog Margin Calculations

Year	Revenue	Feed Costs	Other Variable Costs	Fixed Costs	Total Costs	Net Return	Exchange
	Canadian $/head						US$/Cdn$
2004	$151.14	$69.43	$44.50	$18.09	$132.02	**$19.12**	0.7696
2005	$136.23	$51.59	$45.25	$18.84	$115.68	**$20.55**	0.8259
2006	$125.19	$57.53	$46.49	$19.57	$123.59	**$1.60**	0.8817
2007	$120.48	$77.09	$48.31	$19.94	$145.34	**-$24.86**	0.9351
2008	$124.45	$99.13	$49.74	$18.82	$167.69	**-$43.24**	0.9431

Source: Sask. Ministry of Agriculture

Our first comparison is arguably the most important, looking at revenue per hog marketed in each location. Not all locations are equal in terms of revenue potential for a hog production business. Locations close to major markets and with several large competitive hog plants in the region consistently demonstrate higher revenues for hog producers than locations far from population centers and with fewer competitive plants. With the recent exception of Maple Leaf Brandon, Canadian plants are not double shifted and generally lack the scale to compete effectively with US plants.

Canadian hog prices are almost always below US prices, on a US dollar comparison. However, historically, the great equalizer has been the exchange rate. When the Canadian dollar is valued at a 20% or larger discount to the US dollar, as was the case for over a decade prior to 2006, the revenue to Canadian producers is boosted dramatically, while Canadian packers also benefit, for example finding it easier to compete for export markets. As the Canadian dollar approaches par or even beyond, the revenue advantage for Canadian producers evaporates and prices received by producers reflect the underlying competitive disadvantage of the Canadian industry. This is exactly what happened in 2007 and 2008 as the Canadian dollar appreciated to 94 cents US on average,

compared to a large discount in previous years. Now more recently, the dollar has moved back to a more typical discount, improving revenue potential directly for Canadian operators.

Exhibit 125: Comparison of Saskatchewan to Other Locations

Revenue Comparison							
	Sask	Ontario	Iowa	Sask - Ont	Sask - IA	Advantage	Exchange
Year	C$/head		US$/head	$/head		Location	US$/Cdn$
2004	$151.14	$164.12	$136.07	($12.98)	$15.07	ON	0.7696
2005	$136.23	$149.34	$128.51	($13.11)	$7.72	ON	0.8259
2006	$125.19	$131.93	$120.65	($6.75)	$4.54	ON	0.8817
2007	$120.48	$127.08	$131.42	($6.60)	($10.94)	IA	0.9351
2008	$124.45	$128.16	$133.78	($3.71)	($9.34)	IA	0.9431
Sources: Sask. Ministry of Agriculture, OMAFRA, IA State U.							

In our revenue comparison in local currency, the Ontario producer held an advantage to other North American producers in 2004-6. As the Canadian dollar gained, the US based producer had a strong revenue advantage in the past two years. As noted, this could be shifting back again in 2009. A comparison between Ontario and Saskatchewan producers is also interesting. In 2004-5, the typical Ontario producer had a large $13 per head advantage in revenue, which shrank by almost half in 2006-7, and to only $4 per head by 2008. One possible explanation is that Ontario grew its productive capacity well beyond the local slaughter capacity, necessitating the live export of several million hogs each year. Another important factor is the ramp up of production in the Maple Leaf Brandon plant, leading to full double shift output during 2008, which appeared to support the hog basis in both Saskatchewan and Manitoba. We conclude that Saskatchewan remains at a revenue disadvantage compared to most other regions in North America, but unlike Alberta, Saskatchewan has benefited from the Maple Leaf Brandon expansion, even as local markets for slaughter hogs were lost.

Exhibit 126: Feed Cost Comparison

Feed Cost Comparison							
	Sask	Ontario	Iowa	Sask - Ont	Sask - IA	Advantage	Exchange
Year	C$/head		US$/head	$/head		Location	US$/Cdn$
2004	$69.43	$86.55	$65.20	($17.12)	$4.22	IA	0.7696
2005	$51.59	$70.03	$53.86	($18.45)	($2.28)	SK	0.8259
2006	$57.53	$70.91	$54.87	($13.38)	$2.66	IA	0.8817
2007	$77.09	$85.50	$69.56	($8.41)	$7.52	IA	0.9351
2008	$99.13	$104.00	$95.52	($4.87)	$3.61	IA	0.9431
Sources: Sask. Ministry of Agriculture, OMAFRA, IA State U.							

We compared the feed cost component of farrow-finish COP data from the three locations. This would include corn (or barley) and meal as well as all supplements etc, expressed as dollars per hog marketed. Feed costs are the largest component of total costs and the definition is not ambiguous, thus we expect the data to be directly comparable, even if rations differ by region. Of the

three regions, Ontario consistently had the highest feed costs, while Iowa held a feed cost advantage in all years except 2005. Saskatchewan had the lowest feed cost in 2005 expressed in local currency per head. Iowa's overall feed cost advantage was not dramatic compared to Saskatchewan, or even compared to Ontario in the most recent two years, possibly as a result of the large increase in corn demand for ethanol in the Midwest. Saskatchewan is competitive on feed costs and likely to remain competitive in coming years. Furthermore, the feed cost differential between regions may not be as large as is generally perceived.

Exhibit 127: Non-Feed Cost Comparison

Non-Feed Cost Comparison							
	Sask	Ontario	Iowa	Sask - Ont	Sask - IA	Advantage	Exchange
Year	C$/head		US$/head	$/head		Location	US$/Cdn$
2004	$62.59	$59.41	$47.14	$3.18	$15.46	**IA**	0.7696
2005	$64.09	$64.87	$47.29	($0.78)	$16.81	**IA**	0.8259
2006	$66.06	$63.32	$47.57	$2.74	$18.49	**IA**	0.8817
2007	$68.25	$67.09	$57.45	$1.16	$10.81	**IA**	0.9351
2008	$68.56	$63.47	$58.51	$5.09	$10.05	**IA**	0.9431
Sources: Sask. Ministry of Agriculture, OMAFRA, IA State U.							

In the next comparison we lump together all costs other than feed, and compare across regions. This will include buildings, labour, veterinary and medicine, transportation, energy, genetics, and any other fixed and variable costs identified in the respective models. By lumping together all these costs into one item, we get away from any definitional issues particularly between fixed and variable costs.

Iowa has a large advantage over the other North American regions in non-feed costs to produce a market hog, although the advantage has narrowed somewhat in recent years. Components of this advantage probably include a number of areas including lower building costs (milder climate) and competitive labour, well developed highly competitive supporting industries such as veterinary, pharmaceutical, and trucking, as well as relatively short drive distances to slaughter plants, combined with lower energy costs.

To the extent possible, the gap between Iowa and Canadian producers in non-feed costs must be narrowed further if Canadian producers expect to compete effectively in the long term, particularly in years when the Canadian dollar is valued close to parity. The Canadian industry would be on much stronger footing with only a $5 per head gap in non-feed costs, for example.

In every year except 2005, Saskatchewan was also at a modest disadvantage to Ontario in non-feed costs. This could reflect a larger more competitive supporting industry in Ontario, as well as lower transportation costs, particularly in 2008 and beyond, when Saskatchewan producers had to ship their hogs further distances to market.

Exhibit 128: Other Variable Cost Comparison

Other Variable Costs Comparison							
	Sask	Ontario	Iowa	Sask - Ont	Sask - IA	Advantage	Exchange
Year	C$/head		US$/head	$/head		Location	US$/Cdn$
2004	$44.50	$35.72	$23.37	$8.78	$21.13	IA	0.7696
2005	$45.25	$37.47	$23.85	$7.78	$21.40	IA	0.8259
2006	$46.49	$37.92	$24.11	$8.57	$22.38	IA	0.8817
2007	$48.31	$42.21	$43.23	$6.10	$5.08	ON	0.9351
2008	$49.74	$42.41	$44.30	$7.33	$5.45	ON	0.9431
Sources: Sask. Ministry of Agriculture, OMAFRA, IA State U.							

Other variable costs are intended to reflect labour, trucking, pharmaceuticals, and other inputs that are accounted for on a per head basis. While we believe the OMAFRA and Saskatchewan data are directly comparable, the IA State data is not comparable prior to 2007, as their model was changed with new definitions of fixed and variable costs. Comparing only the 2007 and 2008 data, the Iowa and Ontario variable costs are very similar, with a slight advantage accruing to Ontario both years. Saskatchewan was at a disadvantage to other regions in variable costs.

Exhibit 129: Fixed Cost Comparison

Fixed Costs Comparison							
	Sask	Ontario	Iowa	Sask - Ont	Sask - IA	Advantage	Exchange
Year	C$/head		US$/head	$/head		Location	US$/Cdn$
2004	$18.09	$23.69	$23.49	($5.60)	($5.40)	SK	0.7696
2005	$18.84	$27.40	$23.42	($8.56)	($4.58)	SK	0.8259
2006	$19.57	$25.40	$23.42	($5.83)	($3.85)	SK	0.8817
2007	$19.94	$24.88	$14.22	($4.94)	$5.72	IA	0.9351
2008	$18.82	$21.06	$14.22	($2.24)	$4.60	IA	0.9431
Sources: Sask. Ministry of Agriculture, OMAFRA, IA State U.							

Fixed costs cover buildings primarily, as well as other costs spread over the entire production system. As with variable costs, the IA State data is not comparable prior to 2007, as their model was changed with new definitions as of January 2007. For 2007 and 2008, Saskatchewan fixed costs averaged $5 per head above Iowa, while several dollars under Ontario. Regarding fixed costs, Saskatchewan appears competitive in the Canadian context, while less so relative to the US Midwest.

Exhibit 130: Total Costs Comparison

Total Costs Comparison							
	Sask	Ontario	Iowa	Sask - Ont	Sask - IA	Advantage	Exchange
Year	C$/head		US$/head	$/head		Location	US$/Cdn$
2004	$132.02	$145.96	$112.34	($13.94)	$19.68	IA	0.7696
2005	$115.68	$134.90	$101.15	($19.22)	$14.53	IA	0.8259
2006	$123.59	$134.23	$102.45	($10.64)	$21.14	IA	0.8817
2007	$145.34	$152.59	$127.01	($7.25)	$18.33	IA	0.9351
2008	$167.69	$167.47	$154.03	$0.22	$13.66	IA	0.9431
Sources: Sask. Ministry of Agriculture, OMAFRA, IA State U.							

Adding up total costs for farrow-finish production, Iowa has a clear lead in every year of the comparison. The average difference is $17.47 per hog; greater than the historical average margin, although the narrowest difference of $14 was in the most recent year. In the earlier years, Saskatchewan had a clear and large advantage in total costs to Ontario. According to these data, that advantage has evaporated by 2008. The shift in advantage was attributable almost entirely to relative feed costs.

Exhibit 131: Net Return Comparison

Net Return Comparison							
	Sask	Ontario	Iowa	Sask - Ont	Sask - IA	Advantage	Exchange
Year	C$/head		US$/head	$/head		Location	US$/Cdn$
2004	$19.12	$18.16	$23.28	$0.96	($4.16)	IA	0.7696
2005	$20.55	$14.44	$25.57	$6.11	($5.02)	IA	0.8259
2006	$1.60	-$2.30	$16.07	$3.90	($14.47)	IA	0.8817
2007	-$24.86	-$25.51	$3.14	$0.65	($28.00)	IA	0.9351
2008	-$43.24	-$39.31	-$21.53	($3.93)	($21.72)	IA	0.9431
Sources: Sask. Ministry of Agriculture, OMAFRA, IA State U.							

Finally, pulling all the revenue and costing data together in summary, net returns can be considered one measure of overall hog production competitiveness. Iowa is the most competitive location each year, even 2004 when the Canadian dollar averaged 77 cents US. The difference compared to Saskatchewan averaged $15 per head. Saskatchewan was more competitive than Ontario in four out of five years, but not in the most recent year.

Competitive Implications

Summing up all the data, one's conclusion might be that Saskatchewan is a pretty good place to raise a hog – especially in Canada. The US Midwest seems to be the preferred location overall – however, that might be tempered by differing productivity rates, as seen in Informa's 2006 analysis. In that case, Saskatchewan might be attractive for weaned pig production, with the Western Corn Belt still preferred for finishing operations. It should be noted that the US Midwest region cannot raise all the hogs in North America. Saskatchewan may not have an absolute cost advantage in the production of hogs but has the key inputs and other resources to be sustainably competitive and profitable. The data developed and cited in this section are utilized in the following competitive indexing methodology developed by Informa to evaluate livestock/meat supply chain competitiveness across geographic regions (both within North America as well as globally).

F. Competitive Score Card- Hogs and Pork-2009

Utilizing the competitive factor weighting and scoring system identified earlier in this document and applied to the Saskatchewan cattle and beef supply chain, the

study team conducted a similar competitiveness scoring process of the Saskatchewan hog and pork supply chain. The summary supply chain results are provided below along with more detailed scoring of major individual components of the hog and pork supply chain. While specific data was not available for all competitive factors across all geographic jurisdictions under review, the study team did provide a competitive scoring for the hog and pork sectors in neighboring provinces of Alberta and Manitoba as well as for Ontario and the US Corn Belt region (Iowa/southern Minnesota). As before, Saskatchewan is the base-point of reference for the competitive scoring with other geographical jurisdictions being rated either more competitive or less competitive than Saskatchewan across a broad range of factors. Based on the summary index scores, a competitive ranking of the different geographic areas is provided.

1. Hog & Pork Supply Chain

The hog and pork supply chain, while still complex in nature, is much less variable than the cattle and beef supply chain when it comes to the various factors that impact chain competitiveness. As shown in the chart following, the study team identified seven primary factors that were deemed as being of major importance to the competitiveness of the full supply chain. Each factor was assigned a relative factor weight with government policy and product quality having factor weights of 2, business climate and a social factors sub index having a factor weight of 3 while hog production costs, processing costs and exchange rate risk were all given a high factor weighting of 5. It should be noted that both the live hog cost of production and the processing costs are represented by sub index scoring the details of which are provided in subsequent charts in this section of the report.

The process of scoring the various sub indices and the overall supply chain index was similar to that used for the cattle and beef supply chain. Where available, quantitative measures developed in other sections of this report were used to guide individual matrix scores and where objective measures of the factor were not available, the study team utilized their extensive collective industry knowledge and years of industry experience to make relative judgment calls on one area relative to another with all comparative regions scored in relationship to Saskatchewan as the base or "Zero Line".

Exhibit 132: Hog and Pork Supply Chain Competitive Index - 2009

Factor Weight	2	2	3	3	5	5	5		
Region	Government Policy	Product Quality	Business Climate	Social Factors *	Processing Costs *	Exchange Rate Risk	Live COP *	Composite Pork Index	Rank
Alberta	1	0	1	-1	2	0	-2	2	4
Manitoba	-2	0	-1	-3	4	0	0	4	3
Corn Belt	0	-1	2	-1	5	-1	1	26	1
Ontario	0	0	0	-1	4	0	-1	12	2
SASKATCHEWAN				BASELINE "ZERO"			0		5

Competitive Importance
High (4-5)
Medium (3)
Low (1-2)
* = From Subindex

Driver Rankings
5 High Competitive Advantage
-5 High Competitive Disadvantage

In summary, all three of the comparative jurisdictions within Canada were scored as being slightly more competitive than the Saskatchewan industry when the entire hog and pork supply chain was evaluated. We would suggest that the differences between Alberta, Manitoba and Saskatchewan are relatively minor suggesting that the industry in Saskatchewan does have a viable future role to play in the western Canadian and broader North American hog industry. Of particular interest is the competitive scoring of live hog production. The scoring process indicates that Saskatchewan has a slight advantage over Ontario and an even stronger advantage over Alberta at this level of the supply chain and is about equal in competitiveness with Manitoba. From an overall supply chain perspective, the industry segment where Saskatchewan falls well short of the other geographic regions is in the processing area with the lack of primary slaughter and processing in the province a major detriment to overall supply chain costs and efficiencies.

The Saskatchewan pork supply chain is scored weak relative to Ontario as well as the US Corn Belt area. Not only does the US Corn Belt have modest advantages in terms of live hog costs of production, they also have strong advantages as it relates to slaughter and processing. Ontario has advantages as it relates to the slaughter and processing sector as well but their supply chain score is undermined to a modest degree by higher live animal costs and somewhat more burdensome costs associated with social factors (environment, etc.). Overall, the Saskatchewan hog and pork supply chain is ranked 5th most competitive of the five regions evaluated which certainly indicates there are

challenges at all levels of the supply chain to become more efficient and productive so that future growth in the industry will have a strong economic base from which to develop.

The findings above help in identifying key elements that are further developed in the SWOT analysis presented in a later section of this report. Certainly the lack of a commercial hog slaughter and processing operation in the province following the closure of the MLF operation in Saskatoon in 2007 creates significant hurdles for the Saskatchewan industry to overcome. At present, this lack of slaughter and primary processing is a supply chain weakness negatively impacting Saskatchewan's overall competitiveness. Longer term, it is possible for the industry to turn this weakness into an opportunity should a pro-business environment in the province along with an expanding production base attract new investment dollars. The investment required to build an efficient hog slaughter and processing operation is not trivial but new plants have been built both in Canada and the US but experience would suggest that to be successful, they have to be capable of processing 3-4 million hogs per year.

2. Live Hog Production Drivers

A competitive sub index was developed for the five geographic areas under review as it relates to the specific factors of importance to the competitiveness of the live hog production segment of the chain. As before, a series of competitive factors were identified; assigned a factor weight and then scored on a scale from -5 to +5 relative to the Saskatchewan industry. Factors were broken out on the basis of their competitive importance into high, medium and low factors as shown in the following chart. There are a multitude of factors that impact the competitive situation for live hog production and some but not all of these can be measured or quantified in some manner. Feed costs, for example, can be identified in terms of their impact and importance to live hog production costs. Hog productivity can have a huge impact on actual per unit costs of production and need to be accounted for as does disease status. The structure of the industry in terms of number and scale of production units will impact relative competitiveness as will the cost and availability of key inputs other than feed such as labour, energy, pharmaceuticals, etc.

Based on the research and analysis conducted as well as subjective input from the study team, it is the study team's conclusion that Saskatchewan fares exceptionally well in live hog production and particularly within Canada. The scoring index has Saskatchewan and Manitoba at the same level of competitiveness with both performing strongly as compared to either Alberta or Ontario. Alberta and Ontario are deemed to have competitive disadvantages to Saskatchewan in regards to labour availability and cost, disease status and feed costs although both score higher as it relates to industry and market structure. The US Corn Belt would appear to have modest cost of production advantages to

Saskatchewan and is the only geographic area under review that is rated above both Saskatchewan and Manitoba. Alberta scores as the "least" competitive in the live hog production index and is likely to slip even further over time. It should be noted that all of the factors identified in Exhibit 133 directly or indirectly impact live hog costs of production. It should also be noted that the live hog COP index values presented below are supported by the cost of production analysis gleaned from several different sources and presented in the previous section of this report. Bottom line, Saskatchewan holds its own in terms of resources and ability to competitively produce hogs. This is particularly true for the production of feeder pigs as previously discussed although some slippage does occur when taking the hogs through to market weight.

Exhibit 133: Live Hog Production Drivers - 2009

Factor Weight	1	2	3	3	5	5	5			
Region	*Land Base*	*Hog Weight*	*Labor Costs/Availability*	*Ind. & Market Structure*	*Disease Status*	*Feed Cost*	*Herd Productivity*		*Live Hog COP Index*	**Rank**
Alberta	-1	0	-2	1	-1	-1	-1	-2	-19	**5**
Manitoba	-1	0	0	2	-2	-1	2	0	0	**2**
Corn Belt	-2	2	1	4	-3	2	-1	1	7	**1**
Ontario	-2	0	-1	2	-2	-1	0	-1	-14	**4**
SASKATCHEWAN				**BASELINE "ZERO"**					**0**	**2**

Competitive Importance
- High (4-5)
- Medium (3)
- Low (1-2)
- Carried Forward

Driver Rankings
- 5 High Competitive Advantage
- -5 High Competitive Disadvantage

3. Packer/Processing Sector

A set of competitive factors was identified for the hog slaughter and pork processing segment of the supply chain and the results of the competitive scoring for this supply segment are provided in the following chart. As with the live hog production sub index, there are a multitude of factors that have a direct

impact on the competitiveness of the processing sector of the pork supply chain. Those factors are identified in the chart following and factor weights have once again been assigned to each of the identified competitiveness factors. Finally, each geographic region under review is scored on the +5 to -5 scale for each of the factors resulting in a competitive scoring index for this segment of the industry.

While Saskatchewan scored well at the live hog production level of the chain, it scores rather weak in the processing segment of the industry with much of that weakness associated with the lack of any commercial slaughter operations in the province at this point in time. As can be seen, all geographic jurisdictions in this evaluation have large positive scores relative to Saskatchewan which results in Saskatchewan ranking dead last in the index scoring. The initial conclusion that one could come to based on this evaluation of the processing sector is that Saskatchewan would benefit from putting in place slaughter and processing capacity as an aid to creating a sustainably profitable hog production sector. Putting in place new processing assets may be tempting but also needs to occur only if such an asset can meet a minimum threshold capacity so that processing inefficiencies due to a lack of scale can be avoided.

At present, an argument can be made that Saskatchewan producers are no worse off than prior to the closure of the Maple Leaf slaughter facility in Saskatoon as additional transportation costs to take market hogs to Alberta or Brandon have been partially or totally offset by the higher base price being paid particularly at the Brandon plant. There has been insufficient passage of time to make any definitive statements in this regard but the point to be made is that a cost efficient and competitive production sector does not totally depend upon the existence of a local slaughter outlet for hogs. Local slaughter is certainly a plus if the slaughter facility is cost efficient but if it is not, then existence of such a facility may be detrimental to overall supply chain competitiveness as plant inefficiencies would ultimately need to be passed back to the production sector resulting in a net back price to producers potentially lower than if the hogs were moved out of province to a more cost efficient harvesting operation..

Exhibit 134: Pork Processing Factors - 2009

PORK PROCESSING FACTORS - 2009

Factor Weight	1	2	2	3	5	5	5			
Region	Carcass Weights	Ind. & Market Structure	Transportation/Logistics	Further Processing	Labor Costs/Availability	Economies of Scale + Line Speed	Technology		Processing Sector Index	**Rank**
Alberta	0	2	1	2	-2	2	1	2	17	**4**
Manitoba	0	3	2	2	-1	4	1	4	36	**3**
Corn Belt	3	5	4	5	1	4	1	7	66	**1**
Ontario	0	3	3	5	-1	2	1	4	37	**2**
SASKATCHEWAN				**BASELINE "ZERO"**					**0**	**5**

Competitive Importance	High (4-5)	
	Medium (3)	
	Low (1-2)	
	Carried Forward	
Driver Rankings	5	High Competitive Advantage
	-5	High Competitive Disadvantage

In summary, the Saskatchewan industry as it is configured at this point in time is totally uncompetitive in the slaughter and processing sector primarily because this segment of the supply chain does not exist at a commercial level. The US Corn Belt scores well above any of the Canadian jurisdictions in terms of processing competitiveness and within Canada, the study team's evaluation is that Manitoba and Ontario are on a relatively level playing field with respect to this segment of the supply chain while Alberta lags but is certainly more competitively positioned than is Saskatchewan. The current status certainly points in the direction of potential opportunity for the industry within the province and does not necessarily preclude the hog production sector from being a long term viable livestock enterprise. There would appear to be the need for a detailed study regarding the economic feasibility of establishing a state of the art hog slaughter and processing facility within the province of Saskatchewan. Such a facility may prove to be a necessary investment to facilitate long term growth and sustainable profitability at the live hog production level of the supply chain.

4. Social Factors

The final grouping of competitive factors that the study team evaluated was those issues and factors that are tagged as being social factors. As can be seen in the

following chart, there are six factors that have been identified in this grouping ranging from MCOOL to animal ID/traceability, food safety, animal welfare and environmental and other regulatory requirements. As before, we have assigned a factor weight to each of these variables based on the study team's assessment of the factors relative impact on competitiveness and then each region was scored again on the +5 to -5 digital scale.

Exhibit 135: Social Factors - 2009

Factor Weight	1	1	3	3	4	5			
Region	COOL (hog impact)	Other Regulations eg) antibiotic regs.	Animal ID/Traceability	Food Safety	Animal Welfare	Environmental Regulations		Social Factor Index	Rank
Alberta	0	0	0	0	0	-2	-1	-10	3
Manitoba	-1	0	0	0	0	-5	-3	-26	5
Corn Belt	2	1	-1	0	-1	-2	-1	-14	4
Ontario	-1	0	0	-1	0	-1	-1	-9	2
SASKATCHEWAN			**BASELINE "ZERO"**					**0**	**1**

Competitive Importance	High (4-5)	
	Medium (3)	
	Low (1-2)	
	Carried Forward	
Driver Rankings	5	High Competitive Advantage
	-5	High Competitive Disadvantage

Based on the scoring process utilized, Saskatchewan comes out in a favorable position with respect to the competitive impact as aggregated into the social factor index. For many of the individual components of the social factor index, little or no distinction can be made between the various provinces under review. This leads to more zeros in the matrix than for any of the other matrices scored. The one area where Saskatchewan is deemed to have a competitive advantage over all other jurisdictions is in the area of environmental regulations and the economic/cost burden this puts on the pork supply chain. Manitoba scores poorly in this regard due to the current moratorium on new production while the other Canadian provinces also have less burdensome issues than in Manitoba as it relates to the environment. It should be noted that in all cases, the scoring of

each of the factors in the social factor index is qualitative in nature and based on the study team's knowledge and experience. In localized areas within each of these jurisdictions, the burden of the social factors may be higher or lower than for the jurisdiction in general. The purpose of creating this index is to bring recognition to the fact that governments and other institutions (both public and private) can bring about social pressures on the hog and pork supply chain that in turn does impact relative competitiveness of an area. The sum aggregate of the impacts of these factors falls well short of the economics associated with basic live hog production and/or processing but to ignore them would paint an incomplete picture of total supply chain competitiveness across regional boundaries.

VI. SWOT ANALYSIS

Based on the identification, evaluation and assessment of the competitive factors impacting the cattle/beef and hog/pork supply chains in North America, a SWOT analysis of the Saskatchewan cattle and hog supply chains was conducted by the Informa study team. A SWOT analysis, which stands for Strengths, Weaknesses, Opportunities, and Threats, is a framework for generating strategic alternatives from a situation analysis. The SWOT analysis is commonly used as an interpretative filter to reduce the information and findings made in the Factor analysis to a manageable quantity of key issues.

The SWOT analysis classifies the internal aspects of the Saskatchewan cattle and hog industries as strengths or weaknesses and the external situational factors as opportunities or threats.

> *Internal Analysis*: The internal analysis is a comprehensive evaluation of the internal environment's potential strengths and weaknesses. Strengths can serve as a foundation for building a competitive advantage, and weaknesses may hinder it.
>
> *External Analysis*: An opportunity is the chance to introduce a new product or service that can generate superior returns. Opportunities can arise when changes occur in the external environment. Many of these changes can be perceived as threats to the market position of existing products and may necessitate a change in product specifications or the development of new products in order for the industry to remain competitive.

By understanding these four aspects of its situation, an industry (whether cattle/beef or hog/pork) can better leverage its strengths, correct its weaknesses, capitalize on golden opportunities, and deter potentially devastating threats.

When formulating strategy, the interaction of the quadrants in the SWOT profile or Matrix becomes important. For example, the strengths can be leveraged to pursue opportunities and to avoid threats, and weaknesses might need to be overcome in order to successfully pursue opportunities.

The Saskatchewan cattle and hog industries have a better chance at developing a competitive advantage by identifying a fit between the industry's strengths and upcoming opportunities. In some cases, the industry or individual firms within the industry may overcome a weakness in order to prepare it to pursue a compelling opportunity.

Exhibit 136: SWOT Matrix

		Internal Analysis	
		Strengths	Weakness
External Analysis	Opportunities	S-O Strategies	W-O Strategies
	Threats	S-T Strategies	W-T Strategies

The interaction of the SWOT components can be summarized as follows:

S-O strategies: pursue opportunities that are a good fit to the industry's strengths.
W-O strategies overcome weaknesses to pursue opportunities.
S-T strategies identify ways that the industry can use its strengths to reduce its vulnerability to external threats.
W-T strategies establish a defensive plan to prevent the industry's weaknesses from making it highly susceptible to external threats.

It is recognized that subsequent to the issuing of this document, industry stakeholders in Saskatchewan will embark on the development of new and/or alternative industry strategies. It is not our intent to preempt this strategic effort but the following identification of the SWOT components is presented to provide a discussion list that is intended to assist in future strategy development within Saskatchewan.

A. Cattle and Beef Industry

Based on rather extensive industry profiling, desk research, industry interviews, competitive evaluations and study team experience and knowledge, a list of strengths; weaknesses; opportunities and threats were developed for the Saskatchewan cattle and beef supply chain. Many of the items identified in each component of the SWOT are self explanatory although a brief discussion is provided following the listing in each SWOT component to provide justification and explanation of the various factors and issues as needed.

1. Strengths

Saskatchewan has a relatively large and well developed cow/calf sector which has grown in size in response to some natural competitive features which provide underlying competitive strengths to this component of the cattle and beef supply chain. The primary strengths that the study team identified are listed below and it is the sum total of these key factors which positions the cow/calf and backgrounding segment of the Saskatchewan industry in a positive way relative to competing jurisdictions in both Canada and the United States.

1. Land – plentiful, relatively inexpensive
2. Feed Grains – supply, cost
3. Forage supply
4. Water supply
5. Management experience (cow/calf)
6. Applied research – veterinary college, VIDO, university, research stations, WBDC
7. Climate – fewer external parasites, hardy cattle
8. Low population – less environmental issues
9. Critical mass: 2nd largest cow herd in Canada (9th largest in combined US & Canada)

The cow/calf segment of the cattle and beef supply vertical tends to be highly dependent on the availability of competitively priced land for grazing and roughage production which in turn is somewhat dependent upon both natural and supplemental rainfall and water supply. Saskatchewan has a climate and land base well suited to cow/calf and backgrounding activities and in addition, tends to be a surplus producer of feed grains which assures both a sufficient and sustainable supply of grain for supplemental feeding at a cost that is competitive (or lower) than in most of parts of North America.

In addition to key input resources such as land, water, forage and grain, Saskatchewan also has competitive human resources for managing the beef cow herd and this human resource base is backed up by strong applied research and other support activities. While the climate in Saskatchewan can be extreme at times, these extreme conditions also foster an environment to reduced the incidence of external parasites and creates a hardiness in the cattle which positively impacts animal performance as the animal moves along the production chain. An identified strength of the cow/calf industry in Saskatchewan is that it has reached critical mass in terms of size (production volume) which indicates that the physical infrastructure to support cow/calf operations around the province is adequate to strong. In addition, the low human population of the province reduces the conflict between animal agriculture and various environmental issues such as water and air pollution.

2. Weaknesses

When evaluating the Saskatchewan cattle and beef supply chain focusing on supply chain weaknesses, most such factors that negatively impact competitiveness in the cattle industry within Saskatchewan tend to be factors that come into play up the supply chain from basic cow/calf production and backgrounding activities. Some overriding weaknesses that have an impact on the entire supply chain is the perception (real or otherwise) that wheat production in the province is "king" and all other agricultural based activities are of secondary importance. In addition to this, there would appear to be some competitive issues regarding both land and other taxes (such as PST on buildings/facilities and farm fuel tax differentials) that are weaknesses within the province relative to other jurisdictions. The study teams list of industry weaknesses are provided below.

1. Historic wheat is "king" mentality
2. Lack of packing/processing
3. Management experience (feedlot)
4. Climate – winter feeding, occasional drought
5. Market access
6. Lack of critical mass (feedlot)
7. Lack of effective risk management
8. Labour availability/cost
9. Land taxes
10. Other taxes – PST on building/facilities, farm fuel issues

At the feedlot level, many of the strengths that were identified for the cow/calf producer in terms of ample and low cost grain and roughage supplies certainly afford themselves at the feedlot level but climate (extremes in winter temperatures); lack of critical mass in terms of feedlot capacity and scale deficiencies on existing operations; concerns about management experience/expertise (less time in the business) both in terms of physical facility management as well as margin risk management all are considered as being weaknesses at the present time within Saskatchewan's cattle feeding sector. Market access is of concern to the study team and particularly as it relates to longer term requirements of Alberta slaughter and processing facilities as it relates to animal ID and associated animal traceability requirements. Given the lack of critical mass within the cattle feeding sector in Saskatchewan, there is little reason to believe that local slaughter/processing will come into being; at least over the next 3-5 years. This lack of slaughter within the province is a major weakness for the Saskatchewan supply chain as there is huge mutual dependence between feedlot success and access to an efficient processing operation. The two go hand in hand in most major feeding and processing regions of North America and without the slaughter component, the feedlot component is at a distinct disadvantage. Sales values to more distant slaughter

plants will reflect higher transportation and shrink costs and consequently, those feeding areas tend to be the lowest revenue areas and without scale of operations, higher cost of production areas as well. In an environment where pennies count, a dual disadvantage such as exists in Saskatchewan as it relates to cattle feeding and the lack of slaughter presence is a major weakness that may be difficult or impossible to overcome.

3. Opportunities

During the process of conducting research and analysis on the Saskatchewan cattle and beef industry and subsequent to the competitive analysis that was performed on the Saskatchewan industry vis-à-vis other geographic jurisdictions, the study team was able to identify some distinct opportunities for the Saskatchewan cattle industry. Some of these opportunities build upon the strengths identified for the industry to solidify the positive competitive aspects of the industry while other opportunities flow from identification of weaknesses in the industry that can be changed and/or improved to enhance the industry's long term competitiveness. Following is a list of specific opportunities along with a brief discussion of each.

a) Increase development of irrigation

Two of the primary resource factors that were identified as being critical to Saskatchewan's status as a producer of abundant and relatively low cost forage products were land and water. Due to the relatively arid climate in many parts of Saskatchewan, enhancement of irrigation for grain and forage production should be pursued where economically viable. It was determined that Saskatchewan is highly competitive in the cow/calf and backgrounding segments of the cattle industry and efforts to enhance that competitiveness would seem to be desirable

b) Backgrounding

Due to the available supply of resources for the backgrounding of calves and yearlings, efforts should be made to further improve the efficiencies and productivity of this phase of the production system. Building upon a substantial knowledge base by established operators in this segment of the industry, efforts could be extended to link more of this activity with others in the supply chain to meet specific product attributes that could enhance value creation on those cattle as they move through the feeding and processing stages of production. Animal identification for age verification and other traceability needs should be encouraged.

c) Improve herd productivity

Saskatchewan ranks rather well in terms of overall cow herd productivity but efforts should persist to consistently improve breeding performance, calving percentages, death loss and ultimately the amount of pounds weaned per breeding cow. It goes without saying that top producers with the lowest costs of production are those that achieve the highest and most profitable productivity of the herd. Producers should be constantly looking at ways of improving their relative cost position not only within Saskatchewan or western Canada but in comparison to the US as well.

d) Age verification/traceability

One of the clear strengths that exists in Canada relative to the US is the fact that animal identification is well advanced in Canada which does allow for advantages as it relates to animal age verification and traceability whether for animal disease or food safety purposes. Saskatchewan does lag Alberta (and even British Columbia) in embracing animal ID but there is an opportunity for the industry to catch up quickly. The ability and commitment of the Saskatchewan industry to embrace animal ID provides opportunity if done now but reluctance to do so could quickly turn this factor into a threat to the industry.

e) DDGS availability vs. Alberta &Manitoba

DDGS are an attractive alternative feed stock for livestock and tend to be priced at a discount to grains on an energy equivalent basis while at the same time, providing a protein source to the diet. With the current and expected expansion of the ethanol industry across the Prairie Provinces to meet mandated requirements, the production of DDGS will increase. Potential production in Saskatchewan in comparison to livestock inventories would put the province at a comparative advantage relative to Alberta and Manitoba. With a higher potential inclusion rate in bovine diets, the cattle sector would have greater prospects for usage of DDGS in comparison to the hog sector.

f) Grain variety development

For the cattle and hog production sectors in Saskatchewan to maintain a high level of industry competitiveness, individual operations need ready access to a large and competitively priced supply of feed grains and roughage. To assure

this supply availability over the long term, production of such feed stocks need to be competitive and this is typically determined by the yield potential of the crop relative to other cropping alternatives. Research efforts need to be focused on producing high yielding and hence, lower cost per acre barley and/or other feed grain crops. The industry should be working cooperatively with other agricultural interests in bringing this about with the contribution likely to be in the form of research dollars partially or wholly derived from check-off contributions.

4. Threats

Threats to an industry such as the Saskatchewan cattle and beef industry tend to be related to factors exogenous to the stakeholder's ability to control their outcome or impact. Some threats, however, exist because of inaction on the part of industry to deal with a problem or an issue. Such threats need to be addressed when they are still only potential issues rather than waiting and having to react to what might be a highly negative circumstance.

Following is a list of several threats to the Saskatchewan cattle and beef industry that the study team has identified. Each presents its own specific challenges ranging from being highly proactive to neutralize the threat (such as ALMA requirements) while others are already impacting the industry and being dealt with in one fashion or another (such as MCOOL). A brief discussion of each threat follows:

a) Exchange rate fluctuations

Exchange rate fluctuations can have a huge impact on supply chain profitability as product pricing tends to be set in the US market while cost factors tend to be set in the local Canadian market. Impact is on the Canadian industry's ability to compete in the export markets and particularly for that product moving directly into the US. Hedging of exchange rate risk can be done but typically is not.

b) MCOOL

MCOOL in the US has now been implemented and despite the easing of labeling rules from initial requirements, MCOOL does have an ongoing threat to the Saskatchewan and broader Canadian cattle and beef industry. The impact is primarily reflected through weaker basis levels (deeper discounts to US prices) and actual market access. The integrated nature of the North American cattle and beef industry creates a differentiated cost structure as it relates to non US product flowing through the US marketing chain. The added cost burden to the US industry for segregating and identifying fresh beef products moving through retail does threaten the profitability and ultimately, the size of the Canadian

industry and Saskatchewan is certainly not immune to these impacts in any manner.

c) Government support in other jurisdictions

Every political jurisdiction has the potential of creating threats to an industry's competitive position as preferential taxes or industry subsidies can benefit one region relative to another. While one might consider the ALMA program initiated in Alberta as a threat to the Saskatchewan industry, history would suggest that it is a long and costly process to try and subsidize an industry into a position of growth and prosperity. Typically subsidies will delay the inevitable adjustments and monies spent should be focused on facilitating change rather than impeding change. In the short run, however, government subsidies can create added financial pressure on non subsidized areas.

d) Biofuels – fuel vs. food/feed

It has been strongly argued that the move towards meeting larger and larger energy requirements through production of ethanol and other bio-fuels is a direct threat to other users of feed (corn/barley) and ultimately to the consumers of food. This is built upon the idea that crop production expansion cannot keep pace with the growth in grains for fuel which ultimately leads to permanently higher grain, meat and overall food prices. There is certainly a threat that a permanent shift upwards in grain demand will help sustain grain prices at higher levels than the pre-ethanol boom days but less of a threat that there will be insufficient supplies to satisfy grain demand for food, feed and fuel. The end result through higher costs of production is lower meat output than otherwise would be the case and lower meat output will only come about by an overall contraction in the size of the North American cattle herd. Being a low cost producer of calves does create a level of sustainability and Saskatchewan is well positioned in that regard.

e) Trade disruptions (disease, phytosanitary, protectionism)

The threat of trade disruptions is a highly destabilizing factor for the Canadian industry in general. When a country is highly dependent upon the exportation of cattle and beef which is the case in Canada, along with this dependence comes trade vulnerability. That lesson was hammered home with the discovery of BSE in Alberta in 2003 which effectively shut the Canadian beef industry out of their export markets. The Saskatchewan cattle producer will perpetually be at risk to further trade disruptions which could have huge negative price impacts.

f) Increasing regulatory costs

A threat to cattle producers in virtually all North American jurisdictions is added cost burdens associated with increased regulatory activity in the industry. Since there is a certain amount of regulatory distinction between provinces, the specific threat to Saskatchewan producers would be in having provincial or local authorities create more burdensome environmental or animal disease requirements than in other provinces or in the US. Having a pro-business provincial government that recognizes what regulations can do to an industry's competitiveness should be encouraged.

g) Declining herds

A major threat to the Saskatchewan cattle industry is the potential need for a downsizing of the North American cattle and beef herd due to higher costs and overall weaker demand for end products. The specific threat to Saskatchewan would be the liquidation of a sufficient number of producers that the business infrastructure around the cattle industry starts to shut down.

h) ALMA requirements

While there is still a level of uncertainty regarding specific animal ID and other requirements for the cattle industry in Alberta, the potential does exist that Saskatchewan producers will need to match or exceed the requirements placed on Alberta producers in order to gain access to feedlots in southern Alberta. Stringent animal ID and/or alternative age verification requirements could create market access issues forcing Saskatchewan cattle east or south for feeding. Neither of these alternatives is very attractive.

i) Recession – demand constraint

Recession is not a threat (at least in the US) but has become a reality and while Canada's economy is holding up well as compared to the US, there is a threat that the economic meltdown in the US will eventually drag Canada down as well. This does create a threat as it relates to beef demand which in turn creates a threat to cattle and beef prices in the short to intermediate term. With Canada so highly dependent upon export market and with MCOOL as a complicating factor, producer's margins in Saskatchewan are at risk as revenues from calf sales could be overly depressed for 1-3 years relative to the cost structure that currently exists.

B. Hog & Pork Industry

As was the case with the cattle and beef industry, the Informa project team utilized information gathered and generated during the research and analytic part of this study and blended that with intelligence gathered through interviews with hog and pork industry stakeholders both in Saskatchewan and neighboring provinces of western Canada. This collective information was mixed with the knowledge and experience of the study team to conduct a SWOT of the Saskatchewan hog and pork industry. Readers will find that some of the key factors that manifest themselves in strengths for the Saskatchewan cattle industry play a similar role in the hog and pork industry. Following is a listing and discussion of the strengths, weaknesses, opportunities and threats for the Saskatchewan hog and pork supply chain.

1. Strengths

Strengths in the Saskatchewan pork industry tend to be found almost exclusively at the live hog production level of the supply chain as the Saskatchewan pork industry is virtually void of any commercial activity at the slaughter/first stage processing level while second stage processing tends to be rather modest as well. Accepting this current reality is a first step in dealing with a longer term strategy for the industry as the focal point of any strategic effort needs to be on live animal production; at least initially. If there exist economically compelling reasons for the emergence of a commercial slaughter and processing sector with sufficient scale to be competitive with neighboring geographic jurisdictions, so in lies the second tier of industry strategy development.

For the live hog production segment of the Saskatchewan hog industry, the primary strengths for the industry are the existence of a large and arable land mass at relatively low cost. In addition, there are few concerns within the province as it relates to water supply and in fact, the relative abundance of water creates a long term competitive advantage for the province as it relates to the production of feed grains and oilseeds. Feed costs are one of the most important factors impacting the profitability of raising hogs and Saskatchewan has the core resources to be well positioned on feed costs well into the future. If competitive feed costs (including by-products from an expanding ethanol industry) can be linked up with above average sow herd productivity, then the Saskatchewan hog production sector can have a highly competitive and exceptionally bright future.

It is the study team's assessment that there is average to above average management expertise within the Saskatchewan hog sector to consider this as being a strength for the industry. Data would not suggest that this excellent management capability has been fully leveraged into superior industry productivity so this suggests that an opportunity exists within the industry to be more productive and efficient through extended management efforts. Supportive of this potential is a strong array of institutional support through the vet college in

Saskatoon, VIDO, research stations, University research and extension, and the swine research centre which all contribute to an excellent portfolio of applied research in the province. In point form, the following are considered as being the primary strengths of the Saskatchewan swine industry.

1. Land – plentiful, relatively inexpensive
2. Feedgrains – adequate supply, low relative cost
3. Management experience- good to excellent
4. Applied research – vet college, VIDO, university, research stations, Prairie Swine Centre, Western Beef Development Centre
5. Climate – low incidence of disease
6. Low population – less environmental issues

While abundant land is typically supportive of the ability to produce abundant supplies of feed grains and oilseeds for hog rations, the existence of plentiful land in combination with a low population and population density creates a very attractive location for raising hogs. Combine this with a relatively arid climate with climate extremes (especially extreme cold in the winter) and you have an environment that does not lend itself to insects or animal diseases. In addition, environmental issues are less threatening and tend to translate into lower cost burdens as it relates to facility permitting, water and air pollution, etc.

The strengths identified above for Saskatchewan played a strong positive role in the competitive index scoring of the live animal production segment of the hog and pork supply chain. They create a strong basic resource foundation for the industry and while there are weaknesses in the extended supply chain which will be discussed next, the industry is assessed as having sufficient strengths to support long term profitable growth in basic hog production. The challenge will be one of leveraging off these core strengths to improve competitiveness at other levels of the pork supply chain.

2. Weaknesses

While there are many, notable strengths within the Saskatchewan hog and pork industry, there are also some significant weaknesses in various segments of the supply chain that will take dedicated effort by industry stakeholders to mitigate or eliminate. These weaknesses are identified and discussed in this section and a point form list is provided below.

1. Historic wheat mentality
2. Lack of packing/processing
3. Government shareholder of large hog operation
4. Climate – increased facility and operating costs, occasional drought
5. Market access
6. Lack of critical mass

7. Lack of effective risk management
8. Labour availability/cost
9. Land taxes
10. Other taxes – PST on building/facilities, farm fuel issues

In the earlier cattle discussion, mention was made about the historical "wheat is king" mentality within the province. While we sense that this mentality is rapidly changing, it has had an adverse impact, historically, on other agricultural interests in the province; including the hog and pork sector.

Probably one of the most significant weaknesses that the industry now has is the lack of a commercial slaughter and processing sector. The recent closure of the Saskatoon slaughter facility how requires the movement of market hogs over longer distances to either Alberta or Manitoba. While there are few concerns about actual market access, Saskatchewan producers do experience higher transportation costs and associated shrink of the animals as they move over longer distances. Loss of a local pork raw material base also has negative impacts on second stage processors as they are forced to procure their raw materials from more distant locations adding to their procurement costs and negatively impacting their competitive position within western Canada.

During the interviews that the study team conducted, the issue of the government being a major shareholder in the largest hog production operation in the province was raised. This was seen as a weakness for the industry as concerns (real or perceived) exist regarding business motivation under such an ownership structure. There has been recent criticism in the Canadian press regarding the subsidy program that was recently announced by the Saskatchewan government to provide temporary support to cattle and hog producers. For the hog industry, this is seen as the government paying itself and if nothing else, creates a level of industry suspicion regarding the governments role in this hog production ownership.

While climate was listed as a strength for the Saskatchewan hog industry, it is also listed as a weakness in the sense that the extreme cold temperatures during winter do result in increased facility and operating costs. This weakness occurs more in relation to production locations in the US as most of western Canada experiences similar winter time extremes. Land taxes and other taxes are similarly identified as being industry weaknesses of a public nature and can be addressed in the context of change for the sake of improving the industries overall tax burden hence, reducing production costs. Labour availability and cost are also trouble spots for the industry and particularly as compared to costs in many competing US production regions.

Two other weaknesses were identified during the investigation of the industry. One relates to the contraction that is currently underway in the industry. The other relates to the ability of producers to effectively manage the market and financial risks they are exposed to. IF an industry loses critical mass, there is a tendency for that industry to further contract and sometimes disappear altogether. While this is not believed to be the case for the Saskatchewan hog production sector, loss of primary slaughter and processing was partially attributable to insufficient numbers of hogs to support a competitive slaughter operation. Now that Saskatoon is closed, replacement of that facility at a scale to be long term cost competitive is suspect. Without a local source of pork raw materials, other processing operations in the province might find it difficult to sustain their businesses at a profitable level.

For hog producers, huge swings in feed costs and hog revenues associated with extreme volatility in both grain and livestock markets creates challenging risk management issues. While there are opportunities to hedge both input costs and product sales using US based derivatives, there has been a lack of effective utilization of these tools which has placed significant burden on producers to weather extreme down turns in the hog market. Currency changes can either add to this burden or be partially to totally offsetting but in essence, the volatility creates market and financial uncertainty that impacts those entities providing credit to the industry.

3. Opportunities

During the course of this industry assessment, the study team was able to identify some strengths that if enhanced, will lead to an even stronger industry in the future. Most of these pertain to improvements that can be made in live hog production both as it relates to key inputs but also changes that can occur in productivity and production efficiencies. In point form following are the key opportunities identified by the study team.

1. Improve herd productivity
2. Farrowing vs. finishing
3. Genetics – herd health
4. DDG availability vs. AB &MB
5. Grain variety development
6. Manitoba moratorium

Due to excellent management and a strong applied research capability in the province, there is an opportunity for producers to improve their herd productivity. Productivity of the breeding herd is directly related to per unit costs of production. If sow herd turns can be increased and if pigs per litter or pigs produced per sow per year can be raised, unit costs in terms of cents per kilo or dollars per cwt. can

be lowered. Over the long run, low cost producers are the winners and Saskatchewan producers do hold the potential of attaining that status given the low cost structure as it relates to key inputs such as land and feed.

Cost of production data indicates that Saskatchewan producers are more cost competitive and efficient in the production of isoweans or feeder pigs than they are in generating margins through the finishing stages of production. Opportunities would seem to exist for Saskatchewan producers to focus on this stage of production while implementing changes that will improve their margin competitiveness on hog finishing as well. Distance from packers/processors was sited as the primary reason that Saskatchewan producers are less competitive on raising market hogs and this is a situation that won't be resolved anytime soon. Consequently, utilizing the best possible genetics and implementing best practices in managing herd health will result in a superior feeder animal for either local finishing or to supplement feeding operations in nearby regions.

The moratorium on new hog production facilities in Manitoba provides an opportunity to Saskatchewan hog producers who are not limited in putting in new facilities or expanding current operations. There are already indications that hogs that were once raised in Manitoba but fed in the US are being situated in Saskatchewan for feeding purposes and to supply the expanded slaughter capacity in Manitoba. The primary impetus behind this activity is the economic distortion and added supply chain costs created by the implementation of MCOOL in the US.

As was the situation described in the cattle evaluation, opportunities exist in the hog and pork sector as well as it relates to the utilization of DDGS and the development of new grain variety's in Canada that will increase crop yields and keep Canadian feed grain costs highly competitive with both other parts of western Canada as well as the US. Research dollars should be focused on this key input to the hog production sector as should R&D expenditures on DDG utilization in hog feeding and sow rations.

4. Threats

Many of the threats that were identified and discussed, pertaining to the Saskatchewan cattle and beef industry, are equally existent as it relates to the hog and pork supply chain in the Province. Following is the list of threats the study team identified for the pork sector.

1. Exchange rate fluctuations
2. MCOOL
3. Government support in other jurisdictions
4. Biofuels – fuel vs. food/feed

5. Trade disruptions (disease, phytosanitary, protectionism)
6. Increasing regulatory costs
7. Declining herds
8. ALMA requirements
9. Recession – demand constraint

Exchange rate fluctuations create margin uncertainty and can send false signals to the local market. A weak Canadian dollar back in the 1990's is identified as masking many shortcomings and competitive weaknesses in the Canadian cattle and hog industries and caution needs to be taken when designing and implementing industry strategies to make sure that such strategies are sustainable under wide ranging currency conditions. MCOOL is another external threat to the Saskatchewan hog industry and must be dealt with from both a micro as well as macro approach. Producers need to respond to the added costs of marketing feeder pigs and/or market hogs into the US market. Costs of participating in the US market will be higher and revenues will be lower all leading to a weakening of the hog basis in Saskatchewan. On a macro level, the Federal Government will need to be proactive in protecting the letter of the law as it relates to NAFTA and success in this regard could lead to less restrictive labeling requirements within the US.

Other threats to the Saskatchewan hog and pork industry are listed above and each translates into either a potentially higher cost for the industry through increased burdens (such as regulatory costs) or creates market access restrictions (such as trade disruptions or implementation of ALMA restrictions in Alberta) or threatens the entire North American pork supply chain (the current recession). Of primary importance at this point in time is the global recession that is manifesting itself in a sharp decline in economic activity not only in key pork importing countries but in particular, in the US where negative GDP growth is now entering its third successive quarter. Magnifying the weakness in US economic activity is the financial turmoil that has been created by institutional failure in the US banking and mortgage industries exacerbated by instances of major investment fraud and a general lack of confidence in both Wall Street and the US Government. This situation is negatively impacting global pork demand which in turn is leading to a reduction in the hog herd not only in Canada and the US but in other parts of the world as well. Following the past two years of record high grain costs which pressured hog production margins, the pork industry is now being faced with declining demand which is extending cyclical margin losses well beyond the normal hog cycle situation.

In summary, there are a multitude of threats to the Saskatchewan hog and pork sector at the moment; some of them self induced; some of them driven by parochial or misguided policies of external jurisdictions and some of them due to tumultuous economic and market conditions. Adversity typically leads to

opportunities for those clever enough to identify and respond to emerging market and business conditions.

VII. ASSESSMENT OF ALBERTA LIVESTOCK AND MEAT STRATEGY[47]

A. Primary Features

On June 5, 2008, the Government of Alberta "unveiled a long-term strategy and investment of $356 million to stabilize and strengthen Alberta's livestock industry"[48]. The Alberta Livestock & Meat Strategy (ALMS) encompasses beef, pork, bison, cervidae, and sheep. The program provides for direct payments of $300 million to Alberta livestock producers in two installments. The first installment of $150 million was released shortly after the program announcement. The second payment of $150 million was to start in January 2009. There was a condition on the second payment that producers had to provide evidence that age verification and premise identification practices had been adopted. Further, industry and government are responsible for establishing an appropriate measure of success for tracing animal movement[49]. The payments are based on 2006 livestock information.

The strategy outlines eight priority initiatives to support major change in the livestock industry:

Shared Vision - Advance a shared vision for achieving a global competitive advantage;

Animal Health & Food Safety – Strengthen on a foundation of animal health, food safety and public health;

Alberta Livestock Information System – Invest in the enabling infrastructure required to support information exchange in the livestock supply chain;

Differentiation Initiatives – Create an environment and infrastructure to enable industry to meet customer needs and capture added value;

Marketing and Diversification Initiatives – Redirect and refocus government funds to improve marketing effectiveness and lower marketing risk. Align government R&D funding with the livestock & meat strategy.

[47] Saskatchewan Agriculture has a review of the strategy and its potential implications on Saskatchewan livestock producers in the document, Livestock Industry Review (August, 2008).
[48] http://alberta.ca/acn/200806/236915962D304-B91F-45D9-1E2802D0075952C0.html
[49] A target date of June 1, 2010 has been set for tracking cattle movement in Alberta.

Environmental Stewardship – Provide a platform for leadership in environmental stewardship in the livestock sector;

Cost Reduction and Regulatory Barriers Initiatives - Reduce costs, streamline processes and enable "smart regulations"; and

Industry Governance and Transition – Facilitate the transition of the livestock industry to enhance effectiveness.

Beyond the direct payments to producers, $56 million will be spent on the creation of the Alberta Meat and Livestock Agency (ALMA), including $40 million diverted from the budget of Alberta Agriculture. The purpose of the agency will be to "support the livestock industry with a focus on directing funds, resources and programs towards strategic priorities"[50].

Alberta Agriculture stated that input from several organizations had been received and considered in developing the strategy:

Agriculture Financial Services Corporation
Alberta Advanced Education and Technology
Alberta Agriculture and Rural Development
Alberta Agriculture Products Marketing Council
Alberta Beef Producers
Alberta Cattle Feeders Association
Alberta Energy
Alberta Prion Research Institute
Alberta Pork
Beef Initiative Group
Canada Pork International
Canadian Beef Breeds Council
Canadian Cattlemen's Association
Canadian Cattlemen's Market Development Council
Feeder Associations of Alberta
National Cattle Feeders' Association
Western Stock Growers Association

B. Implications to Saskatchewan

The $300 million ad hoc payments by the Government of Alberta to Alberta livestock producers is another in a long series of provincially funded programs over the last several years. The Alberta Crow Benefit Offset Program started in the mid 1980s was seen as being instrumental in the development of a strong

[50] http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/com12203/$FILE/AB_Livestock_Strategy_Public_Doc_June_9_2008_FINAL.pdf

feedlot sector in Alberta[51]. Beyond the joint Federal/Provincial support to cattle producers following the 2003 BSE incident, Alberta provided increased support to the province's industry in several separate programs[52]. While other provinces, including Saskatchewan, have provided intermittent support to livestock producers in times of unusual circumstances (abnormal market conditions, trade disruptions, weather, etc.), none have approached the magnitude of those provided by the province of Alberta. While Alberta does have the largest amount of cattle production, the dollars on a per head basis tend to outweigh programs in most other provinces. At times, producers in various regions of the country view these actions as a "battle of the treasuries", with Alberta tending to lend the most support to the livestock sectors.

The announcement of the Alberta Livestock and Meat Strategy was met with varied opinions from various individuals and organizations both within and outside of Alberta. While the cash payments would certainly be welcomed by many producers suffering from the increased feed costs and margin squeezes of the last couple of years, there was also some apprehension about the structure and intent of the strategy. In an open letter to producers, the Chairman of Alberta Beef Producers (ABP), concerns were raised regarding "the strategy is not market driven; that it is not directed by democratically chosen producers; that it includes significant additions to regulatory costs; ant that it creates duplication of jurisdiction among federal, provincial, and industry initiatives"[53].

Many producers have voiced concerns regarding the mandatory aspect of age verification and traceability requirements under ALMS. Questions have been raised regarding ownership of the data, who will have access to the data and what sort of controls producers may have on who accesses the data. As pointed out by Saskatchewan Agriculture in the Livestock Industry Review, the conditions for the second payment provide a "disincentive" to those who do not age verify their calves or provide premise ID. The "cash in pocket" offer from Alberta Agriculture has resulted in a significant proportion of the 2008 calf crop being age verified[54]. In other word, money talks, especially in difficult economic times.

There have also been questions raised about the role of the Alberta Livestock and Meat Agency. ALMA has a government appointed board of directors reporting to the Alberta Minister of Agriculture and a staff of approximately 10 people, with plans for increasing that number. ALMA has the potential of becoming a very powerful agency not only within Alberta but also within Canada. The main focus of ALMA will be in four areas – market development; innovation;

[51] http://www.hursh.ca/2007_10_01_archive.asp

[52] http://www.oag.ab.ca/?V_DOC_ID=875

[53] Alberta Beef Producers, July 30, 2008, http://www.albertabeef.org/res/final-alms-letter.pdf

[54] According to a news release by Alberta Agriculture on February 9, 2009, more than 83 percent of the 2008 provincial calf crop was age verified.

industry capacity; and capability development and supply chain development. Questions arise whether the broad mandate overlaps with some of the current responsibilities and authority of certain government agencies (especially within Alberta Agriculture) and some of the existing producer organizations. There are already a wide range of organizations and programs directed toward marketing, research, and supply chain development initiatives.

Another concern amongst producers and livestock organizations is the rumour that the handling and disposition of Alberta livestock check-off funds will be turned over to ALMA. This could have huge implications for various livestock organizations and marketing/research/development plans already in place.

Most regional and provincial livestock organizations agree that most major initiatives for the livestock industries need to be national in scope, particularly in areas of market access and international trade negotiations. There are some concerns that an attitude of "if it's good for the Alberta livestock industry, it's good for the Canadian industry" may develop, to the ultimate detriment to the industry in general.

On February 26, 2009, the Saskatchewan Minister of Agriculture announced a Saskatchewan Cattle and Hog Support Program to assist producers' immediate cash flow problems and help to retain their herds[55]. The program is estimated at $71 million and is based on a payment to cattle producers of $40 per head for all beef breeding cows and beef breeding heifers owned as of January 1, 2009. For hog producers, there will be a payment of $20 per market hog and $10 for all iso-weanlings, weanlings and feeder pigs produced between July 1, 2008 and January 31, 2009.

An obvious concern for Saskatchewan livestock producers is the ALMS requirement for age verification of Alberta cattle and, down the road, traceability of livestock movement. The question of whether this requirement will extend to cattle from other provinces or regions entering the province of Alberta is still not fully answered. However, it is probably only a matter of time before this becomes a requirement. This would a considerable impact on Saskatchewan cattle producers as a significant proportion of feeder cattle and slaughter cattle are shipped to Alberta. According to the Canadian Cattle Identification Agency, less than 20 percent of the calves on Saskatchewan farms on July 1, 2008 are age verified. British Columbia had a participation rate of 47 percent[56] in late December 2008 and more than 70 percent by the end of January 2009. The province provides an incentive of $12 per calf.

[55] http://www.agriculture.gov.sk.ca/Default.aspx?DN=5190b9c0-8e58-47a4-80ce-a4630b399653

[56] http://www2.news.gov.bc.ca/news_releases_2005-2009/2008AL0049-001927.htm

Alberta is the major destination for Saskatchewan cattle. Fulfilling the age verification and traceability requirements of ALMS would come at a cost (registration, record keeping, etc.) to Saskatchewan producers. The question remains whether there would be a premium provided in the marketplace to cover these added costs, or would there be discounts or refusals on cattle that are not age verified.

VIII. ADDITIONAL SUPPLY CHAIN ISSUES AND OPPORTUNITIES

A. Competitive strategies: branded programs, vertical coordination, traceability

Several branded meat programs have been developed over time in the US to deliver certain attributes that are attractive to consumers. There are more branded beef programs than pork programs[57]. There can be a host of criteria and specifications to try to differentiate the program product from commodity beef or pork, including genetics (breed), management practices, feeding systems, handling procedures, health management, quality assurances, age verification, source verification, just to name a few. USDA lists 51 branded beef programs with individual specifications[58] that the Agricultural Marketing Services has certified. Under the Export Verification program for Japan, there are 28 programs that include age verification and source verification of the cattle under Quality System Assessment programs[59].

> There has been much less activity in branded beef or pork programs in Canada. "…the percentage of total market share of beef marketed through branded beef programs in Canada is probably lower than in the U.S. given that the emergence of these programs has been slower in Canada. The slower emergence of these programs may help to explain part of the 15% difference between Canadian and U.S. demand, as consumers in Canada have less access to branded beef and consequently continue to consume other proteins."[60]

The demand for a product is a price/quantity relationship and should not be confused with consumption. Rising (or falling) consumption over time does not necessarily mean rising (or falling) demand. The consumption of a product is determined by a calculation of production plus imports minus exports, adjusted for changes in storage stocks. Finally, not all of the available quantity is actually

[57] This discussion is regarding fresh meat programs, not processed meats.

[58] http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateN&navID=BrandedBeefPrograms&rightNav1=BrandedBeefPrograms&topNav=&leftNav=CommodityAreas&page=BeefPrograms&resultType=&acct=lsstd

[59] http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRD3107505

[60] Brocklebank, Andrea M., "Supply Chain Coordination in the Canadian Beef Industry: Assessing the Opportunities and Constraints", Master's Thesis, Department of Agricultural Economics, University of Saskatchewan, October, 2004.

consumed, as there needs to be consideration for bones, fat, cooking losses, plate waste, etc. Use of the term disappearance is usually felt to be more appropriate. USDA estimated 2007 beef disappearance (retail weight equivalent) at 29.6 kgs per capita[61]. This compares to Statistics Canada estimate of 23.2 kgs per capita for Canada[62], or a difference of more than 20 percent less than in the US. Preliminary estimates for 2008 would be 28.5 kgs for the US (USDA) and 22.4 for Canada (Informa estimate), again a difference of more than 20 percent[63]. Per capita disappearance of pork and poultry is also less in Canada than in the US.

The heavy dependence on out-movement of Canadian product either into the US, Mexico or off shore has tended to limit the industry's efforts to effectively brand the product in order to capture a higher value for the meat. The focus has historically been on trying to be price/quality competitive with US packers in the commodity beef market and efforts to differentiate the Canadian product have not been high on the priority list of the two main Canadian packers (until recently both were US owned). The very recent change in ownership of the Brooks, AB plant to a Canadian-based company could lead to more efforts in developing branded beef programs and more opportunities for producers to get involved in vertically coordinated programs, as long as any such programs are demonstrably beneficial to producers and packer.

There are efforts underway to develop some solid branded beef programs in Canada, mostly by groups of individual producers. As well the Beef Information Centre is working with other industry groups to communicate the Canadian Beef Advantage[64] in order to tell "the story of why Canadian beef should be preferred by customers". The goal is that over time, the new brand identity will become a recognizable Canadian beef symbol identifiable anywhere in the world, promoting all the attributes of Canadian beef and cattle products. Part of this effort is a current pilot project on a cattle and beef information exchange system.

Besides genetic, management and quality attributes, branded beef programs are increasingly involving the concepts of age verification, source verification and traceability. The potential benefits of implementing any type of traceability system are derived from the interest of the participants of the cattle/beef chain: consumers, industry and government. Some of the more general benefits (i.e., potential sources of competitive advantage) include:

- Increased effectiveness of supply/herd management through the chain.
- Improved levels of food safety and prevention.

[61] http://www.ers.usda.gov/publications/ldp/2009/03Mar/ldpm177tables.xls

[62] Statistics Canada – "Cattle Statistics 2009", Catalogue no. 23-012-X

[63] Per capita beef disappearance in Canada rose in 2003 to the highest level since 1999 and has declined in recent years.

[64] http://www.canadianbeef.info/us/en/default.aspx

- Reduced market exposure and/or losses associated with a food safety incident because food safety or quality problems can be identified more quickly and precisely.
- Enhanced ability to differentiate and market cattle and beef with unique content and/or process attributes.
- Supports branding initiatives by increasing consumer confidence and providing an avenue for differentiation.
- Provide potentially better access to food safety sensitive markets such as Japan, South Korea, Hong Kong and the EU.

Of particular importance for Canada's cattle sector competitiveness are (i) the potential that traceability can provide a mechanism to add-value to cattle and beef through various market differentiation strategies and (ii) the potential to access and be more competitive in export markets that favor beef products that are traceable.
While other beef exporter countries such as Australia, Argentina or Brazil have also implemented various types of animal identification and traceability systems to enhance their export competitiveness, Canada is the only grain-fed cattle system with a functional and relatively successful national identification system.

1. Age Verification of Calves

The following table shows the statistics from the Canadian Cattle Identification Agency on the number of calves, by province, that have been age verified at the end of January 2009. Alberta had the largest percentage (75%) as calculated by a proportion of the July 1, 2008 inventory of calves on farms. In British Columbia, a little over 70 percent of the calves have been age verified. For most of the rest of the provinces, including Saskatchewan, the proportion is under 20 percent (except for Ontario at 28%). Both Alberta and BC have provided economic incentives to age verify the calf crop. In Alberta, age verification was a requirement to receive the second payment under the ALMS. In BC, the government provided $12 per calf for age verification (program administered by the BC Cattlemen's Association).

Exhibit 137: Age Verification of the 2008 Calf Crop
The chart below includes both dairy and beef calves

Region	Stats Canada- # of 2008 calves as of July 1, 08	# of 2008 calves AV'd in the CLTS as of Jan 31, 09	% of herd Age Verified
BC	270,000	193,450	71.65%
AB	2,002,000	1,497,253	74.79%
SK	1,346,000	245,407	18.23%
MB	575,000	105,013	18.26%
ON	498,200	141,648	28.43%

NB	23,900	4,577	19.15%
NS	28,600	4,565	15.96%
PE	19,300	3,477	18.02%
NL	2,600	191	7.35%
Canada	4,765,600	2,195,581	46.07%

Source: Canadian Cattle Identification Agency

According to a news release by Alberta Agriculture on February 9, 2009, more than 83 percent of the 2008 provincial calf crop was age verified[65]. The difference in numbers is due to slightly different methods of calculation.

2. Trade agreements and market access

With the entire Canadian beef and pork industries heavily dependent upon exports (live animals and meat), trade agreements and market access are very important to Saskatchewan livestock producers. International trade, including market access, comes under the venue of the federal government. Still, the implications of trade on livestock producers need to be communicated to the Government of Canada through the provincial governments assisting and prompting the relevant federal agencies and politicians on trade matters. As well, Saskatchewan livestock producers need to communicate their position, problems and opportunities to the provincial government and, ultimately, the federal government through regional/provincial livestock organizations, who should also be working in concert with the national livestock organizations.

[65] http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/com12521

IX. OBSERVATIONS AND CONCLUSIONS

The objective of this project was to conduct a detailed assessment and evaluation of the Saskatchewan cattle and hog industries with the principal deliverable being a fact based and objective determination of Saskatchewan's competitive positioning within the Western Canadian and broader North American beef and pork sectors. This assessment has required the development of industry profiles for both the cattle and hog sectors and then evaluations of a broad range of factors that impact each industries structure, conduct and performance.

Informa utilized a proprietary competitiveness evaluation system which the company developed to measure global competitiveness within the livestock, meat and poultry industries. This system requires the identification of competitive factors at all levels of a particular supply chain and then a system of placing relative weights to the various factors. Once these factor weights have been established, each geographic jurisdiction that is being evaluated is scored relative to the target jurisdiction; in this case the Saskatchewan cattle and hog supply chains. Scoring of the various factors utilized an array of numbers ranging from -5 for weak relative competitiveness to +5 for strong relative competitiveness with the outcome being an index value that reflects the ranking of the target region to competing geographic areas.

The study team utilized objective measures, where available, to come up with scoring values and where objective measures were not available or could not be developed, the team utilized their years of industry knowledge and experience to assign a value. For both the cattle and hog industries, competitiveness index values were determined for each of the jurisdictions under review and then ranked in comparison to the Saskatchewan industries reflecting a situation of either stronger or weaker competitiveness. Upon development of these competitiveness indices, the study team utilized this information along with information developed through desk research and extensive industry telephone interviews to conduct a SWOT analysis of both the Saskatchewan cattle/beef and hog/pork supply chains. The sum total of this entire analytic process is a set of conclusions and study team observations for consideration by appropriate stakeholders within the Province of Saskatchewan.

A. Cattle and Beef Industry

a. The province of Saskatchewan has a plentiful supply of key resources that serve the basic production of live cattle well. Abundant land attractively priced and suitable for cattle grazing and production of roughage exists as does adequate to abundant supplies of water.

b. Saskatchewan produces a large supply of both roughage and grain which results in average to below average feed costs for the industry.
c. Cattle producers in the province are assessed as having a strong competitive position within the North American market and this is particularly true at the cow/calf and backgrounding segments of the cattle and beef supply chain.
d. Producers have above average production management skills and are well supported by a strong applied research capability within the province. Skills in managing price and margin risk need to be enhanced.
e. Despite plentiful supplies of competitively priced feed grains, Saskatchewan lacks a commercially strong feedlot sector and those operations that exist lack scale to be as competitive as their neighbors in southern Alberta or in the US Midwest (Nebraska).
f. In addition to only modest cattle feeding activity, Saskatchewan is notably deficient in slaughter and processing capacity. This puts fed cattle prices in the province freight off southern Alberta and US prices creating a revenue disadvantage for producers at virtually every transaction level of the beef supply chain.
g. Deficiencies in both cattle feeding and cattle slaughter/processing weakens the overall Saskatchewan cattle and beef supply chain and subsequently inhibits the full growth potential of the live production segment of the industry.
h. Efforts need to be made to create an environment whereby Saskatchewan cattle producers can extend into up stream value added activities or become suppliers of calves and yearlings to meet specific attributes that will return a premium to the Saskatchewan producer.
i. If Saskatchewan is a low cost or near low cost producer of calves, then a weak selling basis can be overcome and net margins back to the producer can match or exceed competitors in other geographic areas. Any enhancement in live animal attributes such as age verification or traceability that can lead to the producer capturing a market premium should be pursued by all stakeholders in the Saskatchewan cattle and beef marketing chain as this creates an added value proposition for the entire industry both in terms of sales values but also in terms of expanding market access.

B. Hog and Pork Industry

a. The Saskatchewan hog and pork industry lacks sufficient absolute production volume and business scale to be highly competitive at each and every level of the supply chain. This is particularly the case at the slaughter/processing level of the supply chain to the point that this segment of the industry has been exiting the province.
b. While in-province slaughter capacity is clearly desirable, the goal should be to attract an investor with a proven industry track record and

developed markets, as opposed to producer investors or other new players lacking direct industry experience. Smaller packers focused on local retail markets are one possibility but such operations are typically high cost industry participants.

c. We are hesitant to suggest that construction of a new slaughter plant should be undertaken in the short run although at some point, when hog production numbers begin expanding once again, a detailed economic feasibility study for such a plant should be undertaken.
d. Given the choice between marketing hogs to a large scale highly efficient plant located outside the province's boundaries or an inefficient smaller scale plant within the province, most producers would be better off with the former, as the larger plant will be more likely to survive in the long term and will be able to afford to pay more for the hogs it requires.
e. Saskatchewan does have an acceptable climate for raising hogs and extremes in temperatures actually create an environment that is highly positive from a bio-security perspective.
f. The large land base in the province combined with a relatively small population creates a friendly production environment from an environmental perspective. Regions facing more populated and less arid climatic conditions suffer from the NIMBY factor—Not In My Back Yard.
g. The competitive assessment conducted indicates that Saskatchewan is highly competitive in the farrowing segment of the industry and has potential to be the absolute low cost producer in Canada if it can match sow herd productivity in Manitoba. This should be possible, particularly if Manitoba producers invest in the province directly.
h. Saskatchewan has the potential to become the preferred location for genetic seed stock production in North America, particularly for the top of the genetic pyramid.
i. Saskatchewan possesses plentiful supplies of relatively low cost grain and protein for hog feeding rations. This creates a natural advantage for the industry although rankings show that Saskatchewan at present, is not the low cost producer on full farrow to finish operations.
j. At or below the long term average exchange rate of 83 cents the Saskatchewan hog industry can survive and probably grow over time. But the industry remains vulnerable to prolonged periods of higher exchange rates, and will continue to struggle if a stronger dollar is what the future holds.

APPENDIX I

Summary of Producer Interviews

Unique features of Saskatchewan:

- plentiful supply of relatively inexpensive land
- large acreage of native and tame forage (land marginal for other uses)
- in most years, abundant supplies of feedgrain and forages
- many areas prone to early frost, more suited to growing forage or barley
- good genetics throughout Western Canada
- good animal health regime (climate, space)
- disease risk tends to be low
- small human population (tends to limit environmental concerns)
- province historically friendly to industry on environmental issues
- character of the people – willing to accept volatility
- most people only one or two generations removed from the farm (mindset can relate to agriculture and farming)
- Agriculture portfolio has tended to have some prestige among the populace and tends to be sought after by MLAs, particularly in comparison to several other areas of the country
- Prairie Swine Centre felt to be very useful/helpful to Saskatchewan hog producers (use of results from specific research projects)
- climate good most of the year for cattle feeding (winter can increase costs), less dust in summer, less mud in spring than other regions
- cattle well adapted to climate
- relative ease of expansion in comparison to other regions (no moratoriums)
- potential for growth in all sectors of cattle industry (cow/calf, backgrounding, feedlot)
- sale of Crown land to producers seen as plus

Impediments:

- financial difficulties, especially the equity drain in recent years (cattle and hogs)
- government risk management programs do not address wide swings in the market
- rising input costs to grain farmers is a concern
- US mandatory country of origin labeling and possible restrictions/discounts

- increased transportation for hog producers since Saskatoon plant closed
- mandated usage of ethanol – impact on feed costs
- neighbour to Alberta (battle of the treasuries)
- ALMA seen as potential threat
- labour situation in recent years (but a positive aspect is government receptive to foreign workers)
- proximity to packing plants – hogs go to Red Deer or Brandon or to the US; cattle go to Moose Jaw or out of province/country
- growing attitude of "not in my backyard", especially regarding hogs
- industry needs to rectify relationships with regulatory agencies/bodies
- regulations have heaped on costs to the cattle sector
- lingering effects of BSE issues
- very high land taxes (especially education portion)
- PST on building supplies
- farm fuel – custom operators have to use higher cost fuel
- Canadian dollar fluctuations
- need to gain/renew more market access
- cattle feeding segment not well developed
- lacking of slaughter/processing sector (both cattle and hogs)
- lacking in risk management programs that are meaningful
- current herd reductions of cattle and hogs – how to stop the slide

Opportunities:

- cattle feeding sector has big room for growth (backgrounding and finishing)
- increased use of irrigation to improve productivity and volume of feedstuffs
- once past current financial difficulties, should be opportunities to grow the cow herd
- government and input companies need to adjust practices and infrastructure to meet needs of larger units as well as the smaller producers (don't ignore various groups/sectors)
- need for small abattoirs to focus on specific types of hogs and markets
- need national type programs rather than provincial treasury against provincial treasury
- must view the forage base as a long term resource, provide incentives to keep land in forage and sustain the industry
- University and research centres can be partners in growth, providing research and technical expertise
- need to integrate with ethanol production – Saskatchewan can be leader in Canada
- work on development of Canadian branded beef program – sell it to Canadian and international customers

Role of Government:

- need for better dialogue – "not talking to producers", "producers losing faith, feel not listened to by government", "perception that government has abandoned livestock producers"
- get out and say the right things about the importance of livestock in Saskatchewan, then do the right actions
- need to make sure they're "shooting straight" with the industry
- tax concessions, especially education tax on land as well as sales tax on trucks and repairs used in farming, fuel, custom operators
- need to be more aggressive on trade issues (MCOOL, market access, etc.)
- promote free and open trade, better access to markets
- attitude on ad hoc programs ranged from "be wary of cash injections" to "need for short term help in the form of cash, not loans", plus "why were the feedlot guys left out"
- increase funding for more extension work from vet college and ag college
- more research to increase efficiency of livestock production
- research and promotion to develop branded beef program
- government needs to look ahead and consider what the treasury might look like in 10 years ("too much attention and emphasis on resources right now")
- better development of risk management programs
- need government involvement in development of long term strategies
- "government can't do it alone – industry can't do it alone