

Cow-Calf Sector in Crisis

A Report Conducted for



By

Rocky Lake Management
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Executive Summary

This paper examines the state of the Saskatchewan Cow/Calf industry and the difficulty it is currently experiencing due to low cattle prices. The paper evaluates the factors influencing the current low feeder calf prices and offers an examination as to their longevity.

The Saskatchewan cow-calf sector has endured considerable hardships in the past few years. Most notably being the BSE outbreak in 2004 that resulted in the closure of all export markets to the cattle industry. Though the borders have re-opened and cattle producers continue to explore innovative methods to market their cattle, increasing difficulties and market irregularities are eroding the viability of this extremely important industry.

With the removal of the freight rate caps in 1994 and then the Crow benefit in 1995 freight rates on grain increased from \$4.85/tonne in 1983 to \$42.00/tonne in 2007. The result of these higher freight rates has been a lower feed grain price in the prairies making it beneficial to add value to the feed grain by feeding it to cattle. A major rationale for the change in freight rate policy was to increase the value added activity in the prairies, especially in the livestock sector. During this same period the Canadian dollar depreciated against the U.S. dollar, giving Saskatchewan producers an advantage to their American counterparts.

Saskatchewan cattle producers responded to the changing market conditions by increasing the Saskatchewan cowherd to 1.5 million head, an increase of 719,000 head or 94% from the 1986 cowherd numbers. The increase in the size of the cowherd, resulted in an increase in land seeded to tame pasture with acreage increasing to 4.8 million acres in 2006: an increase of 2.7 million acres, or 123% from 1986. With the increase of area in tame pastures and native range it has reduced greenhouse gases, sequestered carbon, reduced soil erosion, improved wildlife habitat, water quality and reduced producer's dependence on government programs such as crop insurance. It also placed agriculture in a more positive environmental light through its greater contribution to mitigating greenhouse gases and the restoration of carbon to the soil.

The growth in the cattle industry that has been experienced in the last 20 years is now at risk of being lost due to recent developments. In the fall of 2007 calf prices had fallen by 26%, or \$35/cwt, from 2005 levels (postBSE) and 36%, or \$57/cwt, from 2002 levels (preBSE). The result for a cow-calf operator with 200 cows has been a drop in revenue of \$38,500 since 2005 and \$63,000 since 2000.

The paper examines 3 market influences and the impact they have had on the Saskatchewan industry.

The first market influence examined is the exchange rate and the rapid appreciation of the Canadian dollar to the U.S. dollar. The change in the value of the Canadian dollar has lowered steer calf prices by \$12.12/cwt compared to the same period in 2007. In the last

57 years, the Canadian dollar has only been greater than the U.S. dollar 12 times. While the past is not always a reflection of the future, at this point it may be premature to assume that the exchange rate will stabilize near current levels.

The second influence on the market is the rapid rise in feed grain prices due to world demand and supply condition and the growing ethanol industry, particularly in the United States. All feed grains are currently trading at record highs, reducing the profitability in the cattle feeding sector and affecting their ability to pay a higher price for feeder cattle. This paper concludes that while higher feed grain prices could be expected in the future, normal crop production Saskatchewan should restore its feed cost advantage relative to the U.S.

The third influence on the market that was examined is the United States Country of Origin Labeling (COOL) proposal, which is to come into effect on October 1, 2008. COOL is directed at retailers, wholesalers and packers, as they are the ones responsible and accountable for implementation. Retailers will have to determine the consumer demand for differentiated product and the cost of that product. The question is, do the consumers treat that product differently? Surveys and studies suggest that they do, which if true will require retailers to segregate the product on the shelf. Retailers are typically reluctant to provide shelf space for similar goods unless warranted by volumes. If this occurs, retailers will then not place orders for that product or will only sell it as specials.

The impact on Saskatchewan producers as the result of COOL will be similar to the impact that BSE had on the markets when the basis (Oklahoma-Saskatchewan) on feeder cattle increased by \$10/cwt to \$15/cwt. There is still uncertainty as to the impact COOL will have on Saskatchewan producers as the rules have not yet been published and COOL is still dependent on the 2007 Farm bill being passed.

The result of these three market influences has been a change in the basis between U.S. feeder calf prices and Canadian feeder calf prices, from a historical basis of -\$0.71 to the current basis of \$20.71/cwt. The result of a changing basis is a loss of revenue of \$22,781 to a Saskatchewan rancher with 200 cows. Combined with a lower exchange rate that same rancher's revenue will have dropped by \$39,325 compared to 2007.

The Saskatchewan cowherd has nearly doubled since 1986 to its current level of 1.48 million cows. The growth in the cow numbers has occurred on large farms where cattle are their main income source. In 2006, 15 percent of all farms accounted for over 50 percent of the cattle numbers. With the increase concentration of the cattle herd into fewer farms, it places the industry at greater risk to a major decline, if the industry is no longer profitable.

With the increase in the cowherd has come an increase in land put into tame hay or seeded pasture. Tame or seeded pasture acreage increased 2.6 million acres by 2006, with the acreage now at 4.8 million acres compared to only 2.2 million acres in 1976. In the past, both the federal and provincial governments have provided programs to protect fragile lands. For example: Economic and Regional Development Agreements, the

National Soil Conservation Program, Permanent Cover Program (PCP), Green Cover, Green Plan, etc. The rationale for such programs has been two-fold. First, the need to protect marginal lands and the benefit they provide to the public, and secondly to reduce government program costs as the result of marginal lands being in crop protection.

Past studies have found that the conservation reserve program in the United States resulted in significant carbon sequestration and other co-benefits such as a reduction in soil erosion, and improved wildlife habitat, water quality and landscape aesthetics. A federal government study estimated that the PCP generated carbon benefits with a value of \$72 to \$362 million.

A U.S. study reported that if the CRP had been designed with carbon sequestration as an objective it would sequester 4.14 million tons on 3.9 million acres. At a carbon value of \$15/ton, the value of carbon sequestration from grassland would be approximately \$15/acre.

The federal department of agriculture has estimated that the PCP reduced other government program costs by \$9.15 per enrolled acre. This may underestimate the reduction in government expenditures in that for the last 5 years the average government expenditure on crop insurance alone was \$7.38/enrolled acre. It would also be expected that grassland converted to crop land would have a above average crop insurance cost due to the marginal nature of the land which would be expected to have more variable production.

The current low calf prices are primarily the result of a higher value Canadian dollar, rising feed grain costs and increased border regulatory costs. This has resulted in a calf price 35% lower than what it would otherwise have been. Using cost of production numbers from Manitoba, rancher will be losing \$154/cow to \$253/cow at the current 2008 prices.

With grain prices at historical highs, combined with losses in the cow-calf sector, it is expected that without policy intervention cow numbers will decline, along with a reduction in grassland acres. It is not unrealistic to expect cow numbers to decline to the mid-1980's level of 700,000 head with a potential loss in grassland of 2.0 million acres.

The loss of the cow-calf sector will have a significant impact on the feeding/finishing sector and the loss of grassland will result in significant ecological damages. As well, the conversion of grass land to cultivated land will increase both levels of government costs for programs such as Crop Insurance, and the Business Risk Management programs. As well, the increase in cultivation, depending on farming practices could result in increased CO₂ emissions, and erosion and lower water quality.

The loss of grassland will erase the benefit of past government programs which spent millions of dollars to convert these fragile lands from cultivation into grassland.

What is uncertain from the analysis is whether the current market conditions are permanent and the cattle industry needs to make the necessary adjustments, or whether they are short term in nature, and market conditions will return to a more normal pattern.

With respect to the high Canadian dollar it is very unclear what the long-term direction the dollar will take. If the past were an indication of the future, one would expect the dollar to trade at a discount to the U.S. dollar.

The market has changed for the feed grains, the growing world demand and increased demand due to biofuels means that feed grains into the future will trade at a higher level. The major impact on the province isn't just the higher feed grain prices but the loss of its feed cost advantage over the U.S., as feed grains are relatively cheaper in the U.S. It is reasonable to expect that this advantage will return to Saskatchewan in the next few years.

With respect to the increase in the basis in general, and the increased costs due to BSE and COOL, policy it is difficult to predict where this will go in the future.

Given the uncertainty in the marketplace and the effort governments have put into preserving and converting fragile lands into grasslands it would be prudent for governments to put into place, policies which would prevent this detrimental conversion.

The paper proposed 5 policy options to be considered as possible solutions to halt the exodus of producers from the cow-calf sector and prevent the conversion of grassland back to cropland. These proposals are:

1. Grass Protection Payment of \$30/acre;
2. Changes to the Business Risk Management Programs;
3. Rollback of Community Pasture Rates;
4. Oppose Country of Origin Labeling; and,
5. Review of Regulatory Costs Associated with BSE.

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I. Introduction

The Saskatchewan cow-calf sector has experienced many hardships through the years. Most notably was BSE in 2004, which saw the loss of all export markets to the cattle industry. Though the borders have re-opened and cattle producers continue to explore innovative methods to market their cattle, increasing difficulties and market irregularities are eroding the viability of the industry.

With the removal of the freight rate caps in 1994 and then the Crow benefit in 1995 freight rates on grain increased from \$4.85/tonne in 1983 to \$42.00/tonne in 2007. The result of these higher freight rates has been a lower feed grain price in the prairies making it beneficial to add value to the feed grain by feeding it to cattle. A major rationale for the change in freight rate policy was to increase the value added activity in the prairies, especially in the livestock sector.

Saskatchewan cattle producers responded to the changing market conditions by increasing the Saskatchewan cowherd to 1.5 million head, an increase of 719,000 head or 94% from the 1986 cowherd numbers. The increase in the size of the cowherd, resulted in an increase in land seeded to tame pasture with acreage increasing to 4.8 million acres in 2006: an increase of 2.7 million acres, or 123% from 1986. With the increase acreage in tame pastures and native range it has reduced greenhouse gases, sequestered carbon, reduced soil erosion, improved wildlife habitat, improved water quality and reduced producer's dependence on government programs such as crop insurance. It also placed agriculture in a more positive environmental light through its greater contribution to mitigating green house gases and the restoration of carbon to the soil.

The growth in the Saskatchewan cattle industry in the last 20 years is now at risk of being lost with the recent developments in the cattle market place. By the fall of 2007, Saskatchewan calf prices had fallen by 26%, or \$35/ cwt, from 2005 levels (postBSE) and 36% or \$57/cwt from 2002 levels (preBSE). The deterioration in the cattle markets has been due to the rapid rise in the Canadian dollar and escalating feed grain prices due to the emerging ethanol and biofuel markets.

Future expectations for 2008 are for a continuation of the deteriorating market conditions, and if left unchecked, a significant loss to the cowherd and the conversion of grassland to cultivated or cropping land. This paper examines the factors that pressed the industry to this current point and what future conditions imply for the industry.

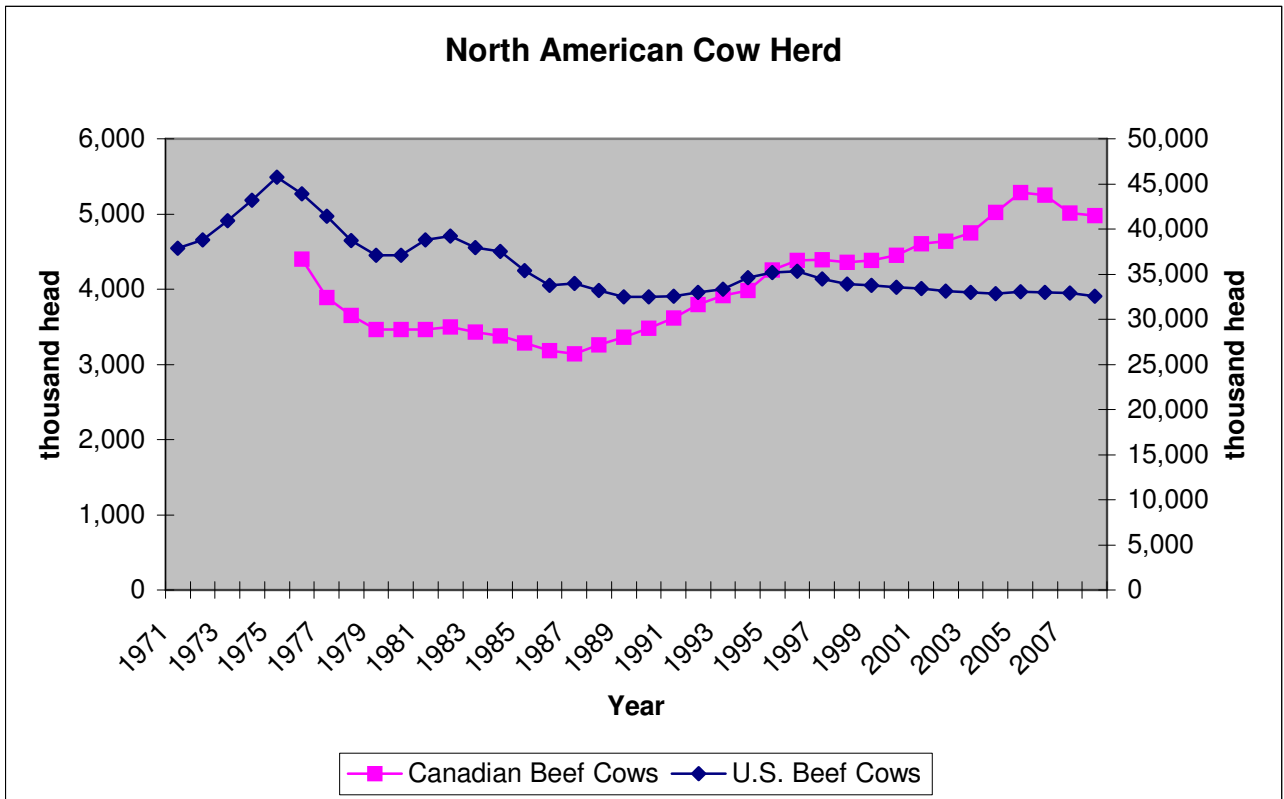
The paper concludes with 5 possible policy options, which would assist the cow-calf sector and prevent the large-scale conversion of grassland to cropland.

II. Historical Overview of the North American Cattle Market

Location of the North American Cow Herd

In North America the beef cowherd as of January 1, 2008 was 37.5 million head. Of that total approximately 5 million head is located in Canada. The Canadian cowherd followed the same trend as the United States herd up to 1995 and then began to grow relative to the United States herd.

The majority of the North American beef cowherd is located in the Great Plains region a predominately short grass-growing region.

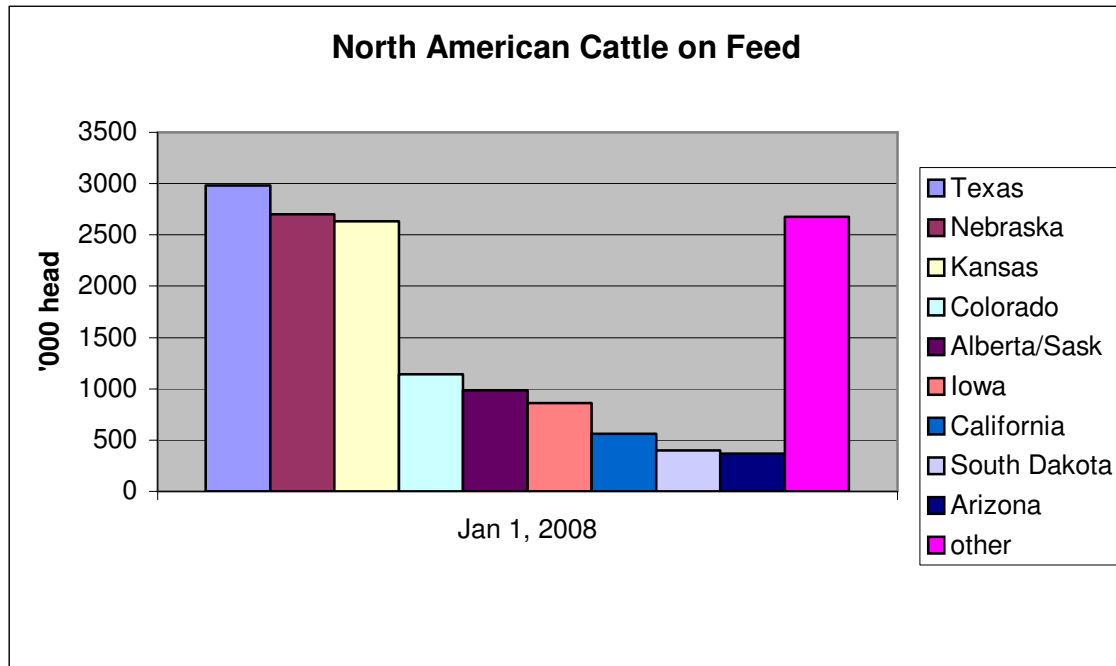


Source: CanFax & National Agricultural Statistics Service (NASS) United States Department of Agriculture (USDA)

The Saskatchewan beef cowherd was 1.48 million head as of January 1, 2008, which represented 4% of the North American beef cowherd and 30% of the Canadian beef cowherd. Saskatchewan ranks ninth in the top 10 regions for beef cow herd numbers in North America. The number one region for beef cow numbers is Texas; Alberta is the largest region in Canada for beef cow numbers at 2.0 million head and ranks fourth in North America. The top 10 regions account for 55 percent of the North American beef cowherd.

Cattle on Feed

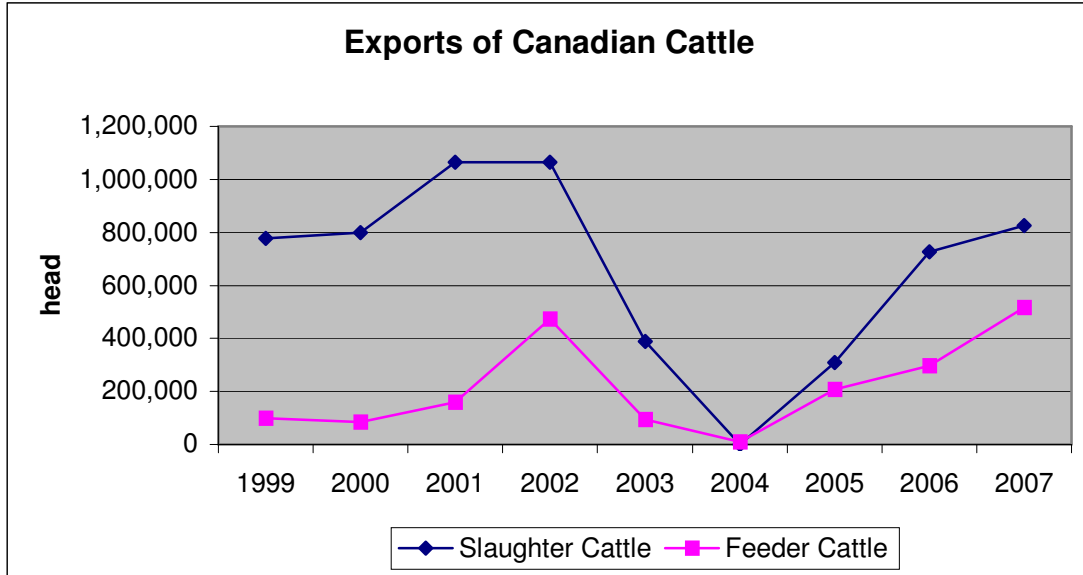
Texas and Nebraska are the #1 and #2 regions in North America for cattle feeding. The Alberta/Saskatchewan region ranks fifth for number of cattle on feed.



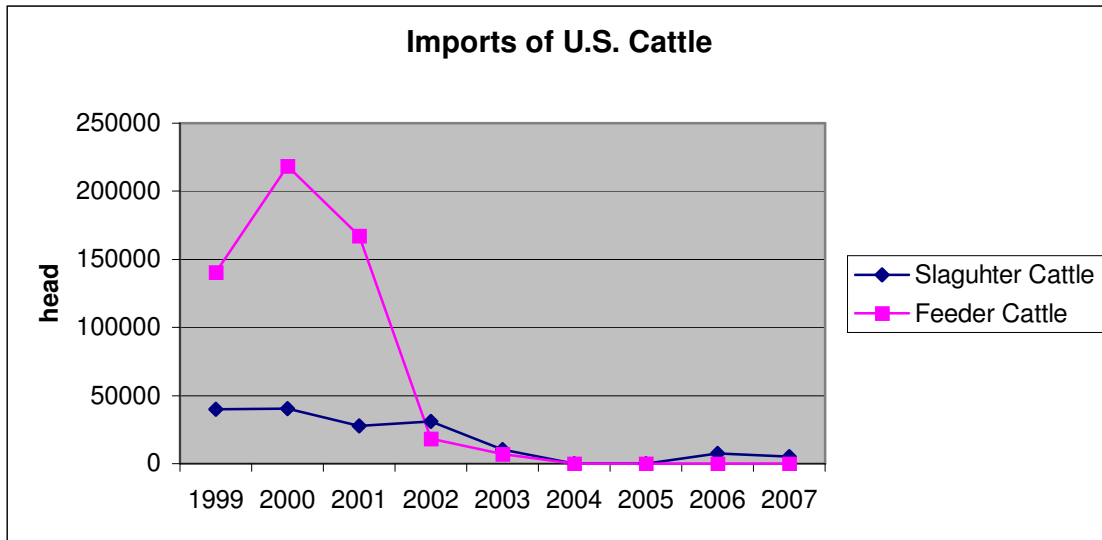
Source: CanFax and NASS

Trade

Trade in beef cattle between Canada and the United States in 2007 was predominately comprised of Canadian exports to the United States. Canada exported a record 516,103 feeder cattle and calves and 824,684 slaughter cattle to the United States in 2007. Canada only imported 29,940 of both classes of cattle in 2007. The last time feeder exports were in this range was in the drought year of 2002. Slaughter cattle exports pre-BSE were over 1,000,000 head and have not returned to that level since. Trade has been more balanced in the recent past. In 2000, Canada imported 343,876 head of both classes and exported 898,741 head.

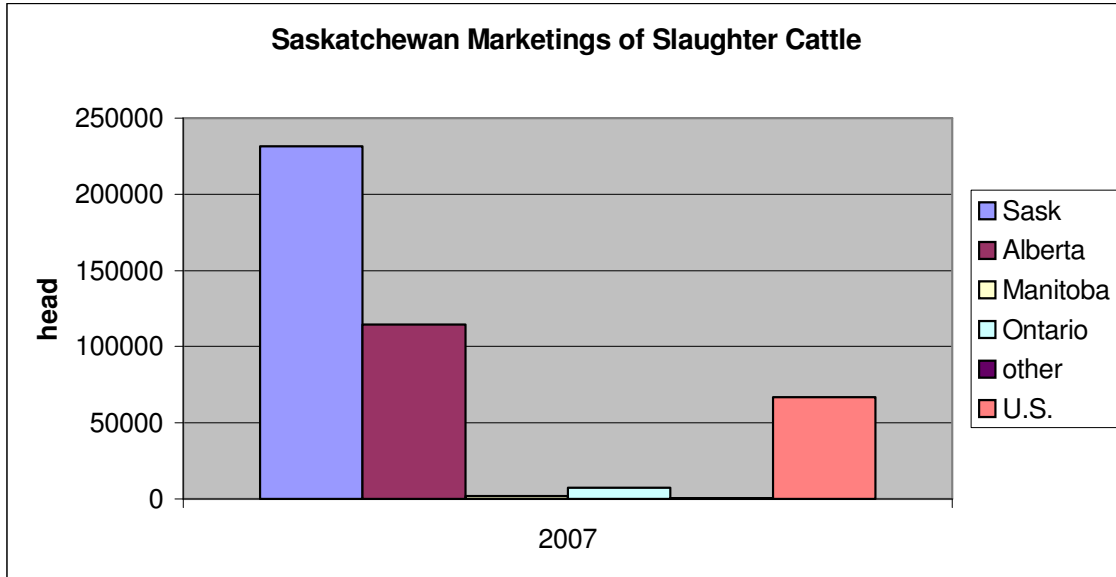


Source: Agriculture and Agri-Food Canada



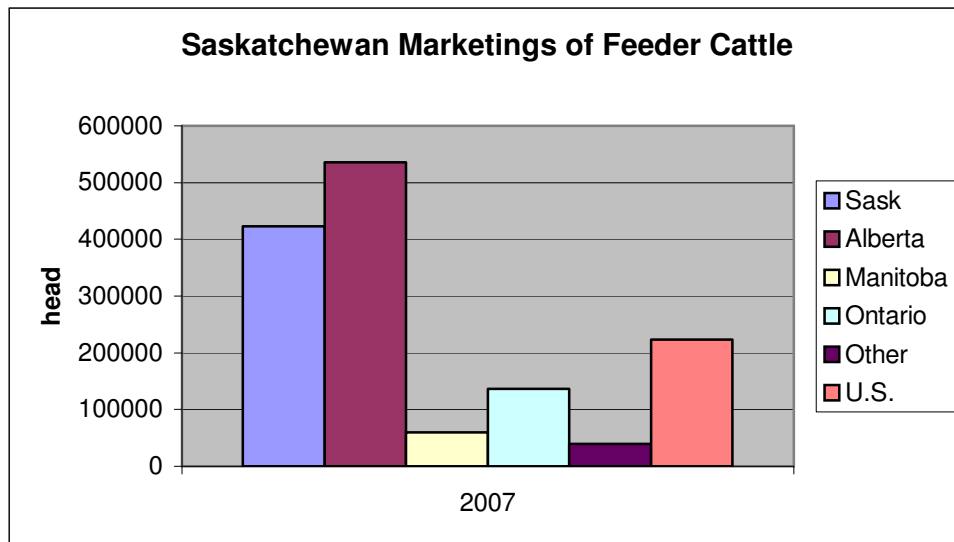
Source: Agriculture and Agri-Food Canada

In 2007, Saskatchewan producers marketed 422,770 head of slaughter cattle. The majority, (55%) stayed in the province with the remainder going to either Alberta, (27%) or the United States, (16)%.



Source: Saskatchewan Ministry of Agriculture

Saskatchewan producers marketed 1.42 million head of feeder cattle in 2007. Alberta was the largest recipient of Saskatchewan feeder cattle receiving 38%, with 30% staying in the province. The United States received 223,740 head of Saskatchewan feeder cattle, or 16% of the total Saskatchewan marketing's. Saskatchewan accounted for 43% of total Canadian exports to the United States.

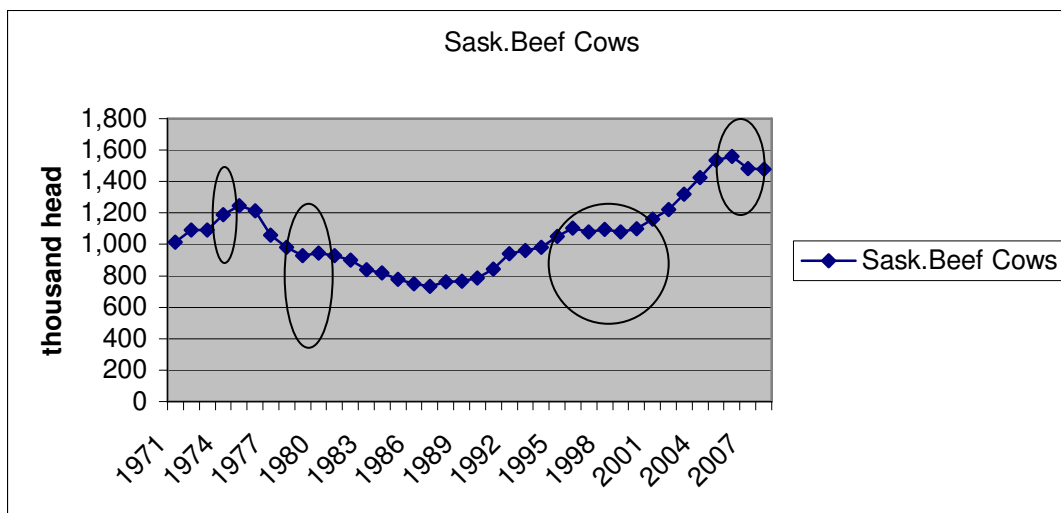


Source: Saskatchewan Ministry of Agriculture

Saskatchewan

In the 1970's, the Saskatchewan cowherd was around 1 million head. Through the 1970's and to the late 1980's the Saskatchewan cowherd mirrored the North American cowherd. There were 4 significant events that occurred to the beef market. Two of these events impacted on the whole North American industry, and two were unique to Canada and Saskatchewan.

The first event was extremely low grain prices in the 1960's and early 1970's, which made the cattle industry attractive relative to the grain sector. As a result the Saskatchewan herd grew from a million head in 1971 to 1.25 million head by 1976. The second event was the rapid rise in grain prices beginning in the 1973-74 crop year with wheat prices increasing more than \$100 per tonne. As the result of a return to profitability to the grain sector, the North American and the Saskatchewan beef herd began to shrink. In Saskatchewan the cowherd declined from 1.25 million head in 1976 to 761,000 head by 1986.



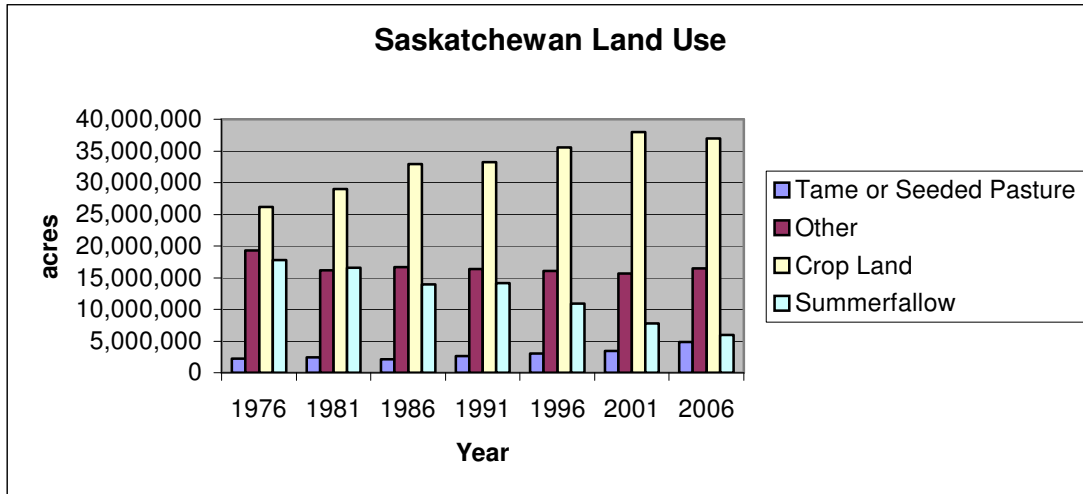
Source: Saskatchewan Ministry of Agriculture

The third significant event to occur to the Canadian industry was the change in the grain freight rate policy. Beginning in 1983 freight rates were capped and the railways were paid a "crow benefit" to cover the short fall. More significantly, the crow rate was abolished in 1995 and grain farmers had to pay the full freight rate without the benefit of the subsidy. The impact was to shift the comparative advantage away from an export oriented grain industry towards the value-added livestock.

The significance of this on the Saskatchewan industry can be readily observed in the above graph as the cowherd grew steadily beginning in the mid 1980's through to 2000's.

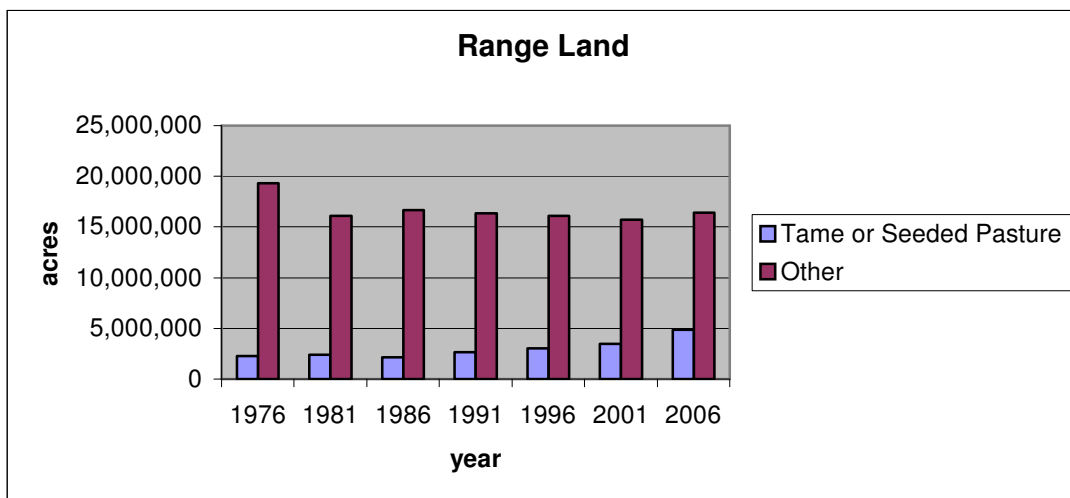
The fourth significant event was the discovery of a BSE infected cow on an Alberta farm in 2003. As a result of BSE, all export markets closed initially to the Canadian industry. As there were no markets for the animals, and producers tried to ride out the BSE impact, the Saskatchewan herd continued to grow.

The resulting growth in the Saskatchewan cattle industry brought significant changes to the provincial landscape. Tame or seeded pasture acreage increased by 2.6 million acres in 2006 with acreage at 4.8 million acres compared to only 2.2 million acres in 1976.



Source: Statistics Canada

As important as the growth in tame pasture acres, is the halting of the loss of native rangeland and other marginal land. In 1976 there was 19 million acres reported in this category, which was subsequently reduced to 15.7 million acres, by 2001. It appears though that this has stabilized with a slight increase in these acres to 16.4 million acres.



Source: Statistics Canada

In 1976, over 38,000 farms reported having beef cows on their farms. The average number of cows on a farm was 32 head. By 2006, the number of farms reporting beef cows was reduced to 19,738 but the average herd size had increased to 73 head.

A more interesting numbers to review is the concentration numbers for the industry. In 1976, 84% of the farms accounted for 50% of the total cattle numbers. These farms had 122 animals or fewer on their farm. The three largest groups of farms with a minimum of 273 animals represented only 3% of the cattle farms and accounted for 18 percent of the total animals. By 2006, these numbers have completely reversed themselves. The three largest categories of farms with a minimum of 273 animals represented 15% of all farms and accounted for over 50% of the cattle numbers. The three smallest categories of farms still represent a sizable number of farms at 60% which now account for only 20 percent of total cattle numbers.

Percentage Distribution of Farms by Size Class

# of Cattle on Farm	1976 %	2006 %
1-32	35.3	20.6
33-77	32.9	23.2
78-122	16.2	16.3
123 to 177	7.9	12.5
178 to 272	4.7	12.2
273 to 527	2.3	10.9
528 to 1127	0.6	3.5
1128 to 0.8	0.2	0.8

Source: Statistics Canada

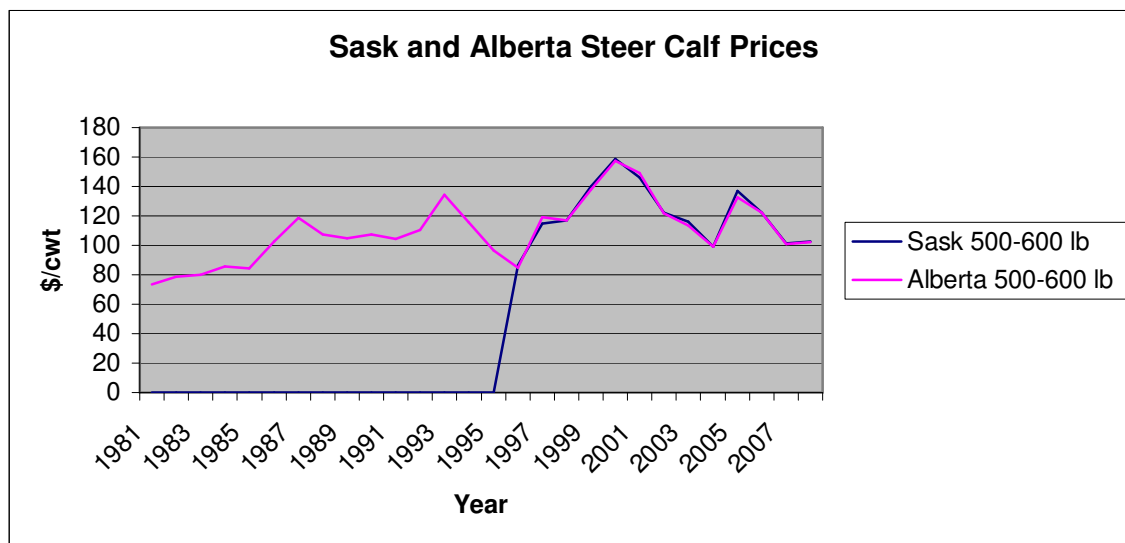
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78-122	21.2	10.0
123 to 177	15.7	11.6
178 to 272	13.8	16.7
273 to 527	11.1	25.0
528 to 1127	5.2	15.5
1128 to 0.8	1.9	11.4

Source: Statistics Canada

III. Current Situation

For the following analysis, Alberta 500-600 lb steer prices will be used due to the availability of a longer time series. As can be seen in the below chart Alberta and Saskatchewan prices are very similar.¹



Source: Canfax and Saskatchewan Ministry of Agriculture

Cattle prices have generally followed a 10-year cycle. In Canada, this at times has been muted by the Canada – U.S. exchange rate. In 1996 steer prices were \$84.60/cwt but began to increase peaking in 2001 at \$157.23/cwt. Prices dropped in 2002 to \$121.62/cwt primarily due to a significant drought in Western Canada, which saw the basis between the United States and Western Canada increase by close to \$14/cwt.

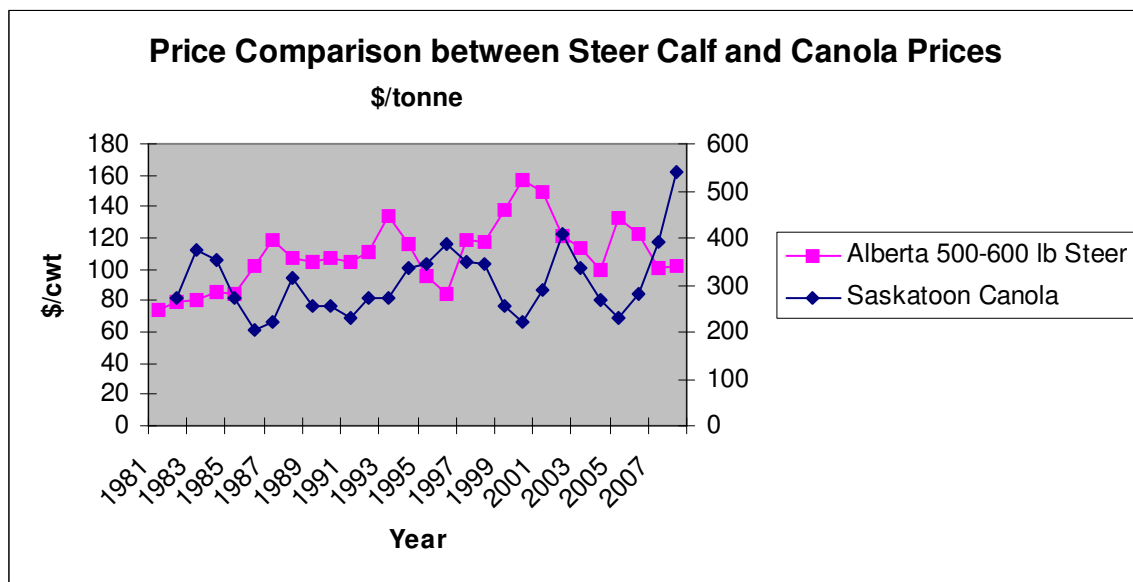
In 2003, BSE was found in an Alberta cow resulting in prices plummeting to a low of \$99.13/cwt, with a basis of \$46/cwt with the U.S. As Canada took the necessary steps to regain its trade status, prices did improve with steer prices returning to \$122.00/cwt in 2006. Since then prices have once again dropped to \$101/cwt as a result of the rapidly appreciating Canadian dollar and the rapidly increasing feed grain prices, which have eroded the feedlot margins.

A cow-calf operator with 200 cows has experienced a drop in expected revenue of \$38,500 since 2005 and \$63,000 since 2000. The typical cow-calf producer will be unable to withstand this sudden drop in their revenue, especially given that they have just come through the down market created by BSE.

¹ All prices used in the report are for the 39 week of the year unless otherwise stated. The exception is for 2008 the 15th week is used.

Manitoba department of agriculture estimated that in 2007 the typical cost per cow of a 250 head ranch would be \$642.90/cow without labour and \$741.90/cow with labour. Assuming a 95% calf crop and a 550 lb calf with prices at \$101/cwt for steers and \$86/cwt for heifers, the rancher would lose \$154/cow before labour and \$253/cow after labour. A rancher with 200 cows would run a loss of \$30,800 before labour and \$50,600 after labour given the current market situation.

While the cattle sector has been experiencing extreme losses, the grain sector has been undergoing resurgence due to growing world demand and the emergence of the biofuel sector. For example, #1 Canola basis Saskatoon in 2005 was worth \$231/tonne, currently it has doubled and today is worth \$540/tonne. With these relative prices, the cattle industry is in danger of losing grassland, as producers will be converting these lands back to crop producing land.



Source: CanFax and Saskatchewan Ministry of Agriculture

The Western Beef Development Centre in 2005 completed a study comparing growing grain to growing grass.² The study was done over the year 2000 to 2005. Over this period the land growing grass had an average return of \$23.46/acre while the grain land had an average return of only \$11.66/acre. Clearly, this is why in Saskatchewan we have seen tame grass production more than doubled. Using the last three years of data from this study and adjusting for today's prices and current fertilizer costs, one can see what the future may be in store for the cattle industry. Under this scenario the grass returns are \$48/acre (using 3 years instead of 6 years), but the grain returns have increased to over \$121/acre. Grain production had a margin that was \$72/acre greater than grass production. Clearly, if this scenario develops, grass lands will be converted to grain land and the cattle industry in Saskatchewan and Western Canada will diminish. This will have a significantly negative impact on the federal and provincial governments

² "From Grain to Grass- 6-Year Analysis", Kathy Lang, Western Beef Development Centre, July 2006

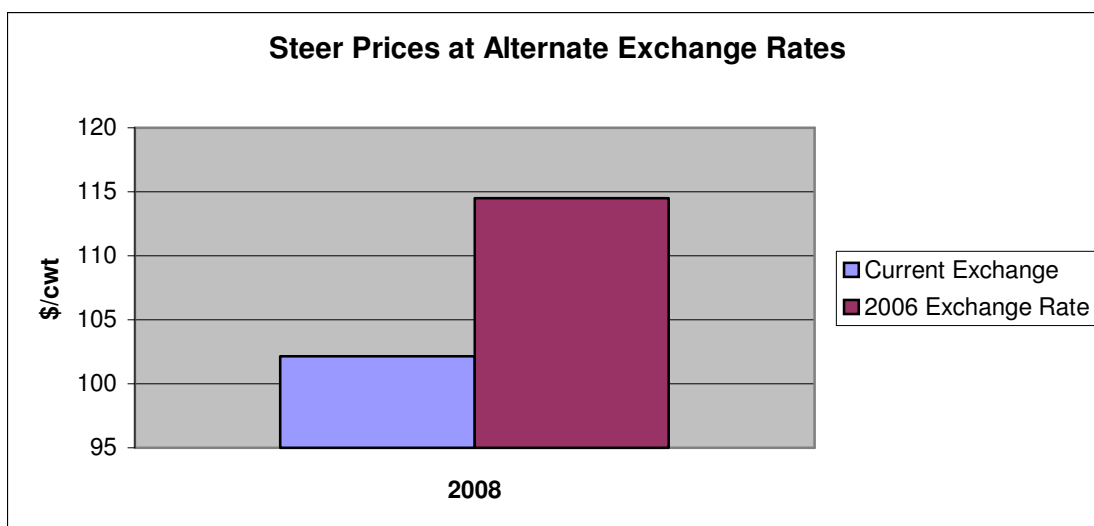
investment in land conversion over the past 5 years. Specifically, the Green Cover Canada program invested over \$100 million in land conversion and best management practices across the country, with most of the land conversion investments occurring in Saskatchewan and the prairies

IV. Market Influences

This section will look at why the Western Canadian cattle industry is experiencing such low prices and whether this is a permanent market shift, or a short-term market aberration.

1. Exchange Rates

Current steer prices in April, 2008 are \$102.22/cwt with a U.S./Canadian exchange rate of 0.9814. If the exchange rate were the same as the previous year, the steer price would be \$114.34/cwt, an improvement in price of \$12.12/cwt. For a rancher marketing 200 calves at a weight of 550 pounds this exchange rate change has resulted in a \$13,332 decline in their revenue.

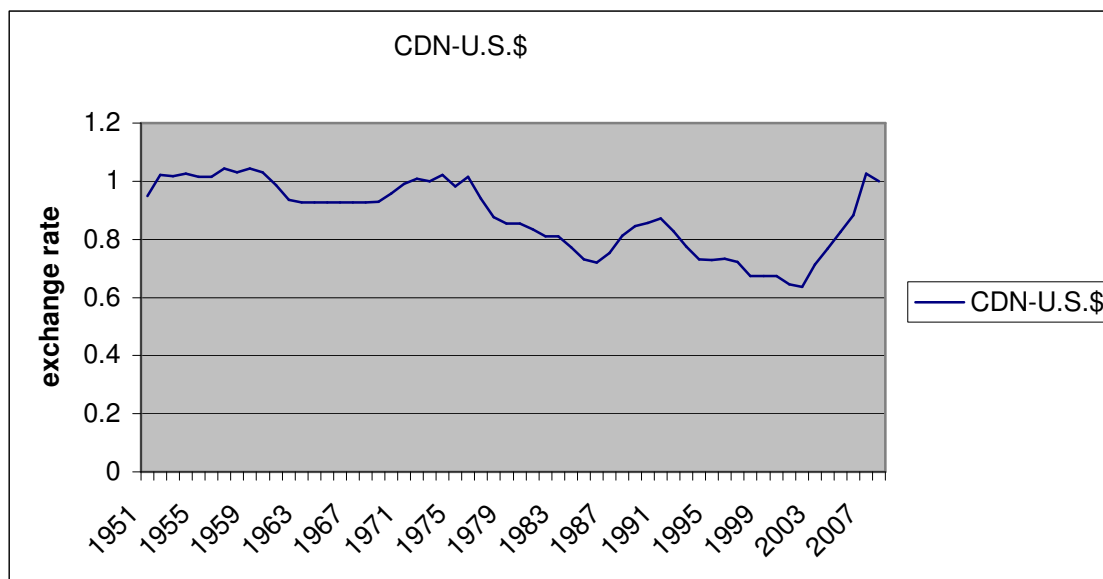


The change to the Canadian dollar has been rapid and, for the most part, unexpected. While it is beyond the scope of this paper to explore the intricacies of the currency market and to try and figure out future trends, a few comments will be made. The consensus appears to be that the Canadian dollar rise against the U.S. dollar is the result of strengthening commodity markets, a weakening U.S. economy, and differences in the respective countries monetary policy. The uncertainty rests with the question, “Is the Canadian dollar at par or greater to the U.S. the new reality and all industries must adjust,

or is this a short-term phenomenon, and the Canadian dollar will retreat to a more traditional level?”

If the past is any indication of the future, the Canadian dollar will at some point depreciate to the U.S. dollar. In the last 57 years the Canadian dollar has only been greater than the U.S. dollar 12 times. The last time the dollar was at current levels was in 1976. Following that year, the Canadian dollar began a sustained period of depreciation to the U.S. dollar. The only significant period of the Canadian dollar trading above the U.S. dollar was period beginning in 1952 through to 1960.

While the past is not always a reflection of the future, at this point in time it may be premature to assume that we are going to revert back to a period similar to the fifties.

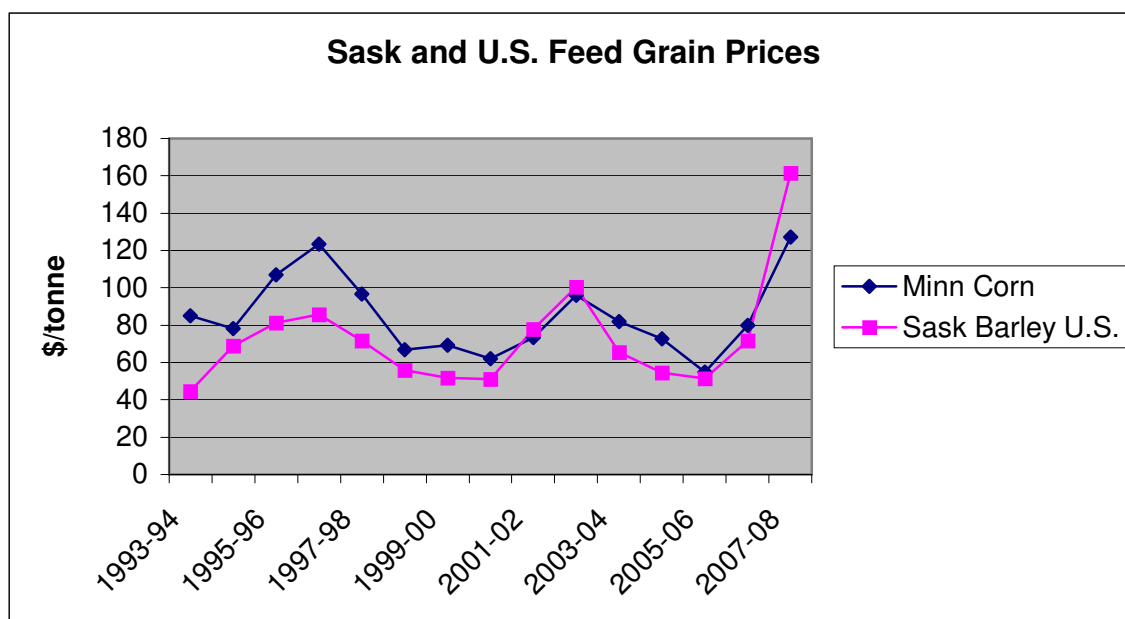


Source: Statistics Canada

2. Feed Grains

Feed grains have been trading at all time highs. Minneapolis corn prices in April 2008 were trading at \$174/tonne and Saskatoon barley prices was at \$187/tonne.

These were up substantively over the previous year prices and are at all time highs for both commodities.



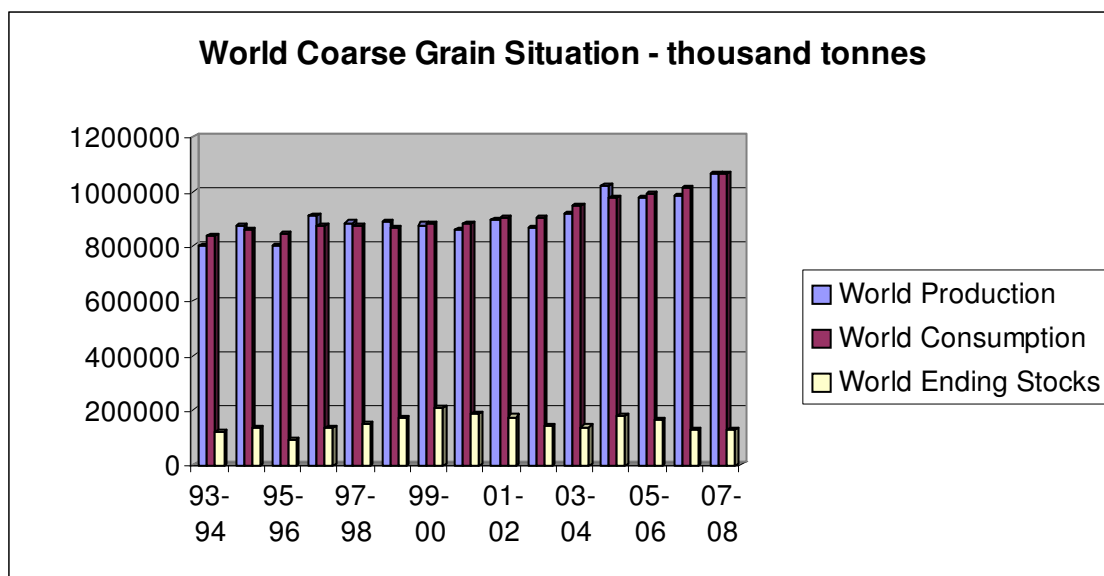
Source: Saskatchewan Ministry of Agriculture

Rising feed grain prices have generally been blamed on the increased world demand and the United States demand for biofuels in particular, but the reason is slightly more complicated.

World coarse grain demand has been increasing steadily since 1998-99, and has grown from 867 million tonnes in 1998-1999 to 1,060 million tonnes in 2007-2008 (122%). This demand for the most part is the result of a growing world population and rising incomes in developing countries. Production has not been able to keep up with the rising demand and world coarse grain stocks have fallen from 170 million tonnes in 1998-1999 to only 132 million tonnes in 2007-08. The stock-to-use ratio for that same period has dropped from 0.2 in 1998-99 to 0.125 in 2007-08.

The rising world demand for coarse grains and the tightening world stocks has led to the rise in feed grain prices in North America.

Corn is the dominant grain in the coarse grain complex (73% of total coarse grain production) and the United States is the largest producer (44% of world corn production) and exporter of corn (63% of total trade). The United States corn market has a significant impact on the world coarse grain market.



Source: USDA

Ethanol produced from corn has been the biggest story in the agriculture markets in both 2007 and 2008. The United States has 116 ethanol plants of which 109 are corn based with the capacity to produce 5.0 billion gallons of ethanol. There are currently new plants under construction of which 52 are corn based. By 2008/09 the United States will have a total ethanol capacity of 11.4 billion gallons/year, which will require 4.1 billion bushels of corn which equates to approximately one-third of the current U.S. corn production³

The United States Energy Act of 2007, mandates ethanol production of 9 billion gallons in 2008 growing to 13.2 billion gallons in 2012 and 15 billion gallons by 2015.

In 2007, the United States corn crop was the largest on record at 14.5 billion bushels an increase of 2 billion bushels from the previous year. Both industrial uses and exports were a record for 2007. Industrial uses increased by 1.2 billion bushels while exports were at a record level of 2.25 billion bushels.

Where the feed grain market will settle out is difficult to predict. A recent Iowa study developed a model, which would suggest that at \$100/barrel oil, ethanol plants could afford to pay as high as U.S.\$6.81/bu. for corn.⁴

³ “The Outlook for Corn and Ethanol”, Chad E. Hart, Center for Agricultural and Rural Development (CARD), Winter, 2008.

⁴ “The Long-Run Impact of Corn-Based Ethanol on the Grain, Oilseed, and Livestock Sectors: A Preliminary Assessment”, Amani Elobeid, Simla Tokgoz, Dermot J. Hayes, Bruce A. Babcock, and Chad E. Hart, CARD, #06-BP 49

But as Babcock, also from Iowa, stated in a recent report:⁵

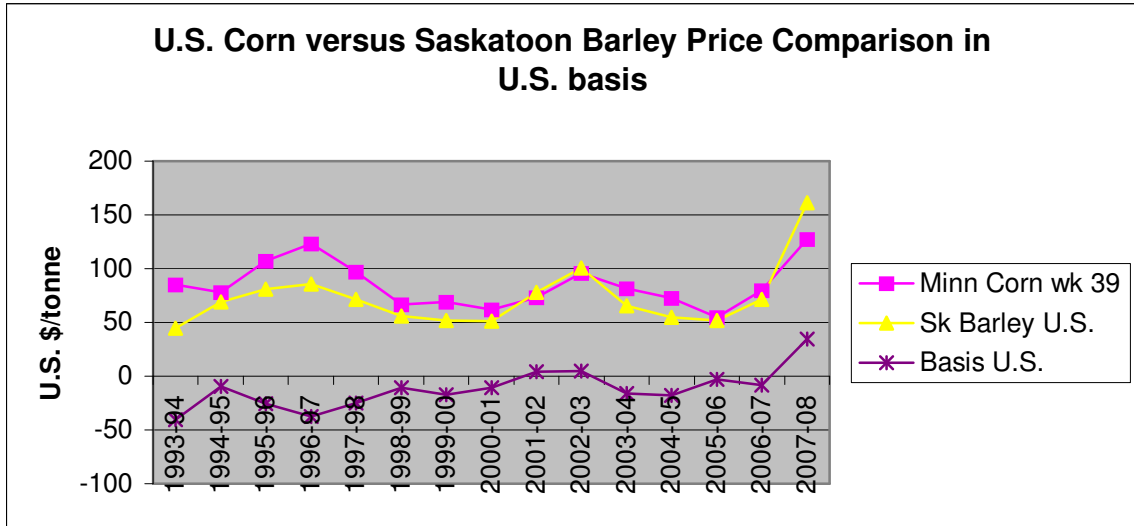
High prices are their own worst enemy. Increased profit margins entice entrepreneurial investment, which results in increased production. Lower market prices inevitably follow. The magic hand of Adam Smith ensures that winners' gains and losers' losses will be temporary, as entrepreneurs correct market imbalances.

The temporary nature of high prices is well known to corn, soybean, and wheat farmers. Over the last 50 years there have been only two corn price increases that have been sustained for more than two years. The first was from 1973 to 1975 when a combination of

⁵ "When Will the Bubble Burst?", Bruce A. Babcock, CARD, Winter 2008.

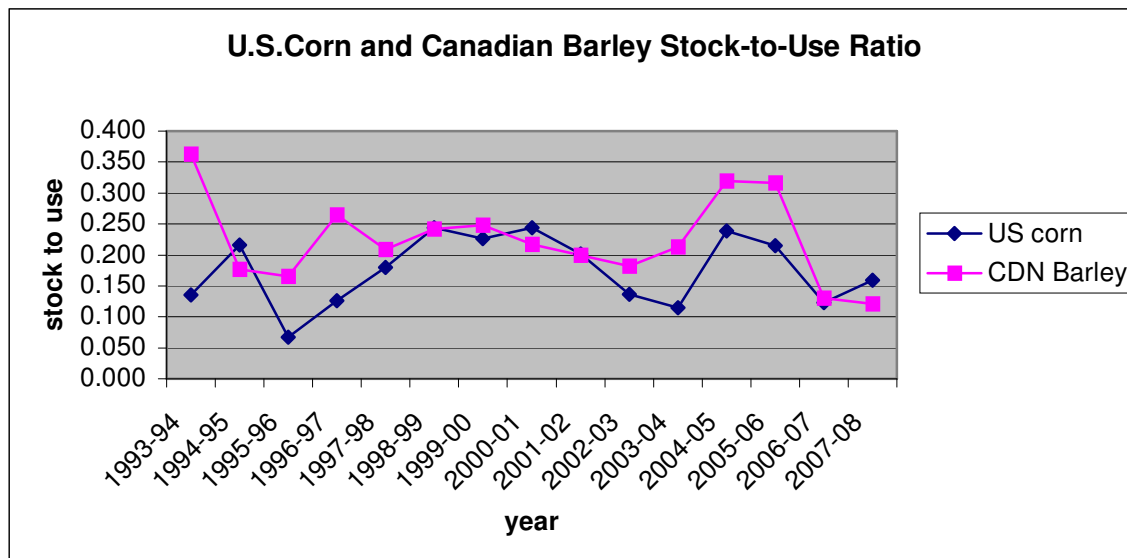
short crops around the world and increased export demand dramatically increased prices. The second was from 1979 to 1984 when high corn prices were sustained by supply controls, government-defended floor prices, and drought. Farmers in the United States and around the world have always been able to out-produce the market and government policy.

The above discussion provides some insights into why feed grain prices are trading at record highs and also where they may go into the future. But the above does not explain why Saskatchewan barley prices are trading at a premium to U.S. corn. The result, which has been increased exports of Canadian feeder cattle to the United States as Western Canada has lost its competitive advantage in feeding cattle.



Source: Saskatchewan Ministry of Agriculture

From the above chart it can be seen that when comparing Saskatoon barley to Minneapolis corn, (both in U.S. dollars), Saskatoon barley has almost always traded under the Minneapolis corn price with the average difference being \$15.30/tonne. So on an equivalent dollar basis Western Canada has had feed cost advantage to the U.S. The result is that our feedlot sector has been able to bid aggressively for Western Canadian calves. In 2007-08 we lost that feed cost advantage as Saskatoon barley was \$34/tonne higher than Minneapolis corn. This shift in the basis was not due to the increased ethanol demand because that, if anything, should have increased the basis, resulting in cheaper Western Canadian feed grains compared to the United States. What occurred, as is shown in the below stock-to-use chart, was that as a result of a relatively small barley production, which was used extensively in the malt and export markets, Canadian barley stocks dropped relative to U.S. corn stocks



Traditionally, Canadian barley stock-to-use ratio has been higher than the U.S. corn stock-to-use ratio. Whenever these ratios come together or when the Canadian stock-to-use ratio is lower than the U.S. ratio, Canadian barley prices will trade to a premium to U.S. corn prices. Canadian barley production in the last two years has been relatively low at 9.6 million tonnes and 11.8 million tonnes for the years 2006-07 and 2007-08. Traditionally, barley production has been around 13 million tonnes. To add to the feed grain problem, a large percentage of the 2007-08 production was of malt quality, which faced a strong world demand. The difficulty in the Western Canadian feeding sectors is that the two major grains, feed barley and feed wheat are not intended to be grown for those purposes.

With a return to a more historical level of barley production and quality, it would be expected that Western Canada would regain its feed cost advantage. When this will occur will depend on weather, and relative prices of other grains and oilseeds.

Two other factors cloud the outlook for western feed grains and make predicting the future difficult. First is whether in the future the U.S. will become a net importer of corn, which will result in them losing their competitiveness in producing meat proteins and would shift production to Western Canada. The second factor is what happens to all the distillers' grain that will be produced. At the mandated ethanol levels for 2015, Clemens reports that there will be 40 million tonnes of distiller's grain.⁶ Cattle have a competitive advantage over other livestock in that it can use up to 50% in a finishing diet, while hogs are 20% and poultry is 15%. The question is, "will this shift the finishing industry up to the Northern Midwest and what does that mean to the Western Canadian finishing and cow-calf sector?"

⁶ "Steady Supplies or Stockpiles? Dried Distillers Grains and U.S. Beef Production", Roxanne Clemens, CARD, Winter 2008.

3. Country of Origin Labeling

On May 13, 2002 President Bush signed into law the Farm Security and Rural Investment Act of 2002 (Farm Bill). Within this Act (section Subtitle D – Country of Origin Labeling) was a provision requiring Country of Origin Labeling (COOL). Initially, COOL was to be mandatory as of September 30, 2004 preceded with a voluntary system. Subsequently in January 2004, and then November 2005, legislation relating to the funding of mandatory COOL was passed which resulted in its postponement, with the exception of a seafood-labelling program, until September 30, 2008. COOL is now scheduled to come into effect as of October 1, 2008, but that date is still dependent on the U.S. legislatures passing the 2008 Farm Bill.

The relevant parts of Section 281 of the Act are provided below to frame the discussion on the impact on the Saskatchewan cattle industry. For this discussion the latest proposed wording available is used.

“Sec. 281. Definitions.

In this subtitle:

“(2) Covered Commodity.-

“(A) In General. – The term covered commodity means –

“(i) muscle cuts of beef, lamb, and pork;

“(ii) ground beef, ground lamb, and pork;

“(iii) farm-raised fish;

“(iv) wild fish;

“(v) a perishable agricultural commodity; and

“(vi) peanuts/

“(B) Exclusions. – The term ‘covered commodity’ does not include an item described in subparagraph (A) if the item is an ingredient in a processed food item.

.....

“

...

The covered meat commodities are beef, lamb, pork and fish. Specialty livestock such as bison and fallow deer are excluded as well as poultry. Covered meat commodities do not include processed products or those products used as an ingredient.

Section 282 provides the requirements for those responsible for COOL and how it is to be implemented.

“Sec. 282. Notice of Country of Origin.

“(a) In General. –

“(1) Requirement. – Except as provided in subsection (b), a retailer of a covered commodity shall inform consumers, at the final point of sale of the covered commodity to consumers, of the country of origin of the covered commodity.

“(2) United States Country of Origin. – A retailer of a covered commodity that is beef, lamb, pork, or goat may designate the covered commodity as exclusively having a United States country of origin only if the covered commodity is derived from an animal that was---

“exclusively born, raised, and slaughtered in the United States; or

“born and raised in Alaska or Hawaii and transported for a period of not more than 60 days through Canada to the United States and slaughtered in the United States.

“(B) Multiple Countries Of Origin.- A retailer of a covered commodity that is beef, lamb, pork or goat that is derived from an animal that is ---

“(i) not exclusively born, raised, and slaughtered in the United States,

“(ii) born, raised, or slaughtered in the United States, and

“(iii) not imported into the United States for immediate slaughter, may designate the country of origin of such covered commodity as all of the countries in which the animal may have been born, raised, or slaughtered.

“(C) Imported For Immediate Slaughter. – A retailer of a covered commodity that is beef, lamb, pork, or goat that is derived from an animal that is imported into the United States for immediate slaughter must designate the origin of such covered commodity as –

“(i) the country from which the animal was imported; and

“(ii) the United States.

“(D) Foreign Country of Origin. – A retailer of a covered commodity that is beef, lamb, pork, or goat that is derived from an animal that is not born, raised, or slaughtered in the United States must designate a country other than the United States as the country of origin of such commodity.

“(E) Ground Beef, Pork, and Lamb. – The notice of country of origin for ground beef, ground pork, or ground lamb shall include-

“(i) a list of all countries of origin of such ground beef, ground pork, or ground lamb; or

“(ii) a list of reasonably possible countries of origin of such ground beef, ground pork, or ground lamb.

...

“(b) Exemption For Food Service Establishments. – Sub-Section (a) shall not apply to a covered commodity if the covered commodity is-

“(1) prepared or served in a food service establishment; and

“(2)(A) offered for sale or sold at the food service establishment in normal retail quantities; or

“(B) served to consumers at the food service establishment .

...

“(f) *Certification of Origin.* -

“(1) *Mandatory Identification.* – *The Secretary shall not use a mandatory identification system to verify the country of origin of a covered commodity.*

COOL is directed at the retailer. As such there is no legal requirement by farmers/ranchers/feedlots/packers to meet COOL definitions. Retailers will be imposing their own requirements on the packing industry that will then set the standards in which producers will have to follow in order to verify the country of origin.

Product targeted to the food service trade is exempt from the legislation. This would allow Canadian packers or U.S. packers to process Canadian beef and market it into this segment of the industry without following any labelling requirements.

The Secretary is prohibited by legislation from enacting a mandatory identification system. This will require the industry, driven by either the retailer or packer, to institute their own verification and audit procedures. As a result there may be no industry standards, which could lead to market inefficiencies.

COOL - Impact Relative to Demand Chain Components

The below chart illustrates the demand chain for the beef industry. For ease of analysis the wholesaler has been left out.



The following will briefly describe the impact on each participant in the supply chain.

Consumer

A consumer after the implementation of COOL will have information as to the country of origin of the beef they are purchasing. What is unclear is how the consumer will use this information or interpret it. Plain and Grimes (2003) postulate that since 82% of the beef consumed in the U.S. is from the U.S. and that Americans generally have a positive image of Canada that their would be minimal consumer reaction to COOL⁷

It is also unclear as to how the consumer would interrupt labelling which had multiple countries listed. Would a product labelled born in Canada, and fed and processed in the

⁷ “Benefits of COOL to the Cattle Industry”, Ron Plain & Glenn Grimes, University of Missouri-Columbia, May, 2003, agebb.Missouri.edu/mkt/cool.htm

United States be viewed differently than a product labelled born in the United States and fed and processed in Canada? Stated differently, when will a consumer view a product as an American product? Will it be only when all stages of production occur in the United States? When 2 of the 3 stages occur in the United States or when only one of the stages occurs in the United States? And if only one stage is important, does it matter which stage?

The other question, which will be important as to how the consumer reacts, is how does the label have to be applied to the product. Both the size of the lettering and the location of the notification will influence whether the consumer pays attention to the notification.

Retailer

The retailer is the most important player in the COOL discussion as it relates to the impact on the Canadian industry.

By law it is the retailer who is responsible for providing the country of origin information and being able to provide the documentation to verify the information.

The retailer will have to adopt a record keeping system which will probably mean changing their electronic tracking systems to treat meat products differently based on the country of origin. The retailer will have to determine whether similar beef products from different countries can be displayed together or whether it will have to be displayed separately. The retailer will also probably have to change their inventory system and cooler management to accommodate products from different countries.

All of the above will result in increased costs and management by retailers as the result of COOL. The important issue for the Canadian industry is, does the retailer price the Canadian primary product less to account for the increased handling costs or does it decide to not carry Canadian product?

Packer

Next to the retailer, the packer is the next important constituent in the COOL discussions as it relates to the impact on the Canadian industry.

The AMI estimates the cost to packers of COOL for red meats to be \$342 million. Packers will be facing increased costs as the result of increased information requirements, data management, and labelling. Packers will also experience both increased costs and efficiency losses as the result of cooler and refrigeration space issues, as product will have to be segregated based on country of origin. Packers will also lose line efficiencies, as they will not be able to do continuous production if they are processing animals from different countries.

Packers will have to assess whether it is worthwhile for them to continue processing products from other countries given the increased costs and losses in plant efficiencies.

Some plants may try to accommodate Canadian product on certain days or designate one plant as their facility for out-of-country product. In the hog industry, it appears that packers are sending signals to producers that they will not be processing Canadian hogs after October 1, 2008.

Canadian packers will have a distinct advantage over American packers in that the cost of implementing COOL will be less for them on product going to the U.S., as they will not incur the same operating inefficiencies.

Feedlots

Feedlots will have to be able to verify where feeder calves originate, whether from the U.S., Canada or Mexico. The cost of COOL will therefore be no different for a domestic animal versus an imported animal.

The impact on the feedlot is in being able to trace that animal through its feedlot. For most feedlots without electronic tracing systems this will mean keeping foreign animals separate during its stay in the feedlot. U.S. feedlots at a minimum will have to be buying a pen load of Canadian feeder cattle in order to be able to manage it in their feedlot. One pen may not be sufficient if the feedlot is unable to finish that pen all at the same time.

Cow-Calf

The U.S. cow-calf producer will have to adopt some verification system in order to prove that the calves they are selling were born in the United States. The producer will also have to be able to prove that any cows sold for slaughter were born and raised in the United States.

COOL Summary

The Food Safety and Inspection Service of USDA originally estimated the cost of COOL at \$8 million for labelling and \$100 for verification per site.⁸ Since this original estimate the industry has estimated the costs to be significantly higher.

The AMI estimated the total cost of COOL for all covered products at \$1.0 billion. With the following breakdown:⁹

⁸ “Mandatory Country of Origin Labeling of Imported Fresh Muscle Cuts of Beef and Lamb”, Food Safety and Inspection Service, January 2000.

⁹ American Meat Institute

Producers - \$246 million

Packers - \$342 million

USDA - \$60 million

Retail - \$375 million

The producer share of \$246 million was the cost estimate for a mandatory animal I.D. for all cattle, estimated to cost \$2-3/animal.

The beef industry's share of the packer cost was estimated to be \$182 million. This value represents the cost of segregating product at slaughter through to processing and distribution to retail.

The retail cost is the total for all covered products and includes the costs related to segregation, separate storage, cutting and grinding operation, and new package labels and/or display placards.

The *Cattle Buyer's Weekly (CBW)*, estimates that COOL will cost the beef industry \$1.4 billion annually, and could cost as much as \$1.9 billion.¹⁰ CBW estimates are based on a cost of \$5 per head to track cattle from the ranch to the packing plant and another \$15 per head for packers to reconfigure their slaughter and fabrication departments to maintain the identity of cattle into boxed beef. The cost of these two steps is \$708 million. CBW estimates it will cost retailers 5 cents per pound of beef sold to reconfigure their meat departments to maintain product identity, to maintain required record-keeping at individual stores and to place COOL labels on every beef item in the meat case for a total cost of \$679 million.

The value of the annual beef meat industry in the United States has been estimated to be 40 billion dollar. If COOL does cost \$1.4 billion that represent 3.5% of the total value. If the cost is closer to the \$2 billion estimate the total increased cost of COOL on a live animal basis for cattle could be 5% of the value of the animal.

It needs to be emphasized that the above numbers are based on an assumption that the industry does not change any of its trade practices as the result of COOL. A large percent of the total costs can be mitigated by the United States industry following a protocol of not accepting imported beef.

COOL is directed at retailers, wholesalers and packers, as they are the ones responsible and accountable for implementation. Retailers will have to determine the consumer demand for differentiated product and the cost of that product. Given that all products have to be labelled no matter what the country of origin, the cost impact should be no different for an imported versus a domestic product. The question then is do the consumers treat that product differently? Surveys and studies suggest that they do, which if true will require retailers to segregate the product on the shelf. Retailers are typically reluctant to provide shelf space for similar goods unless warranted by volumes. If this occurs retailers will then not place orders for that product or will only sell as specials.

¹⁰ American Meat Institute – Issue Background: Country-of –Origin Labeling, November 2002

While there is evidence that consumers prefer domestic products to imports, it is not as clear as to what they will consider domestic product. If a product has a label as being born and raised in Canada, but processed in the United States, will that be considered a domestic product, or will a label with born in Canada but raised and processed in the United States be considered a domestic product? Logic suggests that the more the product is in the United States the greater likelihood that it will be considered a domestic product.

The introduction of COOL with respect to producers may have a similar impact as BSE had on the Canadian beef industry. Following the closure of the U.S./Canada border to all live cattle and beef products the complete industry experienced a loss due to market access. With the subsequent opening of the border to beef products, Canadian packers experienced a substantive increase in their margins, but at the same time producers were unable to capture any of the benefit. Without the bidding of American packers for their animals and with domestic consumption less than domestic slaughter capacity, producers did not see an improvement in their prices. It is anticipated that with the introduction of COOL the impact will be similar as that to the beef industry with BSE.

In May of 2003 with the discovery of BSE, all trading partners with Canada closed their border to both live cattle and beef products. By August of 2003 the United States allowed boneless beef products for cattle less than 30 months of age. In July of 2005, the United States allowed trade in cattle less than 30 months of age.

The Standing Committee on Agriculture and Agri-Food found that fed cattle prices were initially 40% lower with the complete closure of the border and 26% lower when the border opened to beef products.

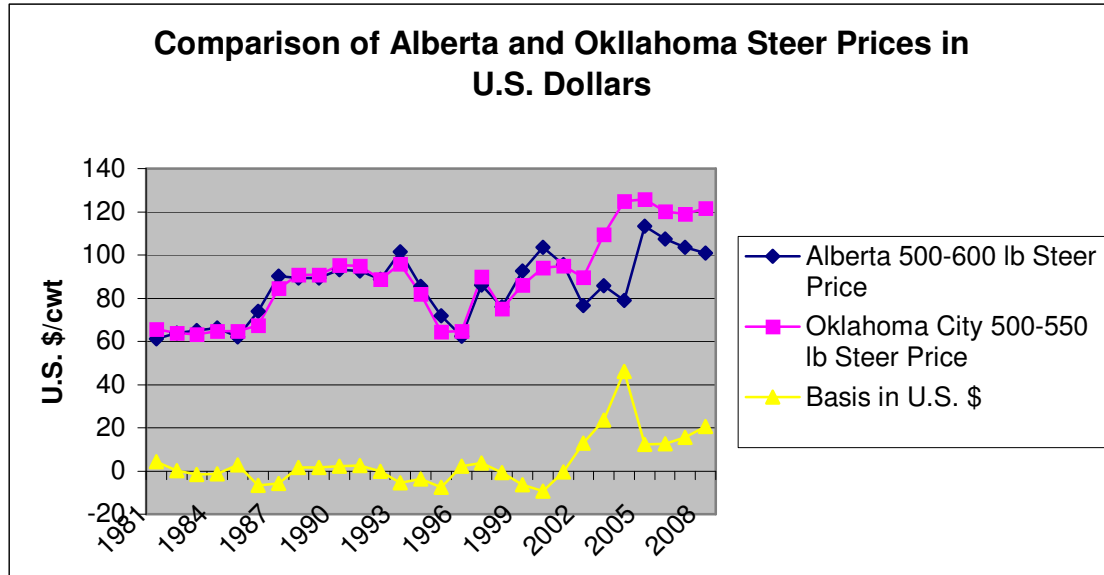
In the case of the cattle industry and BSE, with the opening of the border to live cattle under 30 months, the basis remained wide due to increased cost of identifying and segregating animals in both the feedlot and at the packer. As well the basis widened due to additional costs as a result of increased paperwork, inspection, and a general hassle factor. This resulted in an additional basis of \$10/cwt to \$15/cwt.

4. Canada – United States Basis

What has been the impact of the issues discussed above? As discussed previously it has meant a lower calf price to the Saskatchewan cow-calf producer. But why such an extreme price adjustment? If we look at the basis between Alberta and Oklahoma steer prices in U.S. dollars we can begin to see what has taken place.

Historically, Alberta steer prices have traded close to par with Oklahoma City prices in equivalent U.S. dollars (Alberta slightly higher on average at \$0.70/cwt). This all changed with BSE, with the basis increasing to \$46/cwt in 2004 (Oklahoma City over Alberta).

In 2006 with the border open to live cattle under 20 months of age the basis dropped to \$12.66/cwt in favour of Oklahoma and with the beginning of the 2008-year it has increased to \$20.71/cwt.



Source: CanFax and USDA

The increase in the basis is the result of the increased border costs associated with BSE rules, lost feed grain advantage and discounts due to COOL.

If the basis were at a more normal level, the Saskatchewan price for 500-600 pound steers would increase from \$102/cwt to \$122.71/cwt. For a rancher marketing 200 calves at 550 pounds this would mean increased revenue of \$22,781. In combination with a return of exchange rates, similar to the previous year, the price would be \$137.75/cwt, resulting in an increase of revenue to that same rancher of \$39,325.

V. Summary of Findings

The Saskatchewan cowherd has nearly doubled since 1986 to its current level of 1.48 million cows. The growth in the cow numbers has occurred on large farms where cattle are their main income source. In 2006, 15 percent of all farms accounted for over 50 percent of the cattle numbers. With the increase concentration of the cattle herd into fewer farms it places the industry at greater risk of a major decline, if the industry is no longer profitable.

With the increase in the cowherd has come an increase in land put into tame land or seeded pasture. Tame or seeded pasture acreage has increased by 2.6 million acres by

2006 with the acreage now at 4.8 million acres compared to only 2.2 million acres in 1976. In the past, both the federal and provincial governments have provided programs to protect fragile lands such as: Economic and Regional Development Agreements, National Soil Conservation Program, Permanent Cover Program (PCP), Green Cover, Green Plan, etc. The rationale for such programs has been two-fold. First, the need to protect marginal lands and the benefit they provide to the public (Environmental) and secondly to reduce government program costs as the result of marginal lands being in crop protection (Economic).¹¹ These two factors will be briefly discussed in context of the current cow-calf market condition.

Environment

Follett has reported that the CRP offsets at least 25% of U.S. agriculture's CO₂ emissions.¹² In his report it is stated that: *“Establishment of a permanent grass cover can increase the mass of C added into the soil relative to what may be returned by traditional cropping systems, while lack of mechanical disturbance and absence of tillage decreases rates of soil organic carbon oxidation to CO₂ and the rate at which CO₂-C is returned to the atmosphere.”* As important to the environment as the ability of grassland to sequester C is its storage of carbon below ground, which can be readily released with a return to cropping practices.

A report by Feng, Kling and Gassman (2004) stated the conservation reserve program (CRP) in the United States resulted in significant carbon sequestration and other co-benefits such as a reduction in soil erosion, wildlife habitat, and water quality and landscape aesthetics.¹³ Plantinga and Wu (2003) estimated that the conversion of cultivated land to forest in Wisconsin, resulted in benefits from reduced soil erosion and enhanced wildlife habitat that were on the same order of magnitude as the costs of the carbon sequestration policy.¹⁴ Luciuk, et. al, estimated that the PCP generated carbon sequestration benefits with a value of \$72 to \$362 million.¹⁵

The Feng study reported that if the CRP had been designed with carbon sequestration as an objective it would sequester 4.14 million tons on 3.9 million acres. At a carbon value of \$15/ton the value of carbon sequestration from grassland would be approximately \$15/acre.

¹¹ “The Permanent Cover Program – Is Twice Enough?” Jill S. Vaisey, Ted W. Weins and Robert J. Wettlaufer, Agriculture and Agri-Food Canada, September 1996

¹² “The Conservation Reserve Program and Carbon Sequestration”, Ron Follett, USDA –Agricultural Research Service, Fort Collins, Colorado.

¹³ “Carbon Sequestration, Co-Benefits, and Conservation Programs”, Hongli Feng, Catherine L. Kling, and Philip W. Gassman, CARD, November 2004.

¹⁴ “Co-benefits from Carbon Sequestration in Forests: Evaluating Reductions in Agricultural Externalities from an Afforestation Policy in Wisconsin.” Plantinga, A.J. and J. Wu. Land Economics, 2003.

¹⁵ “Carbon Sequestration – Additional Environmental Benefits of Forages in the PFRA Permanent Cover Program.” G. M. Luciuk, M.A. Bonneau, D.M. Boyle and E. Viberg. Agriculture and AgriFood Canada.

Agriculture and Agri-Food Canada (AAFC) through Prairie Farm Rehabilitation Administration (PFRA) has also estimated that the PCP resulted in soil productivity savings of \$2.55/acre to \$6.30/acre.

Economic

PFRA has estimated that the PCP reduced government program costs by \$9.15 acre per enrolled acre. This may underestimate the reduction in government expenditures in that for the last 5 years the average government expenditure on crop insurance alone was \$7.38/enrolled acre. It would also be expected that grassland converted to cropland would have above average crop insurance costs due to the marginal nature of the land.

The Farm Financial survey of Statistics Canada reports that the 5 year program payments (2001-2006) to grain producers averaged \$27,871 per farm while the average program payment for cattle producers was only \$11,150 per farm.

Summary

Belcher and Gray in their 2001 study of the value of grassland to the public summarized the benefits in the below table:¹⁶

Estimates of the external benefits of a conservation cover program with agricultural use permitted.

External Benefits (cost) \$/ha/yr	High	Low
Saved Annual Crop Subsidies	\$20.37	\$6.79
Decreased off-site erosion cost	\$29.58	\$2.19
Change in GHG emissions	(\$3.85)	\$0.65
Carbon sequestration	\$33.00	\$1.50
Wildlife - consumptive use	\$5.02	\$0.00
Wildlife – non-consumptive use	\$5.86	\$0.00

¹⁶“ The Economics of Conservation Cover Programs”, Ken Belcher and Richard Gray, Centre for Studies in Agriculture Law and the Environment, University of Saskatchewan, July 2001.

Wildlife & biodiversity -nonuse	\$3.30	\$0.00
Gross benefits	\$93.28	\$11.12
Program Administration costs	(\$0.41)	(\$1.63)
Depredation compensation	(\$0.14)	(\$0.56)
Net external Benefits	\$92.87	\$9.49

Their work concluded that there are social net benefits to conservation cover programs. But that since many of the benefits provided by natural areas and lands dedicated to perennial cover are external to the landowner and the market, producers are not in a position to make the correct land use decisions based on market signals that would maximize the public benefits from those lands. In their report they state:

In the absence of a program that enables society to provide economic incentives for conservation practices on agricultural land, it seems that further loss of the environmental function and agroecosystem sustainability is inevitable.

The current low calf prices are primarily the result of a higher value Canadian dollar, rising feed grain costs and increased border regulatory costs. This has resulted in a calf price 35% lower than what it would otherwise be. Using cost of production numbers from Manitoba, a Saskatchewan rancher will be losing \$154/cow to \$253/cow at the current prices.

With grain prices on the rise combined with losses in the cow-calf sector, it is expected that without policy intervention cow numbers will decline along with a reduction in grassland acres. It is not unrealistic to expect cow numbers to decline to the mid eighties level of 700,000 head with a potential loss in grassland of 2.0 million acres.

The loss of the cow-calf sector will have a significant impact on the feeding/finishing sector and the loss of grassland will result in significant ecological damages. As well, the conversion of grass land to cultivated land will increase both levels of government costs for programs, such as Crop Insurance, and the Business Risk Management programs. The increase in cultivation, depending on farming practices would also result in increased CO2 emission, erosion, and lower water quality.

The loss of grassland will erase the benefit of past government programs which spent millions of dollars to convert these fragile lands from cultivation into grassland. What is uncertain from the analysis is whether the current market conditions are permanent and the cattle industry needs to make the necessary adjustments, or whether they are short term in nature, and market conditions will return to a more normal pattern.

With respect to the high Canadian dollar it is very unclear what the long-term direction the Canadian dollar will take. If the past is any indication of the future, one would expect it to trade at a discount to the U.S. dollar.

The market has changed for the feed grains, the growing world demand and increased demand due to biofuels means that feed grains into the future will trade at a higher level. The major impact on the province isn't just the higher feed grain prices but the loss of its

feed cost advantage over the U.S. as feed grains are cheaper in the U.S. It is reasonable to expect that this advantage will return to Saskatchewan in the next few years.

With respect to the increase in the basis in general, and the increased costs due to BSE and COOL policy it is difficult to predict where this will go in the future.

What is certain is that without the proper government policy, there will be a significant market failure, as producers convert grassland to crop land resulting in significant externalities.

VI. Potential Policy Options

The following 5 policy options are presented as possible solutions to halt the exodus of producers from the cow-calf sector and prevent the conversion of grassland back to cropland.

1. Grass Protection Payment

It is proposed that a grass protection payment be paid on all privately-owned grass and hay land to encourage producers to remain in the cow-calf sector. In return producers would have to agree to leave the land in grass production for that year. It is proposed that this program should be in place for a minimum of 3 years until market signals become clearer as to what direction the cattle market is taking in western Canada.

The payment would reflect the environmental value both for carbon sequestration, carbon storage (not releasing it into the atmosphere through cultivation), wildlife habitat, and improved water quality and soil erosion prevention. As well the payment would be a reflection of what the governments would be paying the producer if the land was put into grain production. The government could use the carbon benefit to offset the government's own carbon footprint.

It is critical that the Grass Protection Payment be sufficient in magnitude to offset the producer's economic incentive to convert grassland to crop production. Updating the Western Beef Development Centre 2005 study it was concluded that grain production would produce \$72/acre higher returns than grasslands. It is the author's opinion that at a minimum a payment of \$30/acre would be needed to offset this economic incentive to convert grassland to grain production.

The payment of \$30/acre on grassland could also be explained as reflecting the following values:

- Carbon benefit - \$15/acre

Feng, Kling and Grassman(2004) reported that the CRP if designed with carbon sequestration as a objective would have produced carbon sequestration using Canadian values of \$15/acre. The Luciuk,et. al study reported that the PCP generated carbon sequestration benefits of \$72 to \$362 million or \$3.52/acre to \$17.80/acre on a annual net present value basis. In addition the breaking of grassland would release the carbon currently being stored, O.E. and Paruelo estimate this to be worth \$65/acre- \$162/acre.¹⁷

- Other environmental benefit - \$5/acre and,

Plantinga and Wu estimated that other environmental benefits were in the same order of magnitude as those for carbon sequestration. Belcher and Gray estimated that other environmental benefits associated with grasslands were in the range of \$0.89/acre to \$17.71/acre.

- Offset to government expenditures - \$10/acre

PFRA estimated that the PCP resulted in government program savings of \$9.15/acre. The Farm Financial Survey reports that for the last 5 years an average grain farm received \$28/acre in government support payments. For the last 5 years, both levels of government supported the crop insurance program by \$7.38/enrolled acre.

- Total - \$30/acre

It is critical that the Grass Protection Payment be sufficient in magnitude to offset the producer's economic incentive to convert grassland to crop production.

2. Changes to the Business Risk Management Programs

It is important that when it comes to the business risk management programs that cattle producers are treated similar to grain and oilseed producers. Below are a just a few possible changes to existing programs.

¹⁷ Ecosystem Services in Grasslands, Sala O.E. and J.M. Paruelo, Washington, D.C. Island Press, 1997.

AgriInvest

Currently, in calculating eligible net sales commodity purchases are netted from commodity sales. While this makes policy sense for the purchase of feeders it doesn't for the purchase of breeding cows or forage for maintaining the cow. Cows are a capital asset in that their intended use is for an extended period. As well the cow is the asset the rancher uses to harvest their grass, much like a grain producer purchases a combine to harvest their grain. Forage is the fuel for the cow and should not be deducted from eligible net sales.

AgriInvest should consider one of the two options:

Exclude breed cows and forages from both eligible sales and allowable commodity purchases or AgriInvest should allow cattle producers to include the modified accrual accounting option in their AgriInvest calculation. This would account for all inventory changes just not purchased commodities.

AgriInvest should also allow program payments related to BSE compensation to be included in the calculation much like crop insurance payments are included in the calculation for grain and oilseed producers.

AgriStability

The AgriStability program should also be adjusted so that the modified accrual accounting option uses the actual purchase price of breeding cows not the provincial average price. This is important for producers growing their herd and purchasing animals above the average price calculated for the province. As in these cases the allowable expense item is using the market value, which is higher, then the value used in calculating the modified accrual accounting option, with the result being a lower reference margin.

3. Rollback of Community Pasture Rates

Given the deteriorating returns to cattle producers, it is critical that government does not needlessly increase producer's costs. In 2007, PFRA increased their community pasture rates to \$0.40/head/day from \$0.36/head/day with a schedule to increase the rates into the future. For 2008, the federal government did freeze the rates at 2007 levels. The federal government however, should roll the rates back to 2006 levels and announce that there will be no further increases until market conditions stabilize and improve.

4. Oppose Country of Origin Labeling

The federal government should use all trade remedies available to it under WTO and NAFTA to have COOL repealed and do so in a speedy manner.

5. Review of Regulatory Costs Associated with BSE

The federal government should undertake a review to gain a better understanding of why the western cattle industry is experiencing such a large basis with the United States. This review should pay particular attention to any border or state impediments that have been put in place under the guise of necessary BSE control measures.