



TD Economics

Special Report

March 31, 2004

THE IMPACT OF MAD COW DISEASE

The discovery of Canada's first indigenous case of Bovine Spongiform Encephalopathy (BSE), which is popularly known as mad cow disease, on May 20, 2003 has been a severe blow to the Canadian cattle and beef industry. It has also had negative consequences for many related industries, including feedlots, packing, rendering and trucking. While the United States loosened its ban in August, and a few other countries reduced their restrictions, all of Canadian cattle and a considerable portion of beef output remain shut out of foreign markets.

In October 2003, the U.S. Department of Agriculture issued proposed rules for further easing the restrictions on Canadian cattle and beef exports. Regrettably, the task of reopening markets became more formidable in December, as a new case of BSE was discovered in the United States and was traced back to Canada. However, in a recent positive development, the U.S. has announced that it will not change the rules proposed in October and has set a deadline of April 7 for comments. As a result, the Canadian cattle and beef industry is filled with hope and anticipation, as it waits a final U.S. decision. This report presents the economic impact of the first case of mad cow disease (BSE1) and tries to place the fallout of the second BSE case (BSE2) into some perspective.

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TIMELINE OF NORTH AMERICA'S TWO BSE CASES

20-May-03	Canada announces its first indigenous BSE case; the United States along with other countries close their borders to Canadian cattle and beef shortly thereafter
8-Aug-03	United States lifts the ban on Canada's boneless beef from cattle under 30 months of age
10-Sep-03	Canadian shipments of boneless beef to the United States resume
31-Oct-03	The U.S. Department of Agriculture issues the proposed rules for easing the ban on Canadian live cattle exports and the remaining restrictions on beef; deadline for submitting comments is January 5, 2004.
23-Dec-03	The United States announces its first BSE case
27-Dec-03	The United States announces preliminary information that the affected animal in Washington State originated from Canada
6-Jan-04	The United States confirms that the affected animal came from Canada
9-Feb-04	The United States concludes its BSE investigation
4-Mar-04	The United States reopens the comment period for the rules issued on October 31, 2003; comments will be accepted until April 7, 2004. The U.S. also requests comments on whether imports of beef products from cattle 30 months of age or older will be allowed
???	The Canadian cattle industry is awaiting the U.S. decision

IMPACT OF BSE1

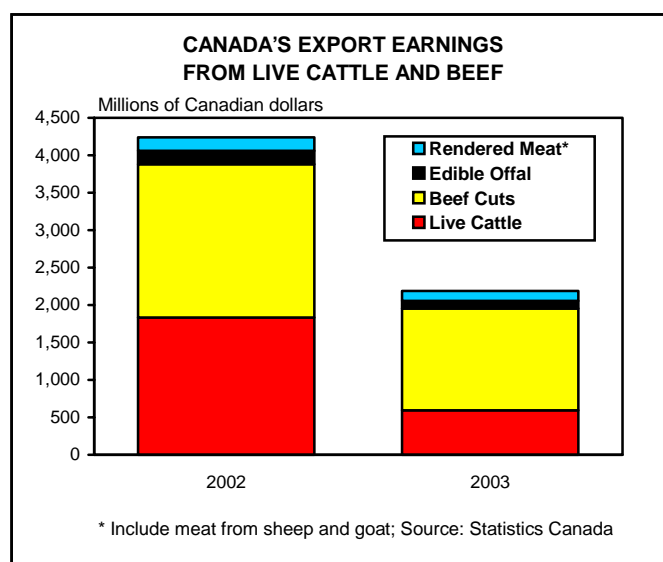
With the discovery of BSE1, the impact of the subsequent bans on Canadian live cattle and beef by the United States and several other countries was quite easy to sur-

CANADA: SUMMARY OF IMPACT OF BSE 1			
	Absolute Change	% Change	Period
Export earnings from cattle and beef	-\$2.0 billion	-48%	2003/2002
To the United States	-\$1.8 bn	-49%	2003/2002
To other countries	-\$0.2 bn	-39%	2003/2002
Inventories of live cattle	1.2 mn cattle	9%	Jan 1, 2004/Jan 1, 2003
Inventories of frozen & chilled beef & veal	13, 600 tonnes	55%	Dec 2003/Dec 2002
Cattle Prices			
Alberta slaughter steers	-\$52/cwt	-58%	July 2003/July 2002
	-\$23/cwt	-22%	Dec 2003/Dec 2002
Alberta cow culls	-\$27/cwt	-52%	July 2003/July 2002
	-\$33/cwt	-62%	Dec 2003/Dec 2002
Nebraska slaughter steers	US\$12/cwt	19%	July 2003/July 2002
	US\$23/cwt	31%	Dec 2003/Dec 2002
Retail beef prices (fresh or frozen), Canada	-	-0.4%	Dec 2003/Dec 2002
Retail beef prices (fresh or frozen), United States all fresh	-	20%	Dec 2003/Dec 2002
Canadian cattle & beef farmers cash receipts	-\$2.5 bn	-33%	2003/2002

mise. Export earnings from cattle and beef would fall, domestic inventories would rise, Canadian cattle and beef prices would plunge, while those in the United States would increase, and consequently, domestic cattle and beef producers would experience financial hardships. There would also be negative consequences on the various components of the cattle and beef industry and those servicing the sector – such as feedlots, packers, truckers, lenders, etc. So, how did the actual numbers play out?

Canadian export earnings

Canadian export earnings from live cattle and beef products tumbled from \$4.2 billion in 2002 to \$2.2 billion in 2003, a 48 per cent drop (Appendix Table 1). The decline was even more pronounced during the period when the U.S. ban on Canadian cattle and beef exports was in place. For the period May to December 2003, the value of Canada's cattle and beef export earnings plunged by 71 per cent from year-ago levels. In a normal year, say in 2002, the value of Canada's export earnings from beef products is worth slightly more than earnings from live cattle. However, in the case of the U.S. market, which provides about 90 per cent of Canada's export revenues from cattle and



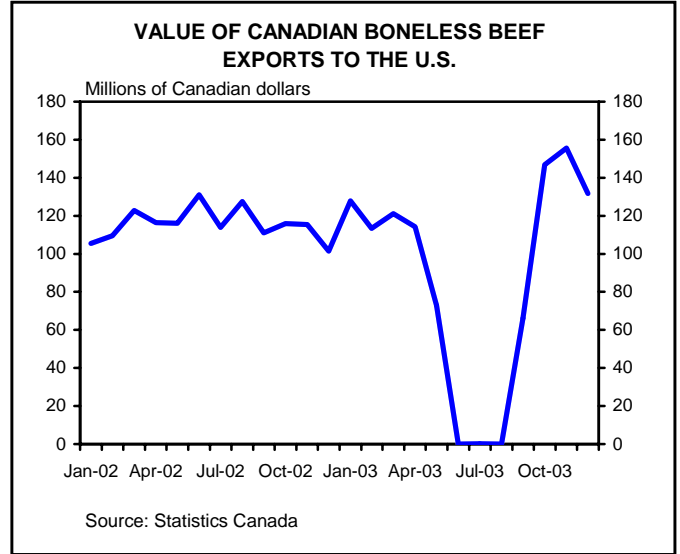
beef, the share is almost equally distributed between those two products. Canada exports only a limited number of live cattle offshore, so its export earnings from other countries are largely derived from beef products.

While the overall picture looks bleak, it is important to note just how quickly the exports of boneless beef recovered once the United States lifted the ban on this product in August. In October 2003, just one full month after Canadian shipments resumed, the value of Canadian export shipments of boneless beef (fresh, chilled and frozen) surpassed its pre-BSE level of a year-ago. This good performance continued in November and December. In 2002, boneless beef accounted for 80 per cent of the total value of all Canadian beef cuts exported to the United States.

Canadian inventories of cattle and calves

Reflecting the closure of export markets to Canadian live cattle and beef following the discovery of BSE in Canada in May 2003, the national herd rose to a record 14.7 million head on January 1, 2004, up 8.7 per cent from a year ago. All provinces registered an increase, with Manitoba recording the largest gain of 16 per cent (Appendix Table 2). In Alberta, which is the largest cattle producer in the country and accounts for nearly 40 per cent of the nation's inventory, the herd rose by about 7 per cent. Meanwhile, in Saskatchewan, the second largest producer with a 20 per cent share, the count rose by 12 per cent.

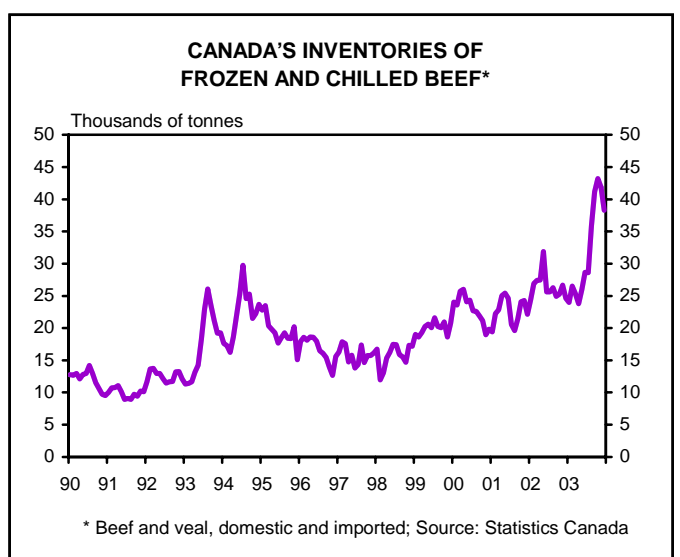
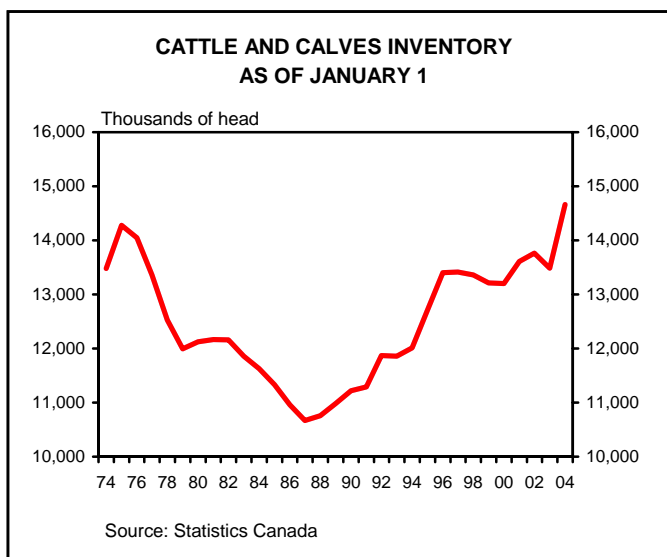
The increase in cattle inventory is likely temporary. If the U.S. border remains closed to Canadian live cattle exports, then the nation's inventory will have to shrink eventually to adjust supply to demand. With the uncertainties regarding the reopening of the U.S. border, some Canadian producers may decide not to replace their slaughtered cattle, or may opt to close their business altogether.

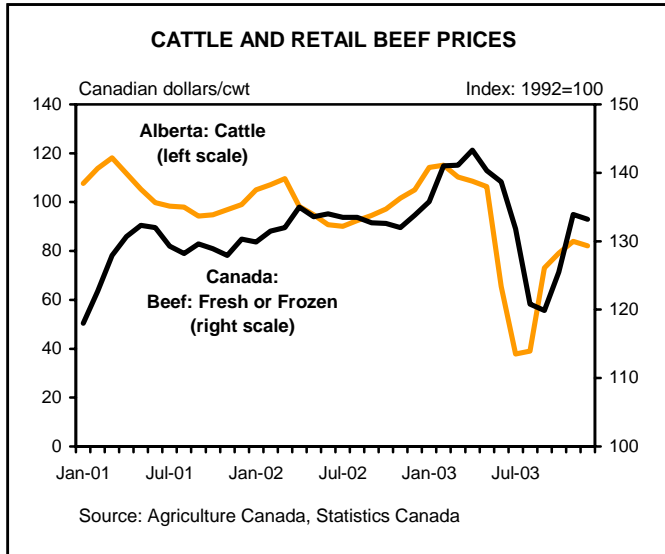


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Canadian inventories of beef

Domestic inventories of frozen and chilled beef and veal rose as one might expect, reaching an all-time high of 43,000 tonnes in October. However, with the partial opening of the U.S. border, beef inventories fell in the subsequent two months (Appendix Table 3). Nonetheless, the December inventory was still 55 per cent higher than the year-ago level. Beef inventories piled up in spite of reduced cattle slaughter activity since the ban in May.





Cattle and beef prices

As anticipated, Canadian cattle prices plunged in the wake of the first BSE case. Although domestic consumption remained steady, the closure of several export markets led cattle prices to tumble, with Alberta prices for slaughter steers down by 58 per cent in July from a year ago (Appendix Table 4). However, with the relaxation of the U.S. ban on Canadian beef in August, Canadian prices quickly turned around, so that by November 2003 prices were just 17 per cent lower than a year ago. These are prices in Canadian dollars. Expressed in U.S. dollars, prices in November were almost back to the level of a year ago (Appendix Table 5).

The late December announcement of the second case of BSE, however, halted the rebound in prices. Canadian dollar prices of Alberta slaughter steers fell by 2 per cent month-on-month in December and were 22 per cent lower than a year ago. These price drops not only reduced the sales revenues of producers across the spectrum of the cattle industry (from the cow-calf operators to the backgrounders and the feedlot operators), but also depressed the values of the producers' cattle holdings. The latter affects the credit standing of producers with their financiers.

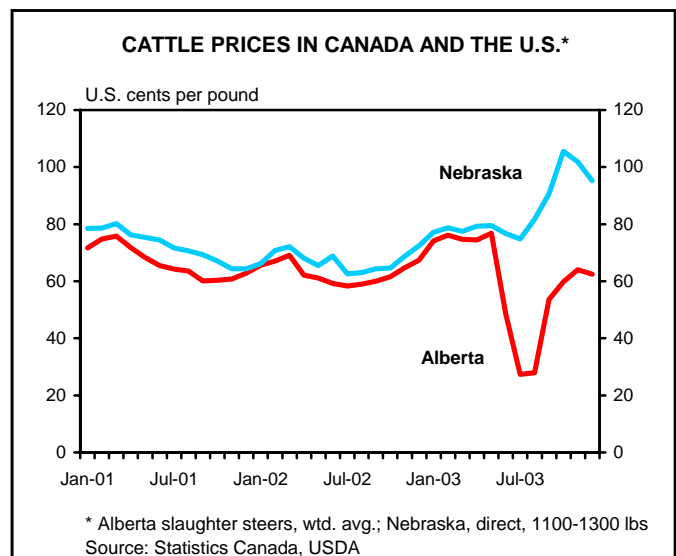
Prices paid by retail consumers, however, did not fall nearly as much – even allowing for the traditional lag between changes in cattle prices and retail beef prices (Appendix Table 6). Statistics Canada's retail price index for fresh or frozen beef showed that prices were only about 10 per cent lower year-over-year in August and Septem-

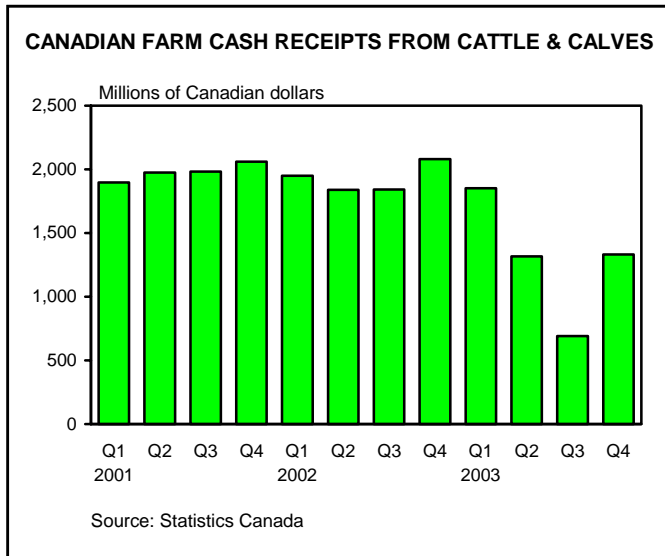
ber, while using a one-month lag, prices for slaughter steers in Alberta were 58 per cent lower in July and August. And, retail prices in November were one per cent higher than their year-ago level, while prices in December were only slightly lower than the year earlier.

The reverse trend, with a lag, occurred in the United States. In Nebraska, prices of slaughter steers fell initially in June and July, but then climbed in each of the following three months, so that prices in October were more than 60 per cent higher than a year ago. Although cattle prices gave back some of the gains in November and December, the levels remained very high, with December prices still up 30 per cent from a year ago. In contrast to Canada, the impact of the higher steer prices did show up at the retail market, with December prices for beef and veal up by 23 per cent from a year ago (Appendix Table 7).

Canadian cattle farmers' cash receipts

Cattle farmers' cash receipts, which include both gross income of farmers and government payments, tumbled to \$5.2 billion in 2003, from \$7.7 billion in 2002 (Appendix Table 8). The total included \$582 million paid out by the federal and various provincial governments last year, as assistance to the producers in response to the BSE crisis (Appendix Table 9). Over the past year, the federal government, working jointly with the various provincial governments, initiated two main financing programs to help the sector. In June, a \$460 million disaster assistance program, with the cost shared on a 60:40 basis, was launched and the federal government extended an additional \$36 million funding for this program in August. In November,





the federal government launched an initiative to deal with the older cattle that need to be culled from herds. The federal government committed \$120 million as base funding for this program. With provincial governments sharing the program on a 60:40 federal/provincial basis, the total assistance will reach \$200 million. So far, the bulk of the money received by the cattle industry came from the first program. Only \$250,000 was given last year from the second program. The provincial governments also had some assistance programs of their own, which in total provided \$138 million last year.

Two programs will also be available to help the industry starting in 2004. In March, the Canadian Agricultural Income Stabilization Program (CAIS) will begin to replace the less comprehensive Net Income Stabilization Account (NISA). CAIS is a government program designed to protect farmers from both small and large drops in income. Producers and the governments will share the cost of replacing the lost income, with the share of the latter increasing as the losses deepen. In April, beef producers will begin to receive payments from the \$680 million industry support program announced by Prime Minister Paul Martin on March 22. The assistance will be a direct payment of up to \$80 per eligible cattle on inventory as of December 31, 2003. All cattle are eligible except mature cows and bulls, which are covered by another program. In addition to the \$680 million, a further \$250 million will be made available to all agricultural producers as bridge financing to CAIS. (Government support payments will be discussed again towards the end of this report.)

Impact on the Related Sectors

There are four primary segments in cattle and beef production: the cow/calf operation, the stocker or background operation, the feedlot operation and the packers/processors. The cow/calf operators are the traditional ranchers and farmers who are in the business of breeding cows and producing calves. The gestation period for cattle is approximately 283 days. Once the calves have been weaned at six to ten months and have reached 300 to 600 pounds, they are sold to the stockers or the backgrounders. The backgrounders will fatten the calves to bring them to 600-800 pounds before they go into the feedlots at 8-14 months. At this point they are called feeder cattle. The feedlot operators buy feeder cattle and bring them to a slaughter weight of 900-1,400 pounds. The cattle reach these weights at 12-22 months. Then they get sold to packers or processors who slaughter the animals and process the carcasses into wholesale cuts. Wholesale cuts are sold as boxed beef to further processors, retailers or food service operators who further process them into retail cuts or value-added products which are sold to consumers.

Impact on Feedlots

Feedlot operators suffered from both a tumble in prices for fed cattle prices and a drop in volumes of their business. In Alberta and Saskatchewan, which feed about 80 per cent of the country's "finished" cattle, the number of cattle on feed, which declined in 2001-02 due to a drought, dropped even more in the immediate aftermath of BSE1 (Appendix Table 10). The term "finished" refers to cattle ready for slaughter. The low point was reached in September 2003, when the number of head on feed dropped to 339,000, or 42 per cent lower than the year before. It bounced back gradually over the next few months, reaching 668,000 head in December. Nonetheless, that number was still about 25 per cent lower than the year before. In January and February of 2004, the numbers reversed course and fell again. By February, the number of cattle on feed was almost 44 per cent lower than the year before.

Impact on Packers

The impact of the BSE crisis on packers has been very controversial. Packers have been accused of "gouging" and "profiteering" in the midst of the current crisis because producers were paid very low prices for their cattle, but beef prices to retail customers did not decline significantly. This implied wider profit margins for either pack-

ers or retail vendors. In a meeting called by the House of Commons agriculture committee in August of last year, executives of packer plants admitted that they had been profitable lately. However, they pointed out that it would only partly compensate them for the tremendous losses incurred during the first few weeks of the crisis when they were stuck with cattle purchased at pre-May 20 prices. They also operated at very reduced levels during the early weeks of the crisis.

Impact on Renderers

The rendering industry, which is not well-known to the public, has been greatly affected by the BSE crisis. This industry serves not only the cattle industry, but also other livestock industries (hog, etc.), butchers, supermarkets and restaurants in handling their by-products and wastes and turning them into useful materials. Rendering is a cooking and separating process that uses raw materials such as bone, fat, hides and feathers to produce purified fat and protein products. The portions of animals not fit for human consumption are cooked at high temperatures to remove moisture, kill bacteria and separate the fat from the protein. The fat is used traditionally in making candles and soaps. It also has other uses, such as in the manufacture of pet food and livestock feed and is a source of fatty acids and glycerin for the chemical industry. The protein is used in the manufacture of cosmetics and is sold to producers as a source of high quality protein (such as for swine, poultry and pet foods).

The BSE crisis has forced changes in the rendering industry and still continues to transform it. While the renderers used to pay a fee to producers for handling and obtaining their animal by-products and dead stock, now the reverse has happened. Producers now pay the renderers for this disposal service, because the renderers have lost most of their export markets for the rendered products. Moreover, after the BSE discovery, the Canadian government placed greater restrictions on the handling of specific risk materials, such as cattle brain, spine, etc., which essentially excluded them as raw materials for rendering. These specific raw materials now go to landfills.

Nevertheless, there is still need for the rendering service, since the raw waste has to be reduced in volume before going to the landfills. Nonetheless, the industry is looking for new uses for rendered products. The industry thinks that biodiesel for oils and new fertilizers for the

proteins offer some future economic possibilities.

Impact on Truckers

Truckers who haul cattle, or deliver the boxed beef, have lost a great deal of their business because of the U.S. ban. In a panel discussion hosted by the Calgary Chamber of Commerce last July, it was reported that trucking companies in Alberta had lost at least 60 per cent of their business, although it is unclear whether the term "business" means shipments or revenues. Meanwhile, Ontario's livestock transporters have reported a decline of as much as 85 per cent in revenues, as there is limited opportunity for them to shift to other types of freight, given the specialized nature of their equipment. Regardless, conditions probably improved somewhat in recent months in reaction to the partial opening of the U.S. border to exports of Canadian beef.

Fallout on Feed Companies

Since May 20, 2003, Canadian feed companies have noted that U.S. tests for possible feed contaminants have become very strict. If there is a contaminant, or even suspicion of a contaminant (such as a hair or a filament of a feather in a feed), the shipments get turned back. This has probably stopped some feed exports. The increased vigilance on the part of U.S. authorities stems from the fact that BSE is believed to be spread by recycling meat and bones from infected animal back into the cattle feed. Canadian and U.S. authorities have banned giving such feed to cattle, but still allow it to be fed to other livestock. The threat of cross-contamination exists because the feed can get mixed up inadvertently on farms.

Impact on Dairy Farmers

Although dairy farmers are in the business of producing milk, they have been directly hit by the BSE crisis. The fallout on dairy farmers is due to the fact that when dairy cows are culled after their productive stage, they are either slaughtered for their meat or they are sold live for export. According to the Canadian Cattlemen's Association, dairy farmers, on average, cull from 20-25 per cent of their herd a year, compared to a 10 per cent culling rate in a beef herd.

The closure of export markets to Canadian live cattle meant that there is no export outlet for the cull dairy cows. They all have to be absorbed domestically, and that has

led to severely depressed prices for these animals. Moreover, when the U.S. market was reopened to boneless beef from cattle younger than 30 months, it excluded dairy cows, as they are culled at an average age of five years. Sales of culls and bred heifers represent up to 20 per cent of the income of an average dairy farm. In most cases, sales of those animals often amount to the net profit for the year for a dairy farm.

Some dairy cattle are also exported to the United States for breeding purposes, but they constitute only a tiny portion of the total. Dairy farmers have also lost some important export markets for their embryo sales due to the BSE crisis. Although Mexico has now reopened its border to Canadian embryos, China remains closed.

The fact that BSE2 was a dairy cow, while BSE1 was a beef cattle, has nothing to do with the hardships being experienced by dairy farmers. Scientific research shows that the milk and dairy products from a herd with BSE represent no risk in terms of public health.

Impact on Lenders

So far, loan delinquency has not been a major issue to the lenders. Lenders have been sensitive to the plight of the cattle and beef industry. As a result, in many cases financial institutions have been willing to delay payments and/or restructure loans. Clearly, the situation calls for increased flexibility to allow farmers to ride out the storm. The challenge for lenders is differentiating between those in financial hardship due to BSE and those that would have run into trouble meeting their financial obligations because of poor business practices. Accordingly, most decisions are being made on a case-by-case basis.

Other effects

There are other repercussions of the BSE case in Canada that will not be expounded here. Suffice it to say that the plunge in cattle prices in Canada has had a negative impact on domestic hog and pork prices and a consequent redirection of Canadian hog exports to the U.S. market. Foreign markets were also affected by the BSE case, as the international ban on Canadian cattle and beef benefited other foreign producers such as Australia, New Zealand and Latin American countries.

IMPACT OF BSE2

The second North American case of BSE, announced on December 23, 2003, came at a time when the United

States was laying the groundwork for the second stage of relaxing its ban on Canadian live cattle and beef. On October 31, 2003, the United States issued the proposed rules for allowing the re-entry of Canadian live cattle and relaxing the remaining restrictions on Canadian beef, and interested parties were given until January 5, 2004 to submit their comments. However, in light of BSE2, the U.S. Department of Agriculture (USDA) decided on March 4 to re-open the comment period from March 8 to April 7. Additionally, the USDA is also soliciting comments on whether imports of Canadian beef from cattle over 30 months of age should be allowed.

The latter is a very positive development, as the U.S. is considering easing the restrictions by even more than the October 2003 proposals. The original measures offered to lift the ban on Canadian live cattle less than 30 months of age and bone-in beef from cattle less than 30 months of age. It now appears that the 30-month age limit will only apply to Canadian live cattle exports. Indeed, the implication is that the U.S. is considering to accept Canadian live cattle under 30 months of age and all Canadian beef regardless of the age of the animal it came from. As a cautionary note, it must be remembered that this is only a proposal and the final decision will depend upon the comments received.

As an aside, readers may be wondering how the age of cattle is readily identified. Since the discovery of the two North American cases of BSE, both Canada and the United States have established the use of dentition for determining the age of cattle at slaughter facilities. Cattle is determined to be 30 months of age or older when it has more than two permanent incisor teeth erupted. Currently, any carcass from Canadian cattle over 30 months of age receives a "Mature" grade and is not eligible for export.

There are no statistics on cattle exports by age, but it must be the case that many bulls and cows for slaughter are currently more than 30 months of age and will, therefore, remain banned in the United States. In 2002, out of the 1.7 million Canadian live cattle exported to the United States, bulls and cows for slaughter comprised about 25 per cent of the total (Appendix Table 11), with the other 75 per cent consisting of steers, heifers and younger cattle weighing less than 700 pounds.

Even with that limitation, however, the U.S. proposal in October was still a very positive development. Under the 30-month age limit, heifers and steers for slaughter

and feeder cattle would qualify, representing close to a million head that could enter the United States.

As the U.S. rule-making process advances toward completion, there are two new elements introduced by BSE2 to the existing situation in Canada.

First, due to the closure of several export markets to U.S. cattle and beef, there is now more supply of beef in the U.S. domestic market. This will likely reduce the U.S. import demand for Canadian boneless beef.

Second, Canada has disallowed the importation of bone-in beef from the United States, which provides some relief to the current excess supply situation in Canada. However, the boost to revenues will be only minor, as bone-in beef accounted for just 7 per cent of the total value of Canada's beef imports from the United States in 2002 (Appendix Table 12). Matching the current U.S. policy on beef, Canada continues to import boneless beef from cattle under 30 months of age from the United States. Boneless beef represents the bulk of Canadian beef imported from the United States, accounting for 63 per cent of the total value in 2002. Canada also continues to import U.S. live cattle for immediate slaughter.

While it is not known with certainty what the U.S. final decision will be, there are several positive items to note:

First, when the USDA released the proposed rules last October (before BSE2), it also made available a risk reassessment by the Harvard Center for Risk Analysis (HCRA). The HCRA completed a three-year study in November 2001 which concluded that even if BSE were to be introduced in the United States, the protection systems put into place by the U.S. to keep the disease out of the country would prevent it from spreading within the country. The USDA commissioned the HCRA to reassess the risk after the discovery of the disease in Canada on May 20, 2003. The HCRA confirmed the findings of the 2001 study.

The reassessment used several scenarios, which considered the possibilities that BSE might have been introduced into the U.S. between 1990 and 1998 due to the imports of infected animals, or the import of contaminated feed. In the worst case scenario, when infection was introduced in 1990, the results demonstrated that the disease could have spread with its peak infection rate occurring in 1997 and peak numbers of clinical cases occurring in 2000. When infection was introduced later in

a scenario of 1996 or 1998, there was minimal spread of the disease. The U.S. Food and Drug Administration's 1997 ban on feeding most mammalian protein back to other ruminants blocked the possible spread of the disease. Ruminants are cud-chewing animals such as cattle, sheep, goats and deer. Canada instituted a similar ruminant-to-ruminant feed ban in 1997.

The HCRA's hypothetical case became real with BSE2. It is difficult to imagine that HCRA would suddenly reverse its finding.

Second, after a meeting between President Bush and Prime Minister Martin in mid-January, President Bush declared that BSE is an issue that requires close coordination between the two countries with respect to regulation, information and science. The international panel, which reviewed the U.S. investigation of its first case of BSE, echoed the same view. In a report issued on February 4, the panel pointed out, that the United States' first case of BSE cannot be considered in isolation from the whole production system in North America and that the U.S. cannot dismiss it by considering it as "imported". It also noted that the United States' first case and Canada's first indigenous case reported in May 2003 must be recognized as both being cases indigenous to North America. It concluded that there has to be a close collaboration between all appropriate agencies in NAFTA in order to manage North America's BSE problem. That will include not only Canada and the United States, but also Mexico.

Third, when the USDA re-opened the comment period in March 2004, it also said that the discovery of an additional BSE case does not alter its original risk assessment of Canadian cattle and beef products. With the import rules already in place and the additional measures taken by both Canada and the United States, in response to their BSE cases, the risk of BSE-infected animals entering the United States from Canada and spreading the disease in the U.S. livestock was deemed low.

Lastly, it should be noted the United States will be hard pressed to convince its other trading partners to reopen their borders to U.S. cattle and beef without first opening its own border to Canada.

Impact of BSE on the United States

What happened to the Canadian cattle and beef industry after BSE1 is likely to be largely experienced by the U.S. industry with the discovery of BSE2. Export earn-

ings, domestic inventories and prices in the United States will likely exhibit the same general trends that transpired in Canada. With proper public relations handling, domestic beef consumption can be shielded from the potential negative fallout from BSE. Like in Canada, BSE has been a non-event as far as U.S. domestic beef consumers are concerned. The one big difference, is that BSE2 will likely have a less serious impact in the United States than in Canada, because while Canada exports about 40 per cent of its domestic beef production, the comparable figure for the United States is only about 10 per cent. Moreover, while Canada's live cattle exports would be the equivalent of about 10 per cent of its total cattle inventory, the same measure for the United States would be less than half a per cent. If the live cattle exports were converted to their meat equivalent, then more than 60 per cent of Canada's beef production are actually being exported. Furthermore, the tight supplies of slaughter-ready cattle in the United States, even before the occurrence of BSE1, also means that prices in the United States are unlikely to drop as much as they did in Canada. The closure of export markets to U.S. beef will ease the upward pressure on domestic cattle and beef prices to the benefit of U.S. consumers, and to the detriment of domestic producers. The latter, across the spectrum of the industry from farmers to wholesalers down to retailers, enjoyed record high prices last year due to the ban on Canadian live cattle and beef.

Attesting to the prior tight supplies of cattle in the United States, prices of live steers and heifers in the United States in mid-February of this year were a mere 1 per cent lower than a year ago, in spite of the closure of several export markets.

INDUSTRY/GOVERNMENT RESPONSE TO THE CRISIS

Canada's federal and provincial governments have worked closely with the industry in responding to the crisis. The approach was essentially three-pronged: 1) manage the flow in the cattle-supply chain in light of the sudden closure of export outlets, 2) work on reopening trade, particularly with the United States, and 3) ensure consumer confidence in the safety of beef and promote domestic consumption.

Only Step 1 will be discussed in detail below, as it is connected with the federal and provincial governments' financial support. Step 2 resulted in the opening of the U.S. border to boneless beef less than three months after

the crisis erupted, and the move to resume live cattle exports was on a fast track until BSE 2 intervened in December. Step 3 was successful. Canadian consumers did not waver in their beef consumption. The big chains such as McDonald's, Burger King and A & W also stepped up to the plate by adopting a Buy Canadian policy for their beef supplies.

Managing the Flow in the Cattle-Supply Chain

After the BSE crisis erupted in May, the Canadian cattle market came to a standstill. In Alberta and Saskatchewan, there were about 700,000 cattle on feed that had nowhere to go except to the domestic market, and the feeding sector faced a cash crunch. With the loss of export outlets for beef, slaughter levels dropped significantly, and that led to a backup of thousands of cattle into the primary production system. At the same time, producers were delaying the marketing of their cattle, waiting for the U.S. border to reopen. If the border opened, the high cattle inventory could result in a sharp price decline in both Canada and the United States.

The Federal-Provincial BSE Recovery Program

To manage the situation, a \$460 million Federal-Provincial BSE Recovery Program was unveiled on June 18, with the federal portion set at 60 per cent. That program had two components. The first component paid sellers of slaughter cattle a compensation amount when the price of cattle fell below a reference price, based on market value in the United States. Payments were on a sliding scale and government assistance increased as the average price declined. Since cattle prices in Canada were much lower than in the United States, producers' sales receipts would be low, but with the government topping up the amount, the financial loss shouldered by the producers was reduced significantly. The second component allocated \$30 million to pay processors to move unsaleable products that are taking space in their cold storage, which prevent them from buying cattle. Those products included offals (tongues, kidneys, tripe, etc.) for which there is low demand in the domestic market and are normally sold offshore.

In early August, the federal government provided another \$36 million to extend the recovery program. With provincial participation, the funding could reach \$60 million.

The federal grant closed at the end of August 2003, while some provincial programs (for example Ontario's) did not close until the end of 2003. All together, the recovery program totalled \$520 million.

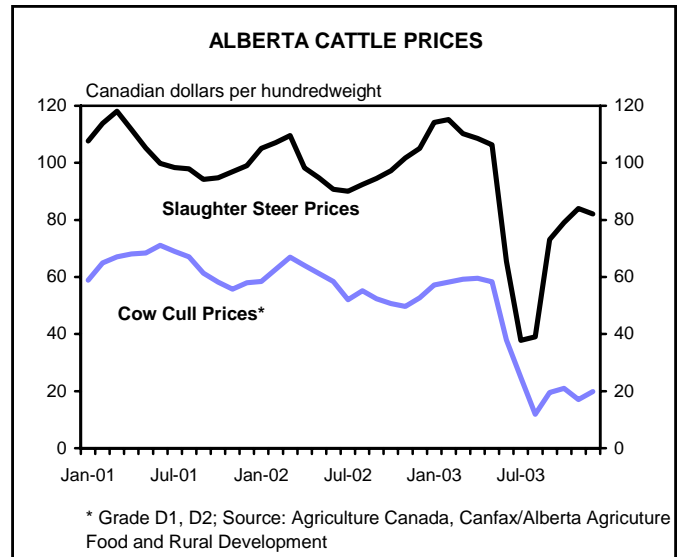
The Cow Cull Program

Cow culls are old female cattle that are past their productive prime. Culling, which is the slaughter of these animals, is a normal practice in the industry to improve herd performance. The meat from cull cows is used for hamburgers. In Canada, about 700,000 cattle are being culled every year. Although that number may include other types of cattle such as bulls, the total is made up mostly of cows (both dairy and beef), which explains the name of the program.

Due to the BSE crisis, cull cows have been a particular challenge to the industry, as the U.S. market has remained closed to live cattle exports from Canada. A significant number of those cull cows used to be sent to the United States for processing, as there is limited slaughtering capacity in Canada. Moreover, the United States reopened its border only to Canadian boneless beef from cattle under 30 months of age. That automatically disqualifies the meat from cull cows, which are usually older than the age limit. Moreover, under the rules being considered by the United States for relaxing the ban on Canadian live cattle, the same 30-month age limit will also apply, so the challenge posed by cull cows will remain for sometime.

The limited market for cull cows has led to severely depressed prices. While prices of other types of cattle, such as steers and heifers, have rebounded from the lows experienced in the summer of 2003, prices for cow culls remain depressed. Because prices are very low, some farmers have been holding on to their old cows to avoid the financial losses that would occur from slaughtering them.

The federal government launched its cow cull program on November 21, 2003 to help the farmers and to minimize the on-farm slaughter and disposal. The federal government will provide \$120 million to help cattle farmers with their older cull animals. The program allows farmers to cull up to 8 per cent of their beef herd and up to 16 per cent of their dairy herd. The federal government will give the farmer \$95.40 per animal once their cows are slaughtered. The cows must be slaughtered between September 1, 2003 and December 31, 2004. An additional 60 cents per day will be given for feed costs for cows being



fed between December 16, 2003 and May 24, 2004. If the provinces participate, the base grant will increase to \$159 per slaughtered animal while the feed assistance will rise from 60 cents per day to \$1 per day. In total, a producer can receive a maximum payment of up to \$320 per eligible animal. These amounts will be on top of the prices to be received by farmers when they sell their cows.

This program had been criticized by some provinces, which objected to the requirement that the cows must be slaughtered before the grant money was given. Alberta opted out of the federal program for this reason and, instead, set up its own program. Producers can apply for both the federal and provincial programs. On February 16, 2004, the federal government removed the slaughter provision in this program.

CONCLUSIONS: WHERE DO WE GO FROM HERE?

The U.S. decision to go with the original rules proposed last October and its tentative plan to open the market to all Canadian beef offer rays of hope that the U.S. market will soon open to Canadian live cattle and beef. The exact timing and the precise details are not known, but the decision is likely to come sooner, rather than later. In an integrated North American market, the United States is under pressure to open its border to Canada in order to convince the world to open their borders to the United States. Since the U.S. market will likely remain closed to older Canadian cattle and/or beef, the industry will have to deal with what to do with the unwanted cattle and/or beef products.

There are a few options:

- **Promote beef consumption**

In recent years, beef consumption has lost out to pork and chicken. A campaign aimed at promoting beef consumption could improve demand and help to raise prices.

- **Curtail beef imports**

Amidst the current crisis, Canada continues to import beef because of the existing free trade agreements with the United States and Mexico, and Chile. Also, as a member of the World Trade Organization, Canada is obligated to accept negotiated quantities of beef tariff-free. When this quota is filled, firms that want to import more can apply for a supplemental quota.

To help out in the current crisis, the government initially tightened the requirement for approving the supplemental quota, and then refused to consider any supplemental quota starting July 9.

- **Diversify markets**

Canada is heavily dependent on the U.S. market, with practically all of its live cattle exports going to the United States, while its beef product exports are only slightly less dependent (about 80 per cent). Even looking at the remainder, there is limited diversification, as the next three most important markets – Mexico, Japan and South Korea account for an additional 15 per cent, leaving the rest of the world with just 5 per cent. Accordingly, an increased geographic diversification in cattle and beef exports would be beneficial.

However, changing export markets is not easily done in the short run, and can encounter its own challenges. For example, pushing exports to Japan runs into the issue of mass testing, which both the United States and Canada oppose, because of the costs involved and based on the belief that it is not necessary. Canada and the United States plan to increase the number of animals

CANADA'S LIVE CATTLE AND BEEF EXPORT VALUES Share by Destination in 2002 (%)		
	Live Cattle	Beef Products
United States	99.60	79.40
Mexico	0.02	8.55
Japan	0.03	4.20
South Korea	0.01	2.76
Taiwan	-	0.91
Others	0.34	4.18
Total	100.00	100.00
Source: Statistics Canada		

that will be tested, but at this point it appears that is not enough for Japan. Unless there is a reasonable compromise on this issue, the Japanese market may well remain closed to both U.S. and Canadian cattle and beef.

- **Use moral suasion on importing countries**

According to the Office International des Epizooties (OIE, or the world organization for animal health), Canada is a minimal risk BSE country, implying that it is safe for others to import Canadian cattle and beef. However, countries have the right to interpret those rules according to their own domestic health situation. Accordingly, some countries have chosen to restrict Canadian exports. The onus is on the Canadian cattle and beef industry and the federal/provincial governments to improve the international perception of the healthiness of Canadian exports.

- **Reduce the Canadian cattle herd to deal with the surplus of Canadian beef**

If there is no success in reopening markets soon enough, it would be necessary to reduce the cattle herd in order to deal with the surplus in supply.

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Appendix Table 1
CANADA'S EXPORT EARNINGS FROM LIVE CATTLE AND BEEF

	Live Cattle			Beef Cuts			Offals			Rendered Meat*			Grand Total					
	U.S.	Others	Total	U.S.	Others	Total	U.S.	Others	Total	U.S.	Others	Total	U.S.	Others	Total	Live Cattle	Beef Prod.	Total
Levels (C\$mn)																		
2002	1,824	7	1,832	1,729	318	2,047	109	72	181	82	97	179	3,744	495	4,239	1,832	2,407	4,239
2003	595	1	596	1,191	177	1,368	63	39	102	49	84	133	1,898	302	2,200	596	1,604	2,200
% Change	-67.4	-88.0	-67.5	-31.1	-44.3	-33.2	-42.4	-45.2	-43.5	-39.7	-13.4	-25.4	-49.3	-39.1	-48.1	-67.5	-33.4	-48.1
% Share																		
2002	99.6	0.4	100.0	84.5	15.5	100.0	60.3	39.7	100.0	45.7	54.3	100.0	88.3	11.7	100.0	43.2	56.8	100.0
2003	99.9	0.1	100.0	87.1	12.9	100.0	61.5	38.5	100.0	36.9	63.1	100.0	86.3	13.7	100.0	27.1	72.9	100.0

Source: Statistics Canada
* Rendered meat includes bovine plus sheep and goat.

Appendix Table 2a
CANADA: CATTLE AND CALVES INVENTORY AS OF JANUARY 1

	Level (Thousands of head)										% Share											
	Can	Alb.	Sask.	Ont.	Man.	Que.	B.C.	N.B.	N.S.	P.E.I.	Nfld. & Lab	Can	Alb.	Sask.	Ont.	Man	Que	BC	N.B.	N.S.	PEI	Nfld. & Lab
1974	13,481	3,929	2,627	3,245	1,180	1,626	556	99	123	96	0	100.0	29.1	19.5	24.1	8.8	12.1	4.1	0.7	0.9	0.7	0.0
1975	14,278	4,211	2,787	3,336	1,285	1,734	585	104	132	104	0	100.0	29.5	19.5	23.4	9.0	12.1	4.1	0.7	0.9	0.7	0.0
1976	14,048	4,148	2,795	3,252	1,272	1,653	581	111	131	105	0	100.0	29.5	19.9	23.1	9.1	11.8	4.1	0.8	0.9	0.7	0.0
1977	13,362	4,035	2,455	3,140	1,230	1,590	567	110	127	102	6	100.0	30.2	18.4	23.5	9.2	11.9	4.2	0.8	1.0	0.8	0.0
1978	12,526	3,805	2,170	2,915	1,195	1,515	595	103	125	97	6	100.0	30.4	17.3	23.3	9.5	12.1	4.8	0.8	1.0	0.8	0.0
1979	11,996	3,665	1,990	2,865	1,115	1,430	605	100	124	96	6	100.0	30.6	16.6	23.9	9.3	11.9	5.0	0.8	1.0	0.8	0.0
1980	12,126	3,695	2,035	2,860	1,105	1,470	634	98	127	96	6	100.0	30.5	16.8	23.6	9.1	12.1	5.2	0.8	1.0	0.8	0.0
1981	12,166	3,690	1,970	2,930	1,045	1,530	664	103	129	99	6	100.0	30.3	16.2	24.1	8.6	12.6	5.5	0.8	1.1	0.8	0.0
1982	12,163	3,690	2,032	2,792	1,053	1,574	680	104	131	100	7	100.0	30.3	16.7	23.0	8.7	12.9	5.6	0.9	1.1	0.8	0.1
1983	11,861	3,630	1,952	2,752	1,001	1,539	649	102	130	99	7	100.0	30.6	16.5	23.2	8.4	13.0	5.5	0.9	1.1	0.8	0.1
1984	11,629	3,555	1,925	2,653	1,005	1,491	665	101	129	99	7	100.0	30.6	16.6	22.8	8.6	12.8	5.7	0.9	1.1	0.9	0.1
1985	11,330	3,520	1,777	2,600	1,009	1,443	648	100	128	98	7	100.0	31.1	15.7	22.9	8.9	12.7	5.7	0.9	1.1	0.9	0.1
1986	10,956	3,400	1,695	2,507	978	1,433	612	101	126	97	7	100.0	31.0	15.5	22.9	8.9	13.1	5.6	0.9	1.2	0.9	0.1
1987	10,667	3,372	1,699	2,354	961	1,385	570	99	123	96	7	100.0	31.6	15.9	22.1	9.0	13.0	5.3	0.9	1.2	0.9	0.1
1988	10,756	3,605	1,763	2,227	932	1,335	573	98	120	95	8	100.0	33.5	16.4	20.7	8.7	12.4	5.3	0.9	1.1	0.9	0.1
1989	10,984	3,749	1,749	2,293	918	1,347	609	96	120	95	8	100.0	34.1	15.9	20.9	8.4	12.3	5.5	0.9	1.1	0.9	0.1
1990	11,220	3,953	1,801	2,301	912	1,316	615	99	120	96	8	100.0	35.2	16.1	20.5	8.1	11.7	5.5	0.9	1.1	0.9	0.1
1991	11,289	4,055	1,823	2,264	919	1,295	615	98	119	93	8	100.0	35.9	16.1	20.1	8.1	11.5	5.4	0.9	1.1	0.8	0.1
1992	11,869	4,234	2,158	2,244	988	1,296	632	98	119	93	8	100.0	35.7	18.2	18.9	8.3	10.9	5.3	0.8	1.0	0.8	0.1
1993	11,860	4,325	2,214	2,103	993	1,299	610	96	119	94	8	100.0	36.5	18.7	17.7	8.4	11.0	5.1	0.8	1.0	0.8	0.1
1994	12,012	4,495	2,210	2,076	986	1,336	593	95	120	94	8	100.0	37.4	18.4	17.3	8.2	11.1	4.9	0.8	1.0	0.8	0.1
1995	12,709	4,783	2,349	2,188	1,069	1,374	634	94	118	93	8	100.0	37.6	18.5	17.2	8.4	10.8	5.0	0.7	0.9	0.7	0.1
1996	13,402	5,038	2,545	2,289	1,154	1,391	672	94	118	93	8	100.0	37.6	19.0	17.1	8.6	10.4	5.0	0.7	0.9	0.7	0.1
1997	13,412	5,074	2,500	2,216	1,229	1,405	674	94	119	94	8	100.0	37.8	18.6	16.5	9.2	10.5	5.0	0.7	0.9	0.7	0.1
1998	13,360	5,258	2,425	2,147	1,212	1,362	646	95	113	95	8	100.0	39.4	18.2	16.1	9.1	10.2	4.8	0.7	0.8	0.7	0.1
1999	13,211	5,398	2,334	2,044	1,176	1,306	645	95	111	94	8	100.0	40.9	17.7	15.5	8.9	9.9	4.9	0.7	0.8	0.7	0.1
2000	13,201	5,590	2,250	1,995	1,160	1,257	650	92	109	90	9	100.0	42.3	17.0	15.1	8.8	9.5	4.9	0.7	0.8	0.7	0.1
2001	13,608	5,829	2,300	2,045	1,205	1,280	655	92	107	87	9	100.0	42.8	16.9	15.0	8.9	9.4	4.8	0.7	0.8	0.6	0.1
2002	13,762	5,825	2,418	2,026	1,245	1,286	670	91	107	85	10	100.0	42.3	17.6	14.7	9.0	9.3	4.9	0.7	0.8	0.6	0.1
2003	13,488	5,310	2,543	2,110	1,250	1,303	683	90	106	84	9	100.0	39.4	18.9	15.6	9.3	9.7	5.1	0.7	0.8	0.6	0.1
2004	14,660	5,675	2,855	2,224	1,450	1,420	740	93	108	86	9	100.0	38.7	19.5	15.2	9.9	9.7	5.0	0.6	0.7	0.6	0.1

Source: Statistics Canada

Appendix Table 2b											
CANADA: CATTLE AND CALVES INVENTORY AS OF JANUARY 1											
% Change Year/Year											
	Can	Alb.	Sask.	Ont.	Man.	Que.	B.C.	N.B.	N.S.	P.E.I.	Nfld. & Lab.
1974	-	-	-	-	-	-	-	-	-	-	-
1975	5.9	7.2	6.1	2.8	8.9	6.6	5.2	5.1	7.3	8.3	-
1976	-1.6	-1.5	0.3	-2.5	-1.0	-4.7	-0.7	6.7	-0.8	1.0	-
1977	-4.9	-2.7	-12.2	-3.4	-3.3	-3.8	-2.4	-0.9	-3.1	-2.5	-
1978	-6.3	-5.7	-11.6	-7.2	-2.8	-4.7	4.9	-6.4	-1.6	-5.1	0.0
1979	-4.2	-3.7	-8.3	-1.7	-6.7	-5.6	1.7	-2.9	-0.8	-1.2	0.0
1980	1.1	0.8	2.3	-0.2	-0.9	2.8	4.8	-2.0	2.4	0.0	-1.7
1981	0.3	-0.1	-3.2	2.4	-5.4	4.1	4.7	5.1	1.6	3.1	1.7
1982	0.0	0.0	3.1	-4.7	0.8	2.9	2.4	1.0	1.6	1.0	10.2
1983	-2.5	-1.6	-3.9	-1.4	-4.9	-2.2	-4.6	-1.9	-0.8	-1.0	4.6
1984	-2.0	-2.1	-1.4	-3.6	0.3	-3.1	2.5	-1.0	-0.8	0.0	1.5
1985	-2.6	-1.0	-7.7	-2.0	0.4	-3.2	-2.6	-1.0	-0.8	-1.0	1.4
1986	-3.3	-3.4	-4.6	-3.6	-3.0	-0.7	-5.6	0.5	-1.6	-1.0	4.3
1987	-2.6	-0.8	0.2	-6.1	-1.7	-3.4	-6.9	-1.5	-2.4	-1.0	1.4
1988	0.8	6.9	3.8	-5.4	-3.0	-3.6	0.5	-1.0	-2.4	-1.0	8.1
1989	2.1	4.0	-0.8	3.0	-1.5	0.9	6.3	-2.0	0.0	0.0	1.3
1990	2.1	5.4	3.0	0.3	-0.7	-2.3	1.0	3.1	0.0	1.1	1.2
1991	0.6	2.6	1.2	-1.6	0.8	-1.6	0.0	-1.0	-0.8	-3.1	-2.4
1992	5.1	4.4	18.4	-0.9	7.5	0.0	2.8	0.0	0.0	0.0	0.0
1993	-0.1	2.1	2.6	-6.3	0.5	0.3	-3.5	-2.0	-0.4	0.5	0.0
1994	1.3	3.9	-0.2	-1.3	-0.7	2.8	-2.8	-1.0	0.8	0.0	0.0
1995	5.8	6.4	6.3	5.4	8.4	2.8	6.9	-1.6	-1.3	-1.1	2.5
1996	5.5	5.3	8.3	4.6	8.0	1.3	6.0	0.0	0.0	0.5	0.0
1997	0.1	0.7	-1.8	-3.2	6.5	1.0	0.3	0.0	0.8	0.5	-1.2
1998	-0.4	3.6	-3.0	-3.1	-1.4	-3.1	-4.2	1.6	-5.0	1.6	-2.5
1999	-1.1	2.7	-3.8	-4.8	-3.0	-4.1	-0.1	0.0	-1.8	-1.1	5.1
2000	-0.1	3.6	-3.6	-2.4	-1.4	-3.8	0.8	-3.2	-1.8	-4.3	6.0
2001	3.1	4.3	2.2	2.5	3.9	1.9	0.8	0.0	-2.3	-3.9	4.5
2002	1.1	-0.1	5.1	-0.9	3.3	0.5	2.3	-1.1	0.0	-1.7	3.3
2003	-2.0	-8.8	5.2	4.1	0.4	1.3	1.9	-1.1	-0.9	-1.2	-4.2
2004	8.7	6.9	12.3	5.4	16.0	9.0	8.3	3.3	1.9	2.4	0.0

Source: Statistics Canada

Appendix Table 3				
CANADA: INVENTORIES OF FROZEN AND CHILLED BEEF AND VEAL				
(Domestic and Imported)				
	Level (thousands of tonnes)		% Change Month-to-Month	
	Beef & Veal		Beef & Veal	
			% Chg. Yr./Yr.	
	Beef & Veal		Beef & Veal	
Jan-01	19.40		-2.0	-19.3
Feb-01	22.21		14.5	-6.0
Mar-01	22.82		2.8	-11.3
Apr-01	25.03		9.7	-3.8
May-01	25.43		1.6	5.5
Jun-01	24.64		-3.1	1.2
Jul-01	20.51		-16.7	-9.5
Aug-01	19.61		-4.4	-13.1
Sep-01	21.42		9.3	-2.1
Oct-01	24.11		12.5	14.0
Nov-01	24.30		0.8	28.4
Dec-01	22.13		-8.9	11.7
Jan-02	24.42		10.3	25.9
Feb-02	26.95		10.4	21.4
Mar-02	27.42		1.7	20.1
Apr-02	27.50		0.3	9.8
May-02	31.90		16.0	25.4
Jun-02	25.65		-19.6	4.1
Jul-02	25.63		-0.1	24.9
Aug-02	26.30		2.6	34.1
Sep-02	24.94		-5.2	16.5
Oct-02	25.30		1.4	4.9
Nov-02	26.70		5.6	9.9
Dec-02	24.66		-7.6	11.4
Jan-03	24.02		-2.6	-1.6
Feb-03	26.53		10.4	-1.6
Mar-03	25.35		-4.4	-7.5
Apr-03	23.80		-6.1	-13.4
May-03	25.99		9.2	-18.5
Jun-03	28.65		10.2	11.7
Jul-03	28.60		-0.2	11.6
Aug-03	35.88		25.5	36.4
Sep-03	41.15		14.7	65.0
Oct-03	43.20		5.0	70.7
Nov-03	41.87		-3.1	56.8
Dec-03	38.28		-8.6	55.2

Source: Statistics Canada

Appendix Table 4				
ALBERTA CATTLE PRICES (IN CANADIAN DOLLARS)				
(Alberta Slaughter Steers, wtd. avg.)				
	Price (In Can. Dollars/cwt)		% CHANGE FROM PERIOD TO PERIOD	% CHANGE YEAR-OVER-YEAR
Annual Avg.				
2001	102.82	-		8.2
2002	98.88	-		-3.8
2003	84.58	-		-14.5
Monthly Avg.				
May-01	105.24		-5.8	9.0
Jun-01	99.81		-5.2	7.6
Jul-01	98.41		-1.4	9.9
Aug-01	97.95		-0.5	6.8
Sep-01	94.25		-3.8	6.4
Oct-01	94.82		0.6	3.1
Nov-01	96.88		2.2	-2.1
Dec-01	99.07		2.3	-7.5
Jan-02	105.08		6.1	-2.4
Feb-02	107.10		1.9	-5.9
Mar-02	109.62		2.4	-7.2
Apr-02	98.19		-10.4	-12.1
May-02	94.77		-3.5	-9.9
Jun-02	90.73		-4.3	-9.1
Jul-02	90.11		-0.7	-8.4
Aug-02	92.43		2.6	-5.6
Sep-02	94.57		2.3	0.3
Oct-02	97.23		2.8	2.5
Nov-02	101.69		4.6	5.0
Dec-02	105.05		3.3	6.0
Jan-03	114.17		8.7	8.7
Feb-03	115.13		0.8	7.5
Mar-03	110.29		-4.2	0.6
Apr-03	108.55		-1.6	10.6
May-03	106.31		-2.1	12.2
Jun-03	65.44		-38.4	-27.9
Jul-03	37.80		-42.2	-58.1
Aug-03	39.02		3.2	-57.8
Sep-03	73.09		87.3	-22.7
Oct-03	79.07		8.2	-18.7
Nov-03	84.00		6.2	-17.4
Dec-03	82.06		-2.3	-21.9

Source: Agriculture Canada

Appendix Table 5 CATTLE PRICES IN CANADA & UNITED STATES						
	LEVELS (IN U.S. CURRENCY) (Slaughter Steers, US\$/cwt)		% CHANGE			
	ALBERTA (wtd.avg.)	NEBRASKA (Direct, 1100- 1300 lbs)	ALBERTA	NEBRASKA	ALBERTA	NEBRASKA
Annual Avg.						
2000	63.97	69.50	-	-	6.4	6.0
2001	66.39	72.57	-	-	3.8	4.4
2002	62.97	67.27	-	-	-5.1	-7.3
2003	59.98	84.89	-	-	-4.7	26.2
Monthly Avg.			% Change Month-to-Month		% Change Year-Over-Year	
May-01	68.27	75.35	-4.8	-1.2	5.7	5.3
Jun-01	65.48	74.45	-4.1	-1.2	4.3	7.5
Jul-01	64.30	71.66	-1.8	-3.7	6.2	7.3
Aug-01	63.60	70.69	-1.1	-1.4	2.8	9.1
Sep-01	60.12	69.33	-5.5	-1.9	0.8	6.9
Oct-01	60.35	67.09	0.4	-3.2	-0.8	-1.1
Nov-01	60.84	64.38	0.8	-4.0	-5.2	-10.7
Dec-01	62.80	64.37	3.2	0.0	-10.7	-14.8
Jan-02	65.66	66.16	4.6	2.8	-8.3	-15.7
Feb-02	67.11	70.72	2.2	6.9	-10.3	-10.0
Mar-02	69.07	72.12	2.9	2.0	-8.8	-10.1
Apr-02	62.09	68.02	-10.1	-5.7	-13.5	-10.8
May-02	61.16	65.50	-1.5	-3.7	-10.4	-13.1
Jun-02	59.24	68.85	-3.1	5.1	-9.5	-7.5
Jul-02	58.29	62.58	-1.6	-9.1	-9.4	-12.7
Aug-02	58.95	63.06	1.1	0.8	-7.3	-10.8
Sep-02	60.01	64.41	1.8	2.1	-0.2	-7.1
Oct-02	61.62	64.65	2.7	0.4	2.1	-3.6
Nov-02	64.71	68.70	5.0	6.3	6.4	6.7
Dec-02	67.41	72.50	4.2	5.5	7.3	12.6
Jan-03	74.09	77.18	9.9	6.5	12.8	16.7
Feb-03	76.13	78.77	2.8	2.1	13.4	11.4
Mar-03	74.73	77.52	-1.8	-1.6	8.2	7.5
Apr-03	74.43	79.24	-0.4	2.2	19.9	16.5
May-03	76.79	79.50	3.2	0.3	25.6	21.4
Jun-03	48.40	76.73	-37.0	-3.5	-18.3	11.4
Jul-03	27.36	74.75	-43.5	-2.6	-53.1	19.4
Aug-03	27.96	81.74	2.2	9.4	-52.6	29.6
Sep-03	53.63	90.59	91.8	10.8	-10.6	40.6
Oct-03	59.82	105.50	11.5	16.5	-2.9	63.2
Nov-03	64.00	101.88	7.0	-3.4	-1.1	48.3
Dec-03	62.51	95.25	-2.3	-6.5	-7.3	31.4

Source: Statistics Canada, USDA

cwt=hundredweight =100 lbs.

Appendix Table 6				
CANADA: RETAIL PRICE INDEX FOR BEEF (FRESH OR FROZEN)				
	Index (1992=100)		% Change Mo.-to-Mo.	% Change Yr/Yr
May-01	132.3		1.2	19.2
Jun-01	132.0		-0.2	17.9
Jul-01	129.3		-2.0	14.0
Aug-01	128.2		-0.9	12.5
Sep-01	129.6		1.1	13.6
Oct-01	128.9		-0.5	14.2
Nov-01	127.9		-0.8	13.6
Dec-01	130.3		1.9	12.9
Jan-02	129.9		-0.3	10.1
Feb-02	131.5		1.2	7.2
Mar-02	132.0		0.4	3.2
Apr-02	135.0		2.3	3.3
May-02	133.6		-1.0	1.0
Jun-02	134.0		0.3	1.5
Jul-02	133.5		-0.4	3.2
Aug-02	133.5		0.0	4.1
Sep-02	132.7		-0.6	2.4
Oct-02	132.6		-0.1	2.9
Nov-02	132.0		-0.5	3.2
Dec-02	133.8		1.4	2.7
Jan-03	135.8		1.5	4.5
Feb-03	141.0		3.8	7.2
Mar-03	141.1		0.1	6.9
Apr-03	143.3		1.6	6.1
May-03	140.3		-2.1	5.0
Jun-03	138.7		-1.1	3.5
Jul-03	131.8		-5.0	-1.3
Aug-03	120.8		-8.3	-9.5
Sep-03	119.9		-0.7	-9.6
Oct-03	125.5		4.7	-5.4
Nov-03	133.9		6.7	1.4
Dec-03	133.2		-0.5	-0.4

Source: Statistics Canada

Appendix Table 7				
UNITED STATES: RETAIL PRICE INDEX FOR BEEF AND VEAL				
	Index (1982-84=100)	% Change Mo.-to-Mo.	% Change Yr/Yr	
Jan-01	154.8	2.6	8.1	
Feb-01	158.6	2.5	9.9	
Mar-01	160.1	0.9	9.9	
Apr-01	161.5	0.9	9.9	
May-01	161.7	0.1	9.3	
Jun-01	162.5	0.5	8.4	
Jul-01	162.1	-0.2	8.4	
Aug-01	161.0	-0.7	7.0	
Sep-01	161.1	0.1	7.3	
Oct-01	161.0	-0.1	8.1	
Nov-01	161.0	0.0	7.8	
Dec-01	160.2	-0.5	6.2	
Jan-02	159.7	-0.3	3.2	
Feb-02	160.7	0.6	1.3	
Mar-02	161.8	0.7	1.1	
Apr-02	162.3	0.3	0.5	
May-02	162.1	-0.1	0.2	
Jun-02	160.2	-1.2	-1.4	
Jul-02	159.7	-0.3	-1.5	
Aug-02	160.0	0.2	-0.6	
Sep-02	159.6	-0.3	-0.9	
Oct-02	159.7	0.1	-0.8	
Nov-02	160.3	0.4	-0.4	
Dec-02	161.1	0.5	0.6	
Jan-03	161.3	0.1	1.0	
Feb-03	166.6	3.3	3.7	
Mar-03	168.6	1.2	4.2	
Apr-03	169.1	0.3	4.2	
May-03	168.3	-0.5	3.8	
Jun-03	170.3	1.2	6.3	
Jul-03	171.8	0.9	7.6	
Aug-03	172.9	0.6	8.1	
Sep-03	175.5	1.5	10.0	
Oct-03	182.1	3.8	14.0	
Nov-03	195.6	7.4	22.0	
Dec-03	198.8	1.6	23.4	
Jan-04	194.2	-2.3	20.4	

Source: USDA

Appendix Table 8
FARM CASH RECEIPTS FROM CATTLE & CALVES

(Millions of Canadian dollars)

	Canada	Alta.	SK	Ont.	Que.	Man.	BC	NS	NB	PEI	NFL
Annual											
1999	6,185	2,968	981	1,000	409	455	286	31	28	25	2
2000	6,875	3,340	1,074	1,078	482	484	328	33	27	27	2
2001	7,914	3,939	1,152	1,255	553	570	348	34	35	28	2
2002	7,707	3,869	1,154	1,172	550	560	318	28	29	25	2
2003	5,190	2,547	768	860	383	345	231	18	19	17	1
Quarterly											
1999 Q1	1,423	645	251	235	105	100	66	7	7	6	0
Q2	1,486	772	188	242	104	103	56	7	7	7	1
Q3	1,491	795	198	248	99	83	49	8	5	7	0
Q4	1,785	756	345	275	100	169	117	9	8	6	0
2000 Q1	1,563	738	245	261	112	106	76	8	8	7	1
Q2	1,707	903	197	260	139	115	68	8	8	8	1
Q3	1,640	854	239	270	114	85	55	10	6	7	0
Q4	1,965	844	394	287	117	178	128	7	6	5	0
2001 Q1	1,897	934	274	305	132	141	86	8	10	6	0
Q2	1,975	1,049	207	318	156	142	75	8	11	8	1
Q3	1,982	1,068	286	300	132	114	60	8	6	7	0
Q4	2,060	888	385	332	133	171	126	9	8	7	0
2002 Q1	1,949	923	321	332	130	137	82	8	9	6	0
Q2	1,838	973	210	285	146	131	68	8	9	7	1
Q3	1,841	1,014	249	251	138	108	65	5	5	6	0
Q4	2,080	959	375	304	136	184	103	6	6	6	0
2003 Q1	1,852	899	290	327	128	119	65	7	9	7	0
Q2	1,315	678	145	237	117	84	39	5	6	5	0
Q3	691	357	96	104	51	43	30	4	3	3	0
Q4	1,332	613	238	193	87	99	97	2	2	1	0

Source: Statistics Canada

Appendix Table 9a
CANADA: DIRECT GOVERNMENT PAYMENTS TO CATTLE PRODUCERS, BSE-RELATED
(Millions of Canadian dollars)

	Total Can.	Federal+Prov.		Alberta			Sask.		Manitoba			Ontario	Quebec	NS	PEI
		BSE Recovery Prog.	Cull Prog.	Fed Ctl. Market Adj. Prog.	Winter Feed Prog.	Set-Aside Prog.	Fed Livest. Comp. Adj.	Feeder Assistance Prog.	Slaughter Deficiency Prog.	Drought Assistance Prog.	BSE Recovery Initia.	prog. De soutien a l'industrie bovine	Beef Prod. Assis.	Ctl. Mktg Initiative	
Annual 2003	720	443	0.25	28.26	24.33	0.07	4.40	10.00	6.26	8.10	1.54	43.27	10.00	1.50	0.39
Qty															
2003Q1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003Q2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
2003Q3	294	280	-	0.12	-	-	1.86	-	4.97	-	-	-	-	-	-
2003Q4	424	162	0.25	28.14	24.33	0.07	2.54	10.00	1.29	8.10	1.54	43.27	10.00	1.50	0.39

Source: Statistics Canada

Appendix Table 9b

CANADA: DIRECT GOVERNMENT PAYMENTS TO CATTLE PRODUCERS, BSE-RELATED

(Millions of Canadian dollars)

	Total Canada	Total Federal- Provincial	Total Other Provincial Programs	Total of Provinces' Other BSE-Related Programs						
				Alberta	SK	Manitoba	Ontario	Quebec	NS	PEI
Annual 2003	581.71	443.58	138.13	52.66	14.40	15.91	43.27	10.00	1.50	0.39
Qtly										
2003Q1	0.00	-	0.00	-	-	-	-	-	-	-
2003Q2	1.38	1.38	0.00	0.00	-	-	-	-	-	-
2003Q3	287.21	280.26	6.95	0.12	1.86	4.97	-	-	-	-
2003Q4	293.13	161.95	131.18	52.54	12.54	10.94	43.27	10.00	1.50	0.39

Source: Statistics Canada

Appendix Table 10 CATTLE ON FEED: ALBERTA AND SASKATCHEWAN									
	Levels (Thousands of heads)				% Change Yr/Yr			Cattle Marketed as % of Inventory	Disappearances as % of Inventory
	Cattle On Feed (stock data)	Cattle Placed On Feed (flow data)	Fed Cattle Marketed	Disappearances	Cattle On Feed	Cattle Placed On Feed	Fed Cattle Marketed		
As of 1st of the month									
May-01	1,214	202	258	33	-5.3	9.3	-0.1	21.3	2.7
Jun-01	1,124	166	255	24	-3.1	0.8	2.6	22.7	2.2
Jul-01	1,010	109	252	11	-2.5	20.7	11.6	25.0	1.1
Aug-01	857	223	270	17	-3.8	27.0	13.3	31.5	2.0
Sep-01	792	418	241	41	-3.5	18.7	7.8	30.4	5.2
Oct-01	928	487	252	20	-1.6	2.6	12.3	27.2	2.1
Nov-01	1,143	284	216	16	-2.9	-4.3	-0.8	18.9	1.4
Dec-01	1,195	137	174	11	-4.3	0.0	0.0	14.6	0.9
Jan-02	1,135	148	184	15	-5.4	-29.4	-4.9	16.2	1.3
Feb-02	1,084	252	183	26	-10.2	17.9	3.6	16.9	2.4
Mar-02	1,126	189	192	27	-8.0	-35.7	-4.5	17.1	2.4
Apr-02	1,096	133	228	15	-14.6	-15.8	11.8	20.8	1.4
May-02	986	196	257	27	-18.8	-2.8	-0.6	26.0	2.8
Jun-02	898	156	241	45	-20.1	-6.1	-5.8	26.8	5.1
Jul-02	768	150	254	15	-24.0	37.4	0.9	33.1	1.9
Aug-02	649	203	249	14	-24.2	-9.2	-7.8	38.3	2.2
Sep-02	589	375	220	18	-25.7	-10.5	-8.9	37.3	3.1
Oct-02	725	408	242	10	-21.9	-16.2	-4.1	33.4	1.4
Nov-02	881	234	213	9	-23.0	-17.5	-1.7	24.1	1.0
Dec-02	893	133	195	13	-25.2	-3.0	12.3	21.9	1.5
Jan-03	818	165	202	13	-27.9	11.7	9.6	24.7	1.6
Feb-03	768	238	167	8	-29.1	-5.3	-9.2	21.7	1.0
Mar-03	832	188	199	22	-26.1	-0.3	3.7	23.9	2.7
Apr-03	799	205	220	20	-27.1	54.1	-3.3	27.5	2.5
May-03	764	104	168	12	-22.5	-46.8	-34.6	22.0	1.6
Jun-03	688	18	108	18	-23.4	-88.1	-55.0	15.7	2.6
Jul-03	580	44	190	8	-24.4	-71.0	-25.2	32.8	1.4
Aug-03	425	139	202	23	-34.5	-31.7	-18.8	47.5	5.4
Sep-03	339	319	156	14	-42.5	-14.8	-29.2	46.0	4.1
Oct-03	488	326	183	9	-32.6	-20.1	-24.7	37.4	1.8
Nov-03	623	227	175	7	-29.2	-3.1	-17.7	28.1	1.2
Dec-03	668	117	179	11	-25.2	-12.4	-8.5	26.8	1.7
Jan-04	594	48	205	7	-27.3	-70.7	1.9	34.6	1.2
Feb-04	430				-44.1				

Source: Canfax
* Those animals for the slaughter market that are being fed a ration of grain

Appendix Table 11a UNITED STATES' IMPORTS OF CANADIAN LIVE CATTLE BY SEX (Thousands of heads)												
	Bulls Sl.	Cows Sl.	Steers Sl.	Heifers Sl.	Bovine Male nes, 320 >	Bovine Male nes, 200-319	Bovine Male nes, 90-199	Bov. Female nes, 320>	Bovine Female nes, 200-319	Dairy Cow PB >90	Other Mixed	Total Imp. From Can.
1998	45	266	427	349	69	24	9	23	23	53	27	1,313
1999	37	170	362	213	57	14	13	20	8	63	34	985
2000	44	171	359	195	54	25	13	16	5	53	32	964
2001	54	258	424	286	76	27	28	37	19	67	33	1,306
2002	57	372	346	248	143	115	94	82	107	62	62	1,687
2003	17	136	107	94	51	7	25	29	5	24	14	508
Source: U.S. Foreign Agricultural Service					Sl. = slaughter							
N.B. Weight in kilograms nes = not elsewhere specified												

Appendix Table 11b												
UNITED STATES' IMPORTS OF CANADIAN LIVE CATTLE BY SEX												
% Share												
	Bulls Sl.	Cows Sl.	Steers Sl.	Heifers Sl.	Bov. Male nes, 320 >	Bovine Male nes, 200-319	Bovine Male nes, 90-199	Bov. Fem. nes, 320>	Bovine Female nes, 200-319	Dairy Cow PB >90	Other Mixed	Total Imp. Fr. Can.
1998	3.4	20.3	32.5	26.6	5.3	1.8	0.7	1.8	1.8	4.0	2.1	100.0
1999	3.7	17.3	36.8	21.6	5.8	1.5	1.3	2.0	0.8	6.4	3.5	100.0
2000	4.6	17.8	37.3	20.2	5.6	2.6	1.4	1.7	0.5	5.5	3.3	100.0
2001	4.1	19.7	32.5	21.9	5.8	2.1	2.2	2.8	1.4	5.2	2.5	100.0
2002	3.4	22.1	20.5	14.7	8.5	6.8	5.6	4.9	6.4	3.7	3.7	100.0
2003	3.3	26.8	21.0	18.6	10.1	1.4	5.0	5.8	0.9	4.7	2.8	100.0

Appendix Table 11c													
UNITED STATES' IMPORTS OF CANADIAN LIVE CATTLE BY AGE (APPROXIMATION)													
	> 30 Mo. of Age			Less Than 30 Months of Age									
	Bulls Sl.	Cows Sl.	Total	Steers Sl.	Hei- fers Sl.	Total	Bov. Male	Bov. Male	Bov. Female nes 200-319	Total	Dairy Cow nes PB>90	Other Mixed	Grand Total
1998	3.4	20.3	23.7	32.5	26.6	59.1	1.8	0.7	1.8	4.3	4.0	2.1	69.5
1999	3.7	17.3	21.0	36.8	21.6	58.3	1.5	1.3	0.8	3.5	6.4	3.5	71.7
2000	4.6	17.8	22.4	37.3	20.2	57.5	2.6	1.4	0.5	4.5	5.5	3.3	70.8
2001	4.1	19.7	23.8	32.5	21.9	54.4	2.1	2.2	1.4	5.7	5.2	2.5	67.7
2002	3.4	22.1	25.5	20.5	14.7	35.3	6.8	5.6	6.4	18.7	3.7	3.7	61.3
2003	3.3	26.8	30.1	21.0	18.6	39.5	1.4	5.0	0.9	7.2	4.7	2.8	54.2

Appendix Table 12a
CANADIAN LIVE CATTLE AND BEEF IMPORTS FROM THE UNITED STATES

	(Value in Millions of Canadian Dollars)										% Share			
	1994	1995	1996	1997	1998	1999	2000	2001	2002	1999	2000	2001	2002	
Total Imports From U.S.	609	588	512	506	539	585	727	690	551	100.0	100.0	100.0	100.0	
Live Cattle	96	70	46	51	93	158	265	238	77	27.0	36.5	34.6	14.0	
Bovine, live, pure bred breeding	6	4	9	11	4	2	3	5	5	0.4	0.5	0.7	1.0	
Bovine, live, not pure bred	90	66	38	40	89	156	262	234	72	26.6	36.0	33.9	13.1	
Total Beef and Products	512	518	466	455	446	427	462	452	473	73.0	63.5	65.4	86.0	
Total Boneless														
Bovine cuts, boneless fresh or chilled	372	378	329	306	291	275	301	277	279	47.1	41.4	40.2	50.7	
Bovine cuts, boneless, frozen	24	32	27	29	27	23	23	24	21	3.9	3.1	3.5	3.8	
Total-Bone-In														
Bov. carcasses & half-carc., fr./chilled	2	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	
Bov. carcasses & half carc., frozen	0	0	0	0	0	-	0	0	-	-	0.0	0.0	-	
Bovine cuts with bone-in, fresh/chilled	38	29	26	27	23	21	24	21	24	3.6	3.3	3.0	4.3	
Bovine cuts with bone-in, frozen	4	3	3	6	6	5	5	5	7	0.8	0.7	0.8	1.3	
Total-Offal														
Bovine edible offal, fresh or chilled	2	3	2	3	3	3	2	3	3	0.5	0.2	0.4	0.5	
Bovine tongues, edible, frozen	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	
Bovine livers, edible, frozen	2	2	2	2	2	2	3	4	4	0.4	0.5	0.5	0.7	
Bovine edible offal, nes, frozen	10	7	8	9	7	6	8	13	12	1.1	1.1	1.9	2.1	
Bovine meat, cured	1	1	1	1	1	1	1	1	1	0.1	0.2	0.2	0.1	
Bovine meat & meat offal (excl. livers) nes, prepared or preserved	37	33	35	44	60	68	78	84	103	11.6	10.7	12.1	18.6	
Total-Rendered														
Rendered fats of bovine animals, sheep or goats	21	28	34	29	24	23	17	19	20	3.9	2.4	2.8	3.7	
Source: Statistics Canada														

Appendix Table 12b
CANADIAN LIVE CATTLE AND BEEF IMPORTS FROM THE UNITED STATES

	% Share								
	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total Imports From U.S.	-	-	-	-	-	-	-	-	-
Live Cattle	-	-	-	-	-	-	-	-	-
Bovine, live, pure bred breeding	-	-	-	-	-	-	-	-	-
Bovine, live, not pure bred	-	-	-	-	-	-	-	-	-
Total Beef and Products	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Boneless	77.3	79.2	76.4	73.7	71.3	69.9	70.1	66.8	63.4
Bovine cuts, boneless fresh or chilled	72.5	73.1	70.6	67.2	65.3	64.5	65.2	61.5	59.0
Bovine cuts, boneless, frozen	4.8	6.1	5.8	6.4	6.0	5.4	4.9	5.3	4.5
Total-Bone-In	8.6	6.5	6.2	7.2	6.5	6.0	6.2	5.9	6.6
Bov. carcasses & half-carc., fr./chilled	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bov. carcasses & half carc., frozen	0.0	0.0	0.0	0.0	0.1	-	0.0	0.0	-
Bovine cuts with bone-in, fresh/chilled	7.5	5.6	5.6	5.9	5.1	4.9	5.1	4.6	5.0
Bovine cuts with bone-in, frozen	0.8	0.6	0.6	1.3	1.4	1.1	1.1	1.2	1.6
Total-Offal	10.1	8.9	10.1	12.8	16.7	18.8	19.9	23.1	25.7
Bovine edible offal, fresh or chilled	0.3	0.6	0.4	0.6	0.7	0.6	0.4	0.6	0.6
Bovine tongues, edible, frozen	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bovine livers, edible, frozen	0.5	0.3	0.4	0.4	0.4	0.5	0.7	0.8	0.8
Bovine edible offal, nes, frozen	2.0	1.4	1.7	1.9	1.7	1.5	1.7	2.8	2.5
Bovine meat, cured	0.2	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.2
Bovine meat & meat offal (excl. livers) nes, prepared or preserved	7.2	6.4	7.5	9.6	13.6	15.9	16.8	18.6	21.7
Total-Rendered	4.0	5.4	7.3	6.3	5.5	5.4	3.8	4.3	4.3
Rendered fats of bovine animals, sheep or	4.0	5.4	7.3	6.3	5.5	5.4	3.8	4.3	4.3