

Managing for Today's Cattle Market and Beyond

March 2002

U.S. Beef Trade Issues

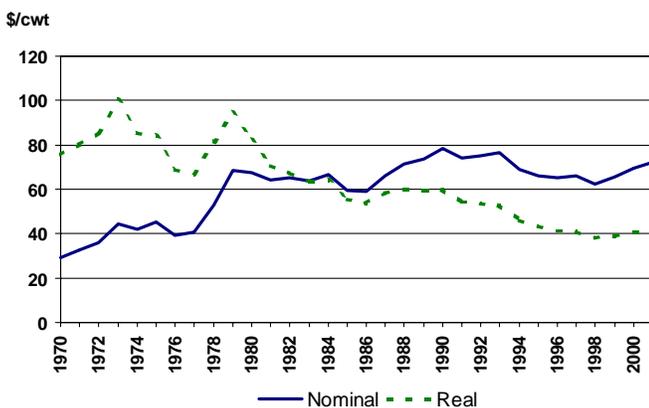
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Introduction

Nominal U.S. cattle prices generally increased throughout the 1970s and 1980s but declined steadily throughout the 1990s. However, real fed and feeder cattle prices have declined steadily since 1979 (Figures 1 and 2). These price declines have generated renewed interest in the role that beef and live cattle imports play in price determination.

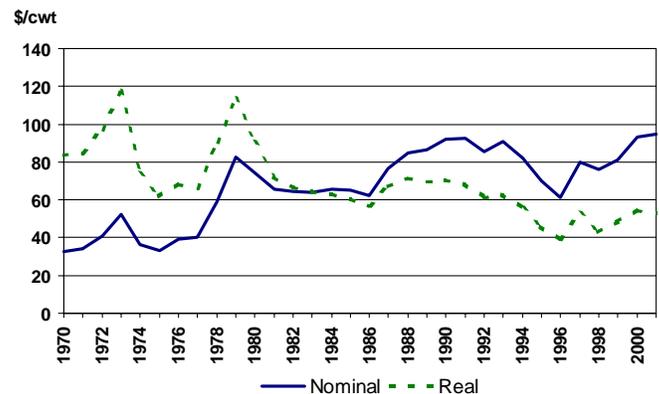
Figure 1. Nominal and Real Fed Cattle Prices (Nebraska Direct, 1100-1300 lb Choice Steers).



Since implementation of the Canada-U.S. Free Trade Agreement (CUSTA) in 1989 and the North American Free Trade Agreement (NAFTA) in 1994, the Canadian beef industry has gained additional market share in the United States while Mexico's share has remained relatively constant. The visible increase in U.S. imports of Canadian cattle raised

concerns, especially in Northern-tier States, regarding the contribution of cattle and beef imports to declining cattle prices. This paper examines a variety of trade developments in the beef industry and analyzes the impact of imports and exports on U.S. cattle prices.

Figure 2. Nominal and Real Feeder Cattle Prices (Oklahoma 600-700 lb Steers).



U.S. Beef and Cattle Imports

Total U.S. beef imports (beef imports plus beef obtained from live cattle imports) have increased about 1.54 billion pounds since 1988 -- from 3.05 billion pounds to 4.59 billion pounds in 2001 (Figure 3). Although record beef imports occurred in 2001, imports were only 850 million pounds more than the 1993 levels (Figure 3). Total U.S. beef (including live cattle) imports in 2001 accounted for just over

15 percent of total U.S. beef supplies -- which is similar to that occurring in 1993 (Figure 4).

Figure 3. U.S. Beef, Veal and Live Animal Imports (Annual, Billion Lbs., Carcass Weight Basis).

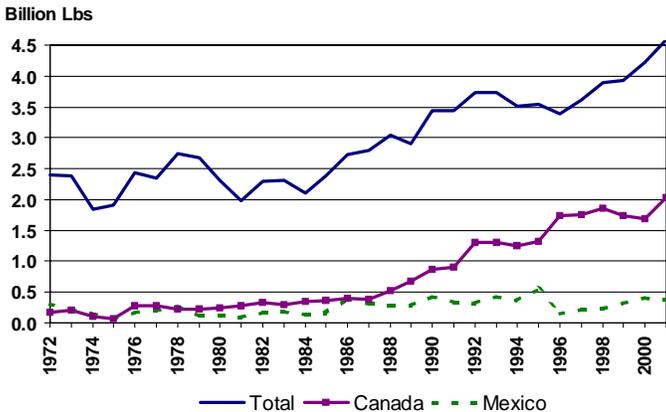


Figure 4. Beef and Beef From Live Cattle Imports as a Percentage of U.S. Supply.

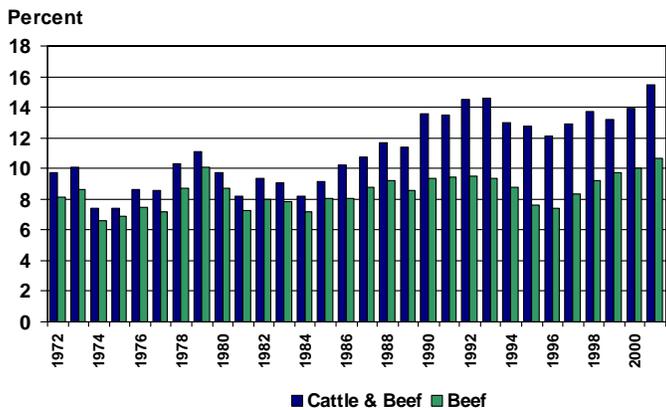


Figure 3 illustrates that cattle and beef imports from Canada have increased steadily since the early 1990s. A sequence of events caused these increases. The watershed event occurred in the 1990s when the Canadian government eliminated transportation subsidies for grain exports (Hayes and Clemens). Subsequently, less grain was exported from central Canada, and lower regional feed grain prices stimulated expansion of cattle (and hog) feeding in Alberta and Saskatchewan. Because Canadian slaughtering capacity has not kept pace, fed cattle exports to the United States have increased. Other factors have also played a role in this increase -- such as excess U.S. slaughtering capacity, CUSTA reductions in trade barriers, and USDA grading of Canadian cattle and beef carcasses. In 2001, beef and cattle imports from Canada represented 4.2 percent of the total U.S. beef supply (29.7 billion pounds).

Cattle imports from Mexico are almost exclusively lightweight feeder calves, which are subsequently finished in U.S. feedlots. Although variable from year to year, Mexican feeder cattle imports decreased by about 13 percent from 1993 to 2001 (Figure 3). The decline probably reflects significant cattle inventory reductions in Mexico. Imports from Mexico currently represent approximately 1 percent of total U.S. beef supplies.

Data Issues Related to U.S. Imports of Canadian Fed Cattle

U.S. cattle producers have expressed concerns regarding the manner in which the U.S. Department of Agriculture (USDA) reports U.S. beef production and import quantities. Specifically, the USDA collects data on quantities of beef produced by U.S. meat packing plants and reports these data as "U.S. beef production." To the extent that fed cattle are imported and then slaughtered in U.S. packing plants, the USDA's approach overstates the amount of beef actually "produced" in the United States. Similarly, the USDA's measure of beef imports understates actual beef imports because only quantities of beef that have been slaughtered in other countries and subsequently imported by the United States are categorized as beef imports.

Figure 5. "US Beef Production" vs. Cattle Inventory as a Percentage of U.S. Supply, January 1, United States

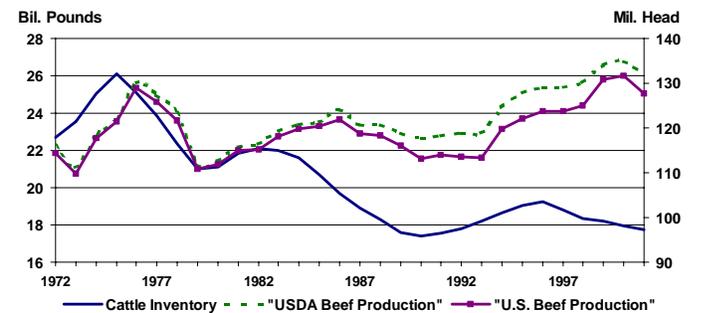


Figure 5 illustrates the relationship between U.S. cattle inventories and two different measures of U.S. beef production since 1972. The first measure, labeled "USDA Beef Production," represents the USDA's definition of domestic beef production (i.e., all beef produced by U.S. slaughter plants). Using this measure, it appears that 2001 beef production in the United States is slightly larger than quantities produced in 1975 -- but with almost 35 million

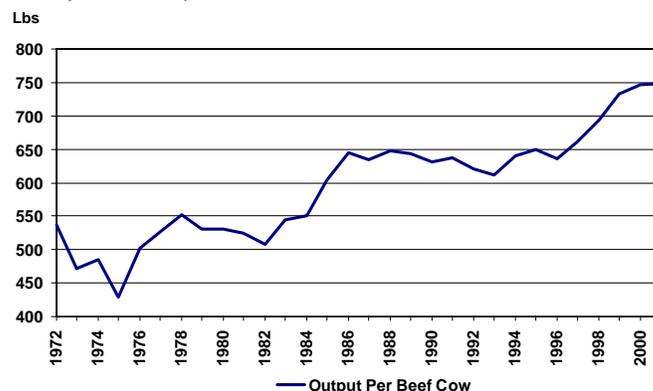
fewer cattle and calves (based on January 1 inventories). However, a debate has formed over whether these production levels are the result of increased productivity of the U.S. beef breeding herd or the result of increased imports in the form of live cattle that are subsequently slaughtered in the United States (and, hence, counted as part of U.S. beef production).

The line in Figure 5 labeled "U.S. Beef Production" represents a more accurate measure of beef actually produced in the United States. It has been constructed by subtracting the carcass weight equivalent of live cattle imports from "USDA Beef Production." Live cattle imports originate from both Canada and Mexico. Upon adjusting the USDA's measure of U.S. beef production for meat that is imported in live animal form, Figure 5 shows that in 2001 the USDA's estimate of U.S. beef production overstates the true value by about 4 percent (26.107 versus 25.067 billion pounds). A visual representation of this issue is provided by figure 4. The lightly-shaded bars in Figure 4 erroneously represent the market share of imports in terms of a percentage of U.S. beef supplies (10.7 percent in 2001) because it uses the USDA's definition of imports (which excludes meat obtained from live cattle imports). The darkly-shaded bars more accurately represent actual U.S. beef imports by including the USDA's measure of beef imports and the beef that is obtained from live cattle imports (15.5 percent in 2001). Note that since 1990, the discrepancy between the two measures averages about 5 percentage points annually. However, year-to-year changes in the percentage that imports add to the U.S. beef supply are similar between the two measures.

Clearly, the USDA's definition of U.S. beef production does not explain production levels occurring in recent years. Some of the increase can be traced to increased feedlot finishing of dairy steers and heifers in the 1980s and concurrent reductions in calf slaughter (Brester, Schroeder, and Mintert). However, most of the increase is explained by increased beef cow productivity. Figure 6 illustrates that beef output per U.S. beef breeding cow (exclusive of dairy cows) on a carcass weight basis has increased 40 percent over the past 28 years. Increased production per beef cow represents a measure of technological change through improved genetics, management, and feeding programs. Consequently, U.S. beef

production remains relatively large even as cattle and calf inventories have declined.

Figure 6. Productivity of U.S. Beef Cow Breeding Herd (Carcass Weight Pounds Per Beef Cow, Annual)



U.S. Beef Exports

U.S. beef exports have increased since the mid-1970s, but the rate of increase accelerated dramatically in the mid-1980s, continued throughout the 1990s, and has only recently declined slightly (Figure 7). Relative to U.S. production, exports have become increasingly important for beef producers. In 1990, beef exports totaled 4.4 percent of total U.S. beef supplies. By 2001, exports increased to 8.9 percent (Figure 8). Approximately 55 percent of all U.S. beef exports are sold to Japan - by far the largest U.S. beef export customer. Approximately 30 percent of U.S. beef exports are marketed to Canada and Mexico, and 7 percent to South Korea. Brester and Marsh (1998) describe the long-run potential impacts of increasing exports on U.S. beef and cattle prices as a result of GATT.

Figure 7. U.S. Beef, Veal and Live Animal Exports (Annual, Billion Lbs, Carcass Weight Basis).

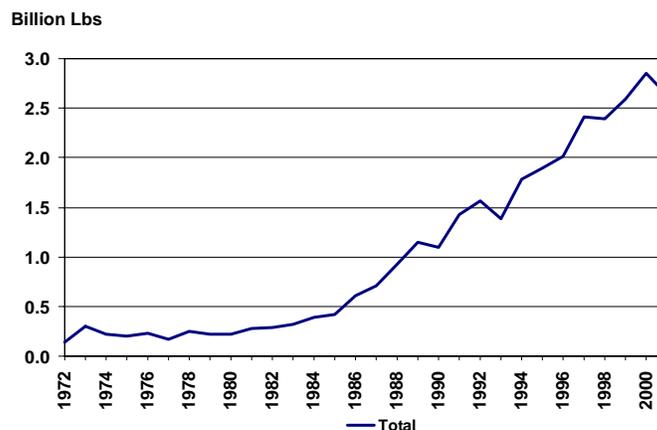
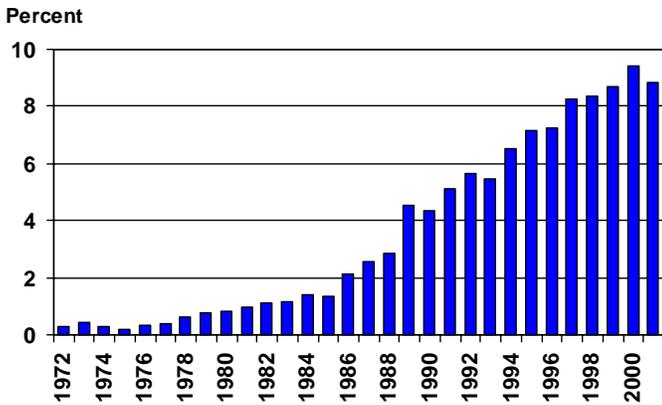


Figure 8. U.S. Beef and Veal Exports As A Percentage of U.S. Beef Supply.



U.S. meat exports have accelerated since the mid-1980s for several reasons (Brester, Mintert, and Hayes):

1. Depreciation of the U.S. dollar relative to other currencies prior to 1997;
2. Adoption of technologies to transport chilled rather than frozen meat;
3. Relaxation of trade (tariff and quota) restrictions;
4. Increased per capita incomes and changes in dietary preferences in developing countries.

Figure 9 shows that, on a value basis, the United States had been exporting almost as much as it has been importing from 1997 to 2000 (including both beef and cattle). In 2001, however, world economic conditions caused the value of imports to exceed the value of exports by almost \$1 billion. On a quantity basis, the United States is a net importer of beef (live cattle included). However, import quantities have increased slightly while export quantities have expanded rapidly. Thus, the difference between the two narrowed markedly until

Figure 9. Value of U.S. Beef, Veal and Live Animal Net Imports/Exports

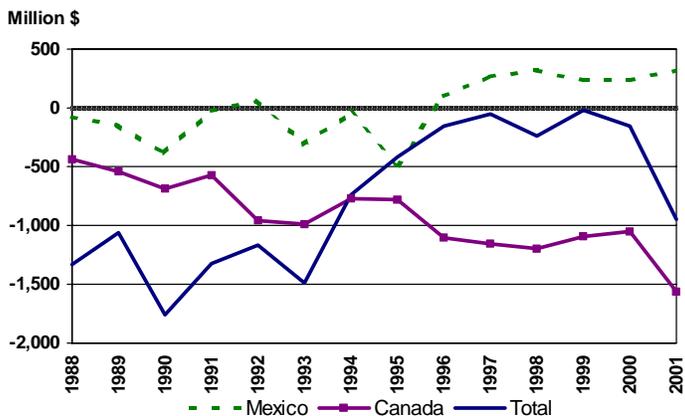
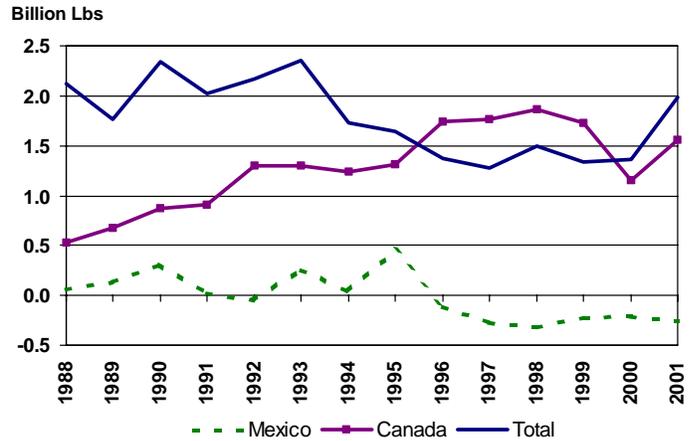


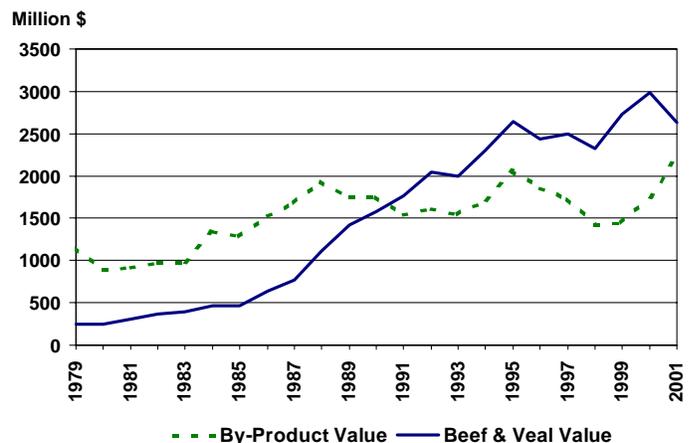
Figure 10. U.S. Beef, Veal and Live Animal Net Imports (Annual, Carcass Weight Equivalents)



2001. In 1990, U.S. net imports were approximately 2.6 billion pounds. By 2000, U.S. net imports declined to 1.37 billion pounds (Figure 10). However, net imports increased to 1.99 billion pounds in 2001. Many analysts expect that U.S. net quantity imports will approach zero within the next few years. However, this projection depends critically upon continued income growth in developing countries and continued increases in market access.

Figure 11 illustrates that beef by-product exports (variety meats, hides, and leather) have also trended upward during the 1990s (because of data limitations, the values of edible and inedible beef tallow are not included). Surprisingly, exports of beef by-products exceeded beef export values until 1991. In 2001, the value of beef by-product exports represented approximately 46% of total beef and beef by-product export value.

Figure 11. U.S. Beef & Veal and By-Product Export Value (Variety Meats and Hides), Annual, Millions of Dollars.



Impacts of Trade on Cattle Prices

The United States exports high-quality beef muscle cuts and both edible and inedible by-products; it imports feeder cattle from Mexico, lower-valued ground beef from Australia and New Zealand, and a mix of high-value muscle cuts, manufacturing-trimming beef, and fed cattle and carcasses from Canada. In general, increased beef imports from Canada have replaced imports from other sources as Canada's proximity to the United States makes it a natural trading partner. Because of excess capacity resulting from plant expansion during years of higher cattle inventories, U.S. beef packing and processing plants rely upon imported fed cattle and beef carcasses to reduce average slaughtering costs and produce additional value-added products.

Considerable controversy has surrounded the cattle price effects of CUSTA and NAFTA on the U.S. cattle market. Throughout the 1990s, total Canadian and Mexican cattle imports have been relatively steady -- averaging 2.16 million head annually. However, a notable difference throughout the 1990s was the declining U.S. net trade position (including both beef and live cattle) with Canada. U.S. net beef and cattle imports from Canada as a percentage of total U.S. beef supplies increased from 2.0 percent in 1988 to 5.8 percent in 1999.

Marsh (1997) considered the impact of CUSTA on U.S. cattle prices using an econometric model. The model was applied to the 1989 to 1997 period to assess the contribution of net imports from Canada on the decline in U.S. slaughter steer prices. Results indicated that domestic factors were primarily responsible for the price decline. The cattle market, however, received support from increasing beef exports and relatively strong by-product values. Canada's share of U.S. beef supplies increased by slightly over 3 percentage points during this period. As a consequence, of the \$8/cwt *decline* in slaughter price, about \$0.35/cwt was attributable to Canadian imports or about 4.4 percent of the price reduction. For a 1,200-pound fed steer, this amounts to about \$4.20 per head. On the other side of the trade picture, U.S. beef exports to Canada (as a percentage of U.S. beef supplies) increased by less than one-half percent, which translated into only a \$0.05/cwt support of slaughter price over this period.

It must be noted that the Canadian cattle industry expanded significantly throughout the 1990s in response to the loss of grain transportation subsidies from the Canadian prairie provinces to west coast port facilities. After the subsidies were eliminated, feedgrain prices in the prairie provinces declined which, in turn, stimulated feedlot expansion. Because both the U.S. and Canada produces high-quality, grain-finished beef cattle, increased Canadian cattle production would have had negative effects on U.S. cattle prices even without increased exports to the U.S. Hence, perhaps it is more accurate to say that increased Canadian cattle production reduced U.S. price by \$0.35/cwt during the 1989-1997 period, rather than implying that the reductions were the sole result of increased Canadian cattle exports to the U.S.

Some producers would like to know what would happen if U.S. participation in international trade in live cattle, beef, and by-products were unilaterally eliminated. Abstracting from political fallout and beef's substitute relationships with other meats, Marsh's model predicts the following:

1. an increase in slaughter price of \$5.15/cwt caused by eliminating live cattle and meat imports from Canada and feeder cattle imports from Mexico;
2. an increase in slaughter price of \$1.00/cwt caused by eliminating all other beef imports;
3. a reduction in slaughter price of \$4.90/cwt caused by eliminating beef exports;
4. a reduction of \$6.30/cwt caused by eliminating by-product exports.

These estimates use average market shares for the 1989-1997 period and the October 1998 fed cattle market price of \$60/cwt.

In summary, eliminating U.S. participation in international beef trade would entail a net reduction in slaughter price of about \$5.00/cwt. This reflects the consequences of closing off foreign demand for high-value products and by-products in exchange for eliminating cattle and lower-value imports. Other costs such as time involved in trade negotiations, transportation, changes in feedlot and packer capacity utilization, and effects on supporting industries, are not considered in this analysis.

Restricted Feeder Cattle Program

The Restricted Feeder Cattle Program (formerly titled the Northwest Pilot Project) has increased U.S. feeder cattle exports to Canada.

Previously, transactions costs for exporting feeder cattle were relatively large because of sanitary restrictions intended to protect the Canadian beef herd from disease. Hence, only a few feeder cattle were exported to Canada. However, many of these diseases have been eradicated in Northern-tier States. The removal of unnecessary quarantines and veterinary expenses and the expansion of the Western Province's cattle feeding sector stimulated feeder cattle exports from Montana and Washington under the Northwest Pilot Project. The Project has been expanded to include feeder cattle exports from Alaska, Hawaii, Idaho, North Dakota, and New York. During the October 1999-March 2000 marketing window, 180,314 head of feeder cattle were exported to Canada. Most of these cattle (over 75%) originated in Montana. Recently, the Canadian Food Inspection Agency published a final regulatory amendment that would allow low-risk health areas to export feeder cattle to Canada on a year-around basis.

Marsh (2000) has estimated that the Restricted Feeder Cattle Program has positively influenced the U.S. cattle market, albeit by a small amount. He estimates that the Program has increased U.S. fed cattle price by \$0.33/cwt, and increased U.S. feeder cattle price by \$0.51/cwt. Of course, these improvements are quite small because of the relatively small number of cattle exported. Nonetheless, the primary benefit to U.S. feeder cattle producers is manifest in transportation savings. Because Canadian fed cattle are trucked across Northern-tier States to Washington, Utah, and Colorado packing plants, truckers are willing to backhaul feeder cattle to Canada for relatively small amounts. For example, anecdotal evidence indicates that the backhaul opportunities may reduce transportation costs to Lethbridge, Alberta by \$3/cwt compared to transportation costs to Western Kansas.

Trade Tensions

In 1998, declining nominal and real fed and feeder cattle prices stimulated legal actions against Canada by the Ranchers-Cattlemen Action Legal Fund (R-CALF). On June 30, 1999, the U.S. Department of Commerce's Import Administration of the International Trade Administration issued a preliminary ruling instructing the U.S. Customs Service to require cash deposits or bonds totaling 4.73 percent (later increased to 5.57 percent) of the

value of imported live Canadian cattle. The ruling was based on a preliminary conclusion that Canadian feedlot managers had sold live cattle to U.S. purchasers below the "normal value" of those cattle in Canada. In November 1999, the International Trade Commission (ITC) issued its final ruling in which five of the six commissioners voted to rescind the preliminary tariff. Initially, R-CALF had appealed the ITC's negative decision under the Chapter 19 provisions of NAFTA. However, the appeal was later retracted.

Brester, Marsh and Smith (2002) note that this particular rent-seeking activity would not have had a significant impact on U.S. cattle prices even if it had been permanently imposed. However, the tariff would have had significant negative effects on Canadian cattle prices. In addition, the legal and bureaucratic costs associated with the trade dispute were relatively large for U.S. and Canadian livestock producers (some have estimated the combined costs at \$6 million) and their respective governments. These costs would have likely increased substantially over time as the proposed anti-dumping tariff would probably have been challenged under NAFTA and WTO provisions. In addition, the imposition of an import tariff would likely have hampered efforts to expand access and reduce tariff-rate quotas in U.S. beef export markets during the upcoming WTO negotiations (Brester, Hayes, and Clemens). Furthermore, such trade actions could encourage retaliatory trade actions that may limit U.S. beef exports. Neither the Canadian government nor a marketing board is involved in the Canadian cattle feeding industry. Therefore, it is difficult to envision Canadian feedlot operators intent on maximizing feedlot profitability selling fed cattle to U.S. packers at exchange rate-adjusted prices below those that could be obtained from Canadian packers.

At least two other beef trade tensions have surfaced in the past year. First, the U.S. government (responding to U.S. beef producers) is likely to institute a country-of-origin labeling requirement on beef and beef products. Brester and Smith (2000) note that the results of such an effort could be either positive or negative for the U.S. beef industry depending upon whether U.S. consumers have a country-of-origin preference, the quality of imported beef products resulting from the labeling program, and the costs imposed on the processing sector. Second, U.S. beef producers are also requesting that USDA grade stamps be used only on meat produced

by U.S. beef cattle. Again, the benefits and costs of such an action are unclear at this point.

Summary

U.S. participation in trade liberalization agreements with Canada and Mexico through CUSTA and NAFTA has generated intense debates in agricultural sectors about the benefits and costs of those agreements. CUSTA and NAFTA mandate that live cattle and beef trade among Canada, Mexico, and the United States be based upon competitive factors and include legal safeguards to deal with arbitrary trade restrictions.

Nominal and real U.S. fed and feeder cattle prices declined throughout the 1990s. Over the same period, the total U.S. beef supply increased from 25.4 billion pounds to 29.7 billion pounds. Imports (both beef and beef obtained from live cattle) accounted for 1.5 billion pounds, or 35 percent, of this increase. Thus, most of the supply increase has resulted from increased domestic production.

U.S. cattle and beef imports from Canada have increased substantially since 1988. Expansion of Canadian slaughtering capacity has not kept pace with the expansion of the Canadian cattle finishing industry. Given that the United States has excess slaughtering capacity and a larger consumer demand for high-quality and ground beef compared to Canada, fed cattle imports from Canada have increased.

Although beef and cattle imports from Canada have expanded throughout the 1990s, total beef imports from all sources have increased only slightly. Canada's share of U.S. beef supplies increased by slightly over 3 percentage points during the 1990s. As a consequence, of the \$8/cwt *decline* in slaughter price during this period, about \$0.35/cwt was attributable to increased Canadian imports or about 4.4 percent of the price reduction. For a 1,200-pound fed steer, this amounts to about \$4.20 per head. Although Canadian beef and cattle exports to the United States certainly put downward pressure on cattle prices, these exports were responsible for only a small portion of the 1990s decline in U.S. cattle prices. Rather, the combination of low feed prices which encouraged unusually heavy average dressed weights, large supplies of competing meats, a flat market for high-quality U.S. beef exports, and a significant reduction in by-product values in Asian

countries contributed to 1998 price woes. Cattle prices recovered during the 1999 to 2000 period.

Producers have expressed concerns regarding the method in which the USDA reports U.S. beef production levels. Prior to the mid-1980s almost all U.S. live cattle imports were feeder cattle. The USDA's definition of U.S. beef production was reasonable given that most of the meat being added to imported feeder cattle was actually being produced in U.S. feedlots. However, because of increased fed cattle imports from Canada, it is important that analysts continue to recognize and account for USDA's definitions of beef production and imports.

The R-CALF anti-dumping challenge to U.S. imports of Canadian fed cattle, had it been permanently implemented, would not have had a significant positive effect on U.S. cattle prices. Although the challenge was rejected, this rent-seeking activity was expensive for Canadian and U.S. cattle producers and added to trade tensions. Issues regarding country-of-origin labeling and the potential restriction of USDA grade stamps to only meat produced by U.S. beef cattle will continue to impact trade relations.

U.S. (and Canadian) cattle producers operate in a commodity marketing system that is highly competitive. Increased prices cause increased production from both domestic and foreign sources - which, in turn, eventually depresses prices. Because of such supply responses, a competitive industry will not experience sustained price levels in excess of long-term average costs (which include a normal rate of return). Therefore, industry participants must continually work at expanding both domestic and foreign markets, developing new products, improving product quality and safety, and lowering production and marketing costs.

References

Brester, Gary W., Dermot Hayes, and Roxanne Clemens. "Negotiating Issues for Beef." Chapter 3 in 2000 WTO Negotiations: Issues for Agriculture in the Northern Plains and Rockies. L. Young, J. Johnson, and V. Smith, eds. Trade Research Center, Montana State University, November 1999.

Brester, Gary W., and John M. Marsh. "Impacts of the Uruguay Round Trade Agreement on U.S. Beef and Cattle Prices." Policy Issues Paper No. 6., Trade

Research Center, Montana State University–Bozeman. September 1998.

Brester, Gary W., James Mintert, and Dermot Hayes. "U.S. Meat Exports Increasing Rapidly." *Choices* (Fourth Quarter 1997):22–23.

Brester, Gary W., John M. Marsh, and Vincent H. Smith. "The Impacts on U.S. and Canadian Slaughter and Feeder Cattle Prices of a U.S. Import Tariff on Canadian Slaughter Cattle." *Canadian Journal of Agricultural Economics*. 50 (July 2002):51-66.

Brester, Gary W., and Vincent H. Smith. "Beef at the Border: Here's the Beef." *Choices*. (Second Quarter 2000):28-32.

Brester, Gary W., Ted C. Schroeder, and James Mintert. "Challenges to the Beef Industry." *Choices* (Fourth Quarter 1997):20–21, 24–25.

Hayes, Dermot, and Roxanne Clemens. "The Market for U.S. Meat Exports in Eastern Canada." Working Paper 99-WP 229. Midwest Agribusiness Trade Research and Information Center, Iowa State University, October 1999.

Marsh, John M. "U.S. Beef Trade Issues and the Northwest Pilot Project." *BEEF Magazine*. December 2000 (In Press):

Marsh, John M. "U.S. Live Cattle and Beef Trade with Canada and Mexico: Effects on Feeder Cattle Price." Research Discussion Paper No. 6, Trade Research Center, Montana State University–Bozeman, October 1997.