

U.S. Beef and Cattle Imports and Exports: Data Issues and Impacts on Cattle Prices

*Gary W. Brester, Associate Professor
Montana State University–Bozeman
and
John M. Marsh, Professor
Montana State University–Bozeman*

Policy Issues Paper No. 9
April 1999

U.S. Beef and Cattle Imports and Exports: Data Issues and Impacts on Cattle Prices

by Gary W. Brester and John M. Marsh

Policy Issues Paper No. 9

U.S. participation in trade liberalization agreements with Canada and Mexico through the Canada–U.S. Free Trade Agreement (CFTA) and the North American Free Trade Agreement (NAFTA) has generated intense debates in agricultural sectors about the benefits and costs of those agreements. The CFTA 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 billion pounds to 28.5 billion pounds. Imports (both beef and beef obtained from live cattle) accounted for almost 0.5 billion pounds, about 14 percent, of this increase. Thus, most of the supply increase has resulted from increased domestic production. This supply increase has occurred even though total cattle inventories have steadily declined since the mid-1970s. Most of the increase is explained by increased productivity of the U.S. beef cow breeding herd—caused by factors such as improved genetics, management, and feeding programs. Consequently, actual U.S. beef production remains relatively large even as cattle and calf inventories have declined.

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.

While 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. In addition, 1998 cattle and beef net imports from Canada were similar to 1997 levels. Although Canadian beef and cattle exports to the United States certainly put downward pressure on cattle prices, these exports were responsible for only



About the Authors

Gary W. Brester is an Associate Professor of Agricultural Economics and Economics at Montana State University–Bozeman. His research focuses on livestock and grain issues, international trade, agribusiness management, and food safety.

John M. Marsh is a Professor of Economics in the Department of Agricultural Economics and Economics, Montana State University–Bozeman. He has published in the areas of livestock and meat demand and supply and marketing issues. He also conducts research in livestock and meat trade issues relevant to NAFTA and GATT.

a small portion of the 1998 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 the 1998 price woes.

Producers have recently expressed concerns regarding the method in which the U.S. Department of Agriculture (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. Perhaps increased fed cattle imports provide a rationale for altering data reporting methods to more accurately account for imports. Nonetheless, the current reporting system does not prohibit appropriate analyses of the impacts of trade on U.S. cattle and beef prices.

U.S. 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 lowering production and marketing costs.



Table of Contents

Introduction 1

U.S. Beef and Cattle Imports 2

Data Issues Related to U.S. Beef Imports 4

U.S. Beef Exports 7

Impacts of Trade on Cattle Prices 8

Summary 12

References 14

Figures

Figure 1.	Nominal and Real Fed Cattle Prices	1
Figure 2.	Nominal and Real Feeder Cattle Prices	2
Figure 3.	U.S. Beef, Veal, and Live Animal Imports	3
Figure 4.	Imported Beef and Beef from Live Cattle Imports as a Percentage of U.S. Beef Supply	3
Figure 5.	“U.S. Beef Production” versus Cattle Inventory	4
Figure 6.	Productivity of U.S. Beef Cow Breeding Herd	6
Figure 7.	Imported Beef and Beef from Live Cattle Imports as a Percentage of U.S. Supply	6
Figure 8.	U.S. Beef, Veal, and Live Animal Exports	7
Figure 9.	U.S. Beef and Veal Exports as a Percentage of U.S. Beef Supply	8
Figure 10.	U.S. Beef, Veal, and Live Animal Net Imports	9

U.S. Beef and Cattle Imports and Exports: Data Issues and Impacts on Cattle Prices

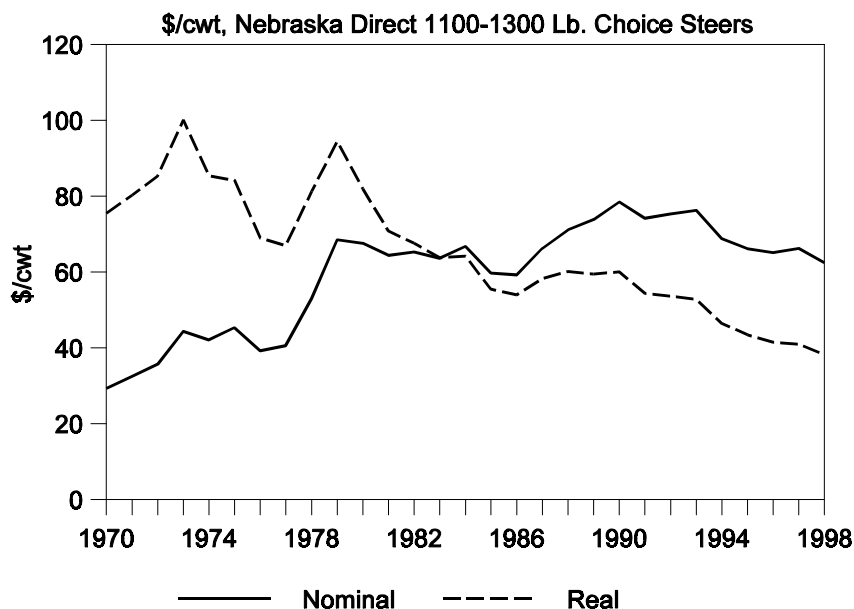
Policy Issues Paper No. 9

Introduction

Nominal U.S. cattle prices generally increased throughout the 1970s and 1980s but have declined steadily throughout the 1990s. For example, Nebraska choice fed steer prices increased from \$30/cwt in 1970 to \$78.50/cwt in 1990—but have subsequently declined to \$62/cwt in 1998 (Figure 1). By extension, feeder cattle prices have followed a similar trend (Figure 2). More recently, prices of Billings, Montana, 500 to 600-pound feeder steer calves (medium and large frame #1) averaged \$85/cwt in 1997, increased throughout the first half of 1998, then declined precipitously throughout the summer of 1998. By August, they had reached a low of \$70/cwt. Real (inflation-adjusted using the Consumer Price Index, 1982–1984 = 100) fed and feeder cattle prices have declined steadily since 1979 (Figures 1 and 2).

U.S. cattle prices have declined throughout the 1990s.

Figure 1. Nominal and Real Fed Cattle Prices

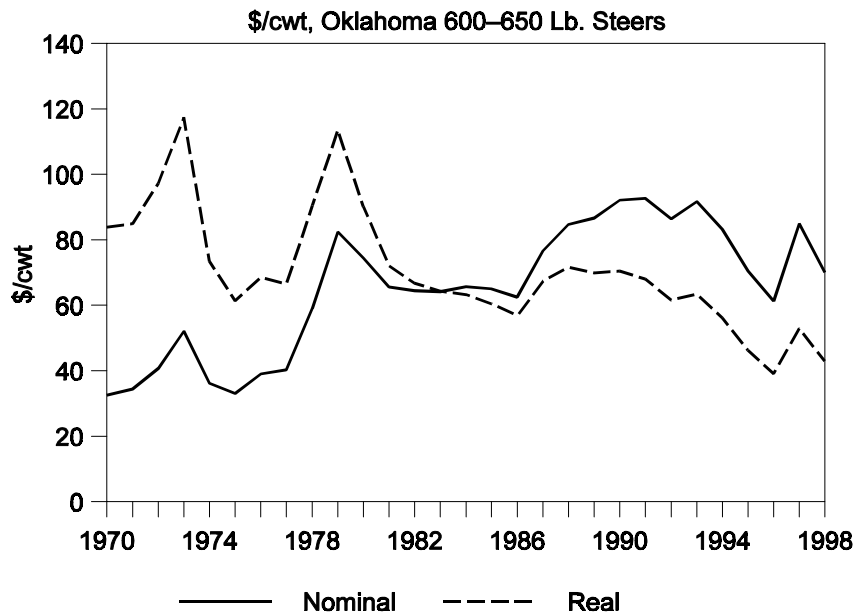


Source: Livestock Marketing Information Center & MSU Trade Research Center

Canada has an increasing market share in the United States, which has raised concerns regarding the contribution of cattle and beef imports to recent declines in 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

U.S. imports of Canadian beef and cattle have increased throughout the 1990s as Canadian cattle feeding has expanded.



Source: Livestock Marketing Information Center & MSU Trade Research Center

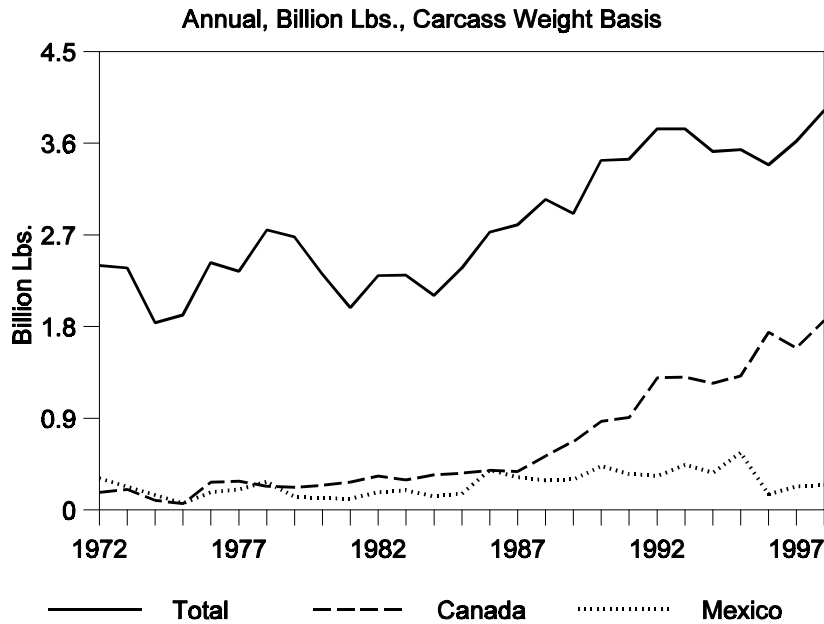
U.S. Beef and Cattle Imports

Although 1998 beef imports were a record, they were only 183 million pounds more than the previous (1992) record level (Figure 3). Total U.S. beef imports in 1998 were only 150 million pounds larger than 1997 levels and accounted for almost 14 percent of total U.S. beef supplies—which is slightly lower than in 1992 (Figure 4).

Figure 3 illustrates that cattle and beef imports from Canada have increased steadily since the early 1990s. A sequence of events has caused these imports to rise. The watershed event occurred in 1995 when the Canadian government eliminated transportation subsidies for grain exports. 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, CFTA reductions in trade barriers, and USDA grading of Canadian cattle and beef carcasses. Currently, beef and cattle imports from Canada represent 6.5 percent of the total U.S. beef supply.

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 45 percent from 1990 to 1998 (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.

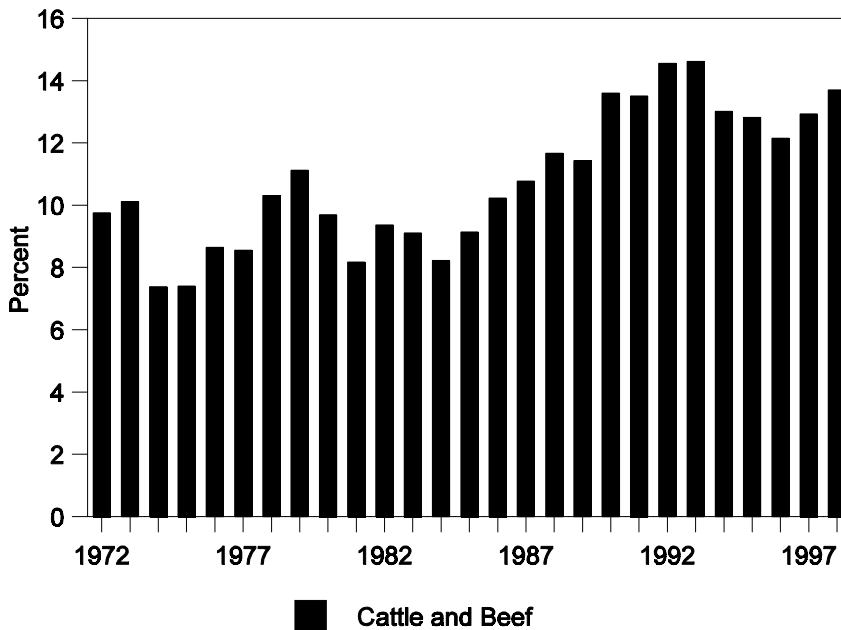
Figure 3. U.S. Beef, Veal, and Live Animal Imports



Source: Livestock Marketing Information Center & MSU Trade Research Center

1998 total U.S. beef and cattle imports were only slightly larger than in 1991 and 1992 and represented close to 14 percent of total U.S. beef supplies.

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



Source: Livestock Marketing Information Center & MSU Trade Research Center

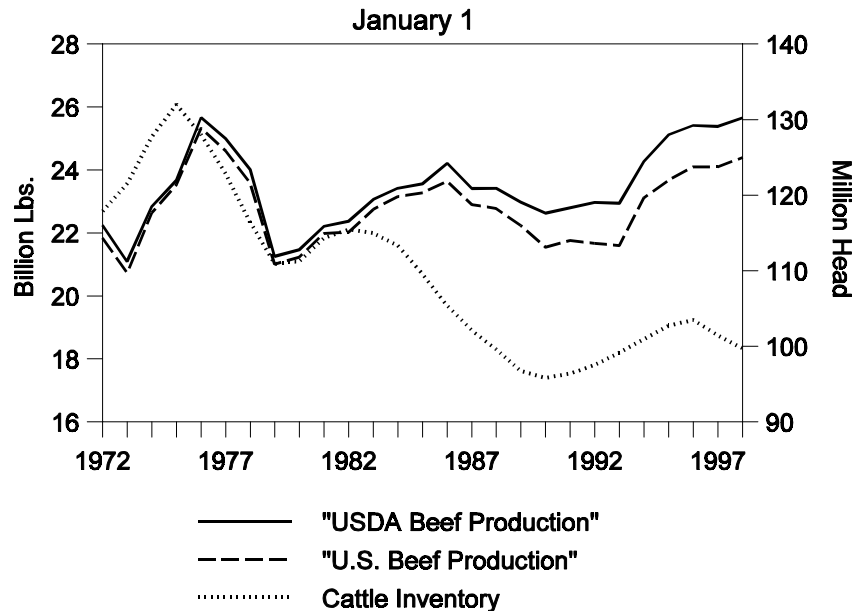
Domestic U.S. beef production has increased throughout the 1990s even though cattle inventories have declined.

Data Issues Related to U.S. Beef Imports

U.S. cattle producers have recently expressed concerns regarding the manner in which the 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 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 1998 beef production in the United States is slightly larger than quantities produced in 1975—but with 32 million fewer cattle and calves (based on January 1 inventories). However, a debate has formed over whether current 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).

Figure 5. “U.S. Beef Production” versus Cattle Inventory



Source: Livestock Marketing Information Center & MSU Trade Research Center

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. In calculating “U.S. Beef Production,” we have assumed that all live cattle imports from Canada are fed cattle and that all live cattle imports from Mexico are feeder cattle. The assumption is certainly valid for imports from Mexico. Therefore, live cattle imports from Mexico are converted to carcass weight equivalents by assuming that each animal weighs 525 pounds and that the “imported” meat associated with each animal represents 65 percent of the live weight (i.e., 341 dressed pounds).

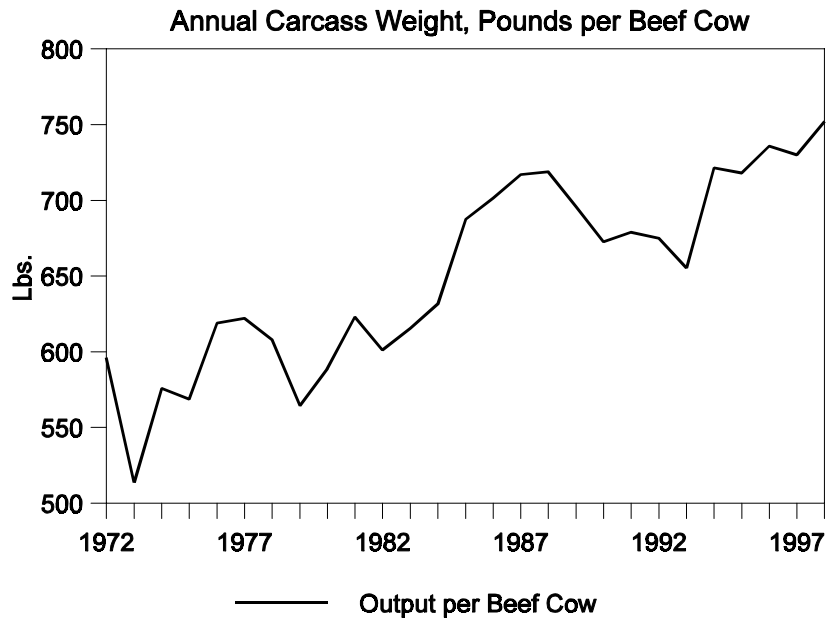
In the case of Canada, 5 to 12 percent of live cattle imports are feeder cattle and 25 percent are cull cows and bulls. However, data on the mix of fed, feeder, and cull cattle imported from Canada are not available prior to 1994. Thus, we recognize that multiplying live cattle imports from Canada by U.S. average dressed weights of slaughter steers slightly overestimates the amount of “live cattle” beef that is imported from Canada. However, some have claimed that finished cattle imported from Canada are heavier than U.S. cattle. Conversations with cattle buyers from two packing companies indicated that Canadian cattle average dressed weights may be 10 to 20 pounds heavier than U.S. average dressed weights. The buyers noted that excessively heavy cattle are not likely to be imported given that such animals (as well as excessively heavy domestic cattle) receive large price-yield discounts. Thus, our approach to estimating meat quantities obtained from Canadian live cattle imports should be relatively accurate.

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 1998 the USDA’s estimate of U.S. beef production overstates the true value by about 5 percent (25.66 versus 24.37 billion pounds). 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 1997). 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 26 percent over the past 25 years. Output per cow is calculated by appropriately considering cattle and beef imports and subtracting carcass weight pounds of U.S. cull cows because breeding cows are generally larger today than in previous years. Thus, increased production per beef cow illustrated in Figure 6 represents a measure of technological change that is being generated by improved genetics, management, and feeding programs. Consequently, U.S. beef production remains relatively large even as cattle and calf inventories have declined.

Figure 7 illustrates the impact of failing to account for meat obtained from live cattle imports in the USDA’s definition of U.S. beef production. The impact is measured by calculating imports as a percentage of annual U.S. beef supplies. Total beef supply in the United States is comprised of “true” U.S. beef production, beef imports, beef obtained from live cattle imports, and beginning-of-the-year cold storage holdings. The white bars in Figure 7 erroneously represent the market share of imports in terms of a percentage

The USDA’s methods of reporting domestic beef production overstates actual domestic production by approximately 5 percentage points.

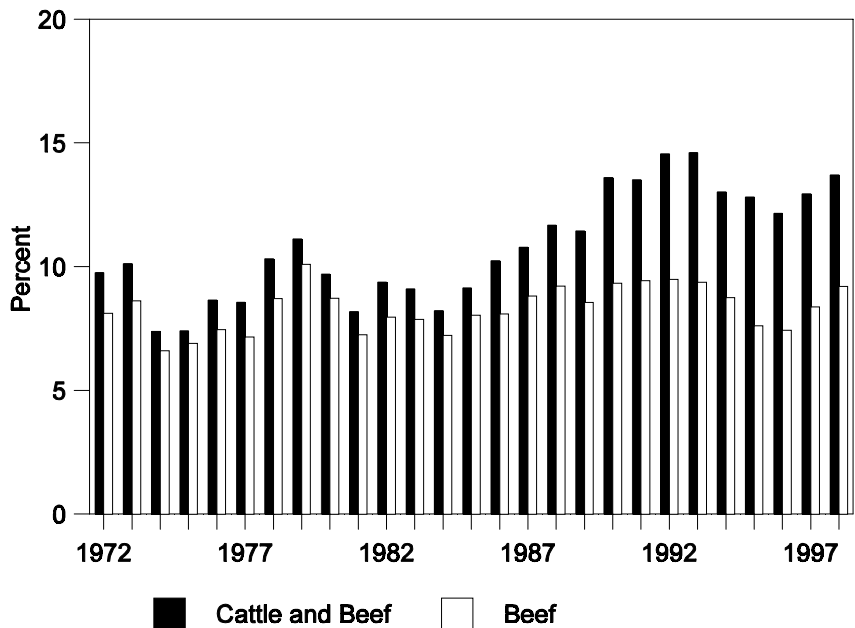
Figure 6. Productivity of U.S. Beef Cow Breeding Herd



Source: Livestock Marketing Information Center & MSU Trade Research Center

The productivity of the U.S. breeding herd has increased markedly since 1972.

Figure 7. Imported Beef and Beef from Live Cattle Imports as a Percentage of U.S. Supply



Source: Livestock Marketing Information Center & MSU Trade Research Center

of U.S. beef supplies (9.2 percent in 1998) because it uses the USDA's definition of imports (which excludes meat obtained from live cattle imports). The black 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 (13.7 percent in 1998). 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.

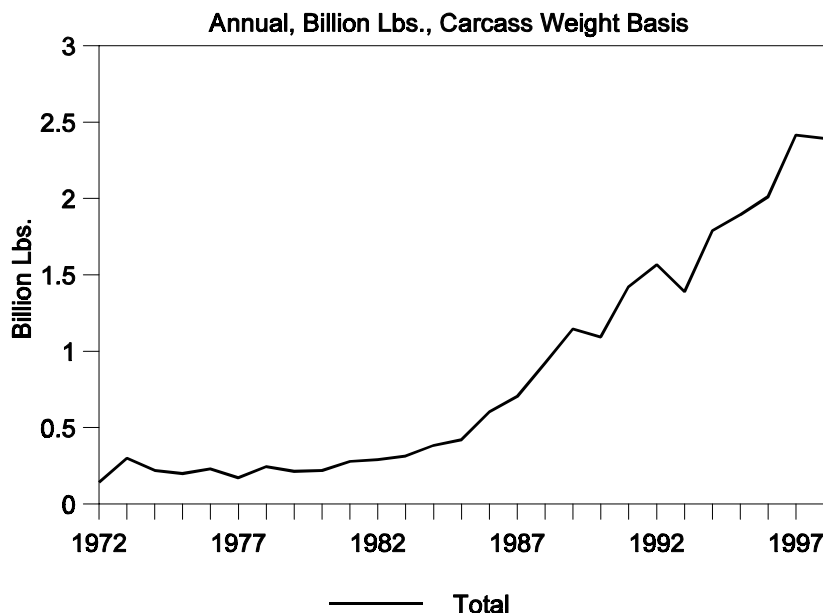
This data “problem” is significant only if it is ignored by analysts in their attempts to quantify the impacts of imports on U.S. beef and cattle prices. However, the “problem” does not occur if analysts make appropriate adjustments to the USDA’s measures of imports and U.S. beef production. Our cursory review of published literature did not uncover any instances where this issue was inappropriately addressed.

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 and continues in the 1990s (Figure 8). Relative to U.S. production, exports have become an increasingly important market for meat producers. In 1990, beef exports totaled 4.4 percent of total U.S. beef supplies, increasing to almost 8.5 percent by 1998 (Figure 9). 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.

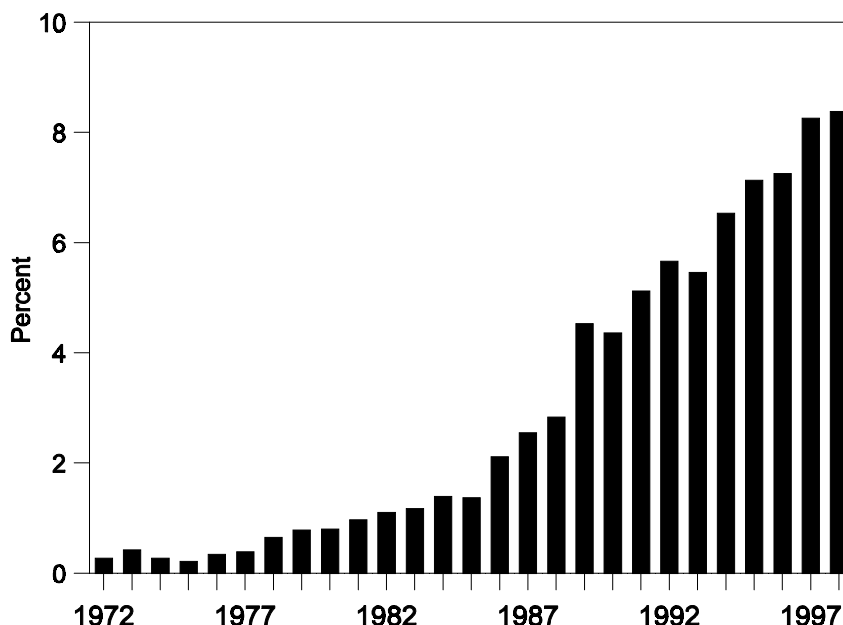
U.S. beef exports have increased dramatically since the mid-1980s.

Figure 8. U.S. Beef, Veal, and Live Animal Exports



Source: Livestock Marketing Information Center & MSU Trade Research Center

Figure 9. U.S. Beef and Veal Exports as a Percentage of U.S. Beef Supply



The U.S. has been a net beef exporter in terms of value since 1994.

Source: Livestock Marketing Information Center & MSU Trade Research Center

U.S. meat exports have accelerated since the mid-1980s for several reasons (Brester, Mintert, and Hayes 1997):

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.

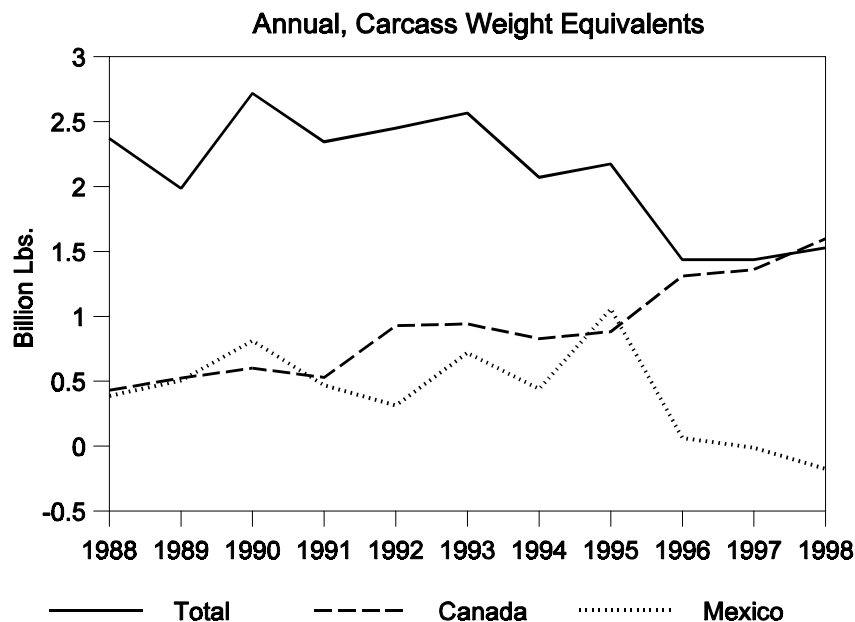
On a value basis, the United States has been exporting more than it has been importing since 1994 (including both beef and cattle). In 1998, the value of U.S. beef and cattle exports were more than 50 percent higher than the value of U.S. beef and cattle imports. On a quantity basis, the United States 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 has narrowed markedly. In 1990, U.S. net imports were approximately 2.6 billion pounds. By 1998, U.S. net imports declined to slightly over 1.5 billion pounds (Figure 10). Many analysts expect net quantity imports to equal zero within the next few years. However, this projection depends critically upon economic recovery in Asia and continued market expansion.

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, 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.

Figure 10. U.S. Beef, Veal, and Live Animal Net Imports



Throughout the 1990s, U.S. net beef imports from all sources have declined while U.S. net beef imports from Canada have increased.

Source: Livestock Marketing Information Center & MSU Trade Research Center

Considerable controversy has surrounded the effects of the 1989 CFTA and 1994 NAFTA on the U.S. cattle market. In 1989, U.S. slaughter steer prices (Nebraska) averaged \$74/cwt and U.S. feeder steer prices (Oklahoma City) averaged \$87/cwt (Figures 1 and 2). By August of 1998, slaughter steer prices averaged about \$60/cwt and feeder steers averaged about \$68/cwt. The declines have been attributed to several factors, but those receiving considerable attention have been Canadian cattle and beef imports, Mexican cattle imports, beef packer concentration and captive supplies, domestic meat supplies, food safety issues, stagnant domestic demand, and inconsistent beef quality.

The impact of CFTA on U.S. cattle prices is assessed using an econometric model that accounts for production, demand, and trade factors that influence cattle prices (Marsh 1997). NAFTA *per se* is not considered here since CFTA was responsible for eliminating quotas and tariffs on live cattle and beef. NAFTA merely extended this process to include Mexico.

Although unpredictable events influence cattle and beef prices in the short run, statistical models indicate that supply and demand factors primarily determine cattle prices in the long run (Wohlgenant 1989). The high average prices of 1989–1993 relative to 1998 occurred when U.S. cattle

Of the \$8/cwt decline in U.S. fed cattle prices from 1989-1997, \$0.35/cwt, or 4.4 percent, is attributable to increased Canadian imports.

slaughter, cattle average dressed weights, and pork and poultry production were relatively low. In addition, beef exports and consumer spending on beef (adjusted for inflation) were relatively high. Throughout the 1990s, packer concentration was quite high, with the four largest packers accounting for 75 percent of the boxed beef market in 1990, rising to 80 percent in 1997. Canadian and Mexican cattle imports increased only slightly during the period—from an annual average of 1.95 million head in 1989–1992 to 2.03 million head in 1998.

One notable difference throughout the 1990s was the declining U.S. net trade position with Canada. USDA trade data indicate U.S. net imports (i.e., the difference between U.S. beef imports from Canada and U.S. beef exports to Canada) of Canadian cattle and beef, converted to a carcass weight equivalent, increased from 2.7 percent in 1989 to 5.9 percent in 1998 as a percentage of total U.S. beef supplies. After converting to carcass weight equivalents, U.S. net imports of live cattle from Canada increased 130 percent and net imports of beef increased 210 percent from 1989 to 1998. Although these percentage increases are large, quantities of Canadian imports represented only 6.5 percent of total beef supplies in 1998.

U.S. slaughter steer prices are directly affected by Canadian slaughter cattle and indirectly affected by meat imports at the wholesale level. To predict the impact of Canadian net imports on slaughter prices, we used an econometric model to account for major variables that influence the beef market (e.g., U.S. cattle slaughter, Canadian and Mexican cattle imports, dressed weights of beef, U.S. beef imports, pork and poultry production, marketing costs from packer to retailer, by-product values, beef exports, and consumer spending on red meat). The first five variables represent supply factors, the next two variables represent marketing margin and by-product effects, while exports and consumer spending represent product demand. In total, these variables accounted for 96 percent of the variation in slaughter prices.

The model's statistical results were applied to the 1989 to 1997 period (recall that the CFTA was implemented in 1989) to assess the contribution of net imports from Canada on the decline in U.S. slaughter steer prices. Results indicated that increases in dressed weights, cattle slaughter, and pork and poultry production and decreases in consumer beef expenditures were primarily responsible for the price decline. The cattle market received support from increasing beef exports, reduced marketing costs (adjusted for inflation), 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.

Although the negative impacts are modest, our model overlooks short-term anomalies that may affect individual sellers in specific markets at certain times. For example, Canadian cattle imports could fill a packing plant's slaughter capacity for several days, which may delay domestic feedlot

marketings. Such delays increase finishing costs and yield grade discounts. 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.

The above analysis considers only changes in U.S.–Canadian beef trade from 1989 (the year of CFTA implementation) to 1997. Some producers would like to know what would happen if all beef imports were eliminated. Unfortunately, the realities of international trade reduce the reliability of such hypothetical simulations. For example, eliminating Canadian cattle exports to the United States would not reduce the amount of beef produced in North America, which is the world’s supplier of grain-finished beef. In addition, such import restrictions would likely trigger retaliatory export restrictions. The United States generally imports lower-value ground and processed beef and exports higher-value table cut beef (choice and prime) as well as hides and offal by-products. So, the question becomes, what would happen to slaughter price if U.S. international trade in live cattle, beef, and by-products were unilaterally eliminated? Abstracting from political fallout and beef’s substitute relationships with other meats, our 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 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 our analysis.

Our estimates do not imply that U.S. beef producers should remain passive about imports, particularly with respect to Canada. Increasing Canadian net imports raise questions as to the causes. They may be related to costs of production, exchange rates, transportation, subsidies, packer demands, or excess capacity. They may also reflect problems at the border regarding health, inspection, or other restrictions. The recent Northwest Pilot Project has alleviated many of these problems, permitting more U.S. feeder cattle exports to Canada. Canada’s recent expansion of beef packing capacity may also reduce fed cattle exports to the United States as well as increase demand for U.S. feeder cattle.

Eliminating all U.S. participation in international beef trade would cause a \$5/cwt decline in U.S. fed cattle price.

Beef imports have put downward pressure on U.S. cattle prices; however, 1998 price declines were primarily caused by large domestic meat production and weakened foreign demand.

Although total U.S. beef imports have increased slightly (880 million pounds) since 1988, Canada has emerged as a major source of beef imports.

Summary

U.S. participation in trade liberalization agreements with Canada and Mexico through the CFTA and NAFTA has generated intense debates in agricultural sectors about the benefits and costs of those agreements. The CFTA 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 billion pounds to 28.5 billion pounds. Imports (both beef and beef obtained from live cattle) accounted for almost 0.5 billion pounds, about 14 percent, of this increase. Thus, most of the supply increase has resulted from increased domestic production. This supply increase has occurred even though total cattle inventories have steadily declined since the mid-1970s. Most of the increase is explained by increased productivity of the U.S. beef cow breeding herd—caused by factors such as improved genetics, management, and feeding programs. Consequently, actual U.S. beef production remains relatively large even as cattle and calf inventories have declined.

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.

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. In addition, 1998 cattle and beef net imports from Canada were similar to 1997 levels. 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 1998 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 the 1998 price woes.

Producers have recently 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. Perhaps increased fed cattle imports provide a rationale for altering data reporting methods to more accurately account for imports. Nonetheless, the current reporting

system does not prohibit appropriate analyses of the impacts of trade on U.S. cattle and beef prices.

U.S. 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). U.S. commodity cattle production is highly competitive for which long-term success requires expanding both domestic and foreign markets, developing new products, improving product quality, and lowering production and marketing costs.

U.S. commodity cattle production is highly competitive and long-term success requires expanding both domestic and foreign markets, developing new products, improving product quality, and lowering production and marketing costs.

- 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., Ted C. Schroeder, and James Mintert. "Challenges to the Beef Industry." *Choices* (Fourth Quarter 1997):20–21, 24–25.
- 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.
- Wohlgenant, Michael K. "Demand for Farm Output in a Complete System of Demand Equations." *American Journal of Agricultural Economics* 71 (May 1989):241–252.

