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Impacts of the Uruguay Round Trade Agreement on U.S. Beef and Cattle Prices

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S U M M A R Y

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The Uruguay Round trade negotiations completed in April 1994 reduced beef trade barriers. Trade barriers for beef products have historically been significant. The Uruguay Round Agreement essentially converts many nontariff barriers (quotas) to tariffs (tariffication), includes safeguards for import surges, establishes minimum access commitments, reduces domestic subsidy supports, and provides special tariff allowances for developing countries. These provisions, commensurate with a growing world demand for animal source proteins, will likely increase U.S. fed beef exports and ground beef imports.

The United States is a major world producer as well as exporter of beef. In 1996, the United States represented 35 percent of world beef production (ranked first) and 28 percent of world beef exports (ranked second to Australia). U.S. quantity share of the annual world beef export market averaged 5.9 percent between 1980 and 1994 but has increased in recent years. In terms of beef and veal, the United States exports primarily higher-value beef cuts.

The United States is the largest single-country beef importer. The U.S. annual quantity share of the world fresh beef import market averaged 16.5 percent between 1980 and 1994. U.S. beef imports primarily consist of lower-quality, manufacturing-grade (ground) beef which is primarily used by the fast-food service industry.

The Uruguay Round Agreement will reduce trade restrictions gradually over an implementation period (1995–2000). Specifically, Japan is to reduce its beef tariffs and South Korea will increase its beef import quota by the year 2000. In 2001, South Korean import quotas will be replaced by a tariff. The European Union has agreed to reduce quantities of subsidized exports. In 1995, the United States replaced import quotas with a tariff and a tariff-rate quota.

The reduction in trade barriers will increase U.S. beef imports and exports. Because U.S. beef imports are primarily ground beef and exports are primarily table cut beef, beef trade liberalization will have different impacts on producers and consumers of these products. In general, increased imports decrease the price of ground beef and increase per capita ground beef consumption. However, increased beef imports reduce nonfed cattle

prices and slaughter. Increased exports cause the prices of table cut beef, fed cattle, and feeder cattle to increase. Per capita consumption of table cut beef declines slightly, and fed cattle slaughter and feeder cattle production both increase.

Researchers have estimated that the Uruguay Round Agreement could increase U.S. beef imports by 6–19 percent and U.S. beef exports by 10–75 percent over 1990–1994 average levels. For example, the ground beef price could decline by \$0.01–\$0.04/lb from average 1990–1994 levels because of increased imports. Thus, the price of nonfed cattle (which generally produce ground beef) could decline by \$0.71–\$2.55/cwt. Conversely, because the United States exports primarily table cut beef, the table cut beef price in the United States could increase by \$0.01–\$0.09/lb. Increased foreign demand for table cut beef would cause the price of boxed beef to increase by \$0.05–\$0.10/lb and the price of fed cattle to increase by \$0.62–\$5.46/cwt relative to average prices received during the 1990–1994 period. By extension, increased demand for fed cattle would increase feeder cattle price by \$0.61–\$5.40/cwt over average prices received during the 1990–1994 period.

Our projections assume relative trade stability (i.e., exchange rates, country-specific macroeconomic policies, etc.) over the implementation period. In addition, our results do not consider the Agreement's potential impacts on the pork, poultry, and feed grain sectors or the potential impacts of other trade agreements such as NAFTA.



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Key Terms

GATT	The General Agreement on Tariffs and Trade refers to (1) the trade agreement first signed in 1947 by twenty-three countries that began the process of removing trade barriers and (2) the provisional organization that implemented the trade agreement.
WTO	The World Trade Organization has replaced the GATT as the legal and institutional foundation of the multilateral trading system.
URA	The Uruguay Round Agreement was reached by 123 countries in 1994 for further liberalization of world trade.
NAFTA	The North American Free Trade Agreement was signed in 1993 to encourage the free flow of goods and investment capital between Canada, Mexico, and the United States.

Impacts of the Uruguay Round Trade Agreement on U.S. Beef and Cattle Prices

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Introduction

The Uruguay Round trade negotiations completed in April 1994 reduced or eliminated many agricultural trade barriers. Trade barriers for beef products have historically been significant. The Uruguay Round Agreement (URA) essentially converts many nontariff barriers (quotas) to tariffs (tariffication), includes safeguards for import surges, establishes minimum access commitments, reduces domestic subsidy supports, and provides special tariff allowances for developing countries. In addition, URA provides for trade reforms beyond the initial implementation period through the World Trade Organization (WTO), which replaces the General Agreement on Tariffs and Trade (GATT). The WTO will rule on issues such as market access, domestic subsidies, export competition, and sanitary and phytosanitary trading provisions (USDA 1996). These provisions, commensurate with a growing world demand for animal source proteins, will likely increase beef export opportunities, as well as risks, for U.S. beef producers.

Trade barriers for beef products have historically been significant.

Overall, URA provisions improve the potential for increasing U.S. fed beef exports and U.S. processed and ground beef imports. Reductions in trade barriers are often designated as the major benefits of URA. However, U.S. producers may also benefit from reductions in nontariff barriers, such as WTO evaluation of food safety issues based on scientific merit rather than political factors. An example is the long-standing European Union (EU) hormone ban on imported U.S. table cut beef. The WTO recently provided a favorable ruling for U.S. producers on this issue—although the European Union has appealed the decision (USDA 1997c). Although U.S. beef producers regard these opportunities as primarily positive, greater access does not automatically imply increasing market share. For example, recent increases in beef slaughter and fabrication capacity in Canada pose greater competition in the Pacific Rim (Hayes, Hayenga, and Melton 1997). In addition, improved product quality, food safety, customer service, and marketing strategies will be keys for successfully exploiting URA provisions.

Brief History of Beef Trade Restrictions

Prior to the recent URA, the U.S. Meat Import Act of 1979 (which amended the 1964 act) restricted U.S. beef imports. Hahn et al. (1990) describe this regulatory policy in detail. In general, the act established an overall import quota based on a formula designed to make import quantities countercyclical with domestic production (Simpson 1982). Imports were not to exceed a calculated base quantity by more than 10 percent. The base quantity was determined by contemporaneous production levels, an overall

growth factor, and average annual imports from 1968–1977. The quota was divided among beef exporting countries. In addition, voluntary restraint agreements were negotiated with those countries. Exporting countries agreed to limit beef exports to the United States if U.S. beef imports approached annual trigger quotas. This arrangement avoided the need for imposing further import restrictions and allowed exporting countries to accrue economic quota rents (Goddard 1988).

In several years since 1979, imports reached trigger quota restrictions imposed by the U.S. Meat Import Act of 1979. Hahn et al. (1990) noted that “the U.S. Meat Import Law occasionally shuts off the additional supplies of beef from exporting nations” (p. 24). In other years, voluntary restraint agreements may have kept imports from reaching the trigger quota levels. Thus, it is likely that relaxing U.S. import restrictions will increase U.S. beef imports.

Changes in Beef Exports

The United States is a major world producer as well as exporter of beef. In 1996, the U.S. represented 35 percent of world beef production (ranked first) and 28 percent of world beef exports (ranked second to Australia’s 34 percent) (USDA 1997b). U.S. quantity share of the annual world beef export market averaged 5.9 percent between 1980 and 1994 but has increased in recent years. In terms of beef and veal, the U.S. exports primarily higher-value beef cuts. However, the United States also exports significant quantities of lower-value edible offals (variety meats and by-products). Historically, edible offals have been subject to less stringent trade restrictions relative to those imposed on higher-value cuts. Recently, U.S. beef exports have increased dramatically. Specifically, quantities of beef exports increased 26 percent between 1993 and 1994, and 13 percent from 1994 to 1995.

Recently, U.S. beef exports have increased dramatically. In 1985, total U.S. beef exports were 331.8 million pounds; and by 1996, exports had increased to 1.87 billion pounds.

The U.S. beef trading position evolved throughout the 1980s. For example, in 1985, total U.S. beef exports were 331.8 million pounds; by 1990, they were 1.01 billion pounds, and by 1996, exports had increased to 1.87 billion pounds (Figure 1). These exports constituted 1.4 percent, 4.0 percent, and 7.4 percent of domestic beef production, respectively. The largest gains were made in the Pacific Rim countries (particularly Japan) and in Canada and Mexico (Figure 2). In 1985, the United States exported 259.6 million pounds of beef to Japan, 24.9 million pounds to Canada, and 4.71 million pounds to Mexico. By 1996, U.S. beef exports to these countries increased to 1,015.8 million pounds, 295.4 million pounds, and 172.2 million pounds, respectively (Figure 2). In 1996, Japan constituted 54.1 percent of total U.S. beef exports, Canada 15.7 percent, and Mexico 9.2 percent. However, the Asian market of South Korea has also gained in relative importance, constituting 10.9 percent of the U.S. beef export market. Beef (including variety meat) exports to the former Soviet Union, Hong Kong, and Taiwan have also gained importance.

Increasing U.S. market share for beef in the Pacific Rim has resulted from rapid income growth in the Asian nations, changing tastes and preferences for animal-source proteins and high-quality beef, and relaxation of trade barriers (Capps et al. 1994). Likewise, U.S. beef export gains to Canada and

Mexico reflect their economic growth, the Canadian Free Trade Agreement, Mexico's elimination of import tariffs under the North American Free Trade Agreement (NAFTA), and the high cost of producing Mexican fed beef.

Figure 1. U.S. Beef Exports, Imports, and Production
(billions of pounds)

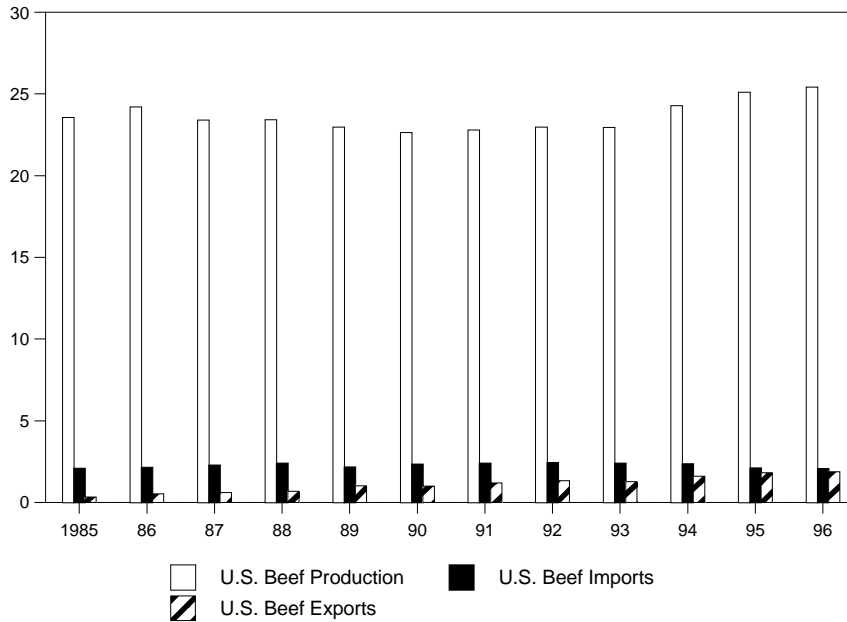
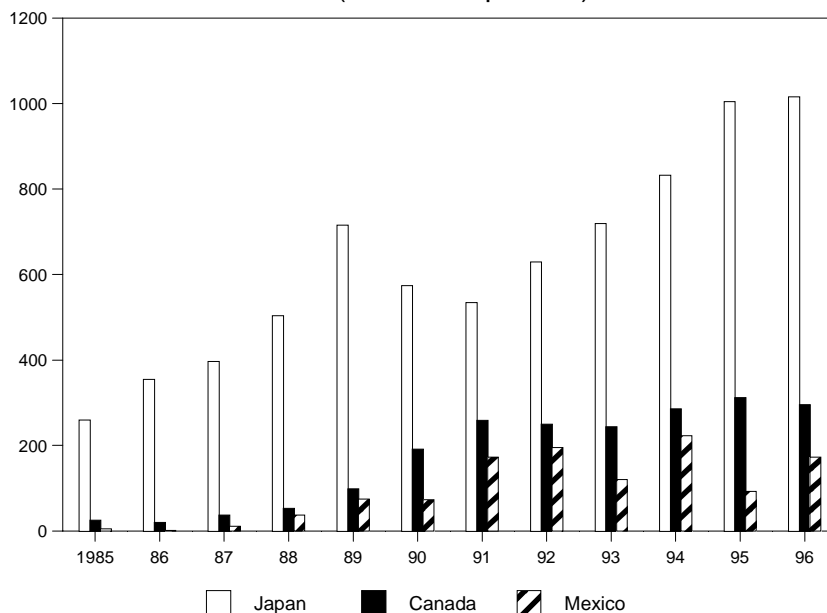


Figure 2. U.S. Beef Exports to Japan, Canada, and Mexico
(millions of pounds)



In 1996 the United States exported 1,016 million pounds of beef to Japan, 295 million pounds to Canada, and 172 million pounds to Mexico.

The majority of U.S. beef exports (excluding variety meats and veal) are primals and subprimals of select, choice, or prime grade quality. Export grade depends upon the importing country's preference. For example, Japan purchases a larger percentage of high choice and low prime grade beef from the United States than does Canada or Mexico. Canada tends to import more select to low choice beef from the United States, whereas Mexico imports primarily select beef and significant quantities of variety meats. However, with increasing tourist trade and incomes, Mexico has begun purchasing more U.S. choice beef (Peel 1996).

Changes in Beef Imports

The U.S. annual quantity share of the world fresh beef import market averaged 16.5 percent between 1980 and 1994 (United Nations). The United States is the largest single-country beef importer (Hahn et al. 1990). U.S. beef imports consist primarily of lower-quality, manufacturing-grade beef. The Livestock Marketing and Information Center (LMIC) estimates that ground beef constitutes 80 percent of all U.S. beef imports. The majority of U.S. beef imports are from Australia and New Zealand and are generally used by the fast-food service industry. Beef imports from Canada are mostly AA and AAA grades which are comparable to U.S. select and choice grades, respectively. However, product forms between the two countries differ. For example, a Colorado Department of Agriculture study indicates that in 1994 U.S. beef imports from Canada were 39 percent carcasses, 30 percent boneless cuts, and 20 percent trimmings. Conversely, approximately 75 percent of U.S. beef exports to Canada consist of high-value, boneless cut varieties and 13 percent offal (Larsen and Rubingh 1995). The absence of a reciprocal grading agreement between the United States and Canada influences beef trade between the countries (Hayes, Hayenga, and Melton 1997). For example, Canada exports beef carcasses to the United States which are subsequently graded by the USDA. However, Canadian boxed beef exports to the United States are sold at "no roll" (i.e., ungraded) discounts at the retail counter. U.S. boxed beef shipments, primarily to eastern Canada, do not receive Canadian beef grades and also receive retail price discounts at the retail counter.

Rapid growth in U.S. beef exports is expected to position the United States as a net exporter of beef in the near future.

The trend in U.S. beef imports has not been as dramatic as beef exports. For example, in 1984, U.S. beef imports were 1.85 billion pounds and by 1996 imports had increased to 2.07 billion pounds, or about a 12 percent increase (Figure 1). Of total beef imports in 1996, 51 percent were from Australia and New Zealand, and 28 percent originated from Canada. The remainder consisted primarily of canned beef products from Central and South America. The latter are not included in the tariff-quota provisions of the U.S. Meat Import Law as revised under URA.

In summary, the rapid growth in U.S. beef exports (relative to beef imports) is expected to position the United States as a net exporter of beef in the near future (excluding carcass weight equivalent of net live cattle imports). Such a net surplus, if realized, would be unprecedented since the 1940s. USDA data for 1994 show exports at 1.61 billion pounds and imports at 2.37 billion pounds for a 761 million pound deficit. However, 1997 projections indicate that U.S. beef exports may total 2.05 billion pounds

and imports may reach 2.13 billion pounds, reducing the deficit to 80 million pounds (USDA 1997a).

URA Provisions for World Beef Trade

The URA will reduce trade restrictions gradually over an implementation period (1995–2000). Specifically, Japan is to reduce its beef tariffs from 50 percent to 38.5 percent by the year 2000, and South Korea will increase its beef import quota from its current 106,000 metric tons to 225,000 metric tons by the year 2000. In 2001, South Korean import quotas will be replaced by a 44 percent tariff which will be reduced to 40 percent by the year 2004. The European Union has agreed to reduce quantities of subsidized exports to 817,000 metric tons by the year 2000 (which is 507,000 tons less than 1992 levels). On January 1, 1995, the United States replaced import quotas established by the U.S. Meat Import Act of 1979 with a tariff of 31.1 percent (which is to be reduced to 26.4 percent by the year 2000) and a tariff-rate quota of 656,621 metric tons. The tariff will be applied to all imports in excess of the tariff-rate quota (USDA 1994b). Thus, the policy provisions of the URA will affect both U.S. beef exports and imports.

The policy provisions of the Uruguay Round Agreement will affect both U.S. beef exports and imports.

Reducing U.S. Beef Import Restrictions

Various methods for restricting U.S. beef imports have been in effect since 1964 (Hahn et al. 1990). Thus, it is difficult to directly estimate increases in beef imports resulting from reductions in those restrictions. The USDA (1994a) projects imports to increase by 6–10 percent over 1994 levels by the year 2005. The URA does not completely remove U.S. beef import restrictions given that a tariff-rate quota and a 31.1 percent tariff (which will gradually be reduced to 26.4 percent) on imports in excess of the quota have been negotiated. Because of this sizeable tariff, significant quantities of beef in excess of the tariff-rate quota will only be imported if rest-of-the-world (predominantly Australian and New Zealand) beef prices are substantially lower than U.S. prices.

Trigger levels for import quotas under the U.S. Meat Import Act of 1979 averaged 587,193 metric tons annually from 1990 to 1994 (Downing 1996). The URA establishes a U.S. tariff-rate quota of 656,621 metric tons, which is divided among Australia (378,214), New Zealand (213,406), Japan (200), and several other countries (64,805). Imports from Canada and Mexico are not counted toward the tariff-rate quota. The tariff-rate quota represents an 11.8 percent increase over previous trigger quota levels. Furthermore, the agreement allows the tariff-rate quota to increase by 20,000 metric tons each for Uruguay and Argentina if they are able to meet sanitary requirements for fresh, chilled, and frozen beef. In this case, the tariff-rate quota would increase to 696,621 metric tons, which is an 18.6 percent increase over the average previous trigger levels. Thus, we consider the effects of the URA using increases in imports ranging from 6 percent (the USDA's lowest estimate) to 19 percent.

Reducing Foreign Import Restrictions on U.S. Beef

Estimating the impact of reductions in rest-of-the-world beef trade restrictions is complicated by the diversity of exported beef products, the

number of countries involved, and a myriad of country-specific regulations. Hayes (1994) expects the value of beef exports to increase by 8–10 percent per year between 1994 and 2004 if several conditions favorable to U.S. trade occur (e.g., U.S. promotional expenditures increase to offset Australian competitive pressures in Japan, and favorable exchange rates exist). However, export quantities will probably not increase as much as export values. Therefore, based on Hayes's projections, we use 75 percent as the upper bound increase in export quantities occurring between 1994 and 2004. The USDA's (1994a) estimate of a 19–25 percent total increase in value (and a 10–14 percent increase in export quantities) from 1994 to 2005 is more conservative. Consequently, our analysis uses 10 percent as the lower bound and 75 percent as the upper bound for percentage increases in U.S. beef export quantities resulting from the URA.

Impacts of the URA on U.S. Prices, Consumption, and Production

**Increased beef imports
reduce nonfed cattle
prices and slaughter and
at the same time
increased exports cause
the prices of table cut
beef, fed cattle, and
feeder cattle to increase.**

Table 1 summarizes the combined projected impacts of the URA obtained from two separate economic models assuming small, medium, and large percentage changes in U.S. beef imports and exports (Brester and Wohlgenant 1997; Marsh 1997). In general, increased imports decrease the price of ground beef and increase per capita ground beef consumption. However, increased beef imports reduce nonfed cattle prices and slaughter. Increased exports cause the prices of table cut beef, fed cattle, and feeder cattle to increase. Per capita consumption of table cut beef declines slightly, and fed cattle slaughter and feeder cattle production both increase.

The third column of Table 1 presents results for “medium” increases in U.S. beef imports (12 percent) and exports (40 percent) from average 1990–1994 levels (the second and fourth columns represent lower and upper bound estimates, respectively). The combined effects increase annual ground beef consumption by 0.71 lbs/capita in response to a \$0.03/lb decrease in the price of ground beef. Table cut beef price increases by \$0.05/lb and U.S. consumption declines by 0.58 lbs/capita. The prices of boxed beef and fed cattle increase by \$0.07/lb and \$2.86/cwt, respectively. This causes fed cattle production to increase by 439,000 head/year. Thus, feeder cattle price increases by \$2.82/cwt, and production increases by 508,650 head/year. The price of nonfed cattle declines by \$1.56/cwt, and production decreases by 187,610 head/year.

Conclusions and Implications

Multilateral trade liberalization resulting from the URA will have significant impacts on U.S. beef and cattle prices. For example, quantities of U.S. beef imports and exports have been projected to increase by 6–19 percent and 10–75 percent, respectively, by the year 2004. Because U.S. beef imports are primarily ground beef and exports are primarily table cut beef, beef trade liberalization will have different impacts on fed cattle and nonfed cattle producers. For example, the price of ground beef could decline by \$0.01–\$0.04/lb from average 1990–1994 levels because of increased imports. Thus, the price of nonfed cattle (which generally produce ground beef) could decline by \$0.71–\$2.55/cwt. Conversely, because the United States exports primarily table cut beef, table cut beef

prices in the United States could increase by \$0.01–\$0.09/lb. Increased foreign demand for table cut beef would cause the price of boxed beef to increase by \$0.05–\$0.10/lb and the price of fed cattle to increase by \$0.62–\$5.46/cwt relative to average prices received during the 1990–1994 period. In addition, increased demand for fed cattle increases the derived demand for feeder cattle. Thus, feeder cattle prices could increase by \$0.61–\$5.40/cwt over average prices received during the 1990–1994 period.

Table 1. Impacts of Small, Medium, and Large Increases in U.S. Beef Imports and Exports on U.S. Meat Consumption, Meat Prices, Cattle Prices, and Production

Variables	Mean (1990–94)	Small Increases in Imports and Exports ^a	Medium Increases in Imports and Exports ^b	Large Increases in Imports and Exports ^c
Ground beef consumption (lbs/capita)	40.1	0.26	0.71	1.24
Table cut beef consumption (lbs/capita)	55.1	-0.16	-0.58	-1.09
Price of ground beef (dollars/lb)	\$1.70	-\$0.01	-\$0.03	-\$0.04
Price of table cut beef (dollars/lb)	\$4.08	\$0.01	\$0.05	\$0.09
Price of boxed beef (dollars/lb)	\$1.17	\$0.05	\$0.07	\$0.10
Price of fed cattle (dollars/cwt)	\$74.22	\$0.62	\$2.86	\$5.46
Price of nonfed cattle (dollars/cwt)	\$49.24	-\$0.71	-\$1.56	-\$2.55
Price of feeder cattle (dollars/cwt)	\$89.09	\$0.61	\$2.82	\$5.40
Fed cattle slaughtered (thousands of head)	19,008.0	95.04	439.08	840.15
Nonfed cattle slaughtered (thousands of head)	4,206.6	-85.81	-187.61	-306.66
Feeder cattle production (thousands of head)	39,127.2	109.56	508.65	970.35

^a A “small” change refers to a 6 percent increase in U.S. beef imports and a 10 percent increase in U.S. beef exports over 1990–94 average levels.

^b A “medium” change refers to a 12 percent increase in U.S. beef imports and a 40 percent increase in U.S. beef exports over 1990–94 average levels.

^c A “large” change refers to a 19 percent increase in U.S. beef imports and a 75 percent increase in U.S. beef exports over 1990–94 average levels.

Obviously, the URA will have positive impacts on fed cattle producers and processors. In addition, even though nonfed cattle price may decline, cow/calf producers will benefit from these trade negotiations because feeder cattle price will increase. Given that approximately 80 percent of cow/calf producers’ revenue is derived from feeder cattle sales, revenue gains from feeder cattle price increases should more than offset losses resulting from reductions in nonfed cattle prices.

We note that our projections assume relative trade stability (i.e., exchange rates, county-specific macroeconomic policies, etc.) over the implementation period.

If the Uruguay Round Agreement succeeds in increasing U.S. fed cattle and boxed beef prices, NAFTA may increase U.S. live cattle imports and decrease U.S. beef exports to Canada and Mexico.

For example, our results certainly overstate positive trade effects if the current Asian economic (currency) crisis continues for an extended period. In addition, our results do not include URA's potential impacts on the pork, poultry, and feed grain sectors. The URA may cause changes in imports and exports of these commodities which may, indirectly, affect the beef sector. In addition, the potential effects of another trade pact, NAFTA, was not considered in this analysis. NAFTA liberalizes beef and cattle trade between the United States, Canada, and Mexico. The United States is a net importer of live cattle from Mexico and Canada, a net importer of beef from Canada, and a net exporter of beef to Mexico. Potential increased trade flows between these countries may alter the table cut and ground beef mix in the United States which would influence beef and cattle prices. Therefore, if URA succeeds in increasing U.S. fed cattle and boxed beef prices, NAFTA may increase U.S. live cattle imports and decrease U.S. beef exports to Canada and Mexico. Nonetheless, the net effects of such actions on U.S. beef and cattle prices are expected to be small. NAFTA may reduce, but would not offset, the positive effects of URA.

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