

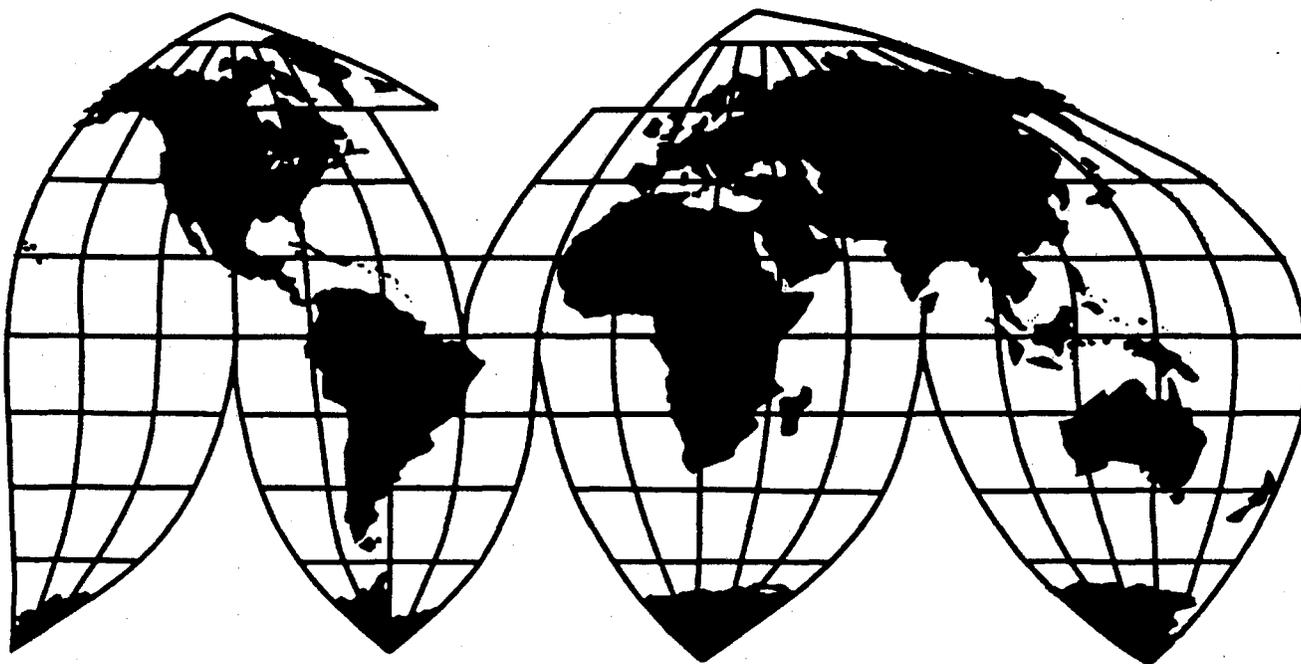
Cattle and Beef: Impact of the NAFTA and Uruguay Round Agreements on U.S. Trade

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U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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List of Frequently Used Abbreviations and Acronyms

AAFC	Agriculture and Agri-Food Canada
ACFA	Arizona Cattle Feeders Association
Act	Section 58 of the Miscellaneous Trade and Technical Corrections Act of 1996
AFBF	American Farm Bureau Federation
AIIS	USDA Automated Import Inspection System
AMEG	Asociacion Mexicana de Engordadores de Ganado Bovino, A.C.
AMLC	Australian Meat and Live-stock Corporation
AMS	USDA Agricultural Marketing Service
APHIS	USDA Animal and Plant Health Inspection Service
BSE	Bovine Spongiform Encephalopathy or “mad cow disease”
CCA	Canadian Cattlemen’s Association
CFTA	United States-Canada Free-Trade Agreement
CITT	Canadian International Trade Tribunal
CNG	Confederacion Nacional Ganadera
Customs	U.S. Customs Service
CVD	countervailing duties
DEIP	Dairy Export Incentive Program
E. coli O157:H7	<i>Escherichia coli</i> O157:H7
ERS	USDA Economic Research Service
EU	European Union
FAS	USDA Foreign Agricultural Service
FBMB	Frozen boneless manufacturing beef
FMD	foot-and-mouth disease
<i>F.R.</i>	<i>Federal Register</i>
FSIS	USDA Food Safety and Inspection Service
GAO	General Accounting Office
GATT	General Agreement on Tariffs and Trade
GRIP	Gross Revenue Insurance Program
HRI	Hotel, restaurant, and institution
<i>HTS</i>	<i>Harmonized Tariff Schedule of the United States</i>
Korea	Republic of Korea
LCFS	Live cattle for slaughter
LPMO	Livestock Products Marketing Organization
MICA	Meat Importers Council of America
MOU	Memorandum of Understanding
MPPD	Meat & Poultry Products Division Agriculture and Agri-Food Canada
NAFTA	North American Free Trade Agreement
NAFTA-TAA	NAFTA Transitional Adjustment Assistance
NASS	USDA National Agricultural Statistics Service
NCA	National Cattlemen’s Association
NCBA	National Cattlemen’s Beef Association
NZMPB	New Zealand Meat Producers Board
ROU	Record of Understanding

List of Frequently Used Abbreviations and Acronyms

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SECOFI	Secretariat of Commerce and Industrial Promotion
SPS Agreement	Application of Sanitary and Phytosanitary Measures
Task Force	Imperial Valley Cattle Feeders Beef Plant Task Force
TEP	National Trade Enforcement Plan
TIF	Plants of Federal Inspection Type
URA	Uruguay Round Agreements
USDA	U.S. Department of Agriculture
USMEF	U.S. Meat Export Federation
VRAs	Voluntary Restraint Agreements
WGTA	Western Grain Transportation Act
WTO	World Trade Organization

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EXECUTIVE SUMMARY¹

This report was prepared in response to section 58 of the Miscellaneous Trade and Technical Corrections Act of 1996, which required the Commission to conduct a study under section 332 of the Tariff Act of 1930 (19 U.S.C. 1332) and to submit a report to the House Committee on Ways and Means and the Senate Committee on Finance, with respect to--

The impact of the North American Free Trade Agreement (NAFTA) and the Uruguay Round Agreements (URA) on United States imports and exports of live cattle for slaughter and fresh, chilled, or frozen beef; and

The steps that have been taken by the United States, since the enactment of the NAFTA, to prevent the transshipment of live cattle and fresh, chilled, or frozen beef through Mexico and Canada for importation into the United States.

The Commission was directed to furnish its report not later than 270 days after the date of enactment, that is, by July 7, 1997.

Primarily as a result of close geographic proximity and relatively open border policies, the U.S., Canadian, and to a lesser extent Mexican, cattle and beef markets are highly interrelated. Since 1993, the United States implemented the NAFTA and the URA,² pursuant to which the United States has reduced tariffs and trade barriers on a wide range of products, including cattle and beef.³ Trade within North America in live cattle and beef has risen in recent years, particularly between the United States and Canada, with U.S. imports of cattle for slaughter from Canada increasing by about a third since 1994. Selected market, trade, and tariff information relating to cattle and beef are provided in table A at the end of this summary.

This is the third fact-finding investigation that the Commission has conducted in the last 10 years with respect to beef and cattle. In 1987 and 1993, the Commission, at the request of Congress, conducted fact-finding investigations concerning the competitive conditions relating to the U.S. and Canadian cattle and beef industries.

Industry Background

- Cattle are one of the leading agricultural products in the United States. Cash receipts from sales amounted to an estimated \$35 billion in 1996. Cattle are raised throughout the United States but are concentrated in the Western Rangelands, the Corn Belt, and the Southeastern States.

¹ The information and analysis in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under other statutory authority.

² These agreements, other than the "side agreements" discussed later in this report, are annexes to the Agreement Establishing the World Trade Organization (WTO) and, therefore, are now more commonly referred to as the "WTO Agreements."

³ The NAFTA entered into force on January 1, 1994, and the URA, or WTO Agreements, entered into force on January 1, 1995.

- During 1992-96, the number of operations with cattle in the United States declined by 3 percent to 1.2 million, continuing a long-term trend reflecting a long-term trend toward consolidation. However, the number of cattle on U.S. farms has remained rather stable.
- Feedlots are concentrated in the Corn Belt and Western Rangelands States. In 1996, Corn Belt and Western Rangeland feedlots with a capacity of 1,000 or more cattle accounted for about 74 percent of all U.S. fed cattle marketed.
- The slaughter sector is the most concentrated of the U.S. cattle and beef sectors. Concentration is most intense in firms that slaughter steers and heifers, and these firms tend to locate near large feedlots. Indeed, the four largest firms accounted for 81 percent of steer and heifer slaughter in 1994. The number of federally-inspected cattle-slaughtering plants declined from 971 plants in 1992 to 812 plants in 1996.
- Feeder cattle prices declined by 39 percent from \$96.13 per hundredweight in the second quarter of 1993, to \$58.81 per hundredweight in the second quarter of 1996. Cull cow prices declined by 41 percent from \$44.91 in the first quarter of 1992 to a low of \$26.68 per hundredweight by the fourth quarter of 1996.
- Changes in cattle inventories followed a cyclical pattern traditionally referred to as the "cattle cycle." The cattle cycle is characterized by the accumulation and liquidation of cattle inventories, generally occurring in response to changes, or anticipated changes, in profits, i.e., prices received for cattle and prices paid for feed.
- As a result of declining cattle prices and profitability, the liquidation phase of the U.S. cattle cycle intensified in 1995-96. By January 1, 1997, cattle inventories, at 101.2 million animals, were 2 percent below year earlier levels of 103.8 million animals, and beef cow inventories, at 34.3 million animals, were 3 percent below year earlier levels of 35.3 million animals.
- International trade in cattle and beef has become increasingly important to U.S. producers. U.S. exports of beef increased from \$2 billion in 1992 to \$2.4 billion in 1996, and the quantity exported in 1996 was equivalent to nearly 7 percent of 1996 production. Beef imports, while generally declining in recent years, were valued at \$1.1 billion in 1996, and accounted for nearly 7 percent of the quantity of consumption.
- U.S. imports of cattle for slaughter from Canada increased from fewer than 1 million animals annually during 1992-94 to a record 1.3 million animals in 1996. However, monthly imports declined during the last quarter of 1996. U.S. imports of fresh, chilled, or frozen beef from Canada increased from 329 million pounds in 1992 to 580 million pounds in 1996.
- U.S.-Mexican trade in cattle for slaughter is relatively small; during 1992-96 U.S. imports of such cattle were equivalent to less than 0.5 percent of slaughter annually. U.S. imports of cattle from Mexico consist mostly of feeder animals. U.S. imports of beef from Mexico are also relatively small, and in 1996 accounted for less than 1 percent of U.S. beef imports.

Impact of the NAFTA

Trade with Mexico

- Prior to the NAFTA, imports of live cattle for slaughter entering Mexico from the United States and Canada were dutiable at 15 percent ad valorem; imports of fresh or chilled beef were dutiable at 20 percent ad valorem; and imports of frozen beef were dutiable at 25 percent ad valorem.
- Under the NAFTA, Mexican imports and exports of live cattle and most fresh, chilled, or frozen beef received a tariff rate of "Free" effective January 1, 1994, with both of the NAFTA partners.
- Notwithstanding the reduction in the rate of duty applicable to Mexican imports of live cattle from the United States such trade has remained relatively limited.
- Mexican imports of beef from the United States were volatile during 1993-96, increasing from 104 million pounds in 1993 to 201 million pounds in 1994, the first year of the NAFTA, then declining to 85 million pounds in 1995, but rising to 164 million pounds in 1996. During 1993-96 about 70 percent of beef exports were fresh or chilled and about 30 percent were frozen.
- The Commission's staff undertook an empirical analysis to determine the impact of the NAFTA on Mexican imports of beef from the United States. The analysis indicates non-NAFTA events had a more important effect on the level of Mexican imports of U.S. beef than did the NAFTA. Commission staff analysis indicates that the decline in Mexican imports of U.S. beef in 1995-96 relative to 1994 was not the result of NAFTA provisions, but due largely to the devaluation of the peso.
- The value of the Mexican peso declined in relation to the U.S. dollar beginning in late 1994. The devaluation of the peso led to inflation, sharply rising interest rates, a drop in gross domestic product, and a decline in real consumer expenditure per capita in Mexico.
- The analysis, however, indicates that the NAFTA has enhanced U.S. exports of beef to Mexico primarily as a result of the preferential tariff treatment enjoyed by the United States under the NAFTA. Since the NAFTA was enacted the United States has supplied almost all the beef imported into Mexico.
- Under the NAFTA the United States exempted imports of fresh, chilled, or frozen beef from Mexico from quantitative restrictions under the Meat Import Act of 1979. However, such beef imports from Mexico have remained small (7 million pounds, product weight) in relation to other suppliers (815 million pounds, product weight) in 1996.

Trade with Canada

- U.S. cattle imports from, and exports to, Canada have received a rate of duty of “Free” since January 1, 1993 as a result of an accelerated duty elimination agreement negotiated under the United States-Canada Free-Trade Agreement (CFTA). By July 1993 most U.S. fresh, chilled, or frozen beef imports from, and exports to Canada received a tariff rate of “Free” as the result of accelerated duty elimination agreements. The pre-CFTA rates of duty were relatively low. Consequently, the NAFTA did not result in any duty reduction on U.S. imports of live cattle or fresh, chilled, or frozen beef from Canada.
- The CFTA, which entered into force on January 1, 1989, prohibited the United States from introducing, maintaining, or seeking a quantitative restriction on meat imports from Canada. Therefore, U.S. imports of fresh, chilled, or frozen beef from Canada were not subject to quantitative restrictions imposed under the Meat Import Act of 1979. Imports from Canada increased irregularly from 131 million pounds (product weight equivalent) in 1988 to 448 million pounds in 1994, the last year the Meat Import Act was in effect for other countries.
- Primarily as a result of trade liberalization associated with the CFTA, the NAFTA does not appear to have resulted in measurable changes in U.S.-Canadian trade in live cattle or beef.

Transshipment Issues

- The Commission was directed to report on the steps that have been taken by the United States, since enactment of the NAFTA, to prevent the transshipment of live cattle and fresh, chilled, or frozen beef through Mexico and Canada for importation into the United States.
- The NAFTA implementing legislation required the U.S. Customs Service (Customs) to develop a methodology for estimating compliance with laws that it administers to be presented in an annual report to the Congress. As a result of this legislation a Customs Compliance Measurement Program, with a NAFTA component, was implemented in an effort to ensure a high level of compliance and enforcement.
- Customs reported that in 1995 the Office of Regulatory Audit performed ten NAFTA verification audits on producers of beef products in Canada and Mexico and no transshipment was detected.
- The NAFTA implementation legislation requires the Secretary of Agriculture to submit an annual report to Congress on the inspection of food and agricultural products imported into the United States in commercially significant quantities from Mexico and Canada. The Secretary reported that in 1995, the latest year for which data are available, USDA was not aware of any incidence of transshipment of live animals.

Impact of the Uruguay Round Agreements

- To date, the URA have not had a significant impact on U.S. trade in cattle for slaughter or beef. However, a number of URA provisions may impact such trade in the future.

Canada's Western Grain Transportation Act

- The action taken as a result of the URA that is expected to have the most significant effect on U.S. trade in cattle for slaughter and beef is the elimination by Canada of transportation incentives for grain under the Western Grain Transportation Act (WGTA). The WGTA was eliminated July 1, 1995, but high grain prices in Canada and worldwide have delayed the effects of higher transportation rates on Canadian grain producers. The elimination of the WGTA incentives may result in some grain producers shifting from grain to cattle growing and feeding in the provinces of Manitoba, Saskatchewan, and Alberta.

SPS Agreement

- The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), requires that sanitary and phytosanitary measures have a scientific basis, and may assist U.S. exporters in gaining increased access to foreign markets restricted as a result of arbitrary measures or measures lacking a scientific basis. A recent U.S.-EU trade dispute that resulted from the EU's prohibition on the importation of meat from countries where the use of certain growth-promoting hormones is permitted is being considered by a WTO dispute settlement panel.
- On June 30, 1997, the panel released its final report to the parties. The panel's final report was in favor of the United States and found the EU's ban to be inconsistent with obligations under the SPS Agreement. On July 1, 1997, EU representatives announced their intention to bring the matter before the Appellate Body of the WTO.

Tariff-Rate Quotas

- As a result of Uruguay Round commitments, the United States repealed the Meat Import Act of 1979 and replaced the import quota system in effect under that Act with a tariff-rate quota system applicable to imports of most fresh, chilled, or frozen beef. However, there is no limit to the quantities of the subject meats that may enter from Canada and Mexico and receive a rate of duty of "Free." The United States committed to a tariff-rate quota of 656,621 metric tons (1.4 billion pounds, product weight). The tariff-rate quota quantity is not scheduled to change except pursuant to side agreements with Uruguay and Argentina described below. Country allocations were made for imports from Australia, New Zealand, Japan, Uruguay, and Argentina. A provision for "other countries or areas" established a within-quota quantity of 64,805 metric tons (143 million pounds) for imports from other countries.

- U.S. imports of tariff-rate quota-type meats from all sources, including Canada and Mexico, during 1995 and 1996 were less than the imports of meats of the type subject to the Meat Import Act of 1979 during the 5 years prior to its repeal.

Side Agreements

- Under the side agreements entered into during the Uruguay Round negotiations, the United States committed to increase the in-quota quantity of the tariff-rate quota for beef to provide Argentina and Uruguay with 20,000 metric tons (44 million pounds) each of access to the United States, provided that the U.S. Secretary of Agriculture determined that these countries or areas of these countries are free of rinderpest and foot-and-mouth diseases (FMD). In mid-November 1995, the Secretary determined that Uruguay was free of the diseases. On June 26, 1997, USDA announced that Argentina had been found to be free of FMD and rinderpest diseases and under certain conditions would be authorized to ship fresh, chilled, or frozen beef to the United States effective August 25, 1997. Imports from Uruguay were 0.3 million pounds in 1995 but in 1996 were very near to the maximum allowable quantity of 44 million pounds.
- In December 1993, during the Uruguay Round negotiations, the United States and the Republic of Korea (Korea) entered into a Record of Understanding (ROU) concerning, among other things, global market access to the Korean market for beef. The ROU includes an immediate increase in Korea's global beef import quota and elimination of the quota by the year 2001.
- U.S. exports of beef to Korea rose from 112 million pounds, valued at \$151 million, in 1993 to 265 million pounds, valued at \$319 million, in 1995. Such exports declined to 196 million pounds, valued at \$243 million in 1996.

Export Incentive Agreements

- Under the URA the EU and the United States agreed to limit export assistance for beef. This agreement is reflected in the WTO Agreement on Agriculture. The EU agreed to reduce exports eligible for assistance from 2.5 billion pounds, valued at 1.9 billion ECUs (US\$2.5 billion) in 1995 to 1.8 billion pounds, valued at 1.3 billion ECUs in the year 2000. Although the Agreement on Agriculture requires the United States to reduce beef export incentives, U.S. beef export incentives have not been used in recent years. Were the United States to provide such assistance, the maximum allowable U.S. assisted exports would decline from 21 million pounds, and \$33.5 million, in 1995 to 18 million pounds, and \$22.8 million, in the year 2000. ■

Table A

Cattle for slaughter and fresh, chilled, or frozen beef: Selected market, trade, and tariff information, 1992-96

Item	Cattle					Beef				
	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
	-----1,000 animals-----					-----Million pounds-----				
U.S. production	38,933	39,448	40,059	40,211	39,586	23,396	23,334	24,679	25,541	26,066
U.S. consumption	34,245	34,520	35,467	37,070	38,352	24,572	24,292	25,414	25,853	26,324
U.S. exports:										
Total	224	149	185	69	47	1,277	1,219	1,547	1,736	1,742
Mexico	168	83	99	6	10	185	104	201	85	164
Canada	56	66	86	63	37	229	220	259	283	264
All other	(¹)	(¹)	(¹)	(¹)	(¹)	863	895	1,087	1,368	1,314
U.S. imports:										
Total	963	927	910	1,123	1,298	2,136	2,102	2,068	1,839	1,808
Mexico	3	2	3	67	2	1	3	3	6	10
Canada	960	926	908	1,055	1,296	329	397	447	439	580
All other	(¹)	(¹)	(¹)	(¹)	(¹)	1,806	1,702	1,618	1,394	1,218
	-----Percentage-----					-----Percentage-----				
U.S. imports market share:										
Total	2.8	2.7	2.6	3.0	3.4	8.7	8.7	8.1	7.1	6.9
Mexico	(²)	(²)	(²)	0.2	(²)	(²)	(²)	(²)	(²)	(²)
Canada	2.8	2.7	2.6	2.8	3.4	1.3	1.6	1.8	1.7	2.2
All other	(²)	(²)	(²)	(²)	(²)	7.4	7.0	6.4	5.4	4.7

See footnotes at end of table.

Table A--Continued

Cattle for slaughter and fresh chilled, or frozen beef: Selected market, trade, and tariff information, 1992-96

Item	Cattle					Beef				
	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
U.S. tariff for:										
Canada	0.4¢/kg.	Free	Free	Free	Free	(³)	(⁴)	Free	Free	Free
Mexico	2.2¢/kg.	2.2¢/kg.	Free	Free	Free	(⁵)	(⁶)	Free	Free	Free
Mexican tariff for:										
United States and Canada	(⁷)	15% ad val.	Free	Free	Free	(⁷)	20%-25%	Free	Free	Free
Canadian tariff for:										
United States	0.4¢/kg.	Free	Free	Free	Free	(⁸)	(⁹)	Free	Free	Free
Mexico	2.2¢/kg.	2.2¢/kg.	Free	Free	Free	4.41/kg	4.41/kg.	Free	Free	Free

¹ Fewer than 500 animals.

² Less than 0.05 percent.

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³ Rates ranged from "Free" to 2.6¢ per kilogram with most imports receiving a rate of "Free."

⁴ Rates ranged from "Free" to 2.2¢ per kilogram with most imports receiving a rate of "Free."

⁵ Rates ranged from 4 percent ad valorem; 4.4¢ per kilogram; to 10 percent ad valorem with most imports being dutiable at 4.4¢ kg.

⁶ The Mexican tariff rate was raised from "Free" to 15 percent ad valorem effective Nov. 12, 1992.

⁷ The Mexican tariff rate was raised from "Free" to 20 percent ad valorem for fresh beef and from "Free" to 25 percent ad valorem for frozen beef effective Nov. 12, 1992.

⁸ Rates ranged from "Free" to Can. 2.6¢ per kilogram with most imports receiving a rate of "Free."

⁹ Rates ranged from "Free" to Can. 2.2¢ per kilogram with most imports receiving a rate of "Free."

Source: U.S. production, consumption, exports, and imports derived from tables D-14, D-16, D-18, and D-20. U.S., Mexican, and Canadian tariffs derived from respective harmonized tariff schedules.

CHAPTER 1

INTRODUCTION

Background

Primarily as a result of close geographic proximity and relatively open border policies, cattle and beef markets in the United States, Canada, and, to a lesser extent, Mexico are highly interrelated. In recent years, trade within North America in live cattle and beef has increased, particularly between the United States and Canada. The Commission, at the request of the Congress, conducted fact-finding investigations in 1987 and 1993 concerning the competitive conditions relating to the U.S. and Canadian cattle and beef industries.¹ Since 1993, the United States has implemented the North American Free Trade Agreement (NAFTA) and the Uruguay Round Agreements (URA), both of which required the United States to further reduce tariffs and trade barriers relating to cattle and beef trade. This investigation and report are concerned with the impact of the NAFTA and the URA on U.S. trade in cattle for slaughter² and fresh, chilled, or frozen beef; and the steps the United States has taken since enactment of the NAFTA to prevent the transshipment of live cattle and fresh, chilled, or frozen beef through Canada and Mexico for importation into the United States.

Since the NAFTA was implemented on January 1, 1994, and the URA was implemented, on January 1, 1995, the impact of these agreements on the U.S. live cattle and beef sectors has been a concern. Subsequent to implementation of these agreements, U.S. cattle prices began to decline and generally remained low relative to earlier periods, throughout 1996. Feed grain prices, which are a major cost to cattlemen, rose as well, resulting in lower profits. During this period some U.S. cattlemen raised concerns about increasing imports of live cattle for slaughter from Canada. Some domestic interests also expressed concern that Canadian sanitary and phytosanitary measures were adversely affecting U.S. exports to Canada while at the same time U.S. measures were too lenient and were not adequately enforced. In addition, U.S. exports of beef to Mexico rose in 1994, after the NAFTA implementation, but declined in 1995 following devaluation of the peso. Certain U.S. interests also believed that the United States was not taking adequate steps to prevent the transshipment of beef from Australia and New Zealand through Canada and live cattle from Central America through Mexico for importation into the United States.

¹ USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, USITC publication 1996, July 1987. USITC, *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, investigation No. 332-328, USITC publication 2591, Jan. 1993.

² For purposes of this report, the phrases cattle for immediate slaughter, cattle for slaughter, and slaughter cattle are used interchangeably. The USITC recognizes that virtually all cattle ultimately will be slaughtered for meat. For this report, U.S. imports of cattle for "immediate slaughter" refers to cattle that will be slaughtered within 2 weeks of entry into the United States conforming to USDA regulations as described in chapter 2 in the *Sanitary and Phytosanitary Measures* section.

Cattle are one of the leading agricultural products of the United States. Cash receipts from sales amounted to an estimated \$35 billion in 1996. In addition domestic producers received \$20 billion from sales of dairy products in 1996. Cattle are raised throughout the United States on more than 1 million operations and for some producers, typically in the Western States, cattle account for all or nearly all of their income. The U.S. cattle population of over 100 million animals, including about 35 million beef cows and about 9 million dairy cows, was valued at \$64 billion in 1995.

International trade in cattle and beef has become increasingly important to U.S. producers in recent years. U.S. exports of beef increased from \$2 billion in 1992 to \$2.4 billion in 1996, equivalent to nearly 7 percent of the quantity of production. Beef imports, while generally declining in recent years, were valued at \$1.1 billion in 1996, and accounted for nearly 7 percent of the quantity of consumption. U.S. imports of cattle for slaughter from Canada increased from fewer than 1 million animals annually during 1992-94 to 1.1 million in 1995 and 1.3 million in 1996. U.S.-Mexican trade in cattle for slaughter is relatively small; during 1992-96 U.S. imports of such cattle were equivalent to less than 0.5 percent of slaughter annually. U.S. imports of cattle from Mexico consist mostly of feeder animals. Canada and Mexico are important markets for U.S. beef, and in 1996 accounted for 15 percent and 9 percent, respectively, of total U.S. beef exports. Canada is also a significant supplier of beef to the U.S. market, and in 1996 accounted for nearly one-third of total U.S. imports, while U.S. imports of beef from Mexico were less than 1 percent of total 1996 imports.

Purpose of the Report

Section 58 of the Miscellaneous Trade and Technical Corrections Act of 1996 (Act), (Pub.L. No. 104-295, 110 Stat. 3514, 3557,(1996)),³ required the Commission to conduct a study under section 332 of the Tariff Act of 1930 (19 U.S.C. 1332) and to submit a report to the House Committee on Ways and Means and Senate Committee on Finance concerning--

1. The impact of the North American Free Trade Agreement (NAFTA) and the Uruguay Round Agreements (URA) on United States imports and exports of live cattle for slaughter and fresh, chilled, or frozen beef; and
2. The steps that have been taken by the United States, since the enactment of the NAFTA, to prevent the transshipment of live cattle and fresh, chilled, or frozen beef through Mexico and Canada for importation into the United States.

The Act required the Commission to transmit its report to the Committees no later than 270 days after the date of enactment, or by July 7, 1997.

Following enactment of section 58 of the Act, the Commission instituted investigation No. 332-371, *Cattle and Beef: Impact of the NAFTA and Uruguay Round Agreements on U.S. Trade*, under section 332(g) of the Tariff Act of 1930 on October 28, 1996. A public hearing in connection with this investigation was held on March 20, 1997, in Washington, DC. Public

³ A copy of section 58 of the Act is included in appendix A.

notice of the investigation and hearing was given by posting copies of the notice at the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of November 6, 1996 (61 F.R. 57451).⁴

Scope of the Investigation

URA and the NAFTA

The URA are the result of multilateral negotiations conducted under the auspices of the General Agreement on Tariffs and Trade (GATT) during the period 1986-1993. The agreements consist of the Agreement Establishing the World Trade Organization (WTO) and a series of multilateral and plurilateral agreements and understandings set forth in annexes to the WTO Agreement that concern trade in goods, trade in services, intellectual property rights, and dispute settlement. The agreements entered into force on January 1, 1995, with respect to the countries that had submitted appropriate ratification documents as of that date. The WTO, the successor to the GATT organization and a permanent forum for member governments to address multilateral trade issues as well as to oversee implementation of the URA, also came into being on that date. As of January 1, 1997, 129 countries had become WTO members.

Several of the WTO agreements concern trade in agricultural products, including the Agreement on Agriculture and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), which are binding on all WTO members; and the International Dairy Agreement and the International Bovine Meat Agreement, which are plurilateral agreements binding only upon countries that have signed those specific agreements. The Agreement on Agriculture is the principal WTO agreement that concerns trade in agricultural products. It was the first broad agreement negotiated under GATT auspices to address trade in agricultural goods, and was also one of the most difficult of the WTO agreements to negotiate. It provides multilaterally agreed rules and disciplines to agricultural trade in three principal areas: market access, domestic support measures, and export incentives. In general, WTO members are required to implement their commitments over a 6-year period beginning in 1995, and developing country members were given up to 10 years. The Agreement on Agriculture also affirmed the commitment of WTO members to give effect to the WTO SPS Agreement.⁵ The United States is a signatory to the International Bovine Meat Agreement, but not to the International Dairy Agreement. The International Bovine Meat Agreement covers live cattle, meat, and offal (byproducts), and carried forward without substantive modification the Arrangement Regarding Bovine Meat, which was concluded during the Tokyo Round of trade negotiations.

The NAFTA was implemented by the United States, Canada, and Mexico on January 1, 1994.⁶ Major objectives of the NAFTA included the elimination of tariffs and other barriers to trade

⁴ A copy of the notice of the Commission's investigation and hearing is included in appendix B.

⁵ For an overview of the Agreement on Agriculture, see the Uruguay Round Agreements Act Statement of Administration Action, published in House Doc. 103-316, 103d Cong., 2d Sess., at 709-26.

⁶ The NAFTA incorporated most of the provisions of the U.S.-Canada Free-Trade Agreement and in many instances expanded upon the earlier (1987) agreement.

in, and facilitation of cross border movement of, goods and services; the liberalization of rules for investment; protection and enforcement of intellectual property rights; and the creation of a dispute settlement mechanism. The NAFTA phases out tariffs on most qualifying industrial goods and agricultural products over a 10-year period, with some tariffs and nontariff barriers to be phased out over 15 years.

Industry and Markets

The U.S. live cattle and beef industries consist of several distinct production sectors. In this report we have analyzed the cow-calf, stocker-yearling, dairy cattle, feedlot, and the slaughter sector. U.S. imports of live cattle are primarily from Mexico and Canada. Australia, New Zealand, and Canada are generally the main sources of U.S. beef and veal imports. Mexico and Canada have been the primary markets for U.S. exports of live cattle, while Japan, Canada, Mexico, and the Republic of Korea (Korea) have generally been the largest-volume export markets for U.S. beef and veal.

Overview and Approach

This study identifies and describes the provisions in the NAFTA and the URA that affect imports and exports of live cattle and beef, and attempts to ascertain the impact of these agreements on live cattle and beef trade. In regards to the NAFTA, the report focuses on various duty reductions and sanitary and phytosanitary measures. In regard to the URA, the report focuses on the Agreement on Agriculture and the SPS Agreement, the replacement of the U.S. Meat Import Act of 1979 with a tariff-rate quota, the commitments made by the United States and the European Union (EU) to reduce the quantity and value of government-assisted beef exports, and U.S. trading partner market access liberalization for beef.

The report also discusses measures taken by the United States to prevent the transshipment of beef through Canada and Mexico to the United States. This investigation also examines and describes the live cattle and beef industries of the United States, Canada, and Mexico. The report includes information on imports, exports, production, consumption, prices, and other significant factors affecting supply and demand for live cattle and beef. The Commission used various statistical and time-series econometric methods to obtain evidence on the factors important to the competitiveness of the U.S. cattle and beef industries.

The information in this report is from written submissions and testimony presented at the Commission's public hearing, domestic and foreign fieldwork, and interviews with producers, processors, purchasers, importers, exporters, and associations. Additional information was obtained from a review of published literature, U.S. Department of Agriculture (USDA) and State Department telegrams, U.S. and foreign academic institutions, and previous Commission studies. Fieldwork took place in Colorado, Kansas, and Texas and Mexico. Appendix C contains a review of literature on the impact of the NAFTA and the URA on U.S. trade in cattle and beef.

Organization

Chapter 2 describes the U.S. cattle and beef sectors. Chapter 3 includes overviews of the cattle and beef sectors for other countries, including Mexico, Canada, Central American countries, the Dominican Republic, Uruguay, Argentina, Japan, and Korea. Chapter 4 provides a description and analysis of commitments and actions taken under the NAFTA. An econometric analysis of the NAFTA on Mexican imports of U.S. beef is also provided in this chapter, as well as an empirical analysis of Canadian exports of live cattle for slaughter to the United States. Chapter 5 describes steps that have been taken by the United States since the enactment of the NAFTA to prevent the transshipment into the United States of live cattle and fresh, chilled, or frozen beef through Mexico and Canada. Chapter 6 describes the commitments made by the United States and its major trading partners concerning the live cattle and beef sectors as part of the URA. In addition, the impact of the NAFTA on the U.S. live cattle and beef sectors is discussed and analyzed qualitatively and econometrically. Statistical tables are presented in appendix D. ■

CHAPTER 2

U.S. INDUSTRY AND MARKETS

This chapter provides a description of the U.S. live cattle and beef industries including the products involved and the production processes. It also provides information on the number, geographic distribution, and concentration of industry sectors; the U.S. cattle cycle; sanitary and phytosanitary measures; U.S. trade and tariff measures; and the U.S. market.

U.S. Live Cattle and Beef Sectors

Description and Uses

In the United States, most cattle are beef-type animals kept for the production of meat. The remainder are dairy-type animals kept for the production of milk for human consumption; dairy cows accounted for 9 percent of the U.S. inventory of all cattle as of January 1, 1997.¹ Beef cows accounted for 34 percent and the rest of the inventory consisted of bulls, steers,² heifers,³ and calves. When cattle are no longer efficient in the production of calves or milk, they are slaughtered for beef; such animals are referred to as cull cattle.⁴

The U.S. live cattle and beef industries consist of several distinct production sectors. In this report we have analyzed the cow-calf, stocker-yearling, feedlot, dairy cattle, and the slaughter sector. There is little integration between these sectors.⁵ Cow-calf operators include two types --purebred and commercial. Purebred breeders are specialized and primarily produce cattle for breeding purposes and semen. The commercial cow-calf operators raise steers and heifers which ultimately are slaughtered for meat except for some bulls and heifers kept for breeding purposes. Calves, which are born after a 9 to 10 month gestation period, are typically raised with their mothers until they are weaned at 6 to 10 months of age, and weigh between 300 and 600 pounds. Most of the cow-calf operations are in the Plains and Corn Belt areas where forage is abundant.⁶

Stocker-yearling operators feed weaned calves on available forage and high-value roughage feeds (such as sugar beet tops and corn stalks), or graze them on wheat pasture and silage. Such animals will ultimately be placed in feedlots.

¹ USDA, NASS, *Cattle*, Jan. 31, 1997, p. 1.

² Arthur L. Anderson and James J. Kiser, *Introductory Animal Science* (NY: Macmillan Pub. Co., 1967), defines a steer as a male bovine that was castrated when young and before his secondary sex characteristics had developed.

³ Robert E. Taylor, *Scientific Farm Animal Production*, (NY: Macmillan Pub. Co., 1992), defines a heifer as a young female bovine cow before the time that she has produced her first calf.

⁴ U.S. International Trade Commission, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, USITC publication 1996, July 1987, p. 1.

⁵ *Scientific Farm Animal Production*, pp. 29 -35.

⁶ *Ibid.*, p. 31.

In cattle feedlots animals are kept in confined areas and are fed on high-energy rations, typically corn and protein supplements, and some roughage for about 6 months at which time the animals weigh between 900 and 1,300 pounds and are about 15 to 24 months old.⁷ Such animals are then ready for slaughter, inasmuch as they have reached muscular maturity, and additional weight gains will consist of fat. Feedlot operations are concentrated in the Corn Belt⁸ and in the Western Rangelands.⁹ Most cattle raised for beef in the United States are placed in feedlots for finishing, with only about 10 to 15 percent of the slaughter steers and heifers finished on pasture. Such cattle are referred to as “nonfed” cattle as they go to slaughter with little or no grain or concentrate feeds.¹⁰

The dairy cattle sector comprises animals kept for milk production for human consumption. Dairy cows are typically less heavily muscled than beef cattle and are less blocky in conformation. At maturity, dairy cows typically weigh from 1,000 to 1,500 pounds and begin to produce milk when they are about 2 years of age, after the birth of their first calf.¹¹ They are usually kept for milk production for about 3-4 years, and then slaughtered for beef.¹² Female calves (heifers) are kept until they reach maturity, are bred, and milked to replace cows that leave the herd because of such factors as reproductive failure, low milk yield, or death. Some bull dairy calves are slaughtered for veal when they are a few days old, and others are castrated (steers) and raised to maturity for the production of beef.¹³

The slaughter sector (also known as meatpackers) purchases slaughter or fed cattle and kills and butchers the animals to produce beef. Slaughter as defined by the USDA is the killing and butchering of animals primarily for food.¹⁴ A slaughter plant is an establishment where animals are killed and butchered.¹⁵ Typically, the animals are rendered unconscious, bled, skinned, eviscerated, and decapitated. The carcasses are generally split down the center of the backbone, washed, and placed in a cooler to chill.¹⁶ Beef may be sold to warehouses or processors for further processing into retail cuts. In recent years, meatpackers have shipped a large share of beef processed as boxed beef.¹⁷

Beef may be considered as consisting of table beef or manufacturing beef. For purposes of this study, table beef is defined as the meat of cattle that is ready, except for division into cuts, for cooking and consumption without further preparation or preservation. Examples of table beef

⁷ Ibid., p. 29.

⁸ The Corn Belt is associated with the States of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin.

⁹ The Western Rangelands are associated with the States of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

¹⁰ *Scientific Farm Animal Production*, p. 33.

¹¹ Ibid., p. 403.

¹² Ibid., p. 391.

¹³ Ibid.

¹⁴ USDA, NASS, *Livestock Slaughter*, Jan. 1996, p. 23.

¹⁵ Ibid.

¹⁶ *Scientific Farm Animal Production*, p. 58.

¹⁷ Boxed beef involves the division of the carcass into primal or subprimal cuts and coarse grinding the trimmings (for final use as hamburger) at the meatpacking plant and packaging the cuts and grindings in plastic-lined paperboard boxes for shipping to retailers.

include steaks and roasts. Manufacturing beef is defined as meats to be further processed into such products as sausages, hamburger, and ground beef.

Number and Distribution of Producers

There were a total of 1,194,390 operations¹⁸ with cattle in the United States in 1996. As shown in the following tabulation, the number of operations with cattle declined by 3 percent during 1992-96, continuing a long-term downward trend:

Year	Number of operations with cattle
1992	1,226,860
1993	1,229,740
1994	1,213,690
1995	1,212,110
1996	1,194,390

Many factors contributed to the long term decline in the number of operations including unacceptable levels of profitability, urbanization, and the consolidation of all farming operations, including beef and dairy.¹⁹

The regional distribution of U.S. operations with cattle and calves for 1996 is shown in figure 2-1 and table D-1.²⁰ Cattle raising is concentrated in the Western Rangelands, the Corn Belt, and the Southeastern States.²¹ Over 75 percent of the cattle inventory is in the Corn Belt and the Western Rangeland States.²²

The number of feedlots in the 13 major cattle-feeding States²³ declined steadily from 46,446 in 1992 to 41,365 in 1995, or by 11 percent (table D-2). The number of cattle marketed by these feedlots increased from 22.0 million animals in 1992 to 23.4 million animals in 1995, or by 6 percent. In 1996, the procedures for reporting of cattle on feed changed, thus comparable data for earlier years are not available. However, in 1996 there were 1,770 feedlots that marketed about 74 percent of the fed cattle (table D-3).

¹⁸ The USDA defines an operation with cattle as an operation having 1 or more animals on hand at any time during the year.

¹⁹ H.D. Ritchie, J.L. Orth, J.N. Ferns, T.R. Pierson, J.H. Hilker, and J.R. Black, "Time is now for beef industry to consider change," *Feedstuffs*, Vol. 69, No. 5, Feb. 3, 1997, p. 1.

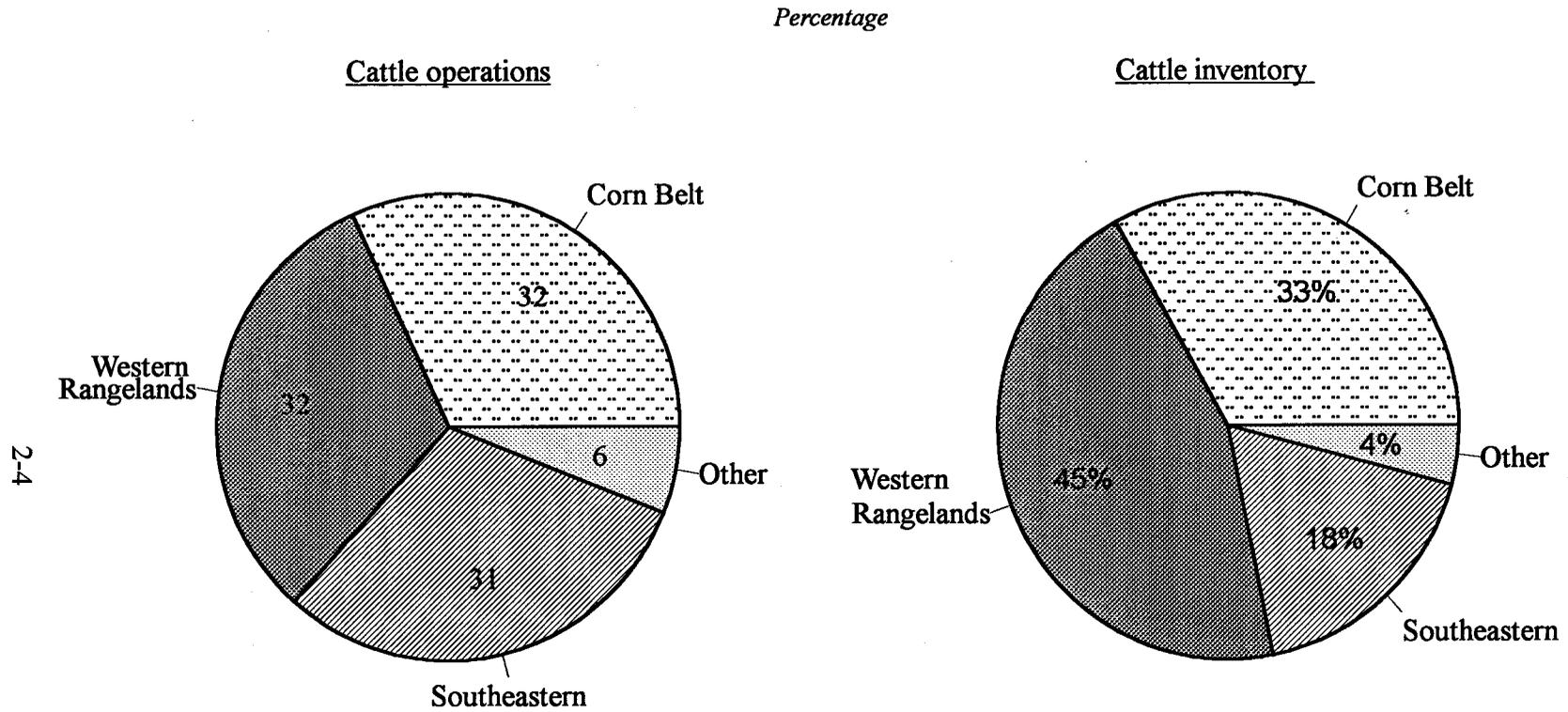
²⁰ Statistical tables are in appendix D.

²¹ The Southeastern States are associated with Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

²² The regions are described in USITC's *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, publication 1996, July 1987, pp. 18-24.

²³ Western Rangeland States of Arizona, California, Colorado, Idaho, Oklahoma, South Dakota, Texas, and Washington; and the Corn Belt States of Illinois, Iowa, Kansas, Minnesota, and Nebraska.

Figure 2-1
Regional distribution of U.S. cattle operations and cattle inventory, Jan. 1, 1996



Source: USDA, NASS, *Cattle Final Estimates, 1989-93, and Cattle, Feb. 1996-Jan. 1997.*

The number of Federally inspected cattle slaughter plants declined by 16 percent during 1992-96. Plants slaughtering less than 10,000 animals per year accounted for most of the decline as plants slaughtering at least 500,000 animals per year increased from 20 plants to 23 (table D-4). The number of calf slaughtering plants totaled 380 in 1996, down 11 percent from 1992 (table D-5).

Cattlemen in the United States have traditionally expressed concern about packer concentration and have noted that two large U.S. meatpacking companies have expanded cattle-slaughtering facilities in Alberta, Canada. The expansion is discussed in chapter 3. During 1991-94, the number of U.S. firms slaughtering cattle fell 26 percent to 239 in 1994 (latest year available) and the number of firms slaughtering calves fell by 22 percent to 108 (table D-6). Some firms operate more than one plant. The decline in the number of firms slaughtering cattle reflects a decline in the number of single-plant firms as the number of multi-plant firms increased from 19 in 1991 to 27 in 1994.²⁴ The number of multi-plant firms slaughtering calves also increased from 8 to 17 during the period.

Industry Concentration

Cow-calf

The cow-calf sector is the least concentrated of the U.S. cattle and beef sectors. There were nearly 1.2 million operations with cattle in the United States in 1996. Many of these operations are family owned and operated. In the Midwest, East, and South, the cattle are often part of a diversified farming operation; however, in the West, cattle frequently account for all or nearly all, of the farmers' incomes.

Feedlot

Table D-2 shows the number of feedlots and marketings by size of feedlot capacity, in cattle-feeding Corn Belt States and cattle-feeding Western Rangelands States for 1992-95. The feedlot sector is more concentrated than the cow-calf sector, but less concentrated than the slaughter sector. Feedlots in the Corn Belt and Western Rangeland States accounted for about 83 percent of the 27.3 million fed cattle marketed annually during 1992-95. In 1996, Corn Belt and Western Rangeland feedlots with a capacity of 1,000 or more cattle accounted for about 74 percent of all U.S. fed cattle marketed.

Dairy Cattle

Dairy farms and processors are located throughout the United States. However, the Upper Midwest, Northeast, and West produce 75 percent of the nation's milk supply, and hold approximately the same percentage of dairy cow inventories (table D-7). In 1996, Wisconsin had the most dairy cows with about 1.5 million animals, followed by California (1.3 million animals) and New York (700,000 animals). There has been a slow trend in milk production away from the upper Midwest and Northeast towards the West, particularly California. California was the largest milk producer in 1996 with almost 26 billion pounds, followed by

²⁴ USDA, *Packers and Stockyards Statistical Report*, 1991-94 Reporting Years, Oct. 1996, p. 14.

Wisconsin with 22 billion pounds. California became the leading milk-producing State in 1994 following recent rapid growth in productivity (production per cow increased 8 percent between 1993 and 1996 (table D-7)). Technological advances for milking and feeding have generally increased the minimum economically feasible size of operation, increased production efficiency, and encouraged specialization. This has particularly benefitted the large dairies in California, as well as those in Arizona, New Mexico, and Florida.²⁵ Factors that have contributed to this geographical shift in production include population movements to the South and Southwest, as well as the lower land and facilities costs of the region, favorable climate, ample supplies of high-quality hay and forage, and availability of labor.²⁶

In addition to regional differences in dairy production and cow inventories, there are also differences in the size distribution of dairy farms. In 1996, for example, over 95 percent of dairy cows in California were on operations with 200 animals or more. In contrast, Wisconsin had only 7 percent of its dairy cows on operations of such size, with over one-third of cows being on operations with less than 50 animals. A comparison of the size distribution of dairy operations between 1993 and 1996 shows that herd sizes are increasing over time, particularly in the Upper Midwest and Central regions. This trend towards larger operations can be associated with technological advances for milking and feeding that have generally increased the minimum economic feasible size of operation.²⁷

Slaughter

The slaughter sector is the most concentrated of the cattle and beef sectors. In 1992, 20 plants each slaughtering 500,000 or more cattle annually, handled 19.2 million cattle, or 58 percent of commercial slaughter (table D-4). In 1996, 23 plants slaughtering 500,000 or more handled 22.9 million cattle, or 63 percent of commercial slaughter. As concentration increased in cattle slaughtering during 1992-96, the number of Federally inspected plants declined from 971 to 812, or by 16 percent.

Calf slaughter is even more concentrated than cattle slaughter. In 1996, 37 plants representing 10 percent of the number of Federally inspected plants, handled 1.6 million calves, or 89 percent of commercial slaughter (table D-5). The number of Federally inspected slaughter plants for calves declined from 427 plants in 1992 to 343 plants in 1995, then rose to 380 plants in 1996.

As many large firms own and/or control more than one slaughtering plant, the number of firms involved in cattle and calf slaughter in the United States is smaller than the number of plants. Concentration that increased during 1990-94 (the latest years for which data are available), largely reflects mergers and acquisitions within the industry. In 1990, for example, the four largest-volume firms accounted for 59 percent of total U.S. commercial slaughter; by 1994, the four largest-volume firms accounted for 68 percent of such slaughter (table D-8).

²⁵ USDA, ERS, "Dairy Policy to Build on Market Orientation," *Agricultural Outlook*, July, 1995, pp. 13-15.

²⁶ *Ibid.*, p. 14.

²⁷ *Ibid.*

Concentration is higher in those firms that slaughter steers and heifers. These firms tend to locate plants near large feedlot operations. Concentration is lower among firms slaughtering cows and bulls, reflecting the widely dispersed cow-calf herds throughout the United States.

U.S. Cattle Cycle and Cattle Inventory

Changes in cattle inventories have followed a cyclical pattern traditionally referred to as the "cattle cycle." The cattle cycle²⁸ is characterized by the accumulation and liquidation of cattle inventories, generally occurring in response to changes, or anticipated changes, in profits, i.e., prices received for cattle and prices paid for feed.

The number of cattle on U.S. farms as measured by the January 1 inventory reported by the USDA increased from 97.6 million animals in 1992 to 103.8 million in 1996 (table D-9).²⁹ Likewise, the number of beef cows increased from 33.8 million animals in 1992 to 35.3 million in 1996.³⁰ The number of cattle on farms declined to 101.2 million animals as of January 1, 1997, and the number of beef cows fell to 34.3 million.

Declining prices and increases in slaughter suggest that the liquidation phase of the most recent cattle cycle may have begun in the fall of 1994. Cull cattle prices at \$36.68 per hundred weight (cwt) during the fourth quarter of 1994 were 16 percent below the corresponding quarter of 1993 (table D-10). Cull cattle prices declined irregularly during 1995-96 to a low of \$26.68 in the fourth quarter of 1996 (42 percent below the second quarter of 1994). Similarly, feeder cattle prices began to decline after the second quarter of 1993. Feeder cattle prices continued to decline irregularly to a low of \$58.81 per cwt during the second quarter of 1996.

The liquidation phase of the cattle cycle intensified in 1996, reflecting in part, high grain prices, an increase in the number of cattle sold for slaughter, adverse weather, and unfavorable feedlot returns. A reduced grain crop in 1995-96 led to record high grain prices. For example, the farm price of corn averaged above \$4 per bushel in the second and third quarters of 1996, up from an average of \$2.50 per bushel in 1995. In addition, drought in much of the Central Plains and Southwestern United States and unusually wet weather in the Northern States sharply reduced demand for a larger supply of feeder cattle, lowering prices.³¹ The American Farm Bureau Federation (AFBF) stated that the reduction in total cattle numbers is likely to continue at least another year or two and that it could be the year 2000 before the U.S. cattle inventory shows an expansion of the cattle herd.³²

²⁸ For a detailed description of the cattle cycle, see USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, publication 1996, July 1987, pp. 35-39.

²⁹ USDA, NASS, *Statistical Highlights of U.S. Agriculture, 1995/96*, [<http://www.usda.gov/nass/pubs/stathigh/cover.htm>].

³⁰ Ibid.

³¹ USDA, ERS, *Livestock, Dairy, and Poultry Monthly*, LDP-M-38, Feb. 20, 1997, p. 1.

³² Posthearing brief of the American Farm Bureau Federation (AFBF) to the USITC regarding "Cattle and Beef: Impacts of the NAFTA and Uruguay Round Agreements on U.S. Trade," Apr. 3, 1997, p. 7.

U.S. Grading System for Cattle and Beef

The USDA grading system for cattle and beef is voluntary and provided on request, typically from packers, on a fee-for-service basis, unlike sanitary and phytosanitary regulations which are mandatory.³³ In 1996, 60 percent of the beef graded by USDA received a grade of Choice, 37 percent received a grade of Select, and 2 percent received a grade of Prime.³⁴

Sanitary and Phytosanitary Measures

Live Animals

The Animal and Plant Health Inspection Service (APHIS) of the USDA is responsible for guarding U.S. borders against the entry of foreign agricultural pests and disease.³⁵ In general, all U.S. imports of live cattle are inspected at the port of entry to be sure they are not carrying any diseases. APHIS regulations specify that U.S. cattle imports from countries other than those of Central America and the West Indies, Canada and Mexico be quarantined for not less than 30 days from the date of arrival at the port of entry.³⁶ All animals found to be free from communicable disease and not to have been exposed thereto within 60 days prior to their exportation to the United States are admitted.³⁷

U.S. imports of live cattle for immediate slaughter from Canada receive a visual inspection at the port of entry. Inspectors look for physical characteristics of respiratory illnesses, such as runny noses and eyes.³⁸ If the cattle pass inspection they are consigned directly to a recognized slaughtering establishment. Slaughter must occur within 2 weeks from the date of entry.³⁹

Less than 1 percent of live cattle offered for importation into the United States from Canada during the last half of 1992 through 1996 was refused entry by APHIS.⁴⁰ The total number of Canadian cattle and the number of cattle for slaughter rejected in each year is shown in the following tabulation:

³³ For a description of the grading system see USITC *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, investigation No. 332-328, publication 2591, January 1993, p. 2-7.

³⁴ Facsimile from USDA, Agricultural Marketing Service (AMS), "National Summary of Meats Graded," Feb. 20, 1997.

³⁵ 9 CFR §92.408, p. 373 (1996 Ed.), and 61 F.R. 17239, (Apr. 19, 1996).

³⁶ 9 CFR §92.411, p. 374 (1996 Ed.), and 61 F.R. 17238 (Apr. 19, 1996).

³⁷ Ibid.

³⁸ USITC staff interview with Dr. Roger Perkins, staff veterinarian, USDA, APHIS, July 1, 1997.

³⁹ 9 CFR §92.420, p. 379.

⁴⁰ Data for the last half of 1992 and for 1993 were compiled from USDA, APHIS, *Quarterly Recap of Import Animals Inspected*, various issues; data for 1994-96 compiled from an APHIS facsimile to the USITC, May 9, 1997.

All cattle rejected		Slaughter cattle rejected	
1992 ¹	831	1992 ¹	69
1993	466	1993	21
1994	238	1994	124
1995	579	1995	267
1996	1,383	1996	899

¹ July-Dec.

U.S. imports of cattle for slaughter from Mexico must be accompanied by a certificate issued by a salaried veterinarian of the Government of Mexico, or issued by a veterinarian accredited by the National Government of Mexico and endorsed by a full-time salaried veterinary officer of the National Government of Mexico.⁴¹ The certificate must state that the veterinarian who issued the certificate has inspected the animals in the herd from which the animals will be imported and found them free of evidence of communicable disease, and that, so far as it has been possible to determine, they have not been exposed to any such disease common to animals of their kind during the preceding 60 days. If the cattle are shipped by rail or truck, the certificate must further specify that the animals were loaded into clean and disinfected railcars or trucks for transportation directly to the port of entry. Such animals must be consigned from the port of entry to a recognized slaughtering establishment and slaughtered there within 2 weeks from the date of entry. Such animals must be moved from the port of entry in conveyances sealed with seals of the U.S. Government.⁴²

Meat

The Food Safety and Inspection Service (FSIS) of the USDA administers a comprehensive system of inspection laws, including meat offered for importation, under the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act.⁴³ Meat and meat products prepared or produced in foreign countries may only be imported into the United States if the exporting countries enforce inspection and other requirements that are at least equal to those applied at U.S. Federally-inspected establishments.⁴⁴ During 1995, 7.6 million pounds (or roughly 0.5 percent) of the fresh, chilled, or frozen beef and veal offered for entry to the United States from all sources, was condemned or refused entry.⁴⁵

The share of fresh, chilled, or frozen beef and veal offered but refused entry⁴⁶ into the United States from Canada is shown in the following tabulation:

⁴¹ 9 CFR §92.429, p. 386 and 61 F.R. 17239 (Apr. 19, 1996).

⁴² Ibid.

⁴³ USDA, Food Safety and Inspection Service (FSIS), *Meat and Poultry Inspection, 1995 Report of the Secretary of Agriculture to the U.S. Congress*, Jan. 1997.

⁴⁴ For a detailed description of the sanitary and phytosanitary inspection system, see USITC *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, investigation No. 332-328, publication 2591, Jan. 1993, p. 2-18.

⁴⁵ Ibid., pp. 54-66.

⁴⁶ Compiled from statistics reported in USDA, FSIS, *Meat and Poultry Inspection, Report of the Secretary of Agriculture to the U.S. Congress*, annual issues.

Year	Percent
1987	1.1
1988	1.0
1989	1.5
1990	2.2
1991	0.8
1992	0.5
1993	1.3
1994	0.7
1995	0.6

The share (percent) of beef offered for importation into Canada from the United States but refused entry is as follows: 1994-1.5 percent; 1995-1.3 percent; 1996-1.2 percent.⁴⁷ The share refused entry for importation into the United States from Canada was less than one-half the rate of U.S. beef and beef products refused entry into Canada in 1994 and 1995, the only years for which such comparisons are available.

The share of fresh, chilled, or frozen beef and veal offered but refused entry⁴⁸ into the United States from Mexico ranged from 0 to 12 percent⁴⁹ during 1987-95 as shown in the following tabulation:

Year	Percent
1987	(¹)
1988	(¹)
1989	0.0
1990	12.2
1991	0.3
1992	4.7
1993	2.2
1994	1.5
1995	6.0

¹ No plants authorized to export products to the United States during this period.

For meat imported from all countries, FSIS relies on its Automated Import Information System (AIIS) to automatically assign the type of reinspection that an FSIS inspector will perform on a shipment offered for importation into the United States.⁵⁰ FSIS reports that the term "reinspection" is used because the products have already passed an inspection in the originating

⁴⁷ Facsimile from Agriculture and Agri-Food Canada, Apr. 28, 1997.

⁴⁸ Compiled from statistics reported in USDA, FSIS, *Meat and Poultry Inspection, Report of the Secretary of Agriculture to the U.S. Congress*, annual issues.

⁴⁹ Because of the relatively small quantity of total shipments from Mexico, any shipment rejected could comprise a substantial portion of the total offered for entry.

⁵⁰ Adapted from USDA, FSIS, *Import Reinspection Between USDA and Agriculture Canada*, found at web site <http://www.usda.gov/agency/fsis/bkcanada.htm>, Feb. 1997, unless otherwise noted.

country, and each export shipment is accompanied by a health certificate indicating the wholesomeness of the product.⁵¹ When shipments arrive at a U.S. port of entry from any country except Canada,⁵² a description of the shipment is entered into the automated system and the type of reinspection is automatically assigned.

Three types of reinspection assignments are possible:

Reinspection assignments:		
Approximately 70 percent of shipments in 1996	Approximately 30 percent of shipments in 1996	
"Skip"	"Inspect"	"Intensified Inspection"
Inspector checks all necessary documents, assures that the shipping container label is accurate, and checks the general condition of products in back of transport vehicle--shipment may be unloaded and inspected if inspector notices anything wrong.	Transportation vehicle is unloaded, inspector reviews all necessary documents, checks products for contamination and sometimes takes samples for laboratory tests. Products such as ground meat are subject to microbiological tests for E. coli 0157:H7.	Occurs after a shipment from a plant has been rejected. The next 10 to 15 shipments from that plant automatically receive an "inspect" assignment. The entire shipment is unloaded so the inspector can randomly select samples and perform tests.

The proportion of "skip" assignments and "inspect" assignments will vary with the product type, country of origin, and meat producer.

The inspector randomly chooses samples from throughout the shipment to conduct the reinspection. A sufficient number of samples is selected for reinspection to provide a picture of the condition of the entire shipment. If the shipment passes reinspection, the documents are stamped and the vehicle moves inland. If examination of the samples results in a rejection, the entire shipment is rejected.

Import Levels, Trends, and Sources

Live Cattle and Calves

The quantity of U.S. imports of live cattle for immediate slaughter declined from about 963,000 animals in 1992 to 910,000 animals in 1994 (table D-11). The value of such imports remained fairly constant averaging \$730 million annually over this period. U.S. slaughter cattle imports rose steadily during 1995-96, totaling 1.3 million animals, valued at \$896 million in 1996. Canada accounted for virtually all U.S. imports of slaughter cattle during 1992-94, and 1996. In 1995, Canada supplied about 94 percent of U.S. imports of cattle for immediate slaughter and Mexico supplied the remainder.

⁵¹ USDA, FSIS, *Import Reinspection Between USDA and Agriculture Canada*, background papers, Feb. 1997.

⁵² The procedures applicable to Canada are described in chapter 4 of this report in the section entitled *Sanitary and Phytosanitary Inspection Issues*.

U.S. imports of cattle for immediate slaughter from Canada include steers and heifers (fed cattle), bulls and cows (cull cattle), and veal calves (cattle weighing less than 90 kilograms (kg) each or about 200 pounds) (table D-12). During 1992-94, U.S. imports of slaughter cattle from Canada declined steadily totaling 908,000 animals, valued at \$727 million in 1994. Since 1994, the quantity of such imports rose by 43 percent, totaling 1.3 million animals, valued at \$895 million in 1996. The decline in U.S. imports during 1992-94, reflects a decline in imports of cull cattle and veal calves as U.S. imports of fed cattle increased steadily (table D-12).

Fed cattle imports from Canada increased by 57 percent during 1992-96, totaling 901,000 animals in 1996 (table D-12). The estimated share of slaughter cattle imports from Canada accounted for by fed cattle rose from 60 percent in 1992 to 70 percent in 1996. During 1992-94, U.S. imports of cull cattle from Canada declined 26 percent to 255,000 animals, then rose by 49 percent to 379,000 animals in 1996. The share of imports accounted for by cull cattle declined from 36 percent in 1992 to 29 percent in 1996. U.S. imports of veal calves from Canada declined steadily from 39,000 animals, valued at \$6 million in 1992 to 17,000 animals, valued at \$2 million in 1996 (table D-12) and accounted for between 1 and 4 percent of slaughter cattle imports from Canada.

Table D-13 shows U.S. imports of slaughter cattle and calves from Canada, by month, from January 1992 to December 1996. Imports ranged from 40,000 animals in January 1994 to 141,000 animals in May 1996. During spring 1996, the contraction phase of the Canadian cattle cycle intensified, in part, because of adverse weather contributing to the increase in exports during April-October.⁵³ Such imports declined during the last 2 months of 1996 as two major cattle slaughtering plants in Alberta, Canada reportedly expanded their capacity and capacity utilization.⁵⁴

U.S. imports of cattle from Mexico consist primarily of feeder cattle.⁵⁵ U.S. imports from Mexico of calves weighing less than 90 kg each are reportedly feeder cattle rather than veal calves.⁵⁶ During 1992-96, U.S. imports from Mexico of feeder cattle fluctuated as shown in the following tabulation (compiled from official statistics of the U.S. Department of Commerce):

<i>Year</i>	<i>Number of feeder cattle</i>
1992	548,725
1993	1,285,992
1994	1,066,758
1995	1,563,249
1996	439,577

⁵³ USDA, FAS, *Livestock Annual*, CA6040, Aug. 2, 1996, p. 3.

⁵⁴ CA6040, p. 3.

⁵⁵ USITC staff interview with Dr. Gary W. Williams, professor and Texas A&M Research Center (TAMRC), director, et.al., Texas A&M University, College Station, TX, Feb. 13, 1997.

⁵⁶ USITC staff interview with Dr. Bill Brown, Texas Animal Health Commission, Feb. 5, 1997.

With the exception of 1995, U.S. imports of slaughter cattle from Mexico averaged 2,500 animals yearly. In 1995, drought in the northern regions of Mexico caused Mexican cattlemen to market an unusually large number of animals, straining plant capacity. This situation contributed to the export of 67,000 slaughter animals to the United States⁵⁷ (table D-11).

AFBF states that increased cattle imports have probably contributed to lower prices for both fed cattle and calves in the United States.⁵⁸ However, they further suggest that “losses” of feeder calf sellers tend to be the “gain” of feeder calf buyers.⁵⁹

Destination of U.S. Imports of Live Cattle for Slaughter, by Region

Data on the destination of U.S. imports of cattle by state are available from the USDA, APHIS “Quarterly Recap of Import Animals Inspected”⁶⁰ and are reported in appendix E.⁶¹ Primary destinations include the leading cattle-slaughtering States. The share of imports accounted for by the leading States in 1995 and 1996, are shown in the following tabulation (in percent):

State	1995	1996
Washington	28	26
Colorado	10	14
Utah	16	12
Minnesota	10	10
Nebraska	9	10
North Dakota	6	6
Pennsylvania	6	7
All other	<u>15</u>	<u>15</u>
Total	100	100

U.S. Imports of Live Cattle and Calves from Canada in Relation to U.S. Production and Consumption

U.S. imports of cattle and calves for slaughter from Canada increased from 2.8 percent of consumption (commercial slaughter) in 1992 to 3.4 percent in 1996 (table D-14). U.S. imports of calves for immediate slaughter declined from 2.8 percent of commercial calf slaughter in 1992 to 1.0 percent in 1996 (table D-15).

⁵⁷ USITC staff interview with an official of USDA, FAS, Mexico City, Feb. 11, 1997.

⁵⁸ Posthearing brief of AFBF, Apr. 3, 1997, p. 7.

⁵⁹ Ibid.

⁶⁰ For a description of the “Quarterly Recap of Import Animals Inspected” see USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, USITC publication 1996, July 1987, appendix H.

⁶¹ Data are not available for all ports of entry, thus the data reported in appendix E are not necessarily comparable with other data in this report.

Imports of Beef and Veal

The bulk of U.S. beef imports consists of lean manufacturing-type beef that is typically mixed with domestic fat trimmings and used in the formulation of products such as beef patties.⁶² Import interests contend that such imports rarely compete with U.S. grain-fed beef.⁶³ U.S. imports of fresh, chilled, or frozen beef and veal declined steadily from 2.1 billion pounds (carcass weight equivalent), valued at \$1.7 billion in 1992 to 1.8 billion pounds, valued at \$1.1 billion in 1996 (table D-16). Canada increased its share throughout the period from 15 percent in 1992 to 24 percent in 1995, while Australia's share steadily declined from 47 percent to 36 percent. These trends continued through 1996. Canada accounted for 32 percent of total U.S. imports in 1996, becoming the number one supplier of beef and veal. Australia accounted for 30 percent and New Zealand accounted for 28 percent of total beef and veal imports in 1996. Mexico was the eighth largest supplier of fresh, chilled, or frozen beef and veal during 1996, supplying less than 1 percent. U.S. imports of fresh, chilled, or frozen beef are further discussed in chapter 4 of this report.

In examining beef and veal imports from Canada it is also possible to estimate the quantity of beef and veal derived from cattle and calves imported for immediate slaughter. Table D-17 shows the estimated carcass-weight equivalent of meat obtained from such cattle and calves, U.S. imports of beef and veal from Canada, U.S. production of beef and veal from U.S. cattle and calves, and the total U.S. imports from Canada as a percent of U.S. production. The ratio of imports from Canada to U.S. beef and veal production rose steadily from 4.5 percent in 1992 to 6.3 percent in 1996.

U.S. Production, Domestic Consumption, Exports, and Prices

Production and Consumption of Live Cattle and Beef

Production of live cattle and beef and veal is largely determined by the stock of cattle on hand, or the cattle inventory. Production of beef and veal is equal to cattle and calf slaughter times the average slaughter weights. Although supply response lags due to biological constraints, beef and veal production ultimately reflects demand for beef and veal in both foreign and domestic markets.

During 1992-96, U.S. production of live cattle, as measured by the annual calf crop,⁶⁴ rose from 38.9 million animals in 1992, to 40.2 million animals in 1995, then declined slightly to 39.6 million animals in 1996 (table D-14). U.S. beef and veal production (carcass weight equivalent) increased from 23.4 billion pounds in 1992 to 26.1 billion pounds in 1996 (table D-18). This increase in production reflects the 12-percent increase in the number of animals slaughtered (cattle consumption) from 34.2 million animals in 1992 to 38.3 million animals in 1996 (table

⁶² Prehearing brief of New Zealand Meat Producers Board (NZMPB), Mar. 10, 1997, p. 4.

⁶³ Prehearing brief of NZMPB, Mar. 10, 1997, p. 4.

⁶⁴ The number of calves born in a year.

D-14). Beef and veal consumption rose from 24.3 billion pounds in 1993 to 26.3 billion pounds in 1996.

Fed cattle account for the bulk of U.S. commercial slaughter, averaging 77 percent annually during 1992-96 (table D-19). Cull animals accounted for about 19 percent of U.S. commercial slaughter and veal calves accounted for about 4 percent.

U.S. Exports of Live Cattle and Calves

U.S. exports of live cattle and calves (except purebred animals for breeding purposes) accounted for less than 1 percent of U.S. production annually during 1992-96. Such exports could include animals for breeding purposes that are not purebred, feeders, dairy cows, and cattle and calves for immediate slaughter. Mexico and Canada accounted for virtually all such exports. U.S. cattle exports to Mexico and Canada are discussed in chapter 4.

U.S. Exports of Beef and Veal

U.S. exports of fresh, chilled, or frozen beef and veal (carcass weight equivalent) increased from 1.3 billion pounds, valued at \$2.0 billion in 1992 to 1.7 billion pounds, valued at \$2.4 billion in 1996, or by 36 percent in quantity (table D-20). The largest U.S. export markets for beef include Japan, Canada, Republic of Korea (Korea), and Mexico. Further integration of the U.S.-Canadian cattle and beef sectors and increased access to the Korean, Japanese, and Mexican markets contributed to the increase in U.S. exports. Further discussion of U.S. exports to Canada and Mexico are provided in chapter 4, information on other important U.S. export markets are discussed in chapter 3.

U.S. Exports of Beef and Veal Offal

Edible beef and veal offal are byproducts of the beef industry and often referred to as variety meats. Tongues, livers, hearts, kidneys, brains, and other products for human consumption are among the byproducts included in variety meats. A 1,100 pound slaughter steer produces about 34 pounds of variety meats.⁶⁵ Per capita consumption of variety meats in the United States is about 9 pounds annually; thus, most edible beef and veal offal are exported. Major export markets include Japan, Russia, and Mexico.

Mexico was the third-largest market for edible beef and veal offal in 1996. Such exports were valued at \$35 million in 1996 (table D-21), and accounted for 13 percent (by quantity) of U.S. exports during 1992-96. U.S. exports of beef and veal offal to Canada, the eighth-largest market, were valued at \$9 million in 1996, and accounted for about 4 percent of the total annually.

⁶⁵ Robert E. Taylor, *Beef Production and Management Decisions* [Department of Animal Sciences, Colorado State Univ., Fort Collins, CO] (NY: Macmillan Pub. Co., 1994), p. 36.

Cattle Prices

In the United States, most cattle are sold at auction and the prices are widely published. The following section examines auction prices for feeder cattle,⁶⁶ slaughter cattle,⁶⁷ cull cattle,⁶⁸ and veal calves.⁶⁹ Changes in cattle prices are a function of many variables. The AFBF contends that imports and exports are but two factors affecting the beef and cattle market, along with retail, wholesale, feedlot, and ranch gate prices, changing marketing systems, captive supplies, packer concentration, stagnant domestic beef markets, and aggressive marketing of competing meats.⁷⁰

Annual prices received at auction for cattle and calves peaked during 1993 then declined steadily through 1996 (table D-10). During 1993-96, annual average prices for U.S. slaughter cattle declined by 15 percent; prices for feeder cattle declined 33 percent; and cull cattle prices declined 36 percent. Many factors contributed to the decline in slaughter cattle prices including increases in beef production (larger slaughter levels and heavier slaughter weights) and record high red meat and poultry supplies (growing supplies of competitive meats). High grain prices and other marketing costs contributed to the decline in feeder cattle prices. In general, increases in the price of feed leads to downward pressure in the price of feeder cattle. This is because as the cost of feeding cattle increases, feedlot operations become less profitable and producers tend to respond by reducing production. As production is lowered the demand for feeder animals declines, putting downward pressure on their prices. In addition, large supplies of beef put downward price pressure on feeder cattle sales.

Average prices received for feeder cattle declined significantly during 1993-96. Feeder cattle brought \$58.81 per hundred weight (cwt) during the second quarter of 1996, a decline of 39 percent from the \$96.13 per cwt in the second quarter of 1993 (table D-10). Large supplies of U.S. feeder cattle coupled with increased imports of feeder cattle from Mexico during 1995 contributed to the decline in feeder cattle prices.⁷¹

Auction prices for U.S. slaughter cattle declined irregularly from \$80.65 per cwt in the first quarter of 1993 to \$60.26 per cwt in the second quarter of 1996, or by 25 percent (table D-10). By the fourth quarter of 1996, the average auction price increased by 17 percent to \$70.39 per cwt.

The price for cull cattle declined from \$47.52 per cwt in 1993 to \$30.33 per cwt in 1996 (table D-10). Cull cattle prices fell from \$49.29 per cwt in the third quarter of 1993 to \$26.68 per cwt in the fourth quarter of 1996. Veal calf prices declined from \$92.92 per cwt in the second quarter of 1993 to \$82.98 per cwt in the first quarter of 1995.⁷²

⁶⁶ U.S. prices based on sales of No. 1 feeder steers, Oklahoma City, medium frame, 600-650 pounds.

⁶⁷ U.S. prices based on sales of slaughter cattle, steers, Nebraska direct, Choice Nos. 2-4, 1,100 to 1,300 pounds.

⁶⁸ U.S. prices based on sales of cows, boning utility, Sioux Falls.

⁶⁹ U.S. prices based on sales of vealers, Choice, Albany, NY.

⁷⁰ USDA, NASS, *Cattle*, Jan. 31, 1997, p. 1.

⁷¹ USDA, ERS, *Cattle and Sheep Outlook*, LDP-CS-6, May 15, 1995.

⁷² USDA stopped collecting the price series on vealers after the first quarter of 1995.

Beef Prices

Commercial meat-processing companies purchase a wide range of products from slaughter houses. A large share of imported and domestic beef (manufacturing beef) is used for processing into products such as hamburger, sausages, and ground beef.⁷³ One reporting service, *The Meat Sheet*, provides frozen boneless manufacturing beef prices that are analyzed below. In addition, the wholesale boxed beef price as reported by USDA reports the average price of primal and subprimal cuts from the meatpacker to the retailer.

Boneless manufacturing beef may be purchased on a fresh or frozen basis, and on the share (percent) of lean meat contained in the purchased product. For this study, prices⁷⁴ were compared for 65 CL (percent chemical lean) frozen boneless manufacturing beef (fbmb) from U.S., Canadian, and other import sources (Australia and New Zealand).⁷⁵

Prices for 65 CL from U.S. sources (delivered to Chicago) fell sharply from \$0.82 per pound in 1993 to \$0.61 per pound in 1995, then rebounded slightly to \$0.62 per pound in 1996 (table D-22, figure 2-2). Such prices rose to \$0.66 per pound during October-December 1996. Prices for Canadian product (delivered to Chicago) also declined from \$0.87 per pound in 1993 to \$0.62 per pound in 1995, then rose to \$0.64 per pound in 1996. The fourth quarter 1996 price rose to \$0.70 per pound. Australia and New Zealand fbmb prices also closely tracked those of the U.S. product.

Table D-22 and figure 2-2 show that U.S. and imported fbmb prices are typically very close and tend to move together. The chart also suggests that subsequent to July 1, 1993, when U.S.-Canadian trade in frozen boneless beef received a rate of duty of "Free" as part of accelerated staged duty eliminations, the price of Canadian fbmb in the U.S. market became even closer to its U.S. counterpart.

Wholesale boxed beef⁷⁶ prices increased from \$116.73 per cwt in 1992 to \$118.74 cwt in 1993, then declined steadily to \$103.09 per cwt in 1996 (table D-23). The price decline reflects in part, large supplies of beef as well as large supplies of other red meats and poultry that acted to depress prices.

U.S. Feed Grain Markets

Livestock and grain markets worldwide are highly interdependent as grain provides a sizable portion of animal feed, or grain can be milled and consumed directly as a food in place of meat. For cattle, pasture and forage offer additional feed not efficiently used by poultry or swine.

⁷³ Prehearing brief of the NZMPB, Mar. 10, 1997, p. 13.

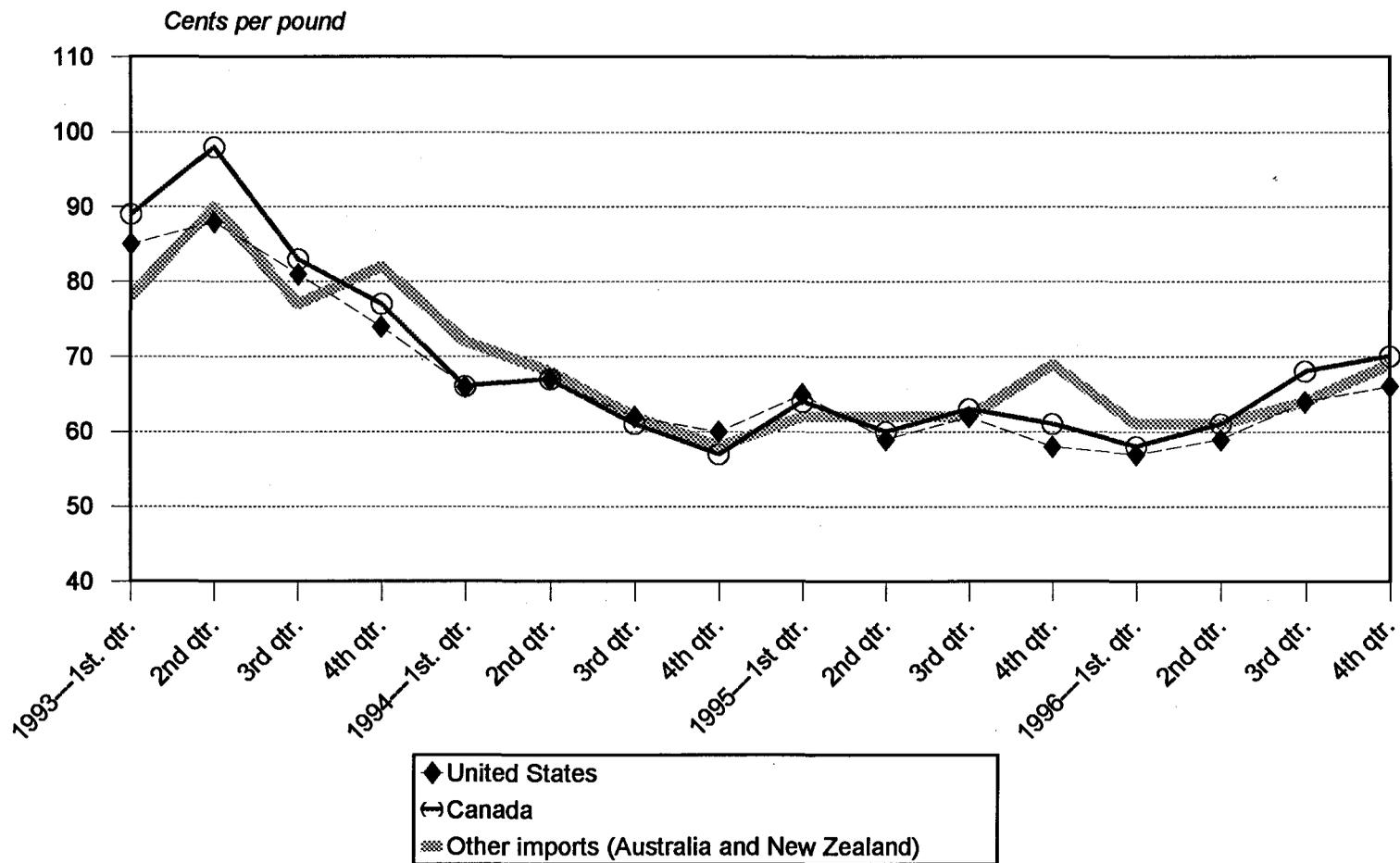
⁷⁴ Derived from daily price quotations of representative market prices as reported in *The Meat Sheet*, Chicago, IL

⁷⁵ USITC staff telephone conversation with Bill Albanos of *The Meat Sheet*, Chicago, IL, Nov. 26, 1996.

⁷⁶ Boxed beef involves the division of the carcass into primal or subprimal cuts and coarse grinding the trimmings (for final use as hamburger) at the meatpacking plant and packaging the cuts and grindings in plastic-lined paperboard boxes for shipping to retailers.

Figure 2-2
 Frozen boneless manufacturing beef: Comparative average U.S., Canadian, and other imported prices, 65 CL (percent chemical lean), by quarters, Jan. 1993-Dec. 1996

2-18



Source: Derived from daily price quotations of representative market prices as reported in *The Meat Sheet*, Chicago, IL.

However, in the United States and Canada, as many as two-thirds of beef cattle are grain-fed for a substantial portion of their growth cycle, according to industry sources, and even for dairy cattle, grain accounts for a sizable portion of their ration. The principal grain fed to cattle in the United States is corn, accounting for over 83 percent of the grain volume fed in the 5 most recent years (table D-24); the other four grains, sorghum, feed wheat, barley, and oats, provided the remaining 17 percent of grain feed consumption.

As grain prices rise or fall, livestock feeders may adjust the types and volume of grain used, although this adjustment can take months or even years before its full effects are felt in the beef market. After this adjustment period or lag, the supply of U.S. and Canadian beef has been found to be inelastic with regard to changes in corn prices; typically, a 10-percent rise in corn prices reduces the volume of beef supplied by as little as 1 percent to as much as 3 percent.⁷⁷

Historically as grain prices rise, feedlot operators reduce their placements of feeder cattle and seek ways to reduce their use of grain, using forage or nongrain feed stuffs, and by marketing the fed cattle at lighter weights.⁷⁸ Typically, higher grain prices initially reduce the feedlots' demand for feeder cattle (calves and yearlings), and thus lower spot prices for feeder cattle.⁷⁹

In the United States, the annual number of cattle on feed fluctuated little during 1992/93 to 1996/97, averaging about 19.6 million animals annually, whereas the volume of feed consumption fluctuated by as much as 15 percent annually (table D-25). Despite a stable number of cattle, U.S. beef production rose steadily by about 2.5 percent annually to 26.1 billion pounds in 1996, according to USDA;⁸⁰ improved genetics and management increased beef productivity (beef production per cow) and feed efficiency.⁸¹ The amount of grain fed per animal unit (a composite index that includes cattle, swine, and poultry)⁸² generally declined from about 1.93 metric tons per animal unit in 1993/93 to 1.66 tons per unit in 1995/96, and then recovered to 1.79 tons per unit in 1996/97 (table D-25).

During 1992/93 through 1996/97, the price of corn, the principal feedgrain, rose from about \$2.07 per bushel to a peak of \$3.24 per bushel in 1995/96, then declined moderately to a projected \$2.65 per bushel in crop year 1996/97 (table D-26). The 43-percent rise in U.S. corn prices from 1994/95 to a record \$3.24 per bushel in 1995/96 was a major influence in the 16-percent drop of feedgrain per animal unit during those 2 years. Lower U.S. feedgrain production particularly in 1993/94 and 1995/96 sharply lowered U.S. stocks, and boosted prices during

⁷⁷ Walter Gardiner, Vernon Roningen, and Karen Liu, *Elasticities in the Trade Liberalization Database*, USDA, May 1989, p. 5, found a price elasticity of supply of beef relative to corn prices ranging from -0.32 to -0.20 in the United States, and from -0.12 to -0.20 in Canada.

⁷⁸ Higher priced grain generally does not affect the feeding of cattle already in a particular feedlot since changing the composition of a feed ration can lead to loss of feeding efficiency and stress.

⁷⁹ For example, one-half of the 45-percent decline in the price of feeder calves during May 1993 through May 1996 was attributed to higher corn prices, and about half to increased poultry and meat supplies in a Michigan State University study. H.D. Ritchie, J.L. Orth, et al., "Time is now for beef industry to consider change," *Feedstuffs*, Feb. 3, 1997, p. 1.

⁸⁰ U.S. beef production rose from 23.4 billion pounds in 1992 to 26.1 billion pounds in 1996, according to USDA data (*Agricultural Outlook*, various issues).

⁸¹ John Marsh, "Domestic and Foreign Trade Factors in the 1994-96 Cattle Price Decline," Montana State University, Department of Agricultural Economics, special report No. 19, Aug. 1996, p. 2.

⁸² USDA does not report the amount of feed grain used by cattle on feed.

these years. The much tighter domestic feedgrain market also coincided with tight world grain markets that affected livestock feeders in the United States, Canada, and elsewhere.

U.S. Trade and Tariff Measures

Tariff Measures

U.S. imports of cattle and calves for immediate slaughter, and fresh, chilled, or frozen beef are subject to import duties (tariffs) as provided for under the *Harmonized Tariff Schedule of the United States (HTS)*. Live cattle for immediate slaughter and fresh, chilled, or frozen beef the subject of this investigation are provided for in chapters 1 and 2 of the *HTS*, which are reproduced in appendix F. Duties applicable to imports from Canada and Mexico are discussed in chapter 4, *Impact of the NAFTA on U.S. Trade of Cattle for Slaughter and Beef*. Eligible U.S. imports from Israel and countries designated under the Caribbean Basin Economic Recovery Act, and the Andean Trade Preference Act receive a rate of duty of "Free." The general rate of duty applicable to U.S. imports of cattle for immediate slaughter is 1.6¢ per kilogram.

U.S. imports of fresh, chilled, or frozen beef (except from Canada and Mexico) are subject to a tariff-rate quota of 696,621 metric tons (tons) (1.5 billion pounds). For countries receiving the general rate of duty, the in-quota tariff rates for beef carcasses and half carcasses are 4.4¢ per kilogram; 4 percent ad valorem for high-quality beef cuts;⁸³ and 10 percent ad valorem for other processed beef. The ad valorem equivalent of the 4.4¢ per kilogram rate of duty in 1996 ranged from 0.58 percent to 2.78 percent. The over-quota tariff rate was 31.1 percent for fresh, chilled, or frozen beef and the bound rate at year 2000 is 26.4 percent for countries receiving the general rate of duty. The rate for 1997 is 28.8 percent. The quantity of beef imported within the tariff-rate quota level remains fixed, as the in-quota duty rates.⁸⁴

The Meat Import Act of 1979 and Section 204 of the Agricultural Act of 1956

Prior to 1995, U.S. imports of certain meats were subject to import quotas under the Meat Import Act of 1979 and section 204 of the Agricultural Act of 1956.⁸⁵ Under the Meat Import Act, the Secretary of Agriculture was required to publish in the *Federal Register* the estimated quantity of beef and veal that would "trigger" the imposition of quotas under the law, and each quarter, the quantity of meat that, but for the law, would enter the United States in such calendar year. During 1980-94, the "trigger" level ranged from a high of 1,667.6 million pounds in 1980 to a low of 1,228.7 million pounds in 1984. The Meat Import Act was repealed by the Uruguay

⁸³ See app. F, pertinent parts of the *HTS*--Cattle and Meat of Cattle: U.S. rates of duty, by *HTS* subheading, "Additional U.S. Notes" for definition of high-quality beef cuts.

⁸⁴ Marilyn Moore, Agricultural Sector, USTR, telephone interview with USITC staff, Sept. 6, 1996.

⁸⁵ The Meat Import Act and section 204 of the Agricultural Act of 1956 were described in detail in the USITC report entitled *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, publication 1996, July 1987, and were reproduced as appendix M and O, respectively, of that report.

Round Agreements Act,⁸⁶ effective January 1, 1995, and replaced with a tariff-rate quota system.⁸⁷ ■

⁸⁶ Public Law 103-465, 108 Stat. 4809 (1994).

⁸⁷ Uruguay Round Trade Agreements, Texts of Agreements, Implementing Bill, Statement of Administrative Action, and Required Supporting Statements (Statement of Administrative Action), Message from The President of the United States, GPO, Wash., DC, 1994, p. 73. The tariff-rate quota system involved a two-tier tariff, with “in-quota” imports subject to a lower tariff, and “over-quota” imports subject to a higher tariff.

CHAPTER 3

FOREIGN INDUSTRIES AND MARKETS

Canada has accounted for the bulk of U.S. imports of cattle for slaughter and Mexico has accounted for nearly all of the remainder. Canada has been a leading and growing supplier of U.S. beef imports and is a leading U.S. export market for beef. Mexico has also been an important U.S. export market for beef and cattle for slaughter and is the largest supplier of U.S. imports of feeder cattle.

This chapter also discusses the cattle and beef sectors of other producing countries, including those in Central and South America, Japan and the Republic of Korea (Korea).

Mexican Cattle and Beef Sectors

Description and Uses

The physical environment in which the cattle sector of the Northern Mexican States¹ exists has many similarities with that of the contiguous regions of the United States. For example, rainfall in East Texas and the contiguous areas of Mexico averages 20 to 40 inches per year whereas West Texas, Arizona, and contiguous areas of Mexico average 10 to 20 inches. Similarly, July temperatures average 68 to 86 degrees in much of the Southwest United States as well as the contiguous regions of Mexico. However, because of the existence of the Sierra Madre Oriental range, parts of central Mexico are generally more mountainous than contiguous regions of the United States.² The Northern Mexican States are of particular interest to U.S. cattle producers because of their physical proximity and because they are estimated to account for most of the U.S. imports of cattle from Mexico.³

A large share of the cattle in Mexico and contiguous parts of the United States are Zebu (*Bos indicus*) or part Zebu cattle. In the United States, the most common Zebu breed is the Brahman. Zebu cattle have a characteristic hump over the top of the shoulder and most Zebu breeds have large, drooping ears and excess skin in the throat and dewlap.⁴ Zebu breeds and Zebu crosses are more heat-tolerant and insect-resistant than other breeds (*Bos taurus*) and hence their productivity is much higher in the southern and Gulf regions of the United States⁵ and contiguous regions of Mexico.

Cattle in Mexico include beef, dairy, and dual purpose types.⁶ Beef types are kept primarily for the production of meat or calves to be exported to the United States. Dairy types are kept

¹ For purposes of this report the Northern Mexican States are Baja California Norte, Baja California Sur, Coahuila, Chihuahua, Durango, Nuevo Leon, San Luis Potosi, Sonora, and Zacatecas.

² *Hammond Ambassador World Atlas*, pp. 147-148.

³ USITC staff interview with Dr. Bill Brown, Texas Animal Health Commission, Jan. 30, 1997.

⁴ Robert E. Taylor, *Scientific Farm Animal Production*, (NY: Macmillian Pub. Co., 1992), p. 353.

⁵ *Ibid*, p. 364.

⁶ USITC staff interview with an official of USDA, FAS, Mexico City, Feb. 10, 1997.

primarily for the production of milk, although they are slaughtered for beef when they are no longer suitable for the production of milk. Dual purpose types are kept for the production of both meat and milk.

The most popular beef type cattle breeds in Mexico include those developed in Europe and the United States including Brangus, Hereford, Beefmaster, Bradford, and Angus although the Charolais has become more popular in recent years. The popularity of European and U. S.-developed breeds reflects, in part, the demand and higher prices for feeder calves of such breeds in the U.S. market.⁷ Feeder cattle and calves in Mexico are graded on the basis of breeds and animal health. Feeder animals of European and U.S. breeds that are of good health constitute export grade 1 and are typically higher priced than other grades. In addition to European and U.S. breeds, beef type cattle include crosses of European and U.S. developed breeds with Zebu that do not have a hump; such animals constitute export grade 2. Crosses that do have humps constitute export grade 3 and, export grade 3 includes dairy animals and indigenous breeds called Criollo. Beef type cattle are mostly in the Northern States of Mexico.⁸

In general, the beef-type cattle in the Northern Mexican States are similar to cattle raised in the Southwestern United States.⁹ Feeder animals imported from Mexico are typically pastured on grass or winter wheat, as described later in this chapter, and thereafter are reportedly highly substitutable for Southwestern feeder animals. They are reportedly less similar and less substitutable for cattle raised in other parts of the United States.

Dairy type cattle include highly productive animals that are kept in modern confinement facilities. Such animals account for a limited share (about 14 percent in 1992) of the dairy animal inventory but more than half of Mexican cow milk production. The most common breeds of dairy type cattle in confinement facilities are the Holstein, which accounted for 95 percent in 1992 and Brown Swiss, which accounted for 4 percent. Dairy confinement facilities are mostly in Northern and Central Mexican States.¹⁰

Dual purpose types include indigenous breeds and crosses on indigenous breeds with either beef breeds or dairy breeds. Holstein and Brown Swiss dairy type cattle are typically crossed with indigenous breeds to improve milk production whereas Simmental and Simbrah are typically crossed with indigenous breeds to improve beef production. Dual purpose breeds are typical kept in the Southern and tropical States of Mexico.¹¹

⁷ USDA, FAS, *Livestock Annual*, (MX2185), Aug. 10, 1992, p. 8.

⁸ *Ibid*, p. 2.

⁹ USITC staff interview with Jim Gill, marketing director, Texas Cattlefeeder's Association, July 1, 1997.

¹⁰ USDA, FAS, *Dairy Annual Report*, 1992.

¹¹ *Op. cit.*, pp. 2-3.

Number and Distribution of Producers

The following tabulation indicates the importance of the Northern Mexican States as a source of U.S. imports of beef from Mexico. As of January 31, 1996, the most recent period for which data are available, there were 27 Mexican plants approved by the USDA to ship meat to the United States and 19 of the plants were in Northern States.¹² The distribution of these plants is shown in the following tabulation.¹³

Northern States	Plants	Other States	Plants
Nuevo Leon	7	Aguascalientes	3
Sonora	5	Sinaloa	2
Chihuahua	4	Hidalgo	1
Baja California Norte ..	2	Tabasco	1
Coahuila	1		

Mexican Cattle Inventories, Calf Crop, and Apparent Consumption

The Mexican cattle inventory declined from 30.2 million animals in 1992 to an estimated 27.3 million in 1997 (table D-27) or by 10 percent. High-interest rates, rising feed costs, the prevailing drought in northern Mexico and modest demand for beef in Mexico contributed to the decline.¹⁴ The drought was described as the worst drought in northern Mexico in several decades.¹⁵ The calf crop declined from 9.7 million animals in 1992 to 8.5 million in 1996 and is forecast to decline to 8.0 million in 1997. The decline in the calf crop reflects both the decline in the number of cows and reduced cattle fertility associated with stress on the animals brought on by the drought.¹⁶ The factors that led to the decline in the cattle inventories contributed to increased consumption (slaughter) of cattle and calves, which rose from 7.8 million animals in 1992 to 8.2 million in 1996, and 8.2 million projected in 1997.

The drought ended in parts of Mexico in the fall of 1996 and Mexican cattlemen began rebuilding their herds. Consequently, there have been very few heifer calves entering the United States from Mexico. During the drought the calving rate declined in Mexico, probably to 55 to 60 percent, down from about 75 percent; some cattlemen did not have their cows bred because there was not adequate feed.¹⁷

Only limited data are available concerning the distribution of cattle in Mexico. However, as part of a cooperative U.S.-Mexican program concerning cattle disease control and eradication,

¹² USDA, FSIS, *Foreign Countries and Plants Certified to Export Meat and Poultry to the United States*, Mar. 1, 1996, pp. 169-173.

¹³ The state location of one plant was not reported.

¹⁴ USDA, FAS, *Livestock Annual*, (MX6099), July 24, 1996, p. 1.

¹⁵ USDA, FAS, *Livestock Annual* (MX5048), Aug. 1, 1995, p. 1.

¹⁶ *Ibid.*

¹⁷ USITC staff interview with Raul Tellez, marketing specialist with the New Mexico Department of Agriculture, Feb. 18, 1997.

participating Mexican States provided data on cattle inventories to a Bi-National Committee. The cattle inventories for reporting Mexican States and the dates of the inventories are shown in table D-28.

Mexican Grading System, Sanitary and Phytosanitary Measures

Grading of meat, which is separate from inspection for sanitary and phytosanitary measures, is not common in Mexico. Some Northern States have grading systems based on U.S. standards that evaluate fat marbling, but in Mexico most beef is derived from grass-feed animals and maturity, firmness, and color of the lean and fat are of more importance than marbling.¹⁸

Mexico's livestock slaughtering and meat processing sector is made up of plants accredited and inspected for sanitary measures by the Mexican Federal Government Secretariat of Agriculture; such plants are called "Plants of Federal Inspection Type" (TIF). Local or county level plants are inspected for sanitary measures by the Mexican Department of Health (non-TIF).¹⁹ In 1995 Mexico had 149 TIF plants of which 27 were approved by the USDA to ship meat to the United States. Although detailed statistics are not available, it is estimated that only 20 percent of Mexican beef and pork was processed at TIF plants because costs were so much lower at non-TIF plants.²⁰ Although official statistics are not available, it is estimated that nearly two-thirds of the beef sold in Mexico is sold fresh rather than chilled, frozen, prepared or preserved.²¹

According to the Mexican Cattlemen's Association the Mexican Federal Government has made efforts in recent years to assist Mexican cattle growers, especially with sanitary and phytosanitary measures. The Mexican Federal Government established a National Commission for the Eradication of Tuberculosis, and, after several years of work, participation in the program became compulsory throughout the country on March 8, 1996.²² A similar program has begun for the eradication of Bovine Brucellosis. The Mexican Federal Government has also supported a campaign for the eradication of ectoparasites that became effective nationwide on May 19, 1995.²³

Mexican Trade in Live Cattle and Beef

The United States has traditionally accounted for the bulk of Mexico's imports and exports of cattle for immediate slaughter. Also, the United States has accounted for virtually all of Mexico's imports and exports of fresh, chilled, or frozen beef since enactment of the NAFTA.²⁴

¹⁸ USDA, FAS, *Livestock Annual* (MX 2185), Aug. 10, 1992, p. 15.

¹⁹ *Livestock Annual* (MX 2185), p. 14.

²⁰ USDA, FAS, *Livestock Annual* (MX5048), Aug 1, 1995, p. 4.

²¹ *Ibid.*, p. 13.

²² National Campaign for the Eradication of Bovine Tuberculosis, NOM-031-ZOO-1995.

²³ USITC staff interview with Cesar Gonzalez Quiroga, president; Heriberto Cardenas Galvan, general counsel; Gustavo Torres Flores, treasurer, Confederacion Nacional Ganadera (the Mexican Cattlemen's Association), Feb. 12, 1997.

²⁴ These exports are discussed in chapter 4.

Mexican exports of cattle and calves for immediate slaughter to the United States have been small in relation to Canadian exports to the United States and very small in relation to U.S. domestic production. As shown in table D-29, Mexico is by far a net importer of beef. Also, as described earlier in this report and shown in table D-21, Mexico is an important market for U.S. exports of edible beef offal. In addition, Mexico was the third or fourth largest market for U.S. exports of cattle hides, although such U.S. exports declined from 2.6 million hides in 1991 to 0.9 million in 1995.²⁵ The data suggest that it is more practical to slaughter cattle in Mexico than to ship the animals to the United States and then return products derived from the slaughter.

Mexican imports of beef declined from 287 million pounds in 1992 to 93 million pounds in 1995 before increasing to 165 million pounds in 1996 (table D-29). The share of imports supplied by the United States increased from 51 percent in 1993 to 97 percent in 1996.²⁶ The increase in the share supplied by the United States reflects changes in import tariff rates and countervailing duties described later in this section. Other suppliers of Mexican beef imports included Australia, New Zealand, and Denmark.²⁷

In general, the United States appears to have a comparative advantage over Mexico in the production of fed cattle and beef whereas some regions of Mexico, such as Northern Mexico, appear to have a comparative advantage over some parts of the United States, particularly in the Northeast, in the production of stocker and feeder cattle and calves as described below.

Grain production in the United States exceeds that in Mexico in part because the United States has a much larger amount of land with soil and growing conditions conducive to the growing of grain, such as in the Corn Belt and the Wheat Belt. Also, grain production in the United States far exceeds the demand for direct human consumption in the United States. For example, corn for food products for human consumption in the United States accounted for less than 15 percent of total and projected use annually during 1993-97.²⁸ By contrast Mexico is a net importer of grains. For example, during the 1995-96 crop year Mexican consumption of coarse grains amounted to 29 million metric tons whereas production amounted to 21 million metric tons.²⁹

Also, there are certain synergies associated with feeder calves, including feeder calves imported from Mexico, and winter wheat growing in parts of the Southwestern and South Central United States.³⁰ Typically calves are born in the early spring and are ready to be weaned in the late fall or early winter as pastures enter into seasonal decline. The weaned calves may be pastured on winter wheat from about November until mid-March or possibly as late as the end of May and, with proper management, the grazing will not adversely affect the wheat crop. The rate of weight gain on winter wheat grazing is typically about 1.5 to 2 pounds per day. Grazing winter

²⁵ USITC, *Industry & Trade Summary Hides, Skins, and Leather*, publication 3015, Jan. 1997, table B-10, p. B-12.

²⁶ *Livestock Annual* (MX 5048), p. 28, and (MX 6099), p. 9.

²⁷ *Ibid.*

²⁸ USDA, ERS, *Feed Outlook*, Dec. 13, 1996, tables 1 and 6.

²⁹ USDA, FAS, *Grain: World Markets and Trade*, Dec. 1996, p. 33.

³⁰ This description of grazing of calves on winter wheat was developed from a USITC staff interview with Dr. Robert E. Taylor, professor of Animal Science, Colorado State University, Jan. 28, 1997.

wheat is especially profitable for light-weight, thin calves in that they could exhibit compensatory gain (gaining weight quickly and efficiently if they had previously been held back by inadequate nutrition). Wheat grazing gains are typically 50 percent less expensive than feedlot gains. Calves that were large enough after wheat grazing (about 600-800 pounds or so) may be moved directly to feedlots whereas lighter calves, about 500 pounds or less, may be transferred to grass pasture for further gain during the summer.

Feedlot operators in Mexico are reportedly not normally able to pay the prevailing price for feeder animals destined for the export market and thus feedlot operators feed culled females or steers that did not meet U.S. standards.³¹

Mexican Production, Domestic Consumption, and Prices

As shown in table D-29, Mexican beef production rose from 3.6 billion pounds in 1992 to 4.1 billion pounds in 1995, reflecting in part a sell-off of live cattle. Production declined to 4.0 billion pounds in 1996 and is forecast to amount to 4.0 billion pounds in 1997 reflecting, in part, the reduced Mexican live cattle inventory. Beef consumption rose from 3.9 billion pounds in 1992 to 4.2 billion pounds in 1994-95 but declined to 4.1 billion pounds in 1996.

The price of live cattle (steers) in Mexico declined irregularly from the equivalent of US\$87 per 100 pounds in the first quarter of 1992 to the equivalent of US\$45 per 100 pounds in the first quarter of 1995 (table D-30). A decline was especially notable between the last quarter of 1994 and the first quarter of 1995 when prices declined by 35 percent (from the equivalent of US\$69 per 100 pounds to the equivalent of US\$45 per 100 pounds). That decline corresponded with a sharp decline in the peso, which is described further in chapter 4. Thereafter prices increased to the equivalent of US\$60 per 100 pounds in the fourth quarter of 1996.

The trend in beef prices in Mexico corresponded with that of cattle declining irregularly from the equivalent of US\$1.36 per pound in the first quarter of 1992 to the equivalent of US\$0.68 per pound in the first quarter of 1995 (table D-31). Prices then rose to the equivalent of US\$0.96 per pound in the fourth quarter of 1996.

Mexican Trade Measures

The rates of duty applicable to Mexican imports of live cattle and fresh, chilled, or frozen beef from the United States and Canada were reduced as a result of the NAFTA and are discussed in chapter 4. U.S. exports of certain fresh, chilled, or frozen beef and offal to Mexico were the subject of a Mexican antidumping investigation, which is also discussed in that chapter.

Mexican countervailing duties of 45.7 percent ad valorem were imposed on imports of frozen beef from the EU effective June 4, 1994. The countervailing duties (CVD) are in addition to a tariff rate of 25 percent and make it unlikely that Mexico will import significant quantities of

³¹ USDA, FAS, *Livestock Annual Report* (MX2185), Aug. 10, 1992, pp. 6-7.

frozen beef from the EU as long as the CVD rates are in effect.³² In 1995 Mexico negotiated trade agreements with other countries including Costa Rica, Bolivia, Venezuela, and Colombia, but most livestock products were excluded or subject to long phase-in periods.³³

Canadian Cattle and Beef Sectors

Structure of the Canadian Cattle and Beef Sectors

Cattle are raised and beef is processed throughout Canada; however both tend to be concentrated in the Prairie Provinces (Alberta, Manitoba, and Saskatchewan) and the Central Provinces (Ontario and Quebec) (tables D-32 and D-33). Overall, Western Canada (the Prairie Provinces and British Columbia) accounted for about 70 percent of the Canadian cattle inventory and about 84 percent of the beef cow inventory (tables D-34 and D-35).

The Prairie Provinces comprise 80 percent of the farmland of Canada. The region is well suited to the production of grains, especially wheat and barley, oilseeds, particularly canola, and forages including alfalfa.³⁴ The Prairie Provinces accounted for about two-thirds of the Canadian January 1 cattle inventory during 1993-97 with Alberta accounting for 37 to 38 percent. The region accounted for an even larger share of the beef cattle sector. The Prairie Provinces accounted for three-fourths or more of the beef cow inventory, or 3.2 million animals (table D-36); with Alberta accounting for 38 to 42 percent.

Alberta's cattle industry appears to be competitive for a number of reasons. The Canadian Cattlemen's Association (CCA) contends that Alberta is one of the lowest cost producers of fed cattle in North America. Large supplies and relatively low costs of barley in Alberta have contributed to increased cattle feeding there. The CCA estimates that 80 percent of Alberta's cow-calf growers are also grain farmers and many of them have expanded their cattle feeding operations.³⁵

Ontario has the most diverse agricultural sector among the Canadian provinces in part because of soils and climate that are suitable for a variety of agricultural crops. Cattle are commonly kept as part of a diversified farming enterprise in Ontario.³⁶ Ontario accounted for 16 percent of the total Canadian cattle inventory and about 10 percent of the beef cow inventory.

Quebec accounted for about 11 percent of the total Canadian cattle inventory and about 5 percent of the beef cow inventory. Milk cows are concentrated in the Central Provinces.

³² *Livestock Annual* (MX4053), p. 4.

³³ *Livestock Annual* (MX6099).

³⁴ "A Review of economic, social and political developments in Canada," *Canada Yearbook 1988*, p. 9-3.

³⁵ USDA, FAS, *Dairy, Livestock, and Poultry: World Livestock Situation*, FL&P 2-96, p. 26.

³⁶ *Canada Yearbook*, p. 9-4.

Quebec accounted for 40 percent³⁷ of Canada's total milk cow inventory as of January 1, 1997 and Ontario accounted for 33 percent.

As with cattle raising, cattle slaughter in Canada appears to be expanding in the Prairie Provinces (especially in Alberta), whereas it appears to be contracting slightly in the Central Provinces. The Prairie Provinces accounted for about two-thirds of Canadian cattle slaughter in recent years (table D-37), although the total number of cattle slaughtered has remained rather stable (table D-33). Also, the expansion of two major cattle-slaughtering facilities in Alberta by the last quarter of 1996, the IBP plant at Lakeside, Alberta and the Cargill plant at High River, Alberta, is expected to increase the slaughtering capacity by one-third.³⁸ Data on Canada's beef sector are shown in table D-38.

The traditional movement of cattle from Western Canada to Eastern Canada has been increasingly replaced by movement of cattle from Western Canada south to the United States. At the same time there has been an increasing trend for beef to move from the eastern and central United States to eastern Canada. These trends were noted in previous USITC investigations.³⁹ The CCA contends that these trends have continued in recent years,⁴⁰ and may be independent of the effects of the NAFTA.⁴¹

Canadian Cattle Cycle and Cattle Inventory

The number of cattle and calves in Canada (as measured by the January 1 inventory reported by Statistics Canada) increased from 11.8 million in 1993 to 13.2 million in 1996 but declined to 12.8 million in 1997 (table D-39). The number of beef cows increased from 3.8 million in 1993 to 4.3 million in 1996 but declined to 4.2 million in 1997 (table D-36). The spring of 1996 was prolonged, limiting forage growth and requiring cattlemen to purchase or supply more feed than usual. Reduced profitability from lower cattle prices combined with relatively high-feed grain prices prompted a large sell-off of beef cows.⁴²

Prices

The price of slaughter cows in Canada declined significantly beginning in April-June of 1995 when prices were US\$39.43⁴³ per 100 pounds, down from US\$47.04 in the corresponding quarter of 1994 (table D-40). Prices remained relatively low for the rest of 1995 and throughout 1996, corresponding to increasing beef production in Canada as the Canadian cattle cycle appeared to be in its contraction phase.

³⁷ Calculated from statistics reported in Statistics Canada, Agriculture Division catalogue No. 23-603-UFE.

³⁸ *Livestock Annual* (CA6040), p. 3.

³⁹ USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, USITC publication 1996, July 1987, p. 34, and *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, investigation No. 332-328, USITC publication 2591, Jan. 1993, pp. 5-4 and 5-5.

⁴⁰ Prehearing brief of CCA, Mar. 10, 1997, pp. 15, 5-1 to 5-4.

⁴¹ David Andrews, president of the CCA, transcript of the hearing, p. 47.

⁴² *Livestock Annual* (CA6040), Aug. 2, 1996, p. 3.

⁴³ Canadian dollar amounts have been converted to U.S. dollars at prevailing exchange rates.

The price of steers in Alberta, Canada, generally declined from the first quarter of 1993, when prices were about US\$75 per 100 pounds through the second quarter of 1996, to US\$54 per 100 pounds (table D-41). However, prices recovered in the last half of 1996, averaging US\$61.45 in July-September compared with US\$57.27 in the corresponding quarter of 1995, and US\$62.38 in October-December compared with US\$59.33 in the corresponding quarter of 1995.

Canadian Trade and Tariff Measures

Canadian imports of live cattle and calves as well as beef and veal are subject to import duties and tariff rate quotas as provided for under the Canadian Tariff Schedules. Such imports are also subject to sanitary and phytosanitary regulations administered by Agriculture and Agri-Food Canada and to countervailing and antidumping duties administered by the Canadian International Trade Tribunal (CITT).⁴⁴

Tariffs and Tariff-Rate Quotas

Portions of the Canadian Tariff Schedules applicable to imports of live cattle and calves as well as beef and veal are shown in appendix H. Tariff rates applicable to Canadian imports of cattle for immediate slaughter and fresh, chilled, or frozen beef and veal from the United States and Mexico were reduced as a result of the CFTA and the NAFTA and are described in detail in chapter 4.

Prior to implementation of the URA, Canada, like the United States, had provisions for quotas on imports of beef under the Canadian Meat Import Act. In its schedule of concessions⁴⁵ Canada agreed to convert its quotas to a tariff-rate quota system, under which the first 76,409 metric tons,⁴⁶ (product weight) of beef classifiable under headings 0201 and 0202 (fresh, chilled, or frozen beef and veal) would enter at a rate of duty of "Free." A side agreement provided New Zealand with a reserve of 26,600 metric tons. Canada imposed an initial rate of 37.9 percent ad valorem on over-quota imports, with this rate to be reduced in stages to 26.5 percent ad valorem. With the beginning of the implementation period Canada committed to matching the level of the U.S. tariff for the corresponding products. The U.S. tariff rate for 1995 was 30.3 percent ad valorem and the final bound rate is to be 26.4 percent ad valorem. Imports from the United States and Mexico are not counted against the tariff quota; thus, all such imports received a rate of duty of "Free."

⁴⁴ The administration of Canadian countervailing and antidumping duties is described in USITC publication 1996, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, pp. 97-99.

⁴⁵ The following description of the Canadian commitments under the URA was adapted from World Trade Organization, *International Bovine Meat Agreement*, Summary of the Results of the Uruguay Round in the Meat Sector, Feb. 1995, p. 23.

⁴⁶ The metric units may be converted to pounds by multiplying by 2.204622.

On October 13, 1995, the Canadian Federal Government announced 1996 beef and veal tariff rate quota administrative guidelines.⁴⁷ New Zealand's country reserve was increased to 29,600 metric tons and Australia was given a country reserve of 42,000 metric tons, leaving 4,809 metric tons with no country reserve. Within the Canadian market 75 percent of the allocation was offered to processors and retailer processors based on their total imports in 1995, and distributors were allocated the remaining 25 percent. Australia's country reserve was reduced by 7,000 metric tons to 35,000 metric tons for 1997 whereas New Zealand's remained at 29,600 metric tons.⁴⁸

Countervailing Duties Applicable to Beef Originating in the EU

On July 22, 1996 the CITT rescinded a countervailing duty order applicable to imports of boneless manufacturing beef originating in the EU.⁴⁹ The CITT concluded that it is persuaded that there is no likelihood of injury to domestic producers from the annual importation of not more than 5,000 tons (metric) of subsidized EU boneless manufacturing beef into Canada.⁵⁰ The CITT found that an Agreement between the EU and Canada would limit the subject imports to no more than the aforementioned 5,000 tons.⁵¹

Safeguard Action Applicable to Beef from non-NAFTA Countries

On June 21, 1993, Canada took a safeguard action and imposed a tariff-rate quota on imports of boneless beef originating in non-NAFTA countries.⁵² Canada terminated the safeguard action on January 1, 1995 when it implemented a tariff-rate quota system pursuant to a URA commitment (as described in chapter 6 of this report).⁵³ Under the safeguard action Canada imposed a duty of 25 percent ad valorem effective May 1, 1993, on annual imports over 72,201 metric tons; however, for the remainder of 1993 the duty was applicable for imports in excess of 48,000 metric tons.⁵⁴ The quantity of 72,201 metric tons was the average import volume for the 3 preceding years.⁵⁵ The action was taken following receipt of a recommendation from the CITT on May 28, 1993. The Canadian Federal Government had earlier asked the CITT to conduct an investigation in order that it might determine whether imports of boneless beef originating in countries other than the United States are causing or threatening serious injury to the producers of boneless beef in Canada, and if so, to provide advice as to the most appropriate

⁴⁷ Agriculture and Agri-Food Canada, news release, *Beef TRQ: Important Dates (Beef TRQ: Important Dates)*, Nov. 1, 1996.

⁴⁸ USITC staff telephone conversation with an official of the U.S. Embassy, Ottawa, Canada, Apr. 29, 1997.

⁴⁹ The duty which was imposed on July 25, 1986 is discussed in USITC Pub. 2591, *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, Jan. 1993, pp. 3-8 and 3-9.

⁵⁰ CITT, *Dumping and Subsidizing Reviews (Section 76) Orders and Reasons*.

⁵¹ *Ibid.*

⁵² *Beef TRQ: Important Dates*. For Canada's notification to GATT, see GATT document L/7219.

⁵³ *Canada Gazette*, part II, vol. 129, No. 9, Mar. 5, 1995, pp. 1261-1264.

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*

remedy.⁵⁶ The CITT found that imports of such boneless beef were in such increased quantities as to threaten Canadian slaughters, boners and cattle producers with serious injury, and recommended the annual tariff-rate quota be put in place for 3 consecutive years that preceded the previously discussed tariff-rate quota.

On May 6, 1994, the tariff rate quota was increased by 13,000 metric tons to allow for importation of product in transit and the time the tariff-rate quota was filled for 1994; the 25 percent tariff-rate quota became effective on May 26, 1994. On October 7, 1994, certain products (frozen inside and outside rounds, eye of the rounds, outside flats, and sirloin tips) were exempted from the 25 percent rate because the Canadian Federal Government determined that primary processors were not in a position to supply the 1994 needs of Canadian further processors.

Central American Live Cattle and Beef Sectors

The Central American countries of Costa Rica, Nicaragua, Honduras, and Guatemala are authorized by the USDA to export beef and veal to the United States. The Dominican Republic in the Caribbean is also authorized to export beef and veal to the United States. Most cattle in these countries are grass-fed. Thus, U.S. imports of beef from these countries generally compete with beef from U.S. cull cattle and imports of beef from Australia and New Zealand, most of which are derived from grass-fed cattle.

There is no country-specific quota for U.S. imports of beef and veal from these countries under the U.S. tariff-rate quota for fresh, chilled, or frozen beef. Thus, such imports fall into a basket category of "other countries or areas." The in-quota quantity for "other" countries is set at 64,805 metric tons.⁵⁷ This section provides information on the cattle and beef sectors for the above countries, and it briefly discusses the impact of the NAFTA and the URA on beef and veal exports from these countries to the U.S. market.

Costa Rica

During 1992-97, cattle inventories in Costa Rica declined by 10 percent to 1.5 million animals (table D-42). Beef production declined from 207 million pounds in 1994 to 205 million pounds in 1995 and 1996. Exports of beef and veal totaled 64 million pounds in 1996 and accounted for 31 percent of production. The United States is by far the largest export market for Costa Rican beef (94 percent in 1996); however, Costa Rica is increasing its exports to Colombia and other Central American countries in an effort to open alternative markets for its beef.⁵⁸

⁵⁶ The CITT investigation was requested by the Governor General in Council on the recommendation of the Minister of Finance et al. and was prompted because "importation into Canada of boneless beef at prices appreciably below domestic prices for boneless beef have been increasing significantly..."-- from CITT, *An Inquiry into the Importation of Boneless Beef, Originating in Countries other than the United States of America*, Reference No. GC-93-001, May 28, 1993, p. 28.

⁵⁷ The U.S. tariff-rate quota provisions are discussed in chapter 6 of this report.

⁵⁸ USDA, FAS, *Livestock Annual* (CS6022), Aug. 6, 1996, p. 2.

Four plants are certified to export beef to the United States; however, three of the plants merged to form a new company, FOGASA. The company reorganized to increase efficiency and lower operating cost.⁵⁹

According to officials of the U.S. Department of State, to date, the URA does not appear to have had a negative impact on Costa Rica's exports of beef to the United States.⁶⁰ The "other" category in which U.S. imports from Costa Rica fall has not been filled; thus, U.S. imports from Costa Rica have entered at the lower in-quota rates. Eligible U.S. imports receive a rate of duty of "Free" under the special CBERA provisions as described in chapter 2. However, like many other Central American countries, Costa Rica contends that if in the future its export potential increases, it would face a ceiling under the tariff-rate quota. In addition, Costa Rica is concerned that if additional countries are approved to export beef to the United States, it is possible that such exports will enter under the "other" category. If this occurs and the "other" quota is not expanded, Costa Rica believes its beef exports will be adversely affected, since the quota is filled on a first-come first-serve basis.⁶¹

Nicaragua

During 1992-96, the Nicaraguan cattle inventory averaged about 1.7 million animals annually as shown in table D-43. Beef production ranged from 119 million pounds in 1994 to 108 million pounds in 1996. The United States is the primary foreign market for Nicaraguan beef. U.S. imports of beef from Nicaragua increased from 19 million pounds in 1992 to 60 million pounds in 1994, then declined to 36 million pounds in 1996.⁶² Beef exports to the United States from Nicaragua are expected to continue to decline during the next 3 to 5 years as cattle producers attempt to redevelop traditional markets such as Costa Rica and Honduras. There are three USDA certified beef export plants in Nicaragua.⁶³

The Nicaraguan livestock industry has expressed concern about the tariff-rate quota for beef, contending it will constrain beef exports to the United States.⁶⁴ Certain industry organizations in Nicaragua, Guatemala, Costa Rica, and the Dominican Republic in conjunction with the "U.S. Council of Beef Importers" are seeking to renegotiate the quantity allocated to the "all other" category.⁶⁵

Honduras

The Honduran cattle inventory declined from 2.4 million animals in 1992 to 2.2 million in 1996 (table D-44). During this time beef production declined from 97 million pounds in 1992 to 66

⁵⁹ *Livestock Annual* (CS6022), Aug. 6, 1996, p. 2.

⁶⁰ Department of State telegram, San Jose, Costa Rica, Apr. 10, 1997.

⁶¹ Department of State telegram, San Jose, Costa Rica, Apr. 10, 1997.

⁶² Based on statistics of the U.S. Department of Commerce.

⁶³ USDA, FSIS, *Foreign Countries and Plants Certified to Export Meat and Poultry to the United States, Report of the Secretary of Agriculture to the U.S. Congress*, Mar. 1, 1996, p. 185.

⁶⁴ USDA, FAS, *Livestock Annual Report*, U.S. Embassy, Managua, Nicaragua (NU5003), Aug. 3, 1995, p. 2.

⁶⁵ *Livestock Annual Report* (NU5003), Aug. 3, 1995, p. 2.

million pounds in 1996. Approximately 61 percent of beef production was consumed domestically, up from 51 percent in 1992 reflecting a reduction in beef exports.⁶⁶

A U.S. Department of State telegram stated that the NAFTA and the URA have not had a significant impact on Honduran beef exports to the United States.⁶⁷ The tariff-rate quota was not filled in 1995 or 1996; however, the lack of a country specific tariff-rate quota could make access to the U.S. market less certain for Honduras since the allocation is on a first-come first-serve basis. Honduran beef exports to the United States declined from 48 million pounds in 1992 to 18 million pounds in 1996⁶⁸ reflecting depressed market conditions in the United States.⁶⁹ The number of USDA approved beef export plants declined to 4 as one plant was decertified on November 9, 1995.⁷⁰

Most of the Honduran beef exported to the United States is marketed in the Miami area and consists primarily of manufacturing type beef. In the U.S. market, Honduran beef competes with U.S. manufacturing type beef as well as manufacturing type beef imported from other sources, including other Central American countries.⁷¹

Guatemala

Cattle inventories in Guatemala declined steadily from 1.8 million animals in 1992 to 1.7 million animals in 1997 as land use continues to shift to more profitable goods such as sugar cane and rubber.⁷² Production of beef and veal increased from 106 million pounds in 1994 to 117 million pounds in 1996 (table D-45). Beef exports declined from 24 million pounds in 1992 to 7 million pounds in 1996. Depressed beef prices in the United States, Guatemala's principal export market, contributed to the decline in exports.⁷³ Apparent consumption rose from 88 million pounds to 112 million pounds during 1993-96.

Guatemala and other Central American countries originally criticized the within quota quantity of beef allocated to "other countries" under the URA saying it was too small. However, the quota has gone unfilled primarily because of depressed beef prices in the United States.⁷⁴ As of August 1996, two Guatemalan plants were certified by the USDA to export beef to the United States.⁷⁵

⁶⁶ USDA, FAS, *Livestock and Beef-- Corrected Numbers* (HO5027), Oct. 12, 1995, p. 1.

⁶⁷ State Department telegram from U.S. Embassy, Tegucigalpa, *Impact of NAFTA and the URA on Honduran Beef Exports to the U.S.*, Mar. 19, 1997, pp. 1-2.

⁶⁸ Based on statistics of the U.S. Department of Commerce.

⁶⁹ State Department telegram from U.S. Embassy, Tegucigalpa, *Impact of NAFTA and the URA on Honduran Beef Exports to the U.S.*, Mar. 19, 1997, pp. 1-2.

⁷⁰ USDA, FSIS, *Foreign Countries and Plants Certified to Export Meat and Poultry to the United States, Report of the Secretary of Agriculture to the U.S. Congress*, Mar. 1, 1996, p. 154.

⁷¹ State Department telegram from Tegucigalpa, *Impact of NAFTA and the URA on Honduran Beef Exports to the U.S.*, Mar. 19, 1997, p. 1.

⁷² USDA, FAS, *Livestock Annual Report* (GT6029), Aug. 1, 1996, p. 1.

⁷³ *Ibid.*, p. 6.

⁷⁴ *Ibid.*

⁷⁵ *Ibid.*, p. 1.

A State Department telegram⁷⁶ stated that the NAFTA and the URA had no impact on Guatemala's trade in beef with the United States. However, opinion varies with respect to the issue of country-specific tariff rate quotas. The Guatemalan beef industry would like a country-specific quota based on historical levels of Guatemala's beef exports to the United States. Some Guatemalan interests contend that the calculation of the quota for the "other" category was flawed because Nicaragua was not trading with the United States during the years used to calculate the "other" category. Since Nicaragua exported beef to the United States in 1996 despite low prices, Guatemalan interests are concerned that if prices increase to more attractive levels, the "other category" could get crowded and make it difficult for Guatemala to compete with other Central American countries.⁷⁷

The Guatemalan beef industry also contends that since the tariff rate quota is allocated on a first-come first-serve basis, Guatemalan exporters are at a disadvantage in that they slaughter heavier animals in the second quarter of the year. A leading beef exporter, on the other hand, stated that the lack of country-specific quota will not harm Guatemala in the short term as there are no large quantities of animals available for the export market. In addition, many cattlemen have shifted to more profitable enterprises.⁷⁸

Dominican Republic

Table D-46 shows cattle inventory, beef and veal production, exports, and apparent consumption for the Dominican Republic for 1992-97. The cattle inventory averaged 2 million animals annually during the period. Beef and veal production increased from 97 million pounds in 1992 to 108 million pounds in 1996. Imports of beef and veal though negligible were supplied primarily by the United States. The Dominican Republic's exports of beef and veal declined from 22 million pounds in 1992 to 9 million pounds in 1995. During 1996, the Dominican Republic did not export any beef and veal. Apparent domestic consumption rose from 75 million pounds to 106 million pounds during 1992-96 as practically all production was being consumed domestically.⁷⁹

The United States and Puerto Rico were the major export markets for the Dominican Republic during 1992-94. High costs associated with an increasing number of residue tests required by USDA, and attractive domestic prices relative to international market prices supported by an increase in demand for beef in the Dominican Republic, primarily by the tourist sector, virtually eliminated exports in 1996.⁸⁰ The number of plants certified by USDA to export beef to the United States decreased from six to one.⁸¹

Reportedly, the NAFTA has not had a measurable impact on Dominican beef exports to the United States and the lack of a country-specific quota is not expected to impact beef exports to the United States.⁸²

⁷⁶ U.S. Department of State, telegram No. 023624, Guatemala, Mar. 19, 1997.

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ USDA, FAS, *Livestock Annual* (DR6015), Aug. 1, 1996, p. 2.

⁸⁰ Ibid.

⁸¹ U.S. Department of State, telegram No. 023624, Santo Domingo, Mar. 14, 1997.

⁸² Ibid.

Uruguayan and Argentine Cattle and Beef Sectors

Uruguay and Argentina are major cattle and beef producers; however, historically their beef exports to the United States have been limited to prepared or preserved products because neither country had been certified by USDA as free of foot-and-mouth disease (FMD). Uruguay received authorization from USDA to export fresh, chilled, or frozen beef to the United States in the latter part of 1995 and Argentina recently received USDA authorization and may begin to export on August 25, 1997.⁸³ A brief discussion of Uruguayan and Argentine cattle and beef sectors and the impact of the NAFTA and the URA on beef exports to the United States as reported by the U.S. Department of State follows.

Uruguay

The number of cattle in Uruguay increased gradually during 1992-97, and totaled 10.6 million in the latter year as shown in table D-47. Beef production rose irregularly to 816 million pounds in 1996; however, domestic beef consumption declined from 534 million pounds to 441 million pounds. Beef exports increased from 271 million pounds in 1992 to 375 million pounds in 1996, accounting for most of the additional beef production.⁸⁴

The EU, Brazil, and Israel were the major export markets for Uruguayan beef during 1992-96.⁸⁵ In November 1995, Uruguay was approved to export fresh, chilled, or frozen beef to the United States; such exports totaled 45 million pounds in 1996.

It is not possible to measure the effects of the URA on Uruguay's cattle and beef industry at this time, since Uruguay only recently received approval to export fresh, chilled, or frozen beef to the United States. Such imports entered the U.S. market during a period of abundant domestic beef supplies and low prices. Uruguay reportedly could fill its quota in less than 1 month; however, because of economic and commercial reasons it must provide its customers with a steady and reliable supply over the entire year. Uruguay reportedly has not had a problem with transshipments of beef to the United States.⁸⁶

Argentina

The Argentine cattle inventory declined from 55 million animals in 1992 to 52 million animals in 1997 (table D-48), the lowest in the past 25 years.⁸⁷ During the past 2 years drought contributed to the decline in the cattle inventory. During 1992-96, Argentine beef production (derived primarily from grass-fed cattle) averaged about 5.7 billion pounds annually. Exports rose from 653 million pounds in 1992 to 1.1 billion pounds in 1995 then declined to 992 million pounds in 1996. Apparent consumption declined from 5.0 billion pounds in 1993 to 4.6 billion

⁸³ 62 F.R. 34385 (June 26, 1997).

⁸⁴ USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P 2-96, Oct. 1996, pp. 92-99.

⁸⁵ USDA, FAS, *Annual Report* (UY6002), July 30, 1996, p. 1.

⁸⁶ U.S. Department of State, telegram No. 22175, Montevideo, Uruguay, Apr. 3, 1997.

⁸⁷ USDA, FAS, *Livestock Annual Report*, Buenos Aires, Argentina (AR9652A), Aug. 8, 1996, p. 1.

pounds in 1995 and 1996, reflecting reduced demand because of high unemployment and an economic recession.⁸⁸

Major Argentine beef export markets include the United States (prepared or preserved products), Chile, Germany, and Brazil. Argentine beef exports to the United States had been limited to prepared or preserved products because the country had not been declared free of FMD and rinderpest. There has been no reported incidences of FMD since April 1994 and Argentina is reportedly free of Bovine Spongiform Encephalopathy (BSE or “mad cow disease”). On June 26, 1997, USDA announced that Argentina had been found to be free of FMD and rinderpest and under certain conditions would be authorized to ship fresh, chilled, or frozen beef to the United States effective August 25, 1997.⁸⁹ Argentina has already signed sanitary agreements with other countries (including Mexico, Hong Kong, and Thailand), and foresees the development of new beef export markets. Consequently Argentine beef exports are expected to increase dramatically by the end of this decade.⁹⁰

Japanese Cattle and Beef Sectors and Markets

Cattle inventories in Japan declined from 5.0 million in 1993 to 4.8 million in 1996 as shown in table D-49. Japanese beef production peaked at 1.33 billion pounds in 1994 then declined to 1.23 billion pounds in 1996. Apparent consumption peaked in 1995 at 3.3 billion pounds then fell to 3.2 billion pounds in 1996 as consumers shifted away from beef consumption due to safety concerns related to BSE and *Escherichia coli* O157:H7 (*E. coli* O157:H7) outbreaks.⁹¹

Households account for approximately 40 percent of Japanese beef consumption; the remainder is consumed in the food service sector.⁹² Beef production in Japan is derived from domestic beef (Wagyu) and dairy breeds (Holsteins). High-quality Wagyu beef is well marbled and very popular in Japan; beef produced from Holstein cattle is generally leaner. Normally, approximately 60-65 percent of domestic beef is marketed through the retail sector; however, the share has risen to 70 percent recently as several supermarket chains have replaced imported beef cuts with domestic cuts. With the BSE scare and *E. coli* O157:H7 outbreaks, many Japanese consumers perceive domestic beef to be safer than imported beef.⁹³ However, no U.S. beef was ever implicated in the *E. coli* O157:H7 epidemic in Japan and the United States is reported to be free of BSE.⁹⁴

The United States and Australia account for most of the foreign beef supplied to the Japanese market. U.S. beef in Japan is generally marketed through the food service sector and includes high-value frozen products, as well as high-value chilled products. U.S. beef is predominately

⁸⁸ Ibid., p. 6.

⁸⁹ 62 F.R. 34385 (June 26, 1997).

⁹⁰ Ibid., pp. 1-2.

⁹¹ USDA, FAS, *Livestock Annual Report*, Tokyo, Japan (JA7004), Feb. 3, 1997, p. 1.

⁹² Ibid., p. 1.

⁹³ Ibid.

⁹⁴ USITC staff interview with officials of the U.S. Meat Export Federation (USMEF), Denver, CO, Jan. 27, 1997.

derived from grain-fed cattle and highly preferred by Japanese consumers. Beef imports from Australia consist primarily of chilled products, derived from grass-fed animals.⁹⁵

According to a U.S. Department of State telegram, there has been a negligible impact on Japanese beef imports as a result of the URA.⁹⁶ Japanese tariffs on beef were reduced from 50 percent in 1994 to 46.2 percent in 1996 and are to be reduced to 38.5 percent by the year 2000. Other factors including rising per capita beef consumption, relative price of U.S. beef vis-a-vis domestic (Japanese) cuts, and growing demand for chilled U.S. loins contributed to the increase in beef imports.⁹⁷ However, the weakening yen (against the U.S. dollar) and health concerns somewhat weakened the market for imported beef in Japan in 1996.⁹⁸

Korean Cattle and Beef Sectors and Markets

The Korean cattle sector is comprised of small farms, with nearly one-third of all native Korean beef cattle (Hanwoo) raised on farms producing 1-4 animals annually.⁹⁹ Farms that raise 5-20 animals account for over 40 percent of production and farms that produce more than 20 animals account for about 25 percent.¹⁰⁰ Korean consumers prefer well marbled beef; thus most Hanwoo cattle are grain fed.

During 1992-97, Korean cattle inventories rose by 51 percent to 3.4 million animals (table D-50).¹⁰¹ Beef production rose from 302 million pounds in 1992 to 509 million pounds in 1996, and apparent consumption rose from 690 million pounds in 1992 to 933 million pounds in 1996. Imports increased steadily from 291 million pounds in 1993 to 432 million pounds in 1996. Strong demand during 1992-95 and market liberalization contributed to the increase in domestic consumption. Approximately 60 percent of beef consumption occurs at the hotel and restaurant sector. Consumption rose by 17 percent from 1993 to 1994 and by 12 percent from 1994 to 1995; such consumption rose only 1.7 percent in 1996 from year earlier levels as food safety concerns coupled with an economic slowdown lessened demand.¹⁰²

The United States is the largest foreign supplier of beef to Korea, accounting for about 52 percent of the quantity and 63 percent of the value imported in 1996.¹⁰³ Other important import suppliers include Australia, New Zealand, and Canada. U.S. beef is marketed primarily through Korea's hotel and restaurant trade; however, sales in the retail sector are increasing. Most beef is imported frozen; however, with revised shelf life regulations that went in effect in October

⁹⁵ *Livestock Annual Report* (JA7004), Feb. 3, 1997, p. 1.

⁹⁶ USDA, FAS, U.S. Embassy, Tokyo, Japan, *USITC investigation into the impact of the UR agreement on U.S. beef exports*, Apr. 7, 1997, facsimile.

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*

⁹⁹ USDA, FAS, *Livestock Annual Report* (KS6042), Aug. 5, 1996, p. 5.

¹⁰⁰ *Ibid.*

¹⁰¹ Korea section adapted from USDA, FAS, *Livestock Semi-Annual Report* (KS7006), Feb. 3, 1997, unless otherwise noted.

¹⁰² *Livestock Semi-Annual Report* (KS7006), Feb. 3, 1997, p. 3.

¹⁰³ Based on Jan.-Oct. 1996 trade data, USDA, FAS, *Livestock Semi-Annual Report* (KS7006), Feb. 3, 1997, p. 4.

1995,¹⁰⁴ imports of chilled beef from the United States are expected to grow, but at a slow rate. Reportedly, Korea currently lacks adequate storage and transportation facilities to accommodate chilled beef imports; thus such imports are not likely to reach their full market potential until after full liberalization on Jan. 1, 2001. In December 1993, during the Uruguay Round negotiations, Korea extended its 1993 Record of Understanding (ROU), set to expire in 1995, to the year 2000. The ROU is discussed in chapter 6. ■

¹⁰⁴ For a detailed discussion on the revised shelf life regulations, see USITC, *The Year in Trade 1995*, Operation of the Trade Agreements Program, 47th report, USITC publication 2971, Aug. 1996, p. 62.

CHAPTER 4

IMPACT OF THE NAFTA ON U.S. TRADE IN CATTLE FOR SLAUGHTER AND BEEF

General

The NAFTA established bilateral market access provisions between the United States and Mexico and contains trilateral provisions on domestic support, export subsidies, rules of origin, safeguards, and phytosanitary standards. In addition, under the NAFTA the market access provisions of the U.S.-Canada Free-Trade Agreement (CFTA) continue to be in effect. The purpose of this chapter is to describe the major actions taken under the NAFTA concerning U.S. trade in live cattle for slaughter and beef. It includes a description of the negotiated tariff rate reductions, as well as a discussion of how Mexican beef exports were treated under the U.S. Meat Import Act of 1979 and Canada's Meat Import Act. The chapter also discusses factors that have influenced the implementation of the NAFTA, including the impact of the peso devaluation on U.S.-Mexican beef trade in 1995 and 1996; antidumping actions against U.S. beef and edible offal; quality grading issues; and sanitary and phytosanitary measures.

Since the NAFTA implementation, certain trade flows relating to cattle and beef have been influenced more than others, generating concern among some U.S. industry participants. In particular, increased U.S. imports of live cattle for slaughter from Canada and reduced U.S. exports of beef to Mexico are of concern to certain domestic interests. In order to evaluate the impact of the NAFTA on U.S. imports of live cattle for slaughter from Canada, and U.S. exports of beef to Mexico, additional analyses based on econometric modeling was undertaken. The purpose of the modeling exercise was to determine the relative importance of the NAFTA vis-à-vis other determinants of trade (such as macroeconomic and production factors). The empirical results are reported and discussed in this chapter.

NAFTA Impacts: Summary

Beef

The most significant NAFTA-related action affecting U.S. trade in beef appears to have been the reduction in the Mexican import duty on U.S. beef. As a result of the NAFTA, U.S. beef receives a rate of duty of "Free" whereas Mexico imposes rates of 25 percent ad valorem and 20 percent ad valorem on non-NAFTA imports of frozen beef and fresh beef, respectively. In 1996, the United States supplied 97 percent of Mexican imports of beef compared with 51 percent in 1993. Although the total quantity and value of U.S. exports of beef to Mexico declined in 1995, the decline appears to reflect the effects of a devaluation of the peso that led to a drop in consumer income and an increase in the purchase price for imported beef. The

result of empirical analysis by the USITC staff indicates that the NAFTA expanded Mexican imports of U.S. beef and benefited U.S. beef producers and exporters.¹

Representatives of the Mexican Cattlemen's Association contend that the NAFTA has been and will continue to be a negative influence on development of the Mexican live cattle sector because of the access it provides to the Mexican beef market.² They contend that the Mexican cattle sector has been put at a comparative disadvantage in relation to the U.S. cattle sector because of factors such as the drought in northern Mexico and the peso devaluation that reduced the effective demand for beef in Mexico.³

The Australian Meat and Live-stock Corporation (AMLC) contends that as a result of Mexico's NAFTA duty preferences, U.S. beef exports have gained a competitive advantage in the Mexican market and increased their market share, thereby displacing Australian imports.⁴ The New Zealand Meat Producers Board (NZMPB) also reported that New Zealand exports of beef to Mexico declined as a result of the NAFTA duty preferences. The NZMPB reported that prior to implementation of the NAFTA, New Zealand's exports to Mexico totaled nearly 10,000 metric tons (22 million pounds) but such exports declined to 250 metric tons (551,000 pounds) in 1994-95 and then to 101 metric tons (223,000 pounds) in 1995-96.⁵

As a result of the CFTA, which preceded but largely was incorporated into the NAFTA, most fresh, chilled, or frozen beef traded between the United States and Canada has received a rate of duty of "Free" since July 1993. Most imports of frozen boneless beef from other suppliers are dutiable at 4.4 cents per kilogram (equal to an estimated 1.2 percent ad valorem). The tariff differential appears to have given a competitive advantage to both countries in relation to other suppliers. However, other factors as described later in this chapter also impacted trade. By 1996, Canada was the leading supplier of U.S. imports of fresh, chilled, or frozen beef and the United States was also Canada's leading supplier of fresh, chilled, or frozen beef, providing more than half of Canada's imports.

Cattle for Slaughter

The NAFTA appears to have had relatively little impact on U.S. trade in live cattle for slaughter, either with Canada or Mexico. The U.S. duty on slaughter cattle imported from Canada has been free since January 1, 1993, and relatively low at 2.2 cents per kilogram (about 1 cent per pound) prior to the CFTA. The United States-Mexican slaughter cattle trade has traditionally been minimal. Factors and events that have influenced trade in slaughter cattle in recent years include the U.S. and Canadian cattle cycles, increasing cattle production in western Canada, high feed-grain prices, and increased exports of U.S. beef to Pacific Rim markets.

¹ See appendix I.

² USITC staff interview with Cesar Gonzalez Quiroga, president; Heriberto Cardenas Galvan, general counsel; Gustavo Torres Flores, treasurer; Confederacion Nacional Ganadera (the Mexican Cattlemen's Assoc.), Feb. 12, 1997.

³ Ibid.

⁴ Posthearing brief of the Australian Meat and Live-stock Corporation (AMLC), Apr. 3, 1997, p. 16.

⁵ Prehearing brief of New Zealand Meat Producers Board (NZMPB), Mar. 10, 1997, p. 18.

NAFTA Commitments and Actions Concerning Cattle and Beef

Description of Tariff Concessions

The CFTA which became effective January 1, 1989, provided for, among other things, the reciprocal phase out of duties over a 10 year period on imports of live cattle, including cattle for immediate slaughter, and fresh, chilled, or frozen beef and veal between the United States and Canada.⁶ However, fresh, chilled, or frozen beef traded between the United States and Canada was subject to reciprocal accelerated duty elimination under the CFTA. Fresh or chilled beef and veal carcasses received a rate of duty of "Free" effective April 1, 1990.⁷ Frozen beef and veal carcasses, fresh, chilled, or frozen other cuts with bone-in, and fresh boneless beef and veal received a rate of duty of "Free" effective July 1, 1991.⁸ Frozen boneless beef and veal received a rate of duty of "Free" effective July 1, 1993.⁹

The NAFTA is based in large part on the provisions of the CFTA, and in many instances expands upon those provisions.¹⁰ It carried forward the schedule for duty phaseouts on U.S.-Canada trade contained in the CFTA. Under the NAFTA, the United States, Mexico, and Canada agreed to provide for a rate of duty of "Free" on eligible¹¹ trade in live cattle, including cattle for immediate slaughter, and fresh, chilled, or frozen beef and veal effective January 1, 1994, the date on which the NAFTA entered into force.¹²

Magnitude of Tariff Concessions

The "General" (non-CFTA and non-NAFTA) rate of duty applicable to U.S. imports of live cattle for immediate slaughter was 2.2¢ per kilogram in 1994 (declining to 1.8¢ in 1996 as a

⁶ The phased reductions are shown in USITC, *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, investigation No. 332-328, publication 2591, Jan. 1993, p. F-12.

⁷ 55 F.R. 21837 (May 30, 1990).

⁸ 56 F.R. 50012 (Oct. 2, 1991).

⁹ 58 F.R. 36842 (July 8, 1993).

¹⁰ For further information see USITC, *Potential Impact on the U.S. Economy and Selected Industries of the North American Free-Trade Agreement*, investigation No. 332-337, publication 2596, Jan. 1993, p. 1-1.

¹¹ To be eligible for the NAFTA duty preferences, goods must comply with the rules of origin (i.e., they must either be "wholly obtained" in the NAFTA region or comply with enumerated tariff shifts (see *HTS* general note 12 (t)); also, importers must have certificates of origin from suppliers/sellers/exporters and must make an affirmative claim for any NAFTA duty preferences on customs entries.

¹² Except for Canadian imports of fresh, chilled, or frozen boneless beef from Mexico that were dutiable at CAN 0.8¢ per kilogram (kg) (equal to about US 0.6¢ per kg or US 0.3¢ per pound) in 1996.

result of the URA).¹³ The two “General” rates applicable to fresh, chilled, or frozen beef and veal were 4.4¢ per kilogram, (which was equivalent to about 4 percent ad valorem), or 10 percent ad valorem, depending on the *HTS* subheading as of January 1, 1994.

Absent the NAFTA, the range in the ad valorem equivalents (AVE’s) of the rates of duty that would have been applicable to U.S. imports of cattle for immediate slaughter and fresh, chilled, or frozen beef from Mexico and Canada in 1996 are shown in the following tabulation (in *percent*):

Cattle for immediate slaughter		Fresh, chilled or frozen beef	
Mexico	0.82-1.55	Mexico	0.65-2.35
Canada	0.59-2.29	Canada	1.24-4.91

The AVE’s of the rates of duty that would have been applicable to Canadian and Mexican imports of cattle for immediate slaughter and fresh, chilled, or frozen beef from the United States in 1996 are shown in the following tabulation (in *percent*):

Cattle for immediate slaughter		Fresh, chilled or frozen beef	
Mexico	15	Mexico	20-25
Canada	1.5	Canada	“Free”

Between November 12, 1992, and entry into force of the NAFTA, imports of live cattle for immediate slaughter entering Mexico from the United States and Canada were dutiable at 15 percent ad valorem; fresh or chilled beef was dutiable at 20 percent ad valorem whereas frozen beef was dutiable at 25 percent ad valorem.¹⁴ Representatives of the Mexican Cattlemen’s Association reported that the duties imposed on November 12, 1992, were put into place as what the representatives called a “safeguard” measure (but not a safeguard action within the meaning of Article XIX of GATT 1994 or the WTO Agreement on Safeguards).¹⁵ They contend that the “safeguards” were necessary because increasing imports were injuring the Mexican live cattle sector that had been in decline because of Mexican Federal Government actions in 1988 that were intended to control inflation.¹⁶

¹³ USTR, *Uruguay Round*, Draft Uruguay Round Tariff Schedules of the United States, vol. I, Agriculture, p. I-7.

¹⁴ USDA, FAS, *Livestock Annual* (MX3105), Aug. 9, 1993, pp. 9 and 39-40.

¹⁵ USITC staff interview with Cesar Gonzalez Quiroga, president; Heriberto Cardenas Galvan, general counsel; Gustavo Torres Flores, treasurer; Confederacion Nacional Ganadera (the Mexican Cattlemen’s Assoc.), Feb. 12, 1997.

¹⁶ *Ibid.*

Actions Concerning Quantitative Limitations¹⁷

Article 704 of the CFTA generally prohibited either the United States or Canada from imposing quantitative restrictions on meat imports from each other. Accordingly, U.S. imports of fresh, chilled, or frozen beef and veal from Canada were not subject to quantitative restrictions imposed under the Meat Import Act of 1979. Similarly, Canadian imports of fresh, chilled, or frozen beef and veal from the United States were not subject to quantitative restrictions imposed under the Canadian Meat Import Act. Mexico did not have a meat import act comparable to those of the United States and Canada. Article 704 of the CFTA was incorporated into and made a part of the NAFTA so as to apply between Canada and the United States.¹⁸ As part of the NAFTA, Mexico and the United States agreed not to seek a voluntary restraint agreement from the other party with respect to the exportation of meat.¹⁹

As required by the NAFTA, U.S. imports of fresh, chilled, or frozen beef and veal from Mexico were exempted from quantitative restrictions imposed under the Meat Import Act of 1979.²⁰ Canadian imports of fresh, chilled, or frozen beef and veal from Mexico were also not subject to quantitative restrictions imposed under Canada's Meat Import Act, as required by the NAFTA.²¹

U.S. Imports from Canada and Mexico After Concessions

Cattle

Canada and Mexico have accounted for virtually all U.S. imports of cattle for immediate slaughter. U.S. imports of cattle for immediate slaughter from Canada accounted for about 3 percent of U.S. consumption (commercial slaughter) annually during 1992-96 (table D-14). Imports of such cattle from Canada increased irregularly since they have received a rate of duty of "Free," rising from 926,000 animals, valued at \$733 million, in 1993 to 1.3 million animals, valued at \$895 million, in 1996 (table D-11).

The Canadian Cattlemen's Association (CCA)²² predicts that there will be a significant decline in the exportation of live cattle (steers and heifers) to the United States because of the expansion of the slaughter activities of two plants in Canada-- the Cargill plant in High Point, Alberta, and the IBP plant in Brookside, Alberta.²³ Indeed, they suggest it is very likely that at times U.S. slaughter cattle will be exported to Canada as the Alberta plants increase their capacity

¹⁷ U.S., Canadian, and Mexican imports of cattle for immediate slaughter were not subject to quantitative restrictions during the period covered by this investigation.

¹⁸ NAFTA, annex 702.1:1.

¹⁹ NAFTA, annex 703.2, sec. A, para. 9.

²⁰ Annex 302.2 to the NAFTA, note 1 to chapter 2, U.S. schedule of concessions to Mexico. Mexico was exempted from quantitative restrictions effective Jan. 1, 1994.

²¹ NAFTA, annex 703.2, sec. B, para. 8.

²² USITC staff interview with David Andrews, president; Larry Sears, chairman, Foreign Trade Committee; and Dennis Laycraft, executive vice-president, CCA, Jan. 29, 1997.

²³ In fact, U.S. imports of cattle for immediate slaughter from Canada were about 21 percent less during January-March 1997 compared with the corresponding period of 1996.

utilization. They also suggest that the increased plant capacity in Alberta may encourage the export of feeder cattle from U.S. Border States to Alberta feedlots.

U.S. imports of cattle for immediate slaughter from Mexico accounted for 0.2 percent or less of U.S. consumption annually during 1992-96 (table D-14). Imports of such cattle from Mexico have fluctuated since they have received a rate of duty of "Free," rising from 3,000 animals, valued at \$1 million, in 1994 to 67,000 animals, valued at \$37 million in 1995, but declined to 2,000 animals, valued at \$1 million, in 1996 (table D-11). U.S.-Mexican trade in cattle is reportedly most sensitive when spreads between the markets are narrow enough to cover the costs of freight and importing expenses. Depending on cattle location and final use and destination, spreads as low as 5 cents per pound can drive movement. In addition to these factors, carcasses that fit the U.S. or Mexican market because of size or type will be drawn by price to their respective best market.²⁴

Beef

U.S. imports of quota-type meats²⁵ from Canada increased from 131 million pounds (product weight) in 1988 to 181 million pounds in 1989 (the first year imports from Canada were not subject to quantitative restrictions under the Meat Import Act of 1979).²⁶ Such imports declined to 166 million pounds in 1991 but then increased to 448 million pounds in 1994. As discussed in chapter 2, the Meat Import Act of 1979 was repealed effective January 1, 1995.

U.S. imports of quota-type meats from Mexico have been relatively small in relation to U.S. production, and imports from other suppliers. Imports from Mexico increased from 0.7 million pounds in 1992 to 1.9 million pounds in 1993. In 1994, the first year imports from Mexico were exempt from quantitative restrictions under the Meat Import Act of 1979, imports rose to 3.3 million pounds.

U.S. Exports to Canada and Mexico After Concessions

Cattle

The following tabulation shows U.S. exports of cattle other than certain purebred cattle for breeding purposes²⁷ to Canada, during 1992-96 (thousand animals; compiled from official statistics of the U.S. Department of Commerce):

²⁴ USITC staff interview with Cary H. Humphries, vice president International, Excel, Jan. 30, 1997.

²⁵ As defined by the Meat Import Act of 1979.

²⁶ USITC, *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, investigation No. 332-328, publication 2591, Jan. 1993, table D-34, p. D-36.

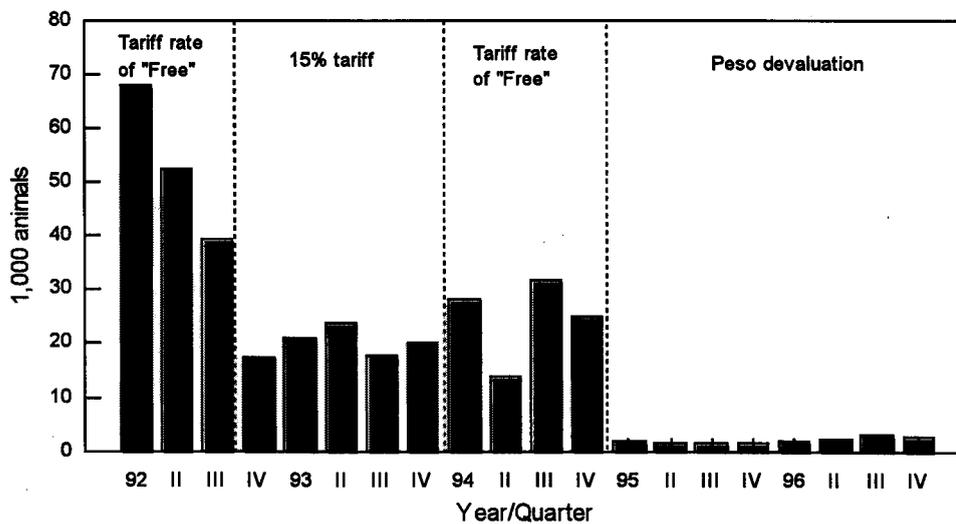
²⁷ Statistics reporting exports of cattle for immediate slaughter are not available; statistics concerning such cattle are included in a basket category of "other." Feeder cattle, animals for breeding other than purebred, as well as slaughter cattle are classifiable within the "other" category.

Year	Quantity
1992	56
1993	66
1994	86
1995	63
1996	37

U.S. exports of such cattle to Canada were equivalent to less than 1 percent of U.S. production annually during the period under review. Such exports ranged from less than 1 percent to 3 percent of Canadian cattle slaughter during 1992-96.

Since 1992, U.S. exports to Mexico of live cattle for slaughter have undergone significant fluctuations, as identified by the four distinct periods shown in figure 4-1. During 1992, Mexico imported 177,000 animals, with close to 95 percent supplied by the United States.²⁸ Imports declined to only 17,300 animals in the fourth quarter of 1992, compared with the quarterly average of 53,300 head for the first 3 quarters of that year. In 1993, U.S. exports were 82,600, or less than half the level of 1992, reflecting in part, the increase in the rate of duty to 15 percent ad valorem. In 1994 as a result of the NAFTA, Mexican imports of cattle for immediate slaughter from the NAFTA countries received a rate of duty of "Free" and U.S. exports increased to almost 100,000 animals in that year. However, beginning in November 1994, exports declined significantly, and likely reflect the devaluation of the peso. In 1995, the United States exported 6,300 animals for immediate slaughter and 10,100 in 1996.

Figure 4-1
U.S. exports of live cattle for immediate slaughter to Mexico, by quarter, Jan. 1992-Dec. 1996



Source: Confederacion Nacional Ganadera, Informacion Economica Pecuaria, pp. 59, Apr. 1996.

²⁸ Confederacion Nacional Ganadera, Informacion Economica Pecuaria, Direccion de Estudios Economicos y Comercio Internacional, Apr. 1996, p. 59.

In 1992, when 177,000 head were imported, this amount represented 2 percent of total Mexican slaughter (estimated at about 7.7 million animals). For the years after 1992, U.S. exports into Mexico represented less than 1 percent of their total slaughter.

Beef

U.S. exports of quota-type meats to Canada rose from 229 million pounds, valued at \$329 million, in 1992 to 259 million pounds, valued at \$336 million, in 1994 (table D-20). The share of Canada's imports of quota-type meats supplied by the United States declined from 51 percent in 1992 to 40 percent in 1993 but then increased to 44 percent in 1994, 54 percent in 1995, and 55 percent during January-November 1996 (the most recent period for which data are available).²⁹

U.S. exports of quota-type meats to Mexico rose from 104 million pounds, valued at \$112 million, in 1993 to 201 million pounds, valued at \$227 million, in 1994, the first year such exports received a rate of duty of "Free" under the NAFTA. However, such exports declined to 85 million pounds, valued at \$85 million in 1995, following the devaluation of the peso in November 1994. In 1996, however, such exports increased to 164 million pounds, valued at \$162 million (table D-20).

NAFTA Grain Commitment Effects on Cattle Markets

The CFTA provided for a rate of duty of "Free" for most grains traded between the United States and Canada (remaining duties are to be "Free" by January 1, 1998), but left intact many nontariff measures, such as end-use certificates.³⁰ It is likely that the elimination of the tariffs on grains between the United States and Canada had little effect on trade since the rates of duty were already low. The CFTA did little to eliminate the nontariff measures, including the Canadian support programs.³¹ The NAFTA did not substantially affect the three primary mechanisms affecting grain within Canada-- the Canadian Wheat Board, the Western Grain Transportation Act (WGTA), and the Gross Revenue Insurance Program (GRIP).

The NAFTA generally reduced Mexico's tariffs on grains;³² however, Mexico as a grain-deficit country, feeds relatively little grain to cattle, and most of its grain consumption is in direct food use (corn and wheat). The feed-grade corn and sorghum that are imported into Mexico are fed

²⁹ The shares were calculated from statistics reported in USDA, FAS, *Livestock Semi-Annual*, CA7007, Jan. 31, 1997, p. 8.

³⁰ Canada-U.S. Joint Commission on Grains, *Final Report*, Oct. 1995, pp. 61-73.

³¹ *Ibid.*

³² USITC publication 2596, ch. 23.

mostly to poultry and hogs rather than to cattle; in the early 1990s, 75 percent of Mexican feed grain consumption went to poultry and swine, and only 15 percent for cattle in feedlots.³³

NAFTA Implementation Issues

A number of events make it difficult to assess the effects, if any, that the NAFTA has had on trade in cattle and beef. These factors include the Mexican peso devaluation, the filing in Mexico of an antidumping petition against U.S. beef and edible offal,³⁴ U.S. Government implementation of cost recovery for import and export inspection, and allegedly, discriminatory Mexican quality grading regulations. Econometric models for U.S. exports of beef to Mexico and imports of cattle for slaughter from Canada were developed. The Mexican duty reductions applicable to beef were modeled because this was determined to be the most significant NAFTA development. U.S. imports of cattle for slaughter from Canada were modeled because such imports are of particular concern to domestic cattle interests.

Mexican Antidumping Actions Against U.S. Beef and Edible Beef Offal

U.S. exports to Mexico of fresh, chilled, or frozen beef and veal, as well as edible beef offal, were the subject of a Mexican antidumping investigation subsequent to implementation of the NAFTA. A representative of the Arizona Cattle Feeders Association (ACFA) cited the Mexican antidumping action as well as the Mexican peso devaluation, as factors contributing to the sharp drop in U.S. exports of beef to Mexico during 1995.³⁵

On May 2, 1994, the Confederacion Nacional Ganadera (CNG) (the Mexican Cattlemen's Association) submitted to the Secretariat of Commerce and Industrial Promotion (SECOFI) a request for compensatory quotas³⁶ and for initiation of an antidumping investigation concerning beef and edible beef offal originating in the United States.³⁷ The CNG alleged that the products were being "dumped" by reason of sales in Mexico at prices less than in the United States.³⁸ The period of review was August 1, 1993-January 31, 1994.

On April 21, 1995, SECOFI concluded preliminarily that imports made under price discriminatory conditions from the United States constitute a threat to domestic production. However, SECOFI decided not to impose compensatory quotas, citing the "current economic

³³ David Wheat and Francisco Medina, "U.S., Mexico feed trade expanding," *Feedstuffs*, May 17, 1993, p. 1; data are derived from the Mexican National Swine Commission.

³⁴ The antidumping investigation was terminated without the imposition of antidumping duties after the U.S. and Mexican industries reached an understanding as described below.

³⁵ Testimony of Basilio F. Aja, executive vice president, Arizona Cattle Feeders Association (ACFA), transcript of the hearing, Mar. 20, 1997, pp. 59-60.

³⁶ In a USITC staff telephone interview on Feb. 19, 1997, Gustavo Uruchurtu Chauarin of SECOFI explained that the term "compensatory quotas" in the administration of Mexican antidumping margins and countervailing duties is comparable to U.S. antidumping margins or countervailing duties.

³⁷ Official Gazette (Diario Oficial), June 23, 1995 (2995 SECTION TWO), pp. 1-2.

³⁸ Interview with Gustavo Uruchurtu.

uncture” under which the quotas would hurt the consumer sector.³⁹ SECOFI found “price discriminatory margins” ranging from less than 1 percent to 35.03 percent.⁴⁰ SECOFI’s preliminary conclusion was published officially in the *Diario Oficial* (Official Gazette) on June 23, 1995.

Hearings concerning SECOFI’s preliminary conclusions were scheduled and parties were given 30 working days from the date of publication of the conclusions in the Official Gazette to present their arguments and supplementary evidence.⁴¹ SECOFI’s final conclusions were expected to be announced by October-November 1995;⁴² however such conclusions were not announced.

During the summer and winter of 1995 discussions were held between CNG and the National Cattlemen’s Association (NCA),⁴³ a representative of U.S. cattle interests. On April 25, 1996, the *Diario Oficial* reported that the investigation had been terminated at the request of CNG. The request for termination reportedly was a result of a Memorandum of Understanding (MOU) between CNG and NCA.⁴⁴

The MOU provided for several things, including: collaboration to increase trade in beef, variety meats, and beef cattle between the United States and Mexico; meetings to review animal health and inspection issues; NCA technical assistance to the CNG on a number of issues; and GSM-103⁴⁵ credit lines sufficient to cover a substantial portion of Mexican ranchers’ import needs of the next 2 years.⁴⁶

Subsequent to the termination of the antidumping investigation there were indications that another Mexican organization, the Asociacion Mexicana de Engordadores de Ganado Bovino, A.C., (AMEG--the Mexican Association of Cattle Feedyards), was considering filing an antidumping petition.⁴⁷ At the Commission’s hearing the AMEG contended that U.S. beef was being “dumped” in the Mexican market and injuring the Mexican live cattle sector.⁴⁸ AMEG was reported to have filed an antidumping petition with SECOFI on April 1, 1997 that claims that U.S. cattle carcasses are being sold at less than fair value in the Mexican market.⁴⁹

³⁹ *Diario Oficial*, pp. 73-74.

⁴⁰ Gustavo Uruchurtu reported that under the administration of Mexican antidumping and countervailing duty laws SECOFI is charged with determining threat or injury to a domestic industry and determining the amount of countervailing duties and antidumping margins.

⁴¹ *Diario Oficial*, p. 73.

⁴² USDA, FAS, *Livestock Annual* (MX5048), Aug. 1, 1995, p. 7.

⁴³ The National Cattlemen’s Association was renamed the National Cattlemen’s Beef Association, (NCBA).

⁴⁴ USDA, FAS, *Countervailing Duty Investigation on U.S. Beef* (MX6030), Apr. 30, 1996.

⁴⁵ GSM -103 refers to a U.S. Government loan guarantee program operated by the USDA.

⁴⁶ Memorandum of Understanding Between the CNG and the NCA, Jan 15, 1996.

⁴⁷ USDA, FAS, *Mexico’s U.S. Meat Dumping Claims Unfounded* (MX6138), Oct. 10, 1996, pp. 1-2; USDA, FAS, *Mexican Weekly Highlights and Hot Bites* (MX7015), Jan. 30, 1997, p. 2.; and, *El Financiero*, Feb. 6, 1997, p. 22A.

⁴⁸ Testimony of Enrique Lopez Lopez, director general, Mexican Association of Cattle Feedyards (AMEG), transcript of the hearing, Mar. 20, 1997, pp. 19-23.

⁴⁹ USDA, FAS, *Mexican Weekly Highlights and Hotbites*, April/Two, (MX7031), p. 1.

SECOFI may make a determination concerning whether to accept the petition by the first week in July 1997.⁵⁰

Mexican State Beef-Grading Systems and Regulations

There are no nationally accepted quality-grading standards for beef in Mexico. However, the Mexican States of Sonora and Sinaloa utilize State grading standards.⁵¹ In general, Mexican State quality-grading standards are comparable to the U.S. quality-grading standards⁵² which are discussed in chapter 2 of this report. The Mexican State quality-grading standard, "Primo" is the general equivalent of U.S. "Prime," and "Choice" is the approximate equivalent of U.S. "Choice." A number of domestic interests have expressed concern about Mexican State quality-grading standards on the ground that those standards have restricted U.S. exports of beef to Mexico. These interests contend that the Mexican State grading standards do not permit boxed beef, a product for which the United States is an especially efficient producer, to be graded,⁵³ thereby restricting U.S. exports of this product.

Mexican interests contend that the Mexican State grading standards limit grading to carcasses, and that boxed beef, which typically consists of subprimal cuts, cannot be graded regardless of whether it is Mexican or imported. Thus, they contend that the Mexican State quality-grading standards do not discriminate against imports.⁵⁴

At the Commission hearing, a representative of the ACFA stated that after entry into force of the NAFTA, the Mexican States of Sonora, Sinaloa, and Baja California required that all graded beef sold by authorized retailers be graded according to the respective Mexican States' grading system. According to the ACFA, this action has effectively excluded U.S. beef from markets in Sonora and Sinaloa.⁵⁵ The ACFA also said that in late 1992 the Mexican State of Sonora began implementing a meat-stamping program that required all U.S. beef to be identified by a brown stamp indicating "imported beef," whereas Mexican beef utilized a red label indicating "domestic beef." The ACFA further stated that this labeling procedure reduced export opportunities for U.S. beef in Sonora.

U.S. and Canadian Quality Grade Issues

During the course of the USITC investigation, and at the hearing, the Commission received several expressions of interest and concern about quality-grading issues in the United States and

⁵⁰ USITC staff telephone conversation with an official of USDA, FAS, U.S. Embassy, Mexico City, Apr. 23, 1997.

⁵¹ Testimony of Marco E. Ojeda, vice president, Grupo Viz, transcript of the hearing p. 33.

⁵² USITC staff interview with Gilberto F. Lozano, director of U.S. Meat Export Federation (USMEF), Mexico City, Feb. 19, 1997.

⁵³ USITC staff interviews with Bruce Cobb and Bryant Wadsworth of the USMEF, Denver CO, Jan. 27, 1997, and Gilberto F. Lozano, USMEF, Mexico City, Mexico, Feb. 10, 1997; Basilio F. Aja, ACFA; et al.

⁵⁴ USITC staff interview with Gilberto F. Lozano, USMEF, Mexico City, Feb. 10, 1997.

⁵⁵ Basilio F. Aja, Hearing Statement, Mar. 20, 1997.

Canada. Of specific concern is that grading practices in Canada may unnecessarily restrict U.S. exports of beef. Neither the NAFTA nor the URA specifically address grading practices. A discussion of grading systems in the United States and Canada for imported cattle and beef follows below.

USDA Quality Grading of Cattle Imported for Immediate Slaughter and of Imported Beef⁵⁶

Beef carcasses (including sides and quarters) derived from cattle imported for immediate slaughter are considered products of U.S. origin for purposes of USDA quality grading (but not for other programs such as beef purchased for the School Lunch Program). Nearly 95 percent of all steers and heifers slaughtered in U.S. plants typically are graded.⁵⁷ Reportedly, most steers and heifers that are not graded are slaughtered at small-volume plants that choose not to have USDA quality grading because of cost considerations. The majority of U.S. imports of steers and heifers for immediate slaughter from Canada are thought to be purchased by large-volume packers that have continuous USDA quality grading; consequently nearly all Canadian steers and heifers slaughtered in the United States are likely graded. Generally, carcasses derived from cull cows are not quality graded as this beef is typically used for manufacturing into products such as hamburger for which quality grades are usually not a concern. Of the 7.1 million cows⁵⁸ that were slaughtered in federally inspected plants in 1996, only 0.2 percent were graded.⁵⁹

Meat grading is administered by USDA's Agricultural Marketing Service (AMS).⁶⁰ According to USDA quality grading standards, "Meat of all eligible species shall be graded only in the establishment where the animal was slaughtered or initially chilled..."⁶¹ The AMS Director may grant prior approval for grading at a location other than the establishment of slaughter or initial chill if the AMS is unable to provide grading service in a timely manner and if the meat can be identified as being in conformity with the standards.⁶² The USDA grader must be notified of the intent to have the carcasses graded. The USDA also requires that imported meat be marked so that the name of the country of origin appears on most of the major retail cuts.⁶³ The mark of foreign origin may be removed after the USDA-quality grade is applied.

Beef carcasses that are imported from Canada were granted an exemption to the standard that meat will be graded only in the establishment in which the animals were slaughtered or initially

⁵⁶ The following description is adapted from USITC staff interview with Craig Morris, international marketing specialist, USDA, Agricultural Marketing Service (AMS), Mar. 26, 1997, except as noted.

⁵⁷ USDA, NASS, *Livestock Slaughter Annual*, various issues.

⁵⁸ USDA, NASS, *Livestock Slaughter 1996 Summary*, Mt An 1-2(97), Mar. 1997, p. 15.

⁵⁹ Facsimile from Larry Meadows, Chief, Meat Grading and Certification Branch, USDA, AMS, Feb. 20, 1997.

⁶⁰ 46 F.R. 63203, (Dec. 31, 1981).

⁶¹ *Code of Federal Regulations (CFR)*, 7 CFR §54.13, Jan. 1, 1996.

⁶² 7 CFR §54.13, Jan. 1, 1996.

⁶³ 7 CFR, §54.5, Jan 1, 1996.

chilled.⁶⁴ Since U.S. graders cannot grade beef outside the United States, the imported carcasses may be graded at designated U.S. locations.⁶⁵ In addition, USDA reports that grading services are automatic for Canadian carcasses when requested by the importer or exporter at least 1 day before it would be required and provided that grading service is available in the establishment for which it is requested.

There is no requirement for collecting data on the quantity of foreign carcasses (including beef carcasses) graded in the United States. However, the AMS estimates that between 2,000 and 4,000 imported carcasses are graded weekly in the United States.⁶⁶ Table D-51 provides an estimate of the number of pounds of imported Canadian beef receiving U.S. quality grades for 1992-96. Estimated U.S. imports of Canadian beef that was graded under USDA quality-grading standards accounted for between 0.3 percent and 0.6 percent of U.S. beef production during 1992-96.

Canadian Grading System and Labeling of Imported Beef

Beef carcasses in Canada are graded by officials of the Meat & Poultry Products Division (MPPD) of Agriculture and Agri-Food Canada (AAFC).⁶⁷ According to Canada's Agricultural Products Act, only carcasses which bear a Canadian meat inspection stamp are eligible for grading with Canadian grades. Consequently, U.S. beef carcasses exported to Canada cannot be graded with Canadian grades. The MPPD has not received any request by U.S. interests to have U.S. beef carcasses graded in Canada; however, MPPD indicates that if such a request were received, Canada would be obligated to reciprocate.⁶⁸

U.S. exports of beef to Canada can be labeled with a USDA quality grade or can be labeled as "no roll" (ungraded).⁶⁹ Effective July 29, 1996, AAFC eased grade labeling requirements for beef. As a result, U.S. meatpackers can export wholesale beef cartons to Canada employing the "or higher" statement in conjunction with a single USDA grade label description (e.g., USDA Select or Higher). Multiple grade designations are also permitted (e.g., USDA Select/USDA

⁶⁴ Letter to C. D. Caldwell, Counsellor Agriculture, Canadian Embassy, Sept. 24, 1980, from Michael L. Huggins, acting director, Meat Quality Division, Food Safety and Quality Service, USDA (now renamed the Food Safety and Inspection Service), Sept 24, 1980. USDA, AMS, letter-fax to USITC, Mar. 26, 1997.

⁶⁵ Request for USDA quality grading of imported carcasses is not limited to Canada; other countries may request an exemption. USITC staff interview on April 1, 1997 with representatives of the New Zealand Meat Producers Board indicated that while they are aware that they may request USDA quality grading standards they chose to promote their products through brand identification.

⁶⁶ Facsimile to USITC from USDA, AMS, Mar. 26, 1997.

⁶⁷ For a detailed description of the Canadian grading system see *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, USITC publication No. 2591, Jan. 1993, p. 3-5.

⁶⁸ Facsimile from USDA, FAS, U.S. Embassy, Ottawa, Apr. 1, 1997.

⁶⁹ Facsimile from USDA, FAS, U.S. Embassy, Ottawa, *Background: Canadian Grade Labeling Regulations*, Apr. 4, 1997.

Choice).⁷⁰ Changes to the grade labeling requirements are expected to facilitate the marketing of U.S. beef in Canada.⁷¹

USDA and AAFC Quality Grade Equivalency

A number of domestic and Canadian interests have expressed concern about the lack of quality grading equivalency between U.S. and Canadian grading standards. An industry source contends that cattlemen, processors, and consumers would benefit if processors that operate plants on both sides of the U.S.-Canadian border could supply markets in either country with beef with the same quality grades from cattle processed in either country.⁷² The CCA noted that lack of a grading equivalency agreement between the United States and Canada means that U.S. boxed beef sold in Canada must be sold as "USDA" or "Ungraded" and that Canadian boxed beef in the U.S. market must be sold without a grade and take the appropriate discount.⁷³

One study that sought to measure the impact of grade equivalency found, among other things, that the lack of equivalency added to the cost of U.S. beef in the Canadian market and Canadian beef in the U.S. market.⁷⁴ The study also found that equivalency would increase beef trade between the countries.

Sanitary and Phytosanitary Inspection Issues

During the course of the investigation interested parties, including ranchers and an agricultural organization,⁷⁵ expressed concern to the USITC about the adequacy of USDA sanitary and phytosanitary inspections for imported beef, especially from Canada. Sanitary and phytosanitary regulations applicable to domestic production and U.S. imports of animals and meat were described in chapter 2 of this report. As noted there, officials of the Food Safety and Inspection Service (FSIS) of the USDA reinspect U.S. imports of meat and poultry products before they are allowed into U.S. commerce. The criteria FSIS employs to judge whether a shipment meets U.S. requirements and passes reinspection is the same for every source country and it is the same standard enforced in U.S. plants for domestically slaughtered and processed meat.⁷⁶

The FSIS considers the inspection system of the eligible foreign countries, not its own reinspection at the port of entry, to be the primary control for ensuring that imported meat meets

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² USITC staff interview with Cary H. Humphries, Jr., vice president, Excel, Jan. 30, 1997.

⁷³ Prehearing brief of the CCA, Mar. 10, 1997, pp. 34-35.

⁷⁴ Hayes, Hayenga, and Melton, *The Impact of Grade Equivalency on Beef and Cattle Trade Between the United States and Canada*, Iowa State University, Department of Economics, Jan. 1996.

⁷⁵ Posthearing brief of the Montana Farm Bureau Federation, Apr. 3, 1997.

⁷⁶ USDA, FSIS, *Import Reinspection Between USDA and Agriculture Canada*, background papers, Feb. 1997.

U.S. standards.⁷⁷ As a check on the foreign countries' inspection performance, FSIS requires that every shipment of imported meat, including shipments from Canada, receive some level of U.S. inspector review at the border.⁷⁸

Background of U.S.-Canadian Import Inspection Process for Beef Relating to the NAFTA

The CFTA specifically addressed meat and poultry inspection. According to USDA, the FSIS modified U.S. reinspection procedures applicable to imports from Canada to bring these procedures into conformity with the CFTA.⁷⁹ Effective January 1, 1989, the FSIS amended the federal meat and poultry products regulations by providing "streamlined" procedures for reinspection of Canadian meat and poultry products and by exempting all meat and poultry products imported from Canada from the requirement that such product or containers of product be marked with the official mark of inspection.⁸⁰

The "streamlined" reinspection procedures provided that at the time a Canadian plant determined a consignment was destined for the United States a representative of the Canadian meat inspection system could contact the FSIS and request a reinspection assignment. FSIS would then determine whether a reinspection of that particular consignment was necessary. The FSIS determination was based on statistically based random sampling plans developed by FSIS. If no reinspection was determined to be necessary the product could proceed to the border through appropriate U.S. Customs controls, and then be delivered to the U.S. consignee. If FSIS determined that reinspection was necessary, the Canadian representative was informed as to the number of samples needed for reinspection according to established sampling tables. The Canadian representative was then to select and identify the samples and place them in an easily accessible area of the transportation vehicle. At the import inspection establishment the samples were to be removed for reinspection. If approved, the consignment was released into U.S. commerce.⁸¹

However, on December 27, 1989, the Canadian Government complained that U.S. inspectors were being unduly stringent; that the U.S. rate of reinspection had increased, and that the rate charged for U.S. border inspection fees had increased substantially. Consequently, U.S. and Canadian negotiators agreed to work toward harmonization of standards including the elimination of border reinspection for meat and poultry traded between the countries.⁸² As part of the implementation, the FSIS proposed the elimination of border reinspection, on an experimental basis, for a period not to exceed 1 year. The FSIS proposal also included, among

⁷⁷ Robinson, Robert A., director, Food and Agriculture Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office, *Food Safety Procedures for Inspecting Canadian Meat Imports*, testimony statement before the Committee on Small Business, U.S. Senate, Apr. 2, 1997, p. 1.

⁷⁸ Ibid.

⁷⁹ USDA, FSIS, *Meat and Poultry Inspection, 1989 Report of the Secretary of Agriculture to the U.S. Congress*, Mar. 1, 1990, p. 14.

⁸⁰ 54 F.R. 273 (Jan. 5, 1989).

⁸¹ 54 F.R. 273 (Jan. 5, 1989).

⁸² Agriculture Canada News Release, *Joint Statement-- Canadian Minister of Agriculture Don Mazankowski and U.S. Secretary of Agriculture Clayton Yeutter*, Feb. 26, 1990.

other things, exempting Canadian meat and poultry plants from certain regulations, and less stringent regulations applicable to U.S. meat and poultry exports to Canada.⁸³

The USDA received numerous comments concerning the proposal. Also the General Accounting Office (GAO) conducted a study relating to the proposal in July 1990 and issued a report entitled *Food Safety--Issues USDA Should Address Before Ending Canadian Meat Inspections*. The GAO study reported, among other things, that the FSIS determination that the Canadian inspection system for meat and poultry was equivalent to the U.S. system had not been adequately documented to allow an independent, objective review. The GAO report resulted in a March 1992 FSIS report entitled *Equivalency Study of the United States and Canadian Meat and Poultry Inspection Systems*, which concluded that the Canadian meat and poultry system is equivalent to the U.S. inspection system. On October 18, 1991, the USDA withdrew its proposal.⁸⁴ The USDA cited an overwhelming number of comments that led USDA to conclude it would be impossible to finalize the open border rule as proposed. USDA reported that since there had only been a proposed rule there was no change in reinspection practices.⁸⁵

On July 15, 1992, the United States and Canada entered into another understanding concerning meat and poultry reinspection.⁸⁶ This understanding provided that the United States and Canada would (1) work to provide destination import reinspection as a common goal, (2) not participate in the then current sample and preselection and prenotification procedures known as the "streamlined" process and (3) reinspect at the same rates in either country. Staged developments were built into the understanding. The staged developments included the end of Canada's participation in the streamlined reinspection procedures effective August 10, 1992. Notwithstanding these efforts, destination import reinspection has not been achieved.⁸⁷

One concern regarding the reinspection process that resulted from the July 15, 1992 agreement was that the samples of red meat carcasses were not selected on a purely random basis but only from the back of transportation vehicles.⁸⁸ The nonrandom sample occurred because of the great difficulty with off-loading, handling, and staging carcasses. None of the import reinspection establishments had the equipment or trained personnel to effectively unload and reload carcasses or the facilities to stage an entire load of carcasses for selecting random samples.⁸⁹

Consequently, on August 23, 1993, FSIS notified Canada and the industry of the need to have random access carcass inspection by January 1, 1994, in order to establish an appropriate

⁸³ 55 F.R. 26695 (June 29, 1990).

⁸⁴ 56 F.R. 52218 (Oct. 18, 1991).

⁸⁵ USDA, News Release, *USDA Withdraws Open Border Proposal for Canadian Meat and Poultry Products*, Oct. 17, 1990.

⁸⁶ *Meat and Poultry Reinspection Understanding Between Agriculture Canada and the U.S. Department of Agriculture*, signed by the United States representative on July 7, 1992 and by the Canadian representative on July 15, 1992.

⁸⁷ USITC staff interviews with officials of the USDA, FAS, U.S. Embassy, Ottawa, Apr. 3, 1997; FSIS officials, Apr. 1, 1997; and counsel for the CCA, Apr. 1, 1997.

⁸⁸ *Report of the United States - Canada Technical Working Group on the Reinspection of Canadian Red Meat Carcasses Imported into the United States*, p. 3.

⁸⁹ *Ibid.*

reinspection procedure.⁹⁰ On January 8, 1994, the U.S. Secretary of Agriculture and the Canadian Minister of Agriculture requested a Technical Working Group to explore options for red meat carcass reinspection.⁹¹ The Technical Working Group devised a proposed system, and on September 25, 1994, an agreement to test the proposed system was formalized,⁹² and resulted in the current import reinspection process.

Current U.S.-Canadian Inspection Systems for Canadian Beef⁹³

Canada is unique among countries that export to the United States in that its sanitary and phytosanitary inspection system is virtually the same as the U.S. system. These similarities were documented in a March 1992 report by FSIS entitled *Equivalency Study of the United States and Canadian Meat and Poultry Inspection Systems*. Because of the similarities in the U.S. and Canadian inspection systems, both countries are committed to extending the same equivalency to systems for reinspecting imported meat and poultry products imported from the other country.

After a shipment has passed AAFC inspection and is certified for export to the United States, it proceeds to the U.S.-Canada border. All Canadian meat shipments receive a visual check for container damage and inaccurate labeling or paperwork.⁹⁴ All Canadian meat shipments must stop at the import inspection station at the border to receive a reinspection assignment. The transportation vehicle may proceed inland to have the reinspection completed, but almost all reinspections take place at one of nine main locations along the Canadian border. As of April 1997, only two U.S. destination facilities were authorized to conduct import reinspection.⁹⁵

When the vehicle arrives at the FSIS import reinspection station, the inspector receives a reinspection assignment for the shipment from the USDA Automated Import Inspection System (AIIS). For meat offered for importation from Canada, the AIIS⁹⁶ is modified.⁹⁷ Rather than assigning inspections on the basis of the product type, the automated system is programmed to (1) randomly generate about 3,000 inspect assignments annually, at a rate of about 250 per month, and (2) automatically generate inspect assignments for those meat producers that are placed in intensified inspection status because of recent compliance problems. For Canadian

⁹⁰ Ibid., attachment 1.

⁹¹ Ibid.

⁹² USDA, FSIS, *Meat and Poultry Inspection 1994 report of the Secretary of Agriculture to the U.S. Congress*, Sept. 1995, p. 24.

⁹³ The following description of the reinspection procedures applicable to U.S. imports of beef from Canada was adapted from USDA, FSIS, *Import Reinspection Between USDA and Agriculture Canada*, background papers, Feb. 1997, except where noted.

⁹⁴ Robinson, Robert A., director, Food and Agriculture Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office, *Food Safety Procedures for Inspecting Canadian Meat Imports*, testimony statement before the Committee on Small Business, U.S. Senate, Apr. 2, 1997, p. 1.

⁹⁵ Ibid., p. 2.

⁹⁶ The AIIS is described in chapter 2 of this report in the section entitled *Sanitary and Phytosanitary Measures*.

⁹⁷ Ibid., pp. 3-4.

meat producers, 15 consecutive shipments of the refused type of product--equaling at least 15 times the weight of the refused shipment--must pass inspection regardless of product type or reason for refusal before the producers are subject to the previous reinspection procedures.⁹⁸

For calendar year 1996, approximately 90 percent of Canadian meat shipments received skip assignments, about 7 percent received inspect assignments, and about 4 percent received intensified inspect assignments triggered by previous compliance problems.⁹⁹ Skip assignments for Canadian shipments also differ from those for other countries in that rather than unloading the shipment, inspectors check only what is visible when the rear doors of the carrier are opened.¹⁰⁰

For inspect assignments the vehicle is unloaded at the border inspection facility (except for carcasses as described below) and the FSIS inspector checks all documents, including the export certificate from AAFC, verifies labeling, and performs all applicable inspection assignments. Generally, for fresh product, the inspector looks for defects and contamination and takes a sample to send to the laboratory to check for species and residues of drugs and pesticides. For processed products, inspection may also include checks for net weight, condition of container, and laboratory analyses for species, microbiological contamination, and food chemistry (such as fat, water, and nitrite levels). Products such as ground meat are subject to microbiological tests for *E. coli* 0157:H7.

The inspector randomly chooses samples from throughout the shipment to conduct the reinspection. Random numbers are available from the computer, or inspectors can use other methods of generating random numbers. Every container in the shipment has an equal chance of being selected for inspection. The number of samples selected for reinspection is sufficient to provide a picture of the condition of the entire shipment.

If the shipment passes reinspection, the documents are stamped, and the vehicle moves inland. If examination of the samples results in a rejection, the entire shipment is rejected and must return to Canada.

Effective February 16, 1997, FSIS began a new system for reinspecting Canadian red meat carcasses to increase confidence in the current system. Under the new procedures, AAFC meat inspectors select samples according to U.S. requirements, mark those samples, and ensure they are loaded at the back of the transportation vehicle. When the carrier reaches the border and the load is an "inspect" assignment, the FSIS inspector will use the randomly selected samples to conduct reinspection. To verify that the samples are selected correctly by Canadian inspectors, FSIS performs a verification check at the final destination. FSIS inspectors examine, at destination points, about 15 carcass shipments per month that are not examined at the border.¹⁰¹ Inspectors look at the entire lot, randomly selecting samples, and compare the results obtained with the results FSIS import inspectors obtain at the border. These comparisons enable FSIS to determine if Canadian inspectors are selecting samples correctly.

⁹⁸ Ibid.

⁹⁹ Ibid., p. 4.

¹⁰⁰ Ibid.

¹⁰¹ Ibid., p. 2.

The new system for reinspecting Canadian red meat carcasses that became effective on February 16, 1997, was adopted in part because only 1 (facility number I-47 at Sweetgrass, Montana) of the 21 FSIS approved inspection facilities along the U.S.-Canadian border has sufficient facilities to arrange a load of carcasses for random selection for reinspection.¹⁰²

Canadian Import Regulations Applicable to Bluetongue Disease

Bluetongue disease occurs in the United States¹⁰³ but AAFC officials have determined that the disease has not been established in Canada.¹⁰⁴ Canadian import regulations associated with bluetongue disease have been a source of controversy for U.S. and Canadian cattlemen for several years.¹⁰⁵ Bluetongue is a viral disease capable of producing severe clinical signs in sheep.¹⁰⁶ Cattle, goats, and wild ruminants can be infected with bluetongue virus but their general health remains unaffected except in very rare instances.¹⁰⁷ However, cattle are a reservoir for future bluetongue infections in sheep.¹⁰⁸ In cattle naturally occurring antibodies will kill the bluetongue virus within about 100 days of the animal being infected.¹⁰⁹ Bluetongue virus is transmitted by infected biting insects (vectors) found throughout the United States during warm weather. Bluetongue occurs seasonally during the summer months when the vector is most active.¹¹⁰ The vectors capable of transmitting bluetongue may be active in Canada between April 15 and October 15.

Effective October 18, 1995, Canadian testing requirements relating to bluetongue disease and applicable to certain animals offered for importation into Canada from the United States were amended.¹¹¹ The amended import-testing requirements and the description of the test regimes are reproduced in appendix J. The amended Canadian regulations were formulated by the Canadian Federal Government after discussions with the Animal Health Working Group under

¹⁰² Ibid., pp. 4-5.

¹⁰³ USITC staff telephone conversation with Dr. Lisa Furgeson, USDA, APHIS, Apr. 8, 1997.

¹⁰⁴ Agriculture and Agri-Food Canada, news release and backgrounder, *Bluetongue Regulations Amended*, Oct. 18, 1995.

¹⁰⁵ USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, USITC publication 1996, July 1987, pp. 100-101 and *Live Cattle and Beef: U.S. and Canadian Industry Profiles, Trade, and Factors of Competition*, investigation No. 332-328, USITC publication 2591, Jan. 1993, p. 3-9.

¹⁰⁶ Sheep Industry Development (SID) program, *SID Sheep Production Handbook*, June 1988, Health-34. For a more detailed discussion of bluetongue disease see USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, USITC publication 1996, July 1987, pp. 100-101.

¹⁰⁷ Sheep Industry Development (SID) program, *SID Sheep Production Handbook*, June 1988, Health-34.

¹⁰⁸ Ibid.

¹⁰⁹ USITC staff telephone conversation with W. J. McElhran, International Trade Team, Animal Health Division, Agriculture and Agri-Food Canada, June 11, 1997. Dr. McElhran indicates that scientific opinion varies concerning the length of time required to kill the virus.

¹¹⁰ Sheep Industry Development (SID) program, *SID Sheep Production Handbook*, June 1988, Health-34.

¹¹¹ *Canada Gazette*, part II, vol. 129, No. 21, Oct. 18, 1995, pp. 2843-2853.

the CFTA.¹¹² The Animal Health Working Group is an industry advisory organization that has members from the U.S. National Cattlemen's Beef Association, the USDA Animal and Plant Health Inspection Service (APHIS), the Canadian Cattlemen's Association, and AAFC.¹¹³ Canada's major trading partners, the United States, the EU, Australia, New Zealand, and Japan, were consulted and accepted the amendment.¹¹⁴

The specific tests used for the determinations under the amended Canadian testing requirements (the Agar Gel Immunodiffusion Test (AGID) and the c-ELISA) were developed in the United States and are the standard tests for bluetongue. Canada's bluetongue testing requirements vary based on four factors: (1) the purpose for which the animals are offered for importation--i.e., for breeding purposes or for feeding; (2) the incidence (prevalence) of bluetongue disease in the state from which the animals are offered for importation; (3) the time of year when the animals are offered for importation, or so-called vector free dates --dates after frosts have occurred which will kill insects that are the vectors of the bluetongue virus; and, (4) the risk of introduction of bluetongue disease into Canada.¹¹⁵ Canada's testing requirements are less stringent for feeder cattle offered for importation than for animals for breeding purposes offered for importation because feeders will likely be kept for a relatively short time before they are slaughtered for meat, whereas animals for breeding might well be kept for several years before they are slaughtered.¹¹⁶ See appendix J.

Lack of Access to USDA Sanitary and Phytosanitary Inspection and Quality Grading Outside the United States

The Imperial Valley Cattle Feeders Beef Plant Task Force (Task Force) has indicated that cattle feeding in Imperial Valley, California has not benefited from the NAFTA or the URA.¹¹⁷ The Task Force has proposed that the U.S. and Mexican Governments negotiate a NAFTA provision to permit the USDA sanitary and phytosanitary inspection and quality grading of U.S.-grown cattle in border beef processing facilities in Mexico within 25 miles of the U.S.-Mexican border.¹¹⁸

The USITC received a submission from the Agricultural Commissioner of Imperial County California supporting the USDA grading of "U.S. grown cattle" and beef processed within 25 miles of the U.S. border. The submission included a copy of a resolution of the Imperial County Board of Supervisors "supporting USDA grading and inspection of U.S. grown cattle in border beef processing facilities."

¹¹² Ibid., p. 2851.

¹¹³ USITC staff telephone conversation with Dr. Lisa Furgeson, USDA, APHIS, Apr. 8, 1997.

¹¹⁴ *Canada Gazette*, part II, vol. 129, No. 21, Oct. 18, 1995, p. 2852.

¹¹⁵ Ibid., pp. 2843-2853.

¹¹⁶ USITC staff telephone conversation with Claude Lavigne, Food Production and Inspection, Agriculture and Agri-Food Canada, Apr. 17, 1997.

¹¹⁷ Posthearing brief of the Imperial Valley Cattle Feeders Beef Plant Task Force, Apr. 2, 1997, p. 1.

¹¹⁸ Ibid., p. 4.

Representatives of the Mexican Association of Cattle Feedyards (AMEG) and Grupo Viz support amending¹¹⁹ U.S. laws to provide for USDA quality grading and sanitary and phytosanitary inspection services at Mexican beef processing plants within 25 miles of the U.S.-Mexican border.¹²⁰ The amendment would allow cattle originating in the United States to cross into Mexico for slaughter without losing their status as U.S. cattle.¹²¹ AMEG and Grupo Viz contend that the amendment would benefit U.S. cattle interests including cattlemen from the Imperial Valley of California by generating more business and jobs for them, farmers, and the various service companies they all depend on.¹²²

U.S. Government Implementation of Cost Recovery for Import and Export Inspection

Effective September 1, 1994, the USDA implemented a cost recovery program for inspection and certification of animals, including cattle for immediate slaughter and meat, including fresh, chilled, or frozen beef and veal for importation into, exportation from, and transit through the United States.¹²³

The minimum fee for any import inspection of live animals as of March 1997 was \$16.50. The fee for inspection of slaughter animals of all types for ports along the U.S.-Mexican border was \$2.50 per animal whereas the fee for all other ports was \$16.50 per load.¹²⁴ Reimbursable overtime schedules for APHIS employees, ranging from \$25 to \$47.96 per hour, and premium schedules ranging from \$65 to \$74 per hour were established under various circumstances.¹²⁵ In addition to the fees associated with inspection of live animals, fees for inspection of approved import establishments, warehouses, and facilities were \$262.75 each for the first year of approval and \$152 for renewed approval.¹²⁶ The fee for endorsing export health certificates for a shipment of animals for slaughter to Canada or Mexico was \$24.50.¹²⁷ The hourly fee for export inspection and supervision services for live animals is \$56 (with a 1-hour minimum) and with a provision for overtime under certain circumstances.¹²⁸

¹¹⁹ In a posthearing brief the Viz Cattle Corporation offered the following language for the amendment: "The United States Department of Agriculture (USDA) shall provide USDA grading and inspection of U.S. grown cattle processed in border beef processing facilities, provided that "U.S.-grown cattle," be defined as any cattle grown in the United States for a period of 100 days or more immediately prior to processing, and provided that "border beef processing facilities" be defined as located within 25 miles of the U.S. border."

¹²⁰ Prehearing brief of AMEG and Grupo Viz, Mar. 8, 1997, p. 8, and transcript of the Commission's hearing on investigation number 332-371, pp. 24-29.

¹²¹ Prehearing brief of AMEG and Grupo Viz, Mar. 8, 1997, p. 7.

¹²² *Ibid.*, p. 8.

¹²³ USITC staff interview with Joan M. Arnoldi, deputy administrator, Veterinary Services, USDA, Animal and Plant Health Inspection Service (APHIS), Jan. 30, 1997.

¹²⁴ USDA, APHIS, *Live Animal Import User Fee Schedule*, exhibit 7-2, ch. 7, p. 1.

¹²⁵ *Ibid.*, p. 4.

¹²⁶ *Ibid.*, p. 3.

¹²⁷ USDA, APHIS, *Export User Fee Schedule*, exhibit 8-1, p. 1.

¹²⁸ *Ibid.*, p. 2.

U.S. Department of Labor NAFTA Transitional Adjustment Assistance

Title V of the North American Free Trade Agreement Implementation Act provides for, among other things, NAFTA Transitional Adjustment Assistance (NAFTA-TAA). Adjustment assistance is provided to workers found to be eligible by the Office of Trade Adjustment Assistance of the U.S. Department of Labor. This office reported applications by four firms for NAFTA-TAA in the 4-Digit SIC breakouts applicable to live cattle.¹²⁹ Twenty-seven workers at two firms were found to be eligible to apply for NAFTA-TAA. Workers at two other firms were denied eligibility to apply for NAFTA-TAA.

Peso Devaluation and Mexican Beef Import Demand

As noted earlier, U.S. exports of fresh, chilled, or frozen beef increased sharply in 1994, the first full year of the NAFTA, but then fell to much lower levels in 1995 and 1996. However, less than one year after implementation of the NAFTA, Mexico experienced a period of macroeconomic instability, which also resulted in a declining value of the peso starting in November 1994. To provide further understanding of the impact of the NAFTA, staff conducted an empirical analysis that distinguishes the differential effects of the peso devaluation and the NAFTA on U.S. exports of beef to Mexico.¹³⁰

After trading in the range of 3.1 to 3.4 pesos per dollar for most of 1994, the peso fell to 3.9 pesos per dollar in December, and after continuing to devalue in January and February, reached 6.7 pesos per dollar in March 1995¹³¹ (figure 4-2). For the remainder of 1995 the exchange rate remained in the 6.0 to 7.7 pesos per dollar range. The devaluation of the peso led to inflation (52 percent for 1994), sharply rising interest rates, a sudden drop in gross domestic product (GDP), and a decline in real consumer expenditure per capita. In the second quarter of 1995, GDP was down almost 10 percent compared with the previous year, and real GDP declined almost 7 percent between 1994 and 1995.¹³²

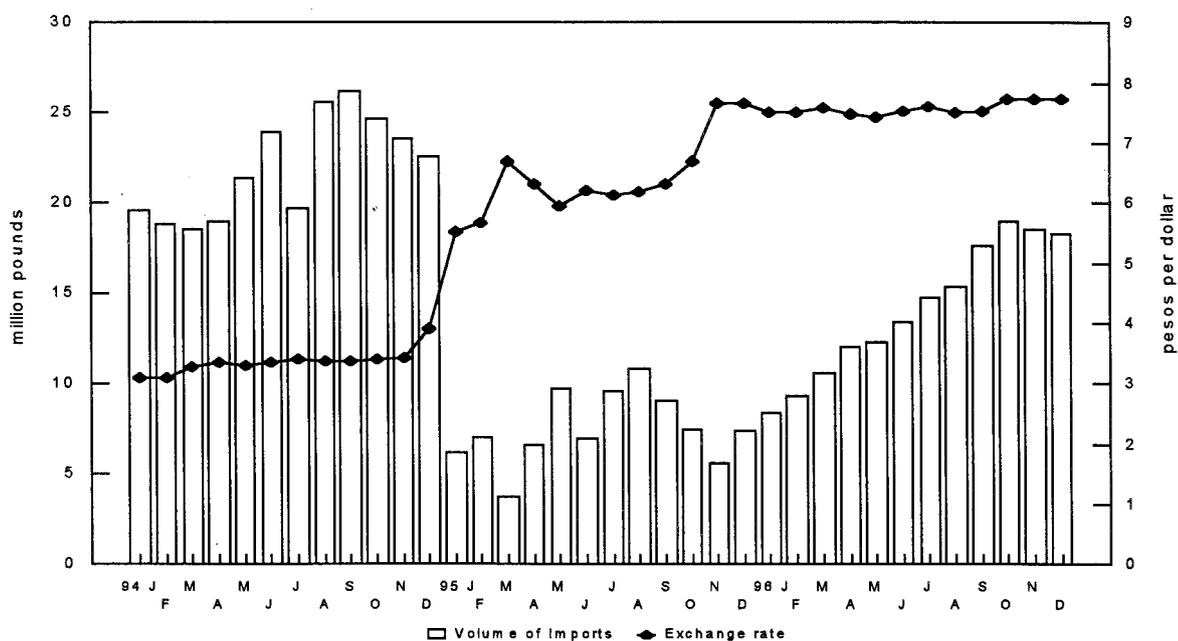
¹²⁹ U.S. Department of Labor, Office of Trade Adjustment Assistance, facsimile Notices of determination, Apr. 10, 1997.

¹³⁰ For a discussion on the reasons for the peso devaluation see C. Valdez, USDA, ERS, *Agricultural Outlook*, April 1995.

¹³¹ International Monetary Fund, Financial Statistics.

¹³² USDA, FAS, *Mexico Economic and Financial Report*, Jan. 1997.

Figure 4-2
 Mexican beef imports and peso/dollar exchange rate, by month, Jan. 1994-Dec. 1996



Source: Confederacion Nacional Ganadera, Informacion Economica Pecuaria, Apr. 1996; International Monetary Fund, International Financial Statistics.

The peso devaluation had an important effect on Mexican imports of beef. In addition to a drop in consumer income, during the first half of 1995, Mexican purchase prices for imported beef increased approximately 40 to 50 percent,¹³³ while beef prices at the retail level rose 20 percent.¹³⁴ In each of the third and fourth quarters of 1994, Mexican beef imports from all countries were about 70 million pounds.¹³⁵ However, during the first quarter of 1995, these imports declined to less than 18 million pounds, increasing only slightly in the second quarter to 23 million pounds. Beef imports for all of 1994 were 265 million pounds compared to 90 million pounds in 1995, a decline of two-thirds.

U.S. exports of fresh, chilled, or frozen beef to Mexico were significantly disrupted by the peso devaluation, falling from 201 million pounds, valued at \$227 million in 1994 to 85 million pounds, valued at \$85 million in 1995 (table D-20). In spite of the sharp decline in the quantity of U.S. exports, the share of Mexico's beef imports supplied by the United States increased from 76 percent in 1994 to 93 percent in 1995.¹³⁶ As the economy improved in 1996, U.S. exports of fresh, chilled, or frozen beef to Mexico increased to 164 million pounds (table D-20).

¹³³ USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Apr. 1995.

¹³⁴ USDA, FAS, *Annual Livestock Report (MX6099)*, Aug. 1996.

¹³⁵ Confederacion Nacional Ganadera, *Informacion Economica Pecuaria*, Apr. 1996.

¹³⁶ *Ibid.*

While the peso devaluation significantly reduced overall U.S. exports of beef to Mexico, trade between the United States and Mexico in some meat products was assisted by the weak peso.¹³⁷ The United States supplies two distinct markets in Mexico—the retail sector, where lower-priced products are sold to the Mexican consumers through supermarkets and other retail outlets; and the hotel, restaurant, and institution (HRI) sector, where higher priced products are sold. While trade in the retail market declined significantly, the demand characteristics of the HRI trade are such that sales are relatively isolated from macroeconomic instability and changes in exchange rates when compared with the retail sector. Moreover, the devalued peso made Mexico attractive to many U.S. tourists which boosted beef sales to the HRI sector. As a result, the peso devaluation provided a boost to U.S. sales of high-quality beef to Mexico's HRI sector and moderated the overall impact of the peso devaluation on U.S. beef exports.¹³⁸

¹³⁷ USITC staff interview with Gilberto Lozano, director of U.S. Meat Export Federation, Mexico City, Feb. 19, 1997.

¹³⁸ Statistics concerning sales of beef into the retail and HRI sectors are not separately reported.

Empirical Analysis of the Impact of the NAFTA on Mexican Imports of U.S. Beef^{139, 140}

The empirical analysis is based on equations explaining Mexican imports of beef and the U.S. share of those imports. The equations were estimated using econometric techniques (details of the econometric analysis are provided in appendix D). Separating out the impacts of the NAFTA on Mexican imports of beef from those of the peso devaluation of 1995-96 was a key challenge for this analysis.

Approach

The approach taken was to evaluate the level of Mexican beef imports from the United States under different assumptions about prices, incomes and trade policies that capture scenarios involving the NAFTA. Four separate scenarios were evaluated, including imports of U.S. beef:

- with the NAFTA, with peso devaluation (simulation 1),
- without the NAFTA, with peso devaluation (simulation 2),
- with the NAFTA, without peso devaluation (simulation 3), and
- without the NAFTA, without peso devaluation (simulation 4).

¹³⁹ For Vice Chairman Bragg's views on econometric modeling, see *The Economic Effects of Antidumping and Countervailing Duty Orders and Suspension Agreements*, USITC publication 2900, June 1995 at xii, and, *The Impact of the North American Free Trade Agreement on the U.S. Economy and Industries: A Three Year Review*, investigation No. 332-381, USITC publication 3045, June 1997 (expected to be released to the public in July 1997).

¹⁴⁰ Commissioner Newquist notes that although he does not necessarily disagree with many of the "findings" in this report, he is generally skeptical of conclusions drawn from economic models rather than empirical quantification. In his view, economic modeling is essentially an exercise in untested, unverifiable, and often unrealistic theory. At its base level, economic modeling is nothing more than the manipulation of "data" and often vague or unspecific "variables." Underlying the data collection and identification of variables is the individual modeler's prejudices and subjective assumptions.

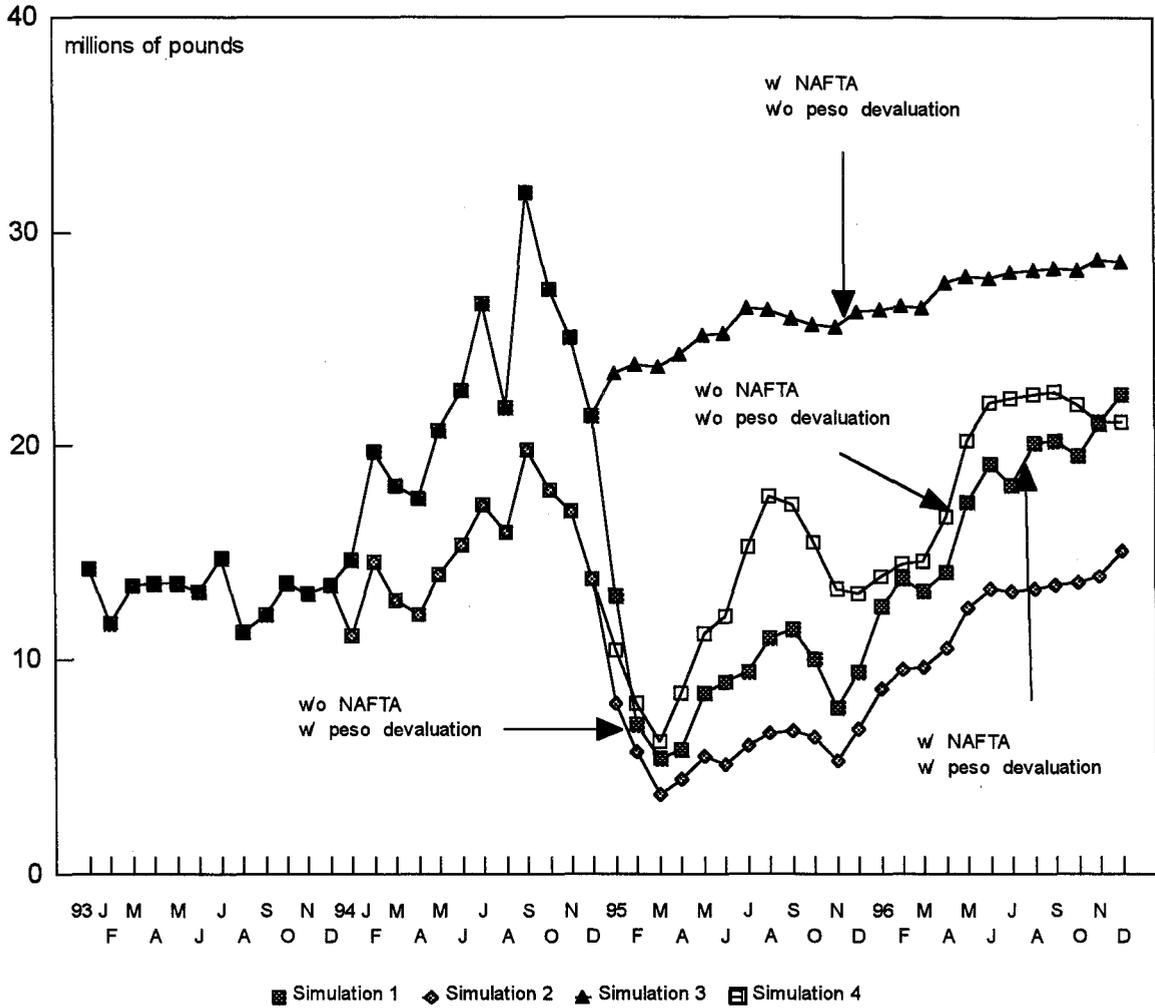
Thus, individuals measuring the impact of a particular event or occurrence, may employ completely different assumptions and focus on different variables--to say nothing of "ranges" within the assumptions and variables. Likewise, the quality and representativeness of data collected must be assessed and acknowledged.

Commissioner Newquist does not dispute that model results in this report may represent a particular manipulation of available data using certain assumptions. However, given the limitations of the modeling exercise, he questions the extent to which policy decisions should be based on these manipulations, particularly where, as here, some of the "measuring" is of events that did not occur.

For further discussion of Commissioner Newquist's view regarding economic modeling, particularly its limitations, *see*, *The Impact of the North American Free Trade Agreement on the U.S. Economy and Industries: A Three Year Review*, investigation No. 332-381, USITC publication 3045 at appendix F (June 1997) (expected to be released to the public in July 1997); *The Economic Effects of Antidumping and Countervailing Duty Orders and Suspension Agreements*, investigation No. 332-344, USITC publication 2900 at xi ("Views of Commissioner Don Newquist") (June 1995); *see also*, *Potential Impact on the U.S. Economy and Industries of the GATT Uruguay Round Agreements*, volume I, investigation No. 332-353, USITC publication 2790 at I-7, n.17 (June 1994); *Potential Impact on the U.S. Economy and Selected Industries of the North American Free-Trade Agreement*, investigation No. 332-337, USITC publication 2597 at 1-6, n.9 (January 1993).

Simulation 1 represents the actual situation and serves as a comparison with the counter-factual simulations 2, 3, and 4. The analysis was undertaken for the period January 1994 to December 1996, and the results are shown in figure 4-3, and also in appendix I, table 2. Each simulation is discussed in detail below.

Figure 4-3
Impact of NAFTA and peso devaluation on Mexican beef imports from the United States, by month, Jan. 1993-Dec. 1996



Source: USITC estimates (see appendix I).

- *Simulation 1 - Mexican beef imports from the United States with the NAFTA, with peso devaluation*

Simulation 1 represents the factual case and is used as the base simulation with which to compare the three counter-factual simulations. In this simulation, income and other macroeconomic variables were kept at their actual levels, while the tariff rates on imported beef were included according to the NAFTA (i.e., reduced to zero for the United States and maintained at the 15 - 25 percent range for the rest of the world). The NAFTA dummy variable in the share equation was set equal to 1 (see equation 5, appendix I).

The model predicted Mexican beef imports from the United States at 267 million pounds in 1994, representing an 86 percent share of total Mexican imports of 308 million pounds. Total imports decline to only 111 million pounds in 1995, although the U.S. share of these imports increases to 97 percent. Imports were predicted to rebound in 1996 to 216 million pounds, of which the United States supplies 98 percent (211 million pounds).

- *Simulation 2 - Mexican beef imports from the United States without the NAFTA, with peso devaluation*

Simulation 2 estimates what Mexico's demand for U.S. beef would have been without the NAFTA. Comparing simulations 1 and 2 measures the impact of the NAFTA in beef trade *ceteris paribus*, excluding the effects of the peso devaluation and other factors. In this simulation, the Mexican income variable was assumed to follow the pattern of actual income with a sharp decline in 1995 because of the peso crisis. However, the income growth rate was reduced by 0.5 percent based on the assumption that the NAFTA provides an incremental 0.5 percent increase in the growth rate in GDP.¹⁴¹

It was also assumed that the tariff rates on imported beef from the United States would have remained at the rates prevailing in 1993 (i.e., were not reduced to "Free" in January 1994). This affected the price of imported beef in the total import demand equation as well as the U.S. import price in the share equation. The NAFTA dummy variable in the share equation was set at zero over the entire simulation period.

Without the NAFTA, the analysis indicates that Mexico would have imported about 182 million pounds of beef from the United States in 1994, compared with 267 million pounds under the Agreement. This reduction is due both to a decline in the overall level of imports, as well as to a decline in the U.S. share (only 73 percent compared to 86 percent). This is because import prices would have been higher without the tariff reductions, and income growth would have been lower without the Agreement. With the NAFTA, Mexico is predicted to import 108 million pounds of U.S. beef in 1995, compared with only 70 million pounds if no agreement had been reached. Thus, for 1995, incremental imports because of the NAFTA were about 38 million pounds. The U.S. share of Mexican beef imports would likely have been about 84 percent compared with the base scenario of 97 percent. In 1996, Mexico is predicted to import almost 64 million pounds more beef from the United States because of the NAFTA (comparing 211 million pounds under the NAFTA with 147 million pounds without the NAFTA).

¹⁴¹ USDA, ERS, *Effects of the North American Free Trade Agreement on U.S. Agricultural Commodities*, Mar. 1993.

- *Simulation 3 - Mexican beef imports from the United States with the NAFTA, without peso devaluation*

The third simulation represents what would have occurred in U.S./Mexican beef trade in the absence of the peso devaluation. Tariff reductions under the NAFTA are assumed to take place, thereby reducing the price of beef imported from the United States. The NAFTA dummy variable is set at one starting in January 1994. Thus the U.S. share of Mexican beef imports is assumed to remain the same in both the "with" and "without" peso devaluation scenarios. The main impact is through the income variable in the total import demand equation. Here income is assumed to increase by 3.5 percent, equal to the rate experienced in 1994.¹⁴² The exchange rate and price deflators were kept at their 1994 levels assuming purchasing power parity holds in the long-run.

Because the peso devaluation started at the end of 1994, impacts are measured for 1995 and 1996. In 1995, if there had been no peso devaluation, total Mexican beef imports would have been 310 million pounds, compared with the base scenario imports of about 111 million pounds. Assuming a U.S. share of 97 percent in both cases, imports from the United States would have been 301 million pounds without the devaluation, compared with only 108 million pounds with the devaluation. Thus, in 1995, the peso crisis reduced U.S. beef sales to Mexico to roughly one-third of what they otherwise would have been. In 1996, the economic recovery increased Mexican imports of U.S. beef to almost 211 million pounds. However, if the peso had not devalued, Mexican demand for U.S. beef would have been 332 million pounds, 57 percent more than was the base simulation. Thus, during the 2-year period, the peso devaluation is estimated to have cost the U.S. beef industry losses on about 315 million pounds of beef exports to Mexico, valued at almost \$300 million.

- *Simulation 4 - Mexican beef imports from the United States without the NAFTA, without peso devaluation*

The final simulation combines the two previous ones to evaluate what Mexican imports of U.S. beef would have been without the NAFTA and without the peso devaluation. The price, income and policy assumptions embodied in this simulation are the same as those described above for the individual NAFTA and peso devaluation scenarios.

The results for 1994 are the same as in simulation 2, given that the peso devaluation did not begin until the end of 1994. In 1995 Mexican imports from the United States were estimated to be about 149 million pounds compared with base level imports of 108 million pounds, while for 1996 total imports and imports from the United States were 233 million pounds and 211 million pounds, respectively. Thus, under this simulation, it is estimated that trade in beef between the United States and Mexico would have been fairly similar to actual levels.

¹⁴² U.S. Embassy, Mexico, Mexico Economic and Financial Report, Jan. 1997.

Results

The preferential tariff treatment enjoyed by the United States following the NAFTA has meant that it now supplies almost all the beef imported into Mexico. The large market share held by the U.S. industry is unlikely to change until the tariffs on competing suppliers are removed. According to the model results, the NAFTA expanded Mexican imports of U.S. beef by 187 million pounds during 1994-96, valued at \$180 million.

The results also show that the drop in U.S./Mexican beef trade in 1995 and 1996 compared with earlier years was due largely to the devaluation of the peso. According to the empirical results, the peso devaluation caused a loss in U.S. beef exports of about 314 million pounds, valued at almost \$300 million, which more than offset the benefits of the NAFTA during the period under review.¹⁴³

Empirical Analysis of Canadian Exports of Live Cattle for Slaughter to the United States

An empirical analysis was also undertaken to identify and measure the factors, including the NAFTA, explaining Canadian exports of live cattle for slaughter (LCFS) to the United States. A single equation econometric model was used, the details of which are reported in appendix K, to address the following key questions: what economic factors influence the trade flow in LCFS between the United States and Canada; did the NAFTA have an impact on Canadian exports of LCFS to the United States; do changes in Canadian grain prices affect LCFS trade; how did changes in plant capacity in Southern Alberta affect Canadian exports of LCFS to the United States; and, what will be the likely outlook for LCFS trade in the near-term?

According to the results of the estimated equation shown in appendix K, the factors found to influence Canadian exports of LCFS to the United States include the prices of slaughter steers on either side of the border. The elasticity of trade with respect to U.S. and Canadian prices is estimated at 3.7, indicating packers are highly sensitive to price differentials between the United States and Canada. Cattle inventories were also found to be highly important in explaining the future level of live cattle trade.

The estimated equation indicated that the NAFTA has not had any major impact on the trade in LCFS. This can be explained by the fact that the ad valorem equivalent (AVE) of the rate of duty for LCFS was less than 2 percent AVE before January 1994 when the NAFTA was

¹⁴³ As in any modeling exercise the results are open to challenge. It is acknowledged that there are several aspects of the modeling exercise that may have led to an under- or over-estimation of the true impacts of the NAFTA. Among these are possible weakness in the raw data, simplifying assumptions about the decision making processes of importers and exporters, assumption in the model specification, choice of estimator, and assumptions about the model's exogenous variables in the counterfactual analysis. Because of these potential sources for error, the modeling procedures and assumptions have been made as transparent as possible. However, while readers must exercise caution with respect to the precise magnitudes of the policy impacts, they can be confident of the overall trends and direction of effects associated with the NAFTA and the peso devaluation that are predicted by the model.

implemented. Further, grain prices were found not to be important in explaining the pattern of trade over the last few years.

Canadian slaughtering capacity was found to be a key factor in determining Canadian exports of LCFS to the United States. According to the results of the model, the increased capacity in the fall of 1996 led to an average decline of 44,000 animals per month being shipped to the United States. With additional capacity utilization, such as that at the IBP plant in mid-1997, it is likely that even fewer cattle will be shipped to the United States.

The econometric analysis indicates that during 1997 and into 1998, Canadian exports of LCFS should decline from the 1996 level assuming no significant change in the relative U.S./Canadian steer price.¹⁴⁴ This drop in exports is attributed to smaller Canadian cattle inventories during the latter part of 1996, and increased slaughtering capacity in Canada in 1997.

While increased slaughtering capacity in Canada likely will result in fewer live cattle for slaughter moving south, it may also provide opportunities for increased shipments of feeder and slaughter cattle to Canada. If so, then Canada will increasingly export beef rather than live slaughter cattle, particularly if efforts to harmonize the meat-grading system of both countries are successful. ■

¹⁴⁴ This result must be heavily qualified by the assumptions of the model, its specification and accuracy of data. Readers should interpret the results as likely direction in trend rather than precise forecasts of cattle movements.

CHAPTER 5

TRANSSHIPMENT ISSUES

This chapter describes steps that the U.S. Customs Service and the USDA have taken since enactment of the NAFTA to prevent transshipment¹ of live cattle and fresh, chilled, or frozen beef through Mexico and Canada into the United States. This chapter also reports on a transshipment issue that involved beef from Australia and New Zealand being transshipped through Canada for importation into the United States. The chapter also discusses a bonding program for live cattle entering the United States from Mexico that was terminated after the NAFTA became effective.

U.S. Customs Service Action

On March 24, 1997, the USITC received a letter from the U.S. Commissioner of Customs (Customs) concerning the transshipment issue.² Customs reported that in 1995 the Office of Regulatory Audit performed 10 NAFTA verification audits on producers of beef products in Canada and Mexico. Although deficiencies with inventory records were noted, and Customs advised the producers concerning record keeping and inventory management, no transshipment was detected.

According to their letter, the NAFTA implementing legislation required Customs to develop a methodology for estimating compliance with the laws administered by Customs to be presented in an annual report to the Congress. As a result of this legislation, a servicewide Compliance Measurement Program, with a NAFTA subset, was implemented in an effort to assure a high level of compliance and enforcement.

Prior to the implementation of the NAFTA, Customs already had in place a National Trade Enforcement Plan (TEP), which was expanded to include the NAFTA subplan. In support of the TEP, the Office of Strategic Trade performs continuing analysis of import data in order to detect changes in trade patterns within trade sensitive industries, including agriculture. If an aberration in trade patterns were to occur, Customs reports that it would attract their attention.

USDA Action

On April 9, 1997, the USITC received a letter from the U.S. Secretary of Agriculture concerning the transshipment issue.³ The Secretary reported that the USDA does not have direct responsibility for monitoring or enforcing regulations on transshipments of product entering the United States. Nevertheless, personnel in the FSIS and APHIS are responsible for enforcing health and sanitary requirements for meat and live animals at the border, and thus, USDA

¹ For a definition of transshipment, please see the General Notes of the 1997 *Harmonized Tariff Schedule of the United States (HTS)*.

² A copy of the letter is reproduced as appendix L.

³ A copy of the letter is reproduced as appendix M.

reported that it would be sensitive to problems potentially relating to transshipments. According to their letter, the NAFTA Implementation Act requires the Secretary of Agriculture to submit an annual report to Congress on the inspection of food and agricultural products (meat, poultry, other food, animals, and plants) imported into the United States in commercially significant quantities from Mexico and Canada.⁴ The Secretary reported that in 1995, the latest year for which data are available, that USDA was not aware of any incidence of transshipment of live animals.⁵ The Secretary also reported that there were no known incidents of transshipment of meat or poultry products that originated in a non-NAFTA country and shipped to the United States through Canada or Mexico.⁶

Interested Parties

Certain parties argued that, since entry into force of the NAFTA, there has been no economic incentive to transship beef through Mexico and Canada for importation into the United States.⁷ However, it was acknowledged that such incentives did exist under the Meat Import Act, which had quantitative restrictions applicable to U.S. imports from Oceania but not Canada.⁸ It was also reported that in a few situations where transshipments had been a problem, the transshipments resulted from misinformation and the situation was quickly corrected by industry and government through existing procedures.⁹

It was also argued that to obtain any useful benefits through transshipments it would be necessary to legally change the country of origin of the subject beef to that of a third country (such as Canada) that enjoys a benefit not enjoyed by the country of origin. To obtain preferential status under the NAFTA rules of origin, third-country beef requires a change from chapter 2 of the *Harmonized Tariff Schedule of the United States (HTS)*, which provides for fresh, chilled, or frozen beef, to another chapter, typically chapter 16, which provides for processed beef. Under most circumstances the costs involved to turn the original product into another product (resulting in a reclassification to another *HTS* chapter) are too great to make such activity economical, merely to obtain a duty or quota benefit.¹⁰

Several domestic interests, including veterinarians¹¹ and other animal health officers,¹² expressed concern about transshipment of live cattle from Central American countries through Mexico for importation into the United States. The concern was that a small shipment of cattle could introduce pests such as screw worms or disease such as tick fever into the U.S. herd.

⁴ USDA, APHIS, *Inspection of Imported Meat, Poultry, Other Foods, Animals, and Plants from NAFTA Countries, 1995 Report of the Secretary of Agriculture to the U.S. Congress*, APHIS 31-05-003, Dec. 1996, p. I.

⁵ *Ibid.*, p. 10.

⁶ *Ibid.*, p. 14.

⁷ Prehearing brief of the NZMPB, Mar. 10, 1997, p. 19; prehearing brief of the CCA, Mar. 10, 1997, pp. 35-37; posthearing brief of the AMLC, Apr. 3, 1997, p. 15.

⁸ Prehearing brief of the NZMPB, Mar. 10, 1997, p. 19; prehearing brief of the CCA, Mar. 10, 1997, pp. 35-37.

⁹ Posthearing brief of the Meat Importers Council of America (MICA), Apr. 3, 1997, p. 8.

¹⁰ *Ibid.*

¹¹ USITC staff interview with Bill Brown, Texas Animal Health Commission, Jan. 29, 1997.

¹² USITC staff interview with G. Gale Wagner, professor of Veterinary Pathology and Coordinator of International Programs, Texas A&M University, Feb. 14, 1997.

Mexican interests argue that cattle ranchers in Northern Mexico also have concerns about cattle pests and diseases and thus the Mexican Government enforces sanitary and phytosanitary regulation on the movement of cattle within Mexico.¹³

Oceania Beef Transshipped Through Canada

In a February 8, 1993 letter to the Secretary of Agriculture, the National Cattlemen's Association (NCA) alleged that Canadian interests were transshipping Australian beef to the United States in violation of Article 302 of the CFTA. The NCA asked the Secretary to investigate their complaint.

As noted in appendix G, in 1992, 1993, and 1994 Australia and New Zealand entered into Voluntary Restraint Agreements (VRAs) negotiated under section 204 of the Agricultural Act of 1956 to limit their exports of quota-type meats to the United States. However, there were no quantitative restrictions on Australian and New Zealand exports of quota-type meats to Canada. Thus, an arbitrage opportunity became plausible in 1992 when the VRAs were signed. Some Canadian processors allegedly would import relatively low-priced Australian or New Zealand beef, mix that beef with Canadian beef, and then export the commingled product to the United States as a product of Canada.¹⁴

The U.S. Customs Service issued a Trade Enforcement Alert that reported a large quantity of frozen beef had been shipped from Australia to Canada in the latter part of 1992. Some concern was expressed that this beef, after some minimal processing, would be exported to the United States as a Canadian product.¹⁵ The U.S. Customs Service received many inquiries as to whether they charged imports through Canada against the proper third country quota.¹⁶ The U.S. Customs Service then implemented an administrative approach in dealing with imports from Canada as follows:¹⁷

1. maintain consistent positions in the areas of tariff classification, marking, CFTA, and quota status,
2. adopt a common strategy for identifying and monitoring Canadian shippers, and
3. establish an information network to ensure that developments regarding shippers, importers, and related issues be disseminated on a timely basis to all interested parties.

On April 8, 1993, the official testing of the arbitrage opportunity arose. On that date, the U.S. Customs Service denied entry to ground beef from Canada that had been minimally processed

¹³ Bi-National Committee (BNC) for the Eradication of Tuberculosis and Brucellosis, *Tuberculosis Program, Stage II Review*, Oct. 21-25, 1996.

¹⁴ USITC staff telephone conversation with officials of USDA, FAS, Jan. 30, 1997.

¹⁵ U.S. Customs Service, Office of Commercial Operations, Quota Branch, Apr. 8, 1993.

¹⁶ *Ibid.*

¹⁷ Source: Correspondence from Richard B. Schroeter, USDA to Michael Lane, Acting Commissioner of Customs.

and mixed with Australian or New Zealand beef.¹⁸ Customs ruled that the commingled beef violated the terms of the VRA requirements that subject Australian or New Zealand beef enter the United States on a through bill of lading.¹⁹

Canada immediately challenged the U.S. Customs Service's prohibition by stating that this was contrary to Article 704 of the CFTA requiring official notification and consultations before prohibiting entry of meat products.²⁰ Acknowledging that no consultations were provided, the USDA formally asked the U.S. Customs Service to allow entry of the commingled Canadian-Australian or Canadian-New Zealand beef products until April 24, 1993. U.S. Customs Service did not count these commingled shipments entering the United States during this interim period against the Australian or New Zealand VRA.

In a letter to the Acting Commissioner of the U.S. Customs Service on April 9, 1993, USDA outlined three scenarios involving Australian or New Zealand beef shipped to the United States through Canada.²¹

1. *Meat of Australia or New Zealand without substantial transformation in Canada--*
Since the Australian and New Zealand VRA were in effect, and the terms of the VRA required a through bill of lading, meat should only be allowed entry under existing regulations, i.e., counted against the VRA.
2. *Meat of Australia or New Zealand with minimal transformation in Canada--*
A Canadian inspection certificate is required for any beef that originated in a third country and has undergone minimal Canadian processing such as shredding, chopping, and mixing, but not enough of a substantial transformation to change country-of-origin guidelines.
3. *Meat of Australia or New Zealand with substantial transformation in Canada--*
Beef from any third-country that has been substantially transformed as to change tariff chapter classification will be deemed a product of Canada and be afforded all the preferences of Canadian beef.

On April 21, 1993, Canada formally asked the United States to extend the April 24, 1993, deadline to perfect a long-term solution and to allow for clearing of various contractual obligations between U.S. and Canadian trade. On April 22, 1993, two days before the deadline, Canada made a proposal to USTR and USDA concerning exports of blended Canadian-Oceanic

¹⁸ USDA Decision Memorandum for the Acting Undersecretary, written by Richard B. Schroeter, acting administrator, USDA, FAS, Apr. 21, 1993.

¹⁹ A through bill of lading is a bill of lading covering the shipment of goods from the origin to the final destination, including all connecting carriers.

²⁰ USDA Decision Memorandum for the Acting Undersecretary, written by Richard B. Schroeter, acting administrator, USDA, FAS, Apr. 21, 1993.

²¹ Letter from Richard B. Schroeter, USDA to Michael Lane, Acting Commissioner of Customs.

meat to the United States.²² Canada's proposal would have required entry of meat blends containing a *de minimis* portion of beef originating outside Canada or the United States. These products would not count against the VRAs but would be afforded Most Favored Nation tariff treatment. Ultimately, the United States rejected Canada's proposal.

However, as noted in chapter 2 of this report, on June 1, 1993 Canada imposed a tariff-rate quota on imports of boneless beef originating in countries other than the United States and Mexico. A provision of the tariff-rate quota required that beef not shipped from the country of origin on a through bill of lading to Canada will immediately be subject to the higher over-quota rate, virtually eliminating any arbitrage opportunity to ship minimally processed Australian-Canadian or New Zealand-Canadian beef to the United States.

Thus, since enactment of the NAFTA, there appears to have been no arbitrage opportunity to transship fresh, chilled, or frozen beef through Mexico and Canada for importation into the United States.

Measures Taken by U.S. Customs to Prevent Transshipments of Cattle and Fresh, Chilled, or Frozen Beef from Mexico

Mexico is a relatively minor supplier of fresh, chilled, or frozen beef to the United States, with just 0.6 percent of total U.S. imports in 1996. The USITC is unaware of any transshipment of fresh, chilled, or frozen beef through Mexico. However, the NAFTA has had some impact on the measures that the U.S. Customs Service takes in preventing the possibility of such transshipments.

Prior to January 1, 1994, the date on which the NAFTA entered into force, the U.S. Customs Service collected duties and bonds on cattle imported from Mexico destined to be ultimately returned to Mexico for slaughter. Such cattle were exempted from meeting certain testing requirements for tuberculosis and brucellosis--diseases that present a greater than average risk of spreading disease to U.S. livestock. As a means of ensuring that the in-bond Mexican cattle were maintained in accordance with the regulations while in the United States and were actually returned to Mexico upon completion of their feeding period in the United States, regulations required the importer to post a bond with the U.S. Customs Service at the port of entry.²³ It was presumably in the importers' economic interest to meet all the terms of the regulations because Customs required that the value of the bond could be three times the value of the cattle.

The U.S. Customs Service discontinued its in-bond program on January 1, 1994 to comply with the terms of the NAFTA. Consequently, U.S. importers no longer were required to post a bond when importing cattle from Mexico into the United States for feeding and return to Mexico. The U.S. Customs Service however continued to monitor such cattle. A penalty of \$400 was

²² John McNab, Counsellor (Commercial), Canadian Embassy to David Weiss, USTR, et. al., Apr. 22, 1993, facsimile.

²³ 60 F.R. 13896 (Mar. 15, 1995).

imposed for failure to return in-bond Mexican cattle to Mexico²⁴ --such a fine would likely be a relatively small penalty relative to forfeiting a bond or the value of the cattle.

The APHIS began to monitor the in-bond program once the U.S. Customs Service discontinued its collection of duties and bonds.²⁵ Unable to prevent the dissemination into the United States of animal diseases by in-bond cattle that remain in the United States in violation of the regulations, APHIS terminated the in-bond program effective March 30, 1995.²⁶ ■

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

CHAPTER 6

IMPACT OF THE URA ON U.S. TRADE IN CATTLE FOR SLAUGHTER AND BEEF

General

As discussed in chapter 1, the Uruguay Round Agreements (URA) are the result of multilateral negotiations conducted under the auspices of the GATT during 1986-93. The URA consist of the Agreement Establishing the World Trade Organization (WTO) and a series of multilateral and plurilateral agreements and understandings set forth in annexes to the WTO Agreement and entered into force on January 1, 1995. This chapter examines major URA issues related to cattle and beef trade.

URA Impacts: Summary

To date, the URA appears to have had little impact on U.S. imports and exports of cattle for slaughter and fresh, chilled, or frozen beef.¹ URA commitments concerning beef include: the conversion of quotas under the United States and Canadian Meat Import Acts to tariff-rate quotas; U.S. side agreements with Uruguay and Argentina to provide for U.S. imports of fresh, chilled, or frozen beef; a U.S./Korea Record of Understanding (ROU) providing for access to the Korean beef market; Japanese duty reductions applicable to beef; and, reductions in government incentives for cattle and beef exports. In addition, more general WTO agreements that might impact such trade include the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), and dairy and grain commitments.

The repeal of the Meat Import Act of 1979 in the United States and subsequent replacement with a tariff-rate quota apparently has had little effect on U.S. trade. The in-quota amounts agreed to under the URA were about 15 percent higher than the previous amounts under the Meat Import Act, and U.S. beef imports have been declining steadily since 1992, generally reflecting low U.S. beef prices and increased U.S. production (in part, a result of the contraction phase of the U.S. cattle cycle).

As a result of a side agreement negotiated during the Uruguay Round, Uruguay was authorized to ship fresh, chilled, or frozen beef to the United States but the authorized quantity is less than 1 percent of U.S. consumption, and Argentina, as of August 25, 1997² was authorized to ship fresh, chilled, or frozen beef to the United States. Japan and Korea are likely to be important

¹ It should be noted that the full impact of some of the agreements (the U.S./Korean Record of Understanding, the agreed upon reductions relating to export incentives for cattle and beef exports, and grain commitments) have not yet been fully realized since they are to be phased in over a period of years.

² 62 F.R. 34385 (June 26, 1997).

future markets for U.S. beef; however, U.S. exports in 1995-96 were limited by consumer health concerns in those countries relating to beef in general.³

Although the URA requires the United States to reduce beef export incentives, U.S. beef export incentives have not been used in recent years. The EU (the primary user of these incentives) is required to substantially reduce export incentives over the next few years. The extent to which U.S. beef exports might benefit from these EU reductions is unclear, since the primary purchasers (e.g., North African and Central and Eastern European countries) may switch to less expensive protein sources, such as poultry and grains, instead of U.S. or EU (without export incentives) beef.⁴

As of early June 1997 there had been no determinations under the SPS Agreement that have impacted cattle or beef trade. In view of the minor impact of the URA on the U.S. dairy sector it appears that the dairy commitments have had only a very minor impact on U.S. trade in live cattle for slaughter and fresh, chilled, or frozen beef. Canadian commitments relating to grain transportation (the elimination of the WGTA in July 1995) have been offset by relatively high world grain prices during 1995-96 and as a result have had little effect on cattle and beef trade. The European Union's URA grain commitments apparently also result in little impact on U.S. cattle or beef trade, since the EU does not feed significant quantities of grain to cattle or export significant quantities of feedgrains to cattle producing countries.

URA Commitments and Actions Concerning Cattle and Beef

Repeal of the Meat Import Act of 1979

As noted in chapter 2, section 403 of the Uruguay Round Agreements Act converted U.S. quotas under the Meat Import Act of 1979 to a tariff-rate quota to bring U.S. law into conformity with U.S. obligations under the WTO Agreement on Agriculture. The Australian Meat and Live-stock Corporation (AMLC) stated that the Meat Import Act had long been a disruptive and distortive factor in beef trade.⁵ The United States committed to a tariff-rate quota of 656,621 metric tons (1.4 billion pounds, product weight) and an additional 20,000 metric tons (44.1 million pounds) each from Uruguay and Argentina under certain conditions explained below. The rate of duty applicable to in-quota quantities varies depending on the *HTS* heading as shown in appendix F. There is no limit to the quantities that enter from Canada and Mexico subject to in-quota rates of duty.⁶ The following tabulation shows the in-quota quantity of beef allocated by country:

³ E. Coli and BSE concerns.

⁴ See the section of this chapter entitled *EU Export Incentive Commitments*.

⁵ Posthearing brief of the Australian Meat and Live-stock Corporation (AMLC), Apr. 3, 1997, p. 2.

⁶ Additional U.S. Notes (#3), ch. 2, *HTS*, 1996, p. 2-1.

Country	Quantity	
	(metric tons)	(1,000 pounds)
Canada	No limit	No limit
Mexico	No limit	No limit
Australia	378,214	833,819
New Zealand	213,402	470,471
Japan	200	441
Uruguay	20,000	44,092
Argentina	20,000	44,092
Other countries or areas ...	<u>64,805</u>	<u>142,871</u>
Total	696,621	1,535,786

The base over-quota tariff for fresh, chilled, or frozen beef was 31.1 percent ad valorem in 1995, to be reduced by 15 percent in equal annual installments over 6 years, resulting in a bound tariff rate of 26.4 percent ad valorem. The over-quota tariff rate for 1997 is 28.8 percent ad valorem.⁷ The AMLC stated that the over-quota rate of duty is prohibitive and progress should be made to open the market more.⁸ At the USITC hearing, the Meat Importers Council of America (MICA) stated that the out-of-quota rate of duty is so high that it is trade prohibitive and in effect represents an absolute quota above the in-quota rate.⁹

U.S. imports of tariff-rate quota-type meats from Canada amounted to 381 million pounds in 1995 and increased to 507 million pounds in 1996.¹⁰ U.S. imports of tariff-rate quota-type meats from Mexico amounted to 4 million pounds in 1995 and then increased to 8 million pounds in 1996. Imports from other suppliers were less than the tariff-rate quota (table D-52). Australia filled 59 percent of its tariff rate-quota in 1995 and 48 percent in 1996, while New Zealand filled 90 percent in 1995 and 78 percent in 1996. Based on statistics of the U.S. Customs Service's Trade Compliance Division, U.S. imports of quota-type meat from Uruguay totaled 19,400 tons (42.8 million pounds), or 97 percent of the in-quota quantity allocation in 1996; up from 0.3 million pounds in 1995.

As shown in the following tabulation, U.S. imports of tariff-rate quota-type meats during 1995 and 1996¹¹ were less than the imports of meats of the type subject to the Meat Import Act of 1979 from all sources (including Canada and Mexico) during the 5 years prior to the repeal of the Meat Import Act of 1979.

⁷ World Trade Organization, International Bovine Meat Agreement, *Summary of the Results of the Uruguay Round in the Meat Sector*, Geneva, Feb. 1995, pp. 24-25.

⁸ Posthearing brief of the AMLC, Apr. 3, 1997, p. 4.

⁹ Testimony of Rufus E. Jarman, Jr., of Barnes, Richardson & Colburn on behalf of the Meat Importers Council of America, Inc., transcript of the hearing, Mar. 20, 1997, p. 66.

¹⁰ Quantities compiled from official statistics of the U.S. Department of Commerce.

¹¹ The only 2 years that the tariff-rate quota has been in effect.

Year	Imports of meats of the type subject to the Meat Import Act of 1979 ¹	Imports of tariff rate quota-type meats ¹
	-----(<i>million pounds</i>)-----	
1987 . . .	1,428.3	(²)
1988 . . .	1,521.3	(²)
1989 . . .	1,322.1	(²)
1990 . . .	1,533.0	(²)
1991 . . .	1,496.2	(²)
1992 . . .	1,587.7	(²)
1993 . . .	1,585.0	(²)
1994 . . .	1,669.9	(²)
1995 . . .	(²)	1,407.2
1996 . . .	(²)	1,412.4

¹ Includes Canada and Mexico.

² Not applicable.

The USITC estimate of what the “trigger level” and quota quantity for 1995 and 1996 would have been had the Meat Import Act of 1979 remained in effect and the URA tariff-rate in-quota quantity are shown in the following tabulation (in *million pounds*):

Year	<u>Meat Import Act of 1979</u>		URA tariff rate in quota
	Estimated “trigger level”	Estimated quota	
1995 . . .	1,373	1,248	1,536
1996 . . .	1,359	1,235	1,536

The USITC’s estimate of what would have been the trigger level under the Meat Import Act of 1979 is 163 million pounds (12 percent) less than the tariff-rate-in-quota quantity in 1996 and 177 million pounds (13 percent) less in 1997.

Side Agreements with Uruguay and Argentina

Section 404 of the Uruguay Round Agreements Act authorized the President to increase the tariff-rate in-quota quantity for beef to implement agreements reached with Uruguay and Argentina in March 1994. Under these side agreements,¹² the United States committed to provide each country with an in-quota quantity of 20,000 tons (44 million pounds) to the United States in the event that the U.S. Secretary of Agriculture determined that those countries or areas

¹² Side agreements reproduced in app. N.

of those countries are free of rinderpest and foot-and-mouth diseases.¹³ Uruguay was found to be free of rinderpest and foot-and-mouth diseases and was granted approval by USDA to ship fresh, chilled, or frozen meat, including beef and veal, to the United States in mid-November 1995.¹⁴ On June 26, 1997, USDA announced that Argentina had been found to be free of the diseases and under certain conditions would be authorized to ship fresh, chilled, or frozen beef to the United States effective August 25, 1997.¹⁵

Tariff-Rate Quota Reallocation

During the course of the investigation, and at the USITC hearing, there was considerable discussion about reallocation of in-quota quantities. The discussions mostly related to quota reallocation from countries that might not supply their in-quota amounts to countries that could exceed their allocations.

The MICA contends that the tariff-rate quotas, contrary to the spirit of the URA, are on a course of action that effectively lowers access to the U.S. market because of the lack of reallocation.¹⁶ The MICA supports reallocation of in-quota quantities.¹⁷ The MICA reported that in 1996, Uruguayan exporters deliberately exported slightly below their in-quota quantity to avoid the tariff on any out-of-quota quantity. Uruguayan exporters report that tariff rates applicable to out-of-quota quantities are so high that they must be avoided at all costs and they were constrained in exporting the full in-quota quantity because of concerns that delays associated with U.S. Customs Service tariff collection might result in the application of out-of-quota rates.¹⁸

The MICA suggests that if Uruguay had a larger in-quota quantity it would likely export more beef to the United States, notwithstanding the fact that Australia and New Zealand had not supplied their in-quota quantities in 1995 or 1996, primarily because Uruguay does not yet have access to third country markets, such as Japan or Korea.¹⁹ The MICA also listed a number of other reasons that Uruguay might export more beef: Uruguay shipped 97 percent of its allocation in 1996 and controls were necessary to assure that the in-quota was not exceeded; so far in 1997 Uruguay is shipping at a rate substantially higher than that of 1996; Uruguay's supplies are high (and expanding) relative to Australia and New Zealand; buyers in Asian/Pacific markets have a geographic advantage over U.S. buyers of Oceanic beef; the amounts in question are relatively small; and, Uruguay's in-quota quantity is small (5 percent of production) and processors can easily switch markets.²⁰

¹³ Rinderpest and foot-and-mouth diseases are highly contagious, infectious diseases that can afflict cloven-footed animals (such as cattle, sheep, swine, and deer). Because the diseases are easily transmitted and debilitating, they are an ever-present threat to the U.S. livestock industry. The diseases do not present a direct threat to human health.

¹⁴ 60 F.R. 55440 (Nov. 1, 1995).

¹⁵ 62 F.R. 34385 (June 26, 1997).

¹⁶ Prehearing brief of the MICA, Mar. 10, 1997, p. 2.

¹⁷ Rufus E. Jarman, Jr., of Barnes, Richardson & Colburn on behalf of MICA, testimony, transcript of the hearing, Mar. 20, 1997, pp. 67-72.

¹⁸ Prehearing brief of the MICA, Mar. 10, 1997, pp. 4-5.

¹⁹ Posthearing brief of the MICA, Apr. 3, 1997, p. 3.

²⁰ *Ibid.*, pp. 5-6.

The MICA favors free trade in the subject commodity. MICA contends that the United States could create a situation more closely approximating free trade over the next several years by establishing a procedure for freeing portions of unusable Australian and/or New Zealand in-quota quantities.²¹

New Zealand, on the other hand, stated that its country allocation is an integral part of the balance of rights and concessions negotiated in the Uruguay Round and it opposes any reallocation of Australian or New Zealand in-quota quantities.²² Australia stated that its country specific allocation, and the binding of that allocation, was a major element of Australia's bilateral settlement with the United States at the end of the Uruguay Round. Australia further contends that the reallocation by the United States of any unused allocation of Australia's bound tariff quota share would modify the U.S. concession which is an Australian entitlement on beef. Reallocation, Australia contends, would not therefore be consistent with the U.S. obligations set forth in the U.S. Country Schedule to the WTO Agreement on Agriculture.²³ The NZMPB reports that to reallocate in-quota quantities at times when the U.S. market is not sufficiently attractive to draw full in-quota quantities from Australia and New Zealand, as typically occurs at a contraction phase of the cattle cycle, might have the effect of exacerbating both the depth and length of these cyclical market conditions.²⁴

Repeal of Canada's Meat Import Act and Implementation of a Tariff-Rate Quota

To meet its URA obligations, Canada also repealed its Meat Import Act.²⁵ Canadian quotas applicable to fresh, chilled, or frozen beef were converted to tariff-rate quotas with staged tariff reductions effective January 1, 1995.²⁶ As shown in appendix H, Canadian imports of tariff-rate quota type beef from the United States and Mexico receive a rate of duty of "Free."

U.S. exports of tariff-rate quota-type meats to Canada increased from 259 million pounds, valued at \$336 million in 1994 to 283 million pounds, valued at \$338 million in 1995, but declined to 264 million pounds, valued at \$295 million in 1996 (table D-20). The share of Canada's market supplied by the United States increased from 44 percent in 1994 to 54 percent in 1995 and 55 percent in Jan.-Nov. 1996, the most recent period for which data are available.²⁷ Officials of the CCA contend that U.S. beef exports to Canada were never effectively limited by the quotas that were set under the Canadian Meat Import Act.²⁸

²¹ Prehearing brief of the MICA, Mar. 10, 1997, p. 13.

²² New Zealand Embassy, letter to the USITC, Mar. 13, 1997.

²³ Submission of the Embassy of Australia to the USITC, Apr. 2, 1997.

²⁴ Posthearing brief of the NZMPB, Apr. 3, 1997, p. 2.

²⁵ *Canada Gazette*, part II, vol. 129, No. 9, Mar. 5, 1995, p. 1263.

²⁶ WTO, International Bovine Meat Agreement, *Summary of the Results of the Uruguay Round in the Meat Sector*, Geneva, Feb. 1995, p. 23.

²⁷ The shares were calculated from statistics reported in USDA, FAS, *Livestock Semi-Annual*, CA7007, Jan. 31, 1997, p. 8.

²⁸ David Andrews and Dennis Laycraft, CCA, testimony, transcript of the hearing, Mar. 20, 1997, pp. 49-50.

Record of Understanding Between the United States and the Republic of Korea on Agricultural Market Access in the URA

During the Uruguay Round, the United States and Korea entered into a Record of Understanding (ROU) concerning, among other things, market access for beef. The ROU was initiated on December 13, 1993, and augmented a U.S.-Korean ROU of July 15, 1993.²⁹ The part of the ROU concerning beef is reproduced as appendix O.

The ROU includes an increase in Korea's global beef import quota from 99,000 metric tons (218 million pounds) in 1993 to 225,000 metric tons (496 million pounds) in the year 2000. By the year 2001 there are to be no quotas. Duties applicable to the subject imports were to be 20 percent ad valorem in 1993 and 1994, rising to 43.6 percent in 1995 and then be subject to phased reductions to 40 percent in 2004. The share of imports to be handled by the Livestock Products Marketing Organization (LPMO), a Korean quasi-governmental agency, was to decline and the share handled by the private sector, the so-called simultaneous-buy-sell system (SBS) was to increase from 15 percent in 1993 to 70 percent by the year 2000. By 2001 there is to be no LPMO involvement and complete private sector autonomy regarding product quantity, price, quality, and supplier and there is to be no government restriction on product utilization.

Officials of the U.S. Meat Export Federation contend that the ROU should contribute to a significant increase in U.S. exports of beef to Korea.³⁰ U.S. exports of beef to Korea rose from 112 million pounds, valued at \$151 million, in 1993 to 265 million pounds, valued at \$319 million, in 1995 but declined to 196 million pounds, valued at \$243 million in 1996.

Japanese Duty Reductions Applicable to Beef

As part of the URA, Japan agreed to staged tariff rate reductions applicable to beef from 50 percent ad valorem to 38.5 percent ad valorem by the year 2000. The tariff rates were reduced to 46.2 percent in 1996³¹ and further reduced to 44.3 percent effective April 1, 1997.³² The reductions contributed to increased imports of U.S. beef; however, as noted in chapter 3 of this report, other factors such as rising per capita beef consumption and relative price of U.S. beef, have been more important than the duty reductions in affecting U.S. exports.³³ The U.S. meat industry, which considers the Japanese reductions to be modest, continues to press the Government of Japan for accelerated reductions through the American Chamber of Commerce

²⁹ The July 15, 1993 Record of Understanding is described in USITC, *The Year in Trade 1993 Operation of the Trade Agreements Program 45th Report*, publication 2769, June 1994, p. 111.

³⁰ USITC staff interview with officials of the U.S. Meat Export Federation, Jan. 27, 1997.

³¹ USDA, FAS, U.S. Embassy, Tokyo, Japan, *USITC investigation into the impact of the UR agreement on U.S. beef exports*, Apr. 7, 1997, facsimile.

³² USDA, FAS, *Livestock, Dairy, and Poultry*, Apr. 16, 1997, p. 7.

³³ USDA, FAS, U.S. Embassy, Tokyo, Japan, *USITC investigation into the impact of the UR agreement on U.S. beef exports*, Apr. 7, 1997, facsimile.

in Japan.³⁴ Overall, the impact of the URA on Japanese imports of beef reportedly has been negligible.³⁵

Sanitary and Phytosanitary Agreement and U.S.-EU Dispute Concerning Beef From Animals Receiving Growth Hormones³⁶

As discussed in Chapter 1, one of the most significant Uruguay Round agreements for the cattle and beef industries is the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). One aim of the SPS Agreement is to liberalize trade in agricultural goods and processed food and beverages by reducing nontariff trade measures in the form of arbitrary regulations on such topics as pest and disease control and food safety. The principle reflected in the agreement is that members' efforts to protect human, animal, or plant life and health within their territories should not discriminate arbitrarily or unjustifiably against another member's goods.³⁷

The SPS Agreement is the basis for the U.S. challenge in the WTO to the EU's ban on certain imports of meat. The United States views this ban as having no basis on scientific grounds and therefore considers it to be in violation of the SPS Agreement. Starting in January 1989, the EU banned imports of meat from countries where the use of certain growth-promoting hormones is permitted.³⁸ Exceptions allowed imports of offal for pet food and imports of beef derived from animals certified as having not received the subject hormones. The EU actions affected approximately \$100 million in U.S. exports annually (85 percent of these exports were offal for human consumption).³⁹ Immediately following the ban, the U.S. sought a review of its legality in the GATT but the EU blocked formation of a review panel. Consequently, the United States retaliated by increasing duties on certain agricultural imports from the EU.

After the WTO Agreements entered into force, the United States renewed its challenge to the EU action on the premise that the ban has no basis on scientific grounds and therefore is in violation of the SPS Agreement. In early 1996, the European Parliament approved a resolution to maintain the ban, and the EU Agriculture Council also re-affirmed its commitment to maintaining the ban. Consequently, the United States requested consultations with the EU pursuant to the WTO dispute settlement provisions. Consultations were held in March 1996, at which time Australia, Canada, and New Zealand joined with the United States. These

³⁴ Ibid.

³⁵ Ibid.

³⁶ The following discussion was obtained from USITC staff interview with officials of USDA, FAS, Dec. 1996, except as noted.

³⁷ USITC, *The Year in Trade: Operation of the Trade Agreements Program*, 45th report, 1993, publication 2769, June 1994, p. 9.

³⁸ In the United States, five hormones can be used to augment cattle growth. Three are natural hormones (estradiol, progesterone, and testosterone) and can be found in all animal foods, humans, and in many other food products. The two other hormones--zeranol and trenbolone acetate, which are synthetically produced--have similar growth promoting effects, but do not occur naturally in cattle. The three natural hormones are approved for use in the EU for therapeutic purposes, but none can be used for the purpose of growth promotion.

³⁹ USTR, press release No. 96-03, Jan. 11, 1996.

consultations failed to resolve the dispute. Accordingly, at the May 1996 meeting of the WTO Dispute Settlement Body, the United States requested that a panel be formed. Under the new WTO rules, the EU was unable to block the formation of a panel. Panel meetings were held in October and November 1996. A third and final meeting was held in February 1997, during which time the panel met with technical experts. While no official report has been released to the public, in early May 1997 a number of news organizations reported that the panel had concluded that the EU prohibition was not based on scientifically justifiable criteria.

On June 30, 1997, the panel released its final report to the parties. The panel's final report was in favor of the United States and found the EU's ban to be inconsistent with obligations under the SPS Agreement.⁴⁰ On July 1, 1997, EU representatives announced their intention to bring the matter before the Appellate Body of the WTO.⁴¹

U.S. Export Incentive Commitments⁴²

Since 1987, the United States has not provided export incentives for beef. Such incentives are now subject to limitation commitments under the WTO Agreement on Agriculture. U.S. export incentive commitments are applicable to live dairy animals, and fresh, chilled, or frozen beef. In 1986-87, the U.S. provided incentives of US\$36 million on 48.5 million pounds of beef. The incentives resulted because in 1986 and 1987 direct sales were made by the Commodity Credit Corporation to support U.S. beef prices following implementation of the dairy termination program.⁴³

Because the U.S. export incentives were provided during the base period from which URA export incentive commitments are calculated, the United States is authorized to provide export incentives. However, as part of the URA, countries agreed to reduce allowable export incentives. The maximum allowable export incentive quantities and maximum allowable budgetary outlays for the United States are shown in the following tabulation:

Year	Maximum allowable assisted exports (million pounds)	Maximum allowable budgetary outlays for assisted exports (million dollars)
1995	47	34
1996	46	31
1997	44	29
1998	42	27
1999	40	25
2000	39	23

⁴⁰ USITC staff telephone conversation with officials of the USTR and facsimile from USTR, July 3, 1997.

⁴¹ The European Union Delegation of the European Commission to the United States, press release "Commission Wants to Appeal WTO Hormone Panel Conclusions," July 1, 1997.

⁴² The following description of the commitments was taken from WTO, *Summary of the Results of the Uruguay Round in the Meat Sector*, Feb. 1995, pp. 25-26, except as noted.

⁴³ For additional information on the CCC and the dairy termination program see USITC, *The Competitive Position of Canadian Live Cattle and Beef in U.S. Markets*, investigation No. 332-241, publication 1996, July 1987, pp. 105-106.

EU Export Incentive Commitments⁴⁴

The EU has also committed to reduce export assistance for beef. The limits are applicable to live animals, edible offal, and prepared or preserved meat products. The starting point for EU reduction commitments for beef was listed as 1,179,150 tons (2.6 billion pounds), described as an average of assisted base level exports (1986-90) and assisted exports during 1991-92. The maximum allowable assisted quantities for exports are shown in the following tabulation:

Year	Maximum allowable assisted exports	
	<i>(1,000 metric tons)</i>	<i>(million pounds)</i>
1995	1,118.7	2,466
1996	1,058.4	2,333
1997	998.1	2,200
1998	937.7	2,067
1999	877.4	1,934
2000	817.1	1,801

The maximum allowable budgetary outlays for assisted exports are shown in the following tabulation:

Year	Maximum allowable budgetary outlays for assisted exports
	<i>(million ECU)</i>
1995	1,900.6 (equal to US\$2.5 billion)
1996	1,772.3
1997	1,644.1
1998	1,515.9
1999	1,387.6
2000	1,259.4

The maximum allowable budgetary outlays were equal to US\$2.5 billion in 1995 and US\$2.2 billion in 1996 with exchange rates in effect at the time.

During the course of the Commission's investigation various opinions were expressed about the impact of the EU export restitution reductions. One trade source contends that in the absence of the EU commitments the amount of assistance to exports would have risen because of increasing EU intervention stocks that resulted from declining demand for beef in the EU as a result of the BSE issue.⁴⁵ One industry source noted that the effect on U.S. exports of beef to specific markets as a result of EU reductions in export restitutions is uncertain. As is the case

⁴⁴ The following description of the commitments was taken from WTO, *Summary of the Results of the Uruguay Round in the Meat Sector*, Feb. 1995, pp. 14, except as noted.

⁴⁵ USITC staff interview with Knud Buhl, director of International Affairs, Danske Slagterier (Danish Bacon and Meat Council), Washington, DC, Feb. 19, 1997.

with any world traded product, protein will shift from country to country, whether beef, pork, poultry, mutton etc., and competition will emerge from new markets.⁴⁶

Officials of the USMEF contend that the reduction in EU export restitutions might lead to increased U.S. exports of beef.⁴⁷ They said that the United States would likely be competitive in the Eastern European markets (including Russia) for grain-fed beef and might be competitive in some markets for manufacturing beef, but that all such exports would require promotion. The NZMPB suggests that the EU export restitutions have driven beef prices down in third markets to levels that make New Zealand, Australian, and U.S. beef noncompetitive. They further suggest that as EU export restitutions decline prices will rise and New Zealand, Australia, and the United States should have opportunities to compete.⁴⁸

URA Dairy Commitments on Cattle and Beef Trade

In addition to trade policy changes in the beef sector, the URA mandated several policy changes in other agricultural sectors which may influence the profitability of raising cattle and producing beef. In particular, linkages in beef and dairy production suggest that changes in dairy policies under the URA could, potentially, influence U.S. trade in live cattle and beef. The dairy and beef sectors are connected through two important relationships.⁴⁹ First, dairy cow inventories influence the number of dairy feeder steers that are sold to feedlot and backgrounding operations, which in turn affect the price of feeder cattle and profitability of cattle feeding operations. Dairy cow inventories also account for most of the supply of veal calves and the price of veal. Second, changes in dairy cow inventories and in the number of dairy cows slaughtered impact the supply and price of beef (especially manufacturing type beef). Therefore, dairy policy changes (such as those required under the URA) which affect the profitability of dairy production might lead to changes in cow inventories, and therefore to changes in prices and profitability in the beef sector.

Studies by the USITC⁵⁰ and the USDA⁵¹ found that implementation of the URA was likely to have only a minor impact on the U.S. dairy industry, with production and commercial use more or less unchanged.⁵² The studies found that the URA would likely lead to a small increase in milk prices, while expenditures on U.S. Government purchases of dairy products will increase significantly following reductions in Government-assisted exports under the Dairy Export Incentive Program (DEIP). Changes in world trade following the URA may be influenced by export incentive reductions and increased market access required of the EU and United States,

⁴⁶ USITC staff interview with Cary H. Humphries, vice president International, Excel, Jan. 30, 1997.

⁴⁷ USITC staff interview with officials of the USMEF, Jan. 27, 1997.

⁴⁸ William Joyce, vice president, North American Operations of the NZMPB, transcript of the hearing, Mar. 20, 1997, p. 16.

⁴⁹ The following discussion on the influence of the dairy sector on the beef sector was derived from a USITC staff interview with Dr. Robert E. Taylor, professor of animal science, Colorado State University, Jan. 28, 1997.

⁵⁰ USITC, *Potential Impact on the U.S. Economy and Industries of the GATT Uruguay Round Agreements*, publication 2791, June 1994.

⁵¹ USDA, ERS, *Effects of the Uruguay Round Agreement on U.S. Agricultural Commodities*, Mar. 1994.

⁵² *Ibid.*

and secondarily, increased market access and stronger economic growth, particularly in East Asian and Latin American countries. In view of the minor impact of the URA on the U.S. dairy sector it appears that dairy commitments likely will have only a very minor impact on U.S. trade in live cattle for slaughter or fresh, chilled, or frozen beef.

URA Grain Commitment

Canada

URA-associated changes in Canada's grain policies may influence Canada's cattle sector because cattle in Canada are fed relatively large quantities of grain. Since 1994, changes in Canadian agricultural programs, mainly the elimination of the Western Grain Transportation Act (WGTA), occurred as described below because of the URA commitments on export assistance and internal agricultural support. Further, Canadian agricultural program changes reportedly arose from the Canadian Government's desire to reduce its fiscal deficit. The lower Canadian agricultural support for grain production may encourage farmers to diversify production to other crops (such as forage or oilseeds) and to raise livestock, a trend likely to boost Canadian cattle production in the provinces of Manitoba, Saskatchewan, and Alberta ("Prairie Provinces"). However, livestock feeders in Eastern Canada would be disadvantaged because of higher feed grain costs.

Background of the WGTA⁵³

As one of the "twin pillars" of Canadian grain policy for many decades (the other being the Canadian Wheat Board), the WGTA has exerted a strong influence on grain trade in Canada. Under the WGTA, the Canadian Federal Government paid between one-half to three-quarters of the cost of rail transportation for eligible grain and agricultural (crop) products from the Prairie Provinces to export ports, Vancouver and Prince Rupert, British Columbia; Churchill, Manitoba; and Thunder Bay, Ontario.⁵⁴ Also, grain shipped to the eastern Canadian domestic market (mainly Ontario and Quebec) was eligible for the benefit. In the final year (1994/95) of the program, total rail assistance was Can\$561 million (US\$406 million; converted at average exchange rates in effect at the time).⁵⁵

Under the NAFTA, Canada agreed not to grant WGTA benefits for grain exported through the west coast ports to the United States. But eastern grain shipments (through Thunder Bay), and then exported to the United States were eligible to receive the benefits.

During the URA negotiations, the Government of Canada acknowledged that the WGTA constituted an "export subsidy" for grain shipped through west coast ports and Churchill,

⁵³ For background on WGTA, see USITC publication 2794, *Wheat, Wheat Flour, and Semolina*, July 1994, pp. II-55 to II-57; and Canada-United States Joint Commission on Grains, *Final Report*, vol. I, Oct. 1995, pp. 39-68.

⁵⁴ USITC publication 2794, p. II-55.

⁵⁵ Canada-United States Joint Commission on Grains, p. 39.

Manitoba.⁵⁶ Under the URA, Canada was obliged to reduce its export assistance over 6 years by 36 percent in budget terms, and 21 percent in export volume. However, in meeting the export assistance reductions, the Canadian Government chose to eliminate the WGTA rather than simply reduce it by the above formula.⁵⁷ The Canadian Government also indicated at that time that their large fiscal deficit was a justification for eliminating the WGTA.⁵⁸

On August 1, 1995, Canada eliminated the WGTA, and then made one-time (ex-gratia) payments of Can\$1.6 billion (about US\$1.2 billion) to farm land owners, and Can\$300 million (US \$220 million) in payments in other adjustment costs to affected agricultural interests in compensation for this loss.⁵⁹ Officials of the CCA also reported that some Canadian Provinces had programs to offset the effects of the WGTA and those programs were removed when the WGTA was eliminated.⁶⁰

Impact of the Elimination of the WGTA

The short-term effects of the modification or elimination of the WGTA cannot be easily discerned because the changes were so recent (over the past 2 years), and because of relatively high world grain prices in recent years. High grain prices associated with the U.S., Canadian, and world grain markets over the past 3 years (described in chapter 2, section, *U.S. Feed Grain Markets*) would largely mask the effects of the Canadian program changes.

However, over the long-term, the modification or elimination of the WGTA will likely lower grain prices from what they otherwise would have been in the Prairie Provinces. Lower grain prices may stimulate cattle feeding and raising in these Provinces. The maximum effect of the elimination of the WGTA may elicit a 1- to 2-percent increase in the supply of beef in the Prairie Provinces if offsetting factors do not occur.

One offsetting factor would be higher exports of Canadian grain to adjacent U.S. markets or to third-country markets, both situations associated with higher grain prices. Another factor is the likelihood of efficiency improvements in the Canadian rail and grain-handling industry, thereby reducing the increased transport cost.⁶¹ Prior economic studies of the supply of Canadian beef indicate that a 10-percent decline in the price of feed grain would eventually increase the volume of beef supplied by 1 to 2 percent.⁶²

⁵⁶ Ibid., p. 77.

⁵⁷ The Canadian Government acknowledged that the URA requires a reduction of its annual grain export incentives of Can\$153 million by the year 2001; the Can\$561 million in WGTA expenditures exceeded this required minimum reduction. USDA, FAS, *Grain and Feed*, American Embassy, Ottawa, Apr. 28, 1995, pp. 20-21.

⁵⁸ Gregory Johnson, "Loss of Canada Rail Subsidy..." *Journal of Commerce*, Apr. 17, 1995; and USDA, FAS, *Grain and Feed*, Annual Report, American Embassy, Ottawa, Apr. 28, 1995, p. 1.

⁵⁹ USDA, FAS, *Grain and Feed Annual*, Apr. 28, 1995, pp. 10-13.

⁶⁰ Prehearing brief of the CCA, Mar. 10, 1997, p. 27.

⁶¹ Linda Young, *Changing Canadian Grain Policies: Implications for Montana's Grain Industry*, Montana State University, 1996, pp. 21-26.

⁶² Walter Gardiner, Vernon Roningen, and Karen Liu, *Elasticities in the Trade Liberalization Database*, USDA, May 1989, p. 5, found supply elasticities of beef ranging from -0.12 to -0.20 in Canada, with respect to corn prices. Corn prices are highly correlated in Canada with the prices of

(continued...)

If the full effect of the loss of the WGTA is reflected in lower feed grain prices, then the price of feed grain might drop around 10 percent. In the final year (1994/95) of the program, the WGTA freight assistance was Can\$14.72 per metric ton (US\$10.65). In 1995/96, the Winnipeg price of Western feed barley averaged Can\$168 per ton (US\$125), and thus the assistance would have amounted to about 9 percent of this average price. In 1996/97, the projected return to farmers for feed barley (No.1 CW) is Can\$143 to Can\$163 per ton, according to the Canadian Wheat Board (Sept. 1996 projection).⁶³ Consequently, a 10-percent drop in feed grain prices would elicit a 1- to 2-percent increase in the volume of beef supplied or about 20 million to 40 million pounds (carcass weight equivalent).⁶⁴ Canadian exports to the United States of beef and live cattle averaged about 1.2 billion pounds (carcass weight equivalent) annually during 1992-96 (table D-17); a 40-million pound increase in Canadian supply is equivalent to about 3 percent of these exports to the United States.

Officials of the CCA said that they think that one of the more significant effects of the URA was the elimination of Canadian grain transportation incentives, specifically the elimination of the WGTA.⁶⁵ They contend that the effects of the WGTA termination, which became final on July 1, 1995, were masked by high grain prices that kept grain production at high levels in 1996. They predict that when prices decline, as they may in 1997, grain production in Canada will also decline and the effects of reduction in grain transportation incentives in Canada will become evident. They said that the elimination of the grain transportation incentives might result in some land being taken out of grain production and being used for the production of forages. They also predicted that some land would be shifted to the growing of speciality crops such as peas, lentils, mustard, and others.

The CCA predicted that the effect of the elimination of grain transportation incentives will be most significant in Saskatchewan because that Province is the most distant from either coast. They said they thought it would be likely that Saskatchewan would expand its cow-calf herd but might not develop a cattle-feeding sector but rather ship feeder animals to Alberta feedlots or possibly to feedlots in the United States.

EU

The URA contained three key provisions that affected EU grain production and trade: reduction of internal support to agriculture; improvement of market access; and reduction of export restitutions. These grain provisions took effect for the EU on July 1, 1995. The internal support measure required the EU (and the United States as well) to reduce agriculture support by 20 percent from the level during 1986-88. In May 1992, the EU changed its agriculture support with the so-called "CAP (Common Agriculture Program) reform" that entailed a lower

⁶² (...continued)

the other principal feedgrains, feed barley and feed wheat.

⁶³ USDA, FAS, American Embassy, Ottawa, *Grain and Feed, Voluntary Report*, Nov. 5, 1996, p. 4.

⁶⁴ Based on the average production of beef in Canada during 1992-97 of 2.1 billion pounds.

⁶⁵ USITC staff interview with David Andrews, president, Larry Sears, chairman, Foreign Trade Committee, and Dennis Laycraft, executive vice-president, Canadian Cattlemen's Association (CCA), Jan. 29, 1997.

internal (intervention) grain price, an acreage reduction program, and conversion of incentives to direct (and non-trade distorting) payments to farmers.⁶⁶

The EU does not feed significant quantities of grain to cattle, nor in general is EU grain exported to countries that use it to feed cattle. Consequently, these URA changes that affected EU grain production are believed to have had little effect on cattle and beef production. ■

⁶⁶ USDA, FAS, "CAP Reform Implementation," *International Agriculture and Trade Reports and Outlook*, Sept. 1993, pp. 51-55.

APPENDIX A
SECTION 58 OF THE MISCELLANEOUS
TRADE AND TECHNICAL
CORRECTIONS ACT OF 1996

SEC. 58. INVESTIGATION ON CATTLE AND BEEF TRADE.

(a) IN GENERAL.--The United States International Trade Commission shall conduct a study pursuant to section 332 of the Tariff Act of 1930, and not later than 270 days after the date of the enactment of this Act, shall report to the appropriate committees on--

(1) the impact of the North American Free Trade Agreement and the Uruguay Round Agreements on United States imports and exports of live cattle for slaughter and fresh, chilled, and frozen beef; and

(2) the steps that have been taken by the United States, since the enactment of the North American Free Trade Agreement, to prevent the transshipment of live cattle and fresh, chilled, and frozen beef through Mexico and Canada for importation into the United States.

(b) APPROPRIATE COMMITTEES.--For purposes of subsection (a), the term "appropriate committees" means the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

SEC. 59. SPECIAL RULE FOR GENERALIZED SYSTEM OF PREFERENCES.

The President is authorized to grant waivers under subsections (c)(2)(F) and (d)(1) of section 503 of the Trade Act of 1974 for those products that exceeded the limitations for 1994 under section 504(c)(1) of the Trade Act of 1974, as in effect on June 30, 1995, and lost eligibility for duty-free treatment under title V of that Act as of July 1, 1995. In granting such waivers, the President shall apply the provisions of subsections (c)(3) and (d)(2) of section 504 of the Trade Act of 1974, as in effect on July 31, 1995, and the references to "preceding calendar year" in such section 504 shall be references to 1994.

Approved October 11, 1996.

PL 104-295, 1996 HR 3815
END OF DOCUMENT

APPENDIX B
COMMISSION'S NOTICE OF
INVESTIGATION AND HEARING

Written Submissions

Each party who is an interested party shall submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of section 207.23 of the Commission's rules; the deadline for filing is February 21, 1997. Parties may also file written testimony in connection with their presentation at the hearing, as provided in section 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of section 207.25 of the Commission's rules. The deadline for filing posthearing briefs is March 6, 1997; witness testimony must be filed no later than three days before the hearing. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before March 6, 1997. On March 25, 1997, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before March 27, 1997, but such final comments must not contain new factual information and must otherwise comply with section 207.30 of the Commission's rules. All written submissions must conform with the provisions of section 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of sections 201.6, 207.3, and 207.7 of the Commission's rules.

In accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the investigation must be served on all other parties to the investigation (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: This investigation is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.21 of the Commission's rules.

Issued: October 30, 1996.

By order of the Commission.

Donna R. Koehnke,
Secretary.

[FR Doc. 96-28535 Filed 11-5-96; 8:45 am]

BILLING CODE 7020-02-P

[Investigation 332-371]**Cattle and Beef: Impact of the NAFTA and the Uruguay Round Agreements on U.S. Trade**

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation and scheduling of hearing.

EFFECTIVE DATE: October 28, 1996.

SUMMARY: As required by section 58 of the Miscellaneous Trade and Technical Corrections Act of 1996 (Act), (Pub. L. 104-295, Oct. 11, 1996, 110 Stat 3514, 3557), the Commission has instituted Investigation No. 332-371, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) for the purpose of conducting a study and preparing a report on (1) the impact of the North American Free Trade Agreement (NAFTA) and the Uruguay Round Agreements on United States imports and exports of live cattle for slaughter and fresh, chilled, and frozen beef; and (2) the steps that have been taken by the United States, since the enactment of the NAFTA, to prevent the transshipment of live cattle and fresh, chilled, and frozen beef through Mexico and Canada for importation into the United States. As directed by the Act, the Commission will transmit its report to the House Committee on Ways and Means and Senate Committee on Finance no later than 270 days after the date of enactment, or by July 7, 1997.

FOR FURTHER INFORMATION CONTACT: Information on industry aspects may be obtained from David Ludwick, Office of Industries (202-205-3329) or William Lipovsky, Office of Industries (202-205-3330), and legal aspects, from William Gearhart, Office of the General Counsel (202-205-3091). The media should contact Margaret O'Laughlin, Office of External Relations (202-205-1819). Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal on (202-205-1810).

PUBLIC HEARING: A public hearing in connection with the investigation will be held at the U.S. International Trade Commission Building, 500 E Street SW, Washington, DC, beginning at 9:30 a.m. on March 20, 1997. All persons will have the right to appear, by counsel or in person, to present information and to be heard. Requests to appear at the public hearing should be filed with the Secretary, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, no later than 5:15 p.m., March 6, 1997. Any prehearing briefs (original and 14 copies) should be filed not later than

5:15 p.m., March 10, 1997; the deadline for filing posthearing briefs or statements is 5:15 p.m., April 3, 1997. In the event that, as of the close of business on March 6, 1997, no witnesses are scheduled to appear at the hearing, the hearing will be canceled. Any person interested in attending the hearing as an observer or non-participant may call the Secretary to the Commission (202-205-1816) after March 6, 1997, to determine whether the hearing will be held.

WRITTEN SUBMISSIONS: In lieu of or in addition to participating in the public hearing, interested persons are invited to submit written statements concerning the matters to be addressed in the report. Commercial or financial information that a party desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of section 201.6 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons in the Office of the Secretary to the Commission. To be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted at the earliest practical date and should be received no later than April 3, 1997. All submissions should be addressed to the Secretary, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436.

Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

Issued: October 29, 1996.

By order of the Commission.

Donna R. Koehnke,
Secretary.

[FR Doc. 96-28534 Filed 11-5-96; 8:45 am]
BILLING CODE 7020-02-P

[Investigation No. 731-TA-745 (Final)]**Steel Concrete Reinforcing Bars From Turkey**

AGENCY: United States International Trade Commission.

ACTION: Scheduling of the final phase of an antidumping investigation.

SUMMARY: The Commission hereby gives notice of the scheduling of the final phase of antidumping investigation No.

CALENDAR OF PUBLIC HEARINGS

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject : CATTLE AND BEEF: IMPACT OF THE NAFTA
AND THE URUGUAY ROUND AGREEMENTS
ON U.S. TRADE

Inv. No. : 332-371

Date and Time : March 20, 1997 - 9:30 a.m.

Sessions were held in connection with the investigation in the Main hearing room 101, 500 E Street, S.W., Washington, D.C.

ORGANIZATION AND WITNESS

Panel 1

Wigman, Cohen, Leitner & Myers, P.C.
Washington, D.C.
on behalf of

New Zealand Meat Producers Board

Bill Joyce, Vice President, North American Operations

Edward J. Farrell--OF COUNSEL

Panel 2

Mexican Association of Cattle Feedyards, Napoles, Mexico
(Asociacion Mexicana de Engordadores de
Ganado Bovino A.C., "AMEG")

Enrique Lopez Lopez, Director General

Gina Lugo, Translator, Manchester Trade

ORGANIZATION AND WITNESS

Group Viz, S.A. de C.V. ("Grupo Viz"), Mexico City, Mexico

Marco E. Ojeda, Vice President

Panel 3

Wigman, Cohen, Leitner & Myers, P.C.
Washington, D.C.
on behalf of

Canadian Cattlemen's Association

David Andrews, President, Canadian Cattlemen's Association (CCA)
Larry Sears, Chairman, Foreign Trade Committee, CCA
Dennis Laycraft, Executive Vice President, CCA
Chris Mills, Policy Adviser, CCA

Edward J. Farrell--OF COUNSEL

Panel 4

Arizona Cattle Feeders' Association, Phoenix, Arizona

Basilio F. Aja, Executive Vice President

Panel 5

Barnes, Richardson & Colburn
Washington, D.C.
on behalf of

Meat Importers Council of America, Incorporated

**William C. Morrison, Executive Director, Meat Importers Council
of America, Incorporated**

Rufus E. Jarman, Jr.--OF COUNSEL

-END-

APPENDIX C
IMPACT OF THE URA ON U.S. CATTLE
AND BEEF TRADE--REVIEW OF
LITERATURE

Impact of the URA on U.S. Cattle and Beef Trade--¹Review of Literature

During the period of the Uruguay Round Agreements (URA) negotiations, various studies were undertaken which attempted to evaluate the likely quantitative impacts of alternative policy scenarios. Most studies focused on the implications of greater market access and the resulting effects on prices, incomes, and the economic welfare of producers and consumers, however, certain studies had an agricultural focus and separated out the impacts of the URA on the world beef market. These studies provide a useful body of evidence on the likely impacts of the URA on world beef trade and prices, and likely impacts facing U.S. producers of beef and cattle for slaughter.

A comprehensive empirical analysis of the URA on U.S. agriculture was undertaken by the U.S. Department of Agriculture.² The approach taken was to make baseline projections of prices, production, consumption, and trade for the period 1994-2005 without the Agreement, and to compare them with an equivalent set of projections that included the URA domestic and trade policy changes. Overall, the analysis indicated that the URA would lead to an increase in world beef trade, largely because of increased access to markets in East Asia (Japan and South Korea) and North America (United States and Canada), and because increased incomes would strengthen demand worldwide. World exports were expected to increase by as much as 4 percent by 2000 and 11 percent by 2005, even though the requirement to lower export incentives would reduce exports from the EU.

The study found that the impact of the URA on the U.S. beef sector would be small. The reduction in trade barriers and higher income was expected to increase producer prices by 5 to 7 percent by 2000 and to a small increase in beef production (projected to increase by less than one-half of 1 percent by 2005 compared to the baseline). Domestic consumption was estimated to remain almost unchanged, with growth in real incomes offsetting the impact of higher beef prices.

¹Analyzing the URA's policy changes across many sectors (e.g., cattle, beef, dairy, feedgrains) and for many countries presents an extremely complicated modeling exercise, requiring considerable time and resources in developing a suitable analytical approach and in collecting and compiling the huge data sets required for such an exercise. Therefore, it was not possible to develop an econometric model that would adequately capture the great complexity of the URA in the time frame available for the study.

²United States Department of Agriculture (USDA), Economic Research Service (ERS), *Effects of the Uruguay Round Agreement on U.S. Agricultural Commodities*, Mar. 1994.

The study expected U.S. beef imports to increase by 6 to 10 percent by 2005, following the replacement of the U.S. Meat Import Act of 1979 with a tariff-rate quota of 656,621 tons. Meanwhile, exports were expected to rise by more than imports—10 to 14 percent higher than in the baseline scenario. Higher exports were predicted as a result of trade liberalization in the major markets for U.S. product. The high quality of U.S. grain-fed beef was expected to allow the United States to capture much of the increased trade opportunities in South Korea and maintain its share of the increased Japanese market.³ Higher world income was expected to contribute to increased beef consumption, particularly in East Asia and Latin America, while reductions in export subsidies by the EU were projected to open up opportunities for other exporters. The USDA predicted that the United States would remain a net importer of beef, but that net imports would decline. However, the value of U.S. beef exports would increase \$1.1 billion to \$1.35 billion, significantly higher than the value of imports.

A study by the Food and Agricultural Organization of the United Nations (FAO) focused mainly on the impact of the agreement on agricultural trade flows and prices for certain agricultural commodities.⁴ To accomplish this task, the FAO World Food Model (WFM) was used to provide baseline projections based on assumptions regarding the economic and demographic conditions, and technology expected to prevail by 2000. The assessment of the URA was made based on market and policy changes likely to arise up to the year 2000 when the bulk of the URA commitments would be completed. The study covered only measurable policy changes in trade and agricultural policies explicitly defined in the GATT commitments and likely to occur in practice over the implementation period (these relate to the tariffication of trade distortion measurements and the agreed reductions of tariffs). Country specific commitments concerning cuts in subsidized exports and increased imports under the minimum access provisions were also included in the simulation runs. The simulation “with the UR” assumed that countries would undertake reforms according to their offers on the reductions in tariffs, as presented in the schedules of reduction commitments. Evaluating the impact of policy changes was done by

³Japan, for example, will lower its beef tariffs from 50 percent to 38.5 percent by 2000, while South Korea will increase its import quota from 106,000 tons to 225,000 tons by 2000.

⁴Food and Agriculture Organization (FAO), *Impact of the Uruguay Round of Agriculture*, (Rome, 1995).

comparing the results of the simulation run which included these policy alterations with those of the base run. No feed back effects due to liberalization were included in the URA scenario with the exemption of its likely impact on income growth.

The study reported that trade in bovine meat would remain the most important commodity in international meat trade. Between the late 1980s and 2000, bovine meat imports were projected to grow by 35 percent (or 2.5 percent per annum) to 8 million tons, of which close to 6 percent of the 35-percent increase could be associated with the URA. Import markets were expected to expand by more than 4 percent in the developing countries (particularly, China, Indonesia, South Korea, the Philippines, Malaysia, Brazil, Mexico and Nigeria). Among the developed countries, Japan was projected to import 1.3 million tons by the year 2000, three times more than in the base period, reflecting duty reductions. By contrast, U.S. bovine meat imports were expected to decline somewhat, while U.S. exports were projected to be boosted by its growing penetration of expanded markets in the Far East. In terms of prices, the baseline projected a 6-percent increase in the price of bovine meat between 1987-89 and 2000. With the URA, bovine prices were expected to increase by 14 percent over the same period, thus indicating the URA provided an additional price increase of 8 percent. The results for total meats, indicated that United States production in 2000 without the URA would be 34.8 million tons, and with the URA it would be 35.7 million tons (an increase of 0.9 million tons, or 2.6 percent). The corresponding figures for U.S. consumption were 33.8 million tons and 33.6 million tons (a decline of less than 1 percent). U.S. exports in 2000 were expected to increase from 2.3 million tons to 3.6 million tons, while imports were expected to expand from 1.41 million tons to 1.43 million tons.

An empirical analysis of the URA before the final agreement was reached was undertaken by the Center for Agricultural and Rural Development (CARD), and reported by Westhoff (1991).⁵ The CARD study examined the effects of an agreement to reduce internal supports and tariff equivalents by 33 percent and export subsidies by 50 percent from a 1986-88 base by 1996.

⁵P. Westhoff. *Implications of a GATT Agreement on Agriculture: The Known, the Unknown, and the Unknowable*, GATT research paper 92-GATT. Iowa State University, Center for Agricultural and Rural Development (CARD), Oct. 1991.

Results were reported for both 1996 and an average of the period 1997-2000. Because the analysis was undertaken several years before the final agreement was reached, the simulations reflect the likely outcome of the agreement in the early 1990 and therefore differ somewhat from what was finally agreed upon. Interestingly, however, the results are fairly similar to those reported by the USDA, and show the agreement benefiting U.S. livestock producers but the gains are small. The price of beef (Omaha steer price) was expected to increase by 6 percent, resulting in increased livestock production in the United States by an estimated 1 percent. The increase in beef production was expected to strengthen demand for feedgrain and proteins, giving rise to corn prices increasing 9 percent and soybean prices increasing 6 percent. Milk prices were expected to increase by 5 percent.

Vanzetti (1994)⁶ provided estimates of the impact of the URA on 14 major agricultural exporting countries which comprise the Cairns Group.⁷ Using a SWOPSIM (Static World Policy Simulation Model) trade model (Roningen, 1986⁸), preliminary estimates were made of implications of changes in market access, domestic support, and export subsidies as contained in two preliminary agreement—the Dunkel text and the Blair House Accord.⁹ The SWOPSIM framework is based on comparative static, partial equilibrium, which evaluates response to policy changes over the medium term (about 5 years). The SWOPSIM model was adjusted to accommodate regions and commodities of key importance to Cairns Groups countries, and was expanded to differentiate between beef from foot-and-mouth-free and -affected areas. The model was run using 1989 data (the most recent available at the time of publication)—a period of

⁶D. Vanzetti, N. Andrews, S. Hester, and B.S. Fisher. "U.S. E.C. Agricultural Trade Relations and the Uruguay Round: A Cairns Groups Perspective". In *Agricultural Trade Conflicts and GATT. New Dimensions in U.S.-European Agricultural Trade Relations*. Edited by G. Anania, C.A. Carter, and A.F. McCalla. Westview Press. 1994.

⁷Cairns groups countries include Argentina, Australia, Brazil, Canada, Chile, Colombia, Fiji, Hungary, Indonesia, Malaysia, New Zealand, Philippines, Thailand, and Uruguay. The United States is not a member.

⁸V.O. Roningen. "A Static World Policy Simulation (SWOPSIM) Framework," Washington DC, USDA ERS staff report No. AGES860625, 1986.

⁹The Dunkel package (Dec. 1991) contains support for reductions in the three areas—market access, internal supports, and export subsidies—with reductions in support implemented over a six year period from 1993 to 1999. The Blair House Accord (Nov. 1992) was a bilateral agreement between the United States and the EU on those aspects of the negotiations on which these countries had differing views. While the Blair House Accord maintained the basic structure of the Dunkel text, certain aspects were modified. The main differences include: (1) the 20 percent reduction in domestic support would apply to the aggregate value of support, rather than for individual commodities, (2) some forms of direct payments would be excluded from reduction commitments for domestic support, and (3) the reduction in the volume of subsidized exports would be 21 percent instead of 24 percent under the Dunkel text.

relatively higher prices (a consequently low levels of protection)—giving rise to impacts that were less than earlier SWOPSIM analyses based on 1986 data, a period when prices were low.

URA reform of agricultural policies, including greater market access, reduced internal supports, and curtailment of subsidized exports, were estimated to have a marked positive impact on the prices of agricultural commodities entering world markets. In terms of percentage changes from the 1989 base, beef (foot-and-mouth-free) prices were estimated to increase by 9 percent and by 6 percent, under the Dunkel Package and Blair House Accord, while equivalent price increases for beef from FMD-affected areas were 3 percent and 1 percent, respectively, for the two policy packages. The difference between the results for the Dunkel and Blair House Agreements are due to the less significant reductions in domestic support for livestock products in the EU under the Blair Accord. Grain prices (wheat, corn, and other coarse grains) were estimated to rise by between 6 percent and 7 percent, while soybean prices were estimated to rise by 1 percent and 2 percent.

As a result of the increases in beef prices, substantial welfare gains were expected to accrue to beef producers in both Australia (\$174 million) and Canada (\$130 million), while gains of \$75 million and \$45 million were expected for Brazil and Argentina, respectively. The distinction between beef produced in regions that have been deemed free of FMD and beef produced in FMD-affected areas was an important factor in the result. As Australia and Canada are FMD free, producers in these countries stand to gain more as a result of the greater increases in the world price of beef produced in areas that are FMD-free. The authors noted that a large part of this increase was due to an increase in Japanese imports that result from the 36-percent reduction in the Japanese tariff equivalent, and that this reduction was only part of the liberalization of the Japanese beef market. As such, the study speculated that the increase in Japanese imports and the associated increase in the world price would have occurred even without a successful conclusion of the URA.

Goldin and van de Mensbrugge (1995)¹⁰ evaluated the impact of the GATT using the

¹⁰I. Goldin, and D. van der Mensbrugge. "The Uruguay Round: An Assessment of Economywide and Agricultural Reforms", In *The Uruguay Round and the Developing Economies*, Edited by W. Martin, and L.A. Winters, World Bank discussion paper No. 307. World Bank, Washington, DC Oct. 1995.

Rural/Urban-North/South (RUNS) Model—a computable general equilibrium model containing 22 regions and 20 sectors. Their analysis was confined to quantifying the impact of tariffication of agriculture and, in an aggregate manner, manufacturing (it does not include trade in services, investment and intellectual property rights). The analysis also incorporated export subsidies, while domestic support were captured by input subsidies based on producer subsidy equivalents. Minimum access commitments were ignored. The model results were reported in terms of percent deviations from baseline levels in 2002 for world agricultural prices and real income. In all, five simulation results were reported covering different assumptions about the baseline levels of protection and about tariff reductions, input subsidy levels, and employment under the URA.¹¹

For beef, veal, and sheep (beef was not separated in the RUNS model), the world prices were expected to increase by 0.2 to 6 percent above baseline levels by 2002, depending on the model assumptions. As expected the largest impact (6 percent) was obtained under the scenario of greatest tariff and input subsidy reductions. Under the scenario which most closely resembled the final agreement, the world beef price was expected to increase by only 1.4 percent. The model also found fairly small price changes for most other commodities, including those linked to beef production. For instance, coarse grain prices were estimated to increase by at most 5 percent in 2002 above the baseline price level. The largest impacts were found for wheat which ranged from 1.2 percent to 10 percent, while increases in prices of dairy products were reported less than 2.5 percent (except under the scenario representing implementation of the Final Draft Agreement). Overall, the results indicated that the impact of the URA on agricultural prices and trade would be fairly small, although the magnitude of impacts were highly sensitive to the

¹¹The simulations reported include the following: (i) baseline protection are the 1982-93 (long-run) average, tariff reductions as presented in the URA submissions, input subsidies remain unchanged (Simulation I), (ii) as Simulation I but using base protection level given by the 1989-93 (recent reform) average (Simulation II), (iii) as Simulation II, with 1989-93 baseline protection, and tariffs reduced according to URA submissions, but with input subsidies reduced by 36 percent for OECD countries, and 24 percent for non-OECD countries to reflect an overall commitment of these countries to reducing the aggregate level of agricultural support (Simulation III), (iv) as Simulation III, but instead of assuming tariff reductions as outlined in countries' submissions, the tariffs were assumed to be lowered according to the Draft Final Act, that is, tariffs for OECD countries were lowered by 36 percent and those of non-OECD countries reduced by 24 percent (Simulation IV), (v) as Simulation III, although full employment is not assumed, unlike other simulations (Simulation V).

underlying data and assumptions regarding the baseline scenarios.

Brandao and Martin (1993)¹² used a general equilibrium model to capture the welfare consequences of trade liberalization, with special focus on agricultural reforms. Using the RUNS model, four scenarios were analyzed. First, a scenario to capture implementation of the Dunkel package in the developed countries was undertaken. Next, an experiment for reductions outline in the Dunkel package in all protection (positive and negative) in developed and developing countries was carried out. This goes beyond the Dunkel package in requiring reductions in negative as well as positive assistance and was intended to explore the consequences of GATT liberalization complemented by a corresponding wave of liberalization undertaken either unilaterally or through regional arrangements. The third scenario examined the implications of an agreement closer to the Dunkel proposal, including a reduction of distortions applied to agriculture by the OECD countries and a reduction of positive protection in the developing countries in the order of two-thirds of that in the OECD. A final experiment considered a reduction in all protection (positive and negative) rates in the developing countries alone. The results were presented for the year 2002, thereby incorporating most of the long-run supply and demand adjustments that would be expected from the liberalization process.

These scenarios were evaluated in terms of their impacts on world prices and on welfare. Under each scenario, dairy, sugar, beef and wheat were commodities for which the largest price increases were observed, reflecting the high levels of protection in OECD countries. Beef prices increases ranged between 5 to 6 percent over the baseline by 2002, while dairy price increases were higher by 9 and 10 percent. Wheat prices rose by 4 to 6 percent. The results from the first experiment indicate that agricultural policy reform in the OECD countries will have significant impacts on world prices of a limited number of commodities. The main gainers from these reforms are the OECD countries themselves. By contrast, when policy reform was extended to all countries, there was a substantial increase in the benefits going to the developing countries, indicating clearly that the major source of welfare gains for this group of countries is the reforms of their own policies.

¹²A.S. Brandao, and W. J. Martin. "Implications of Agricultural Trade Liberalization for Developing Countries." *Agricultural Economics*, vol. 8, pp. 313-343. 1993.

Harrison (1995)¹³ evaluated the welfare benefits of the URA associated with several key provisions, including tariff reductions in manufactured products, tariffication of nontariff barriers in agriculture and binding commitments to reduce the level of agricultural protection, reduction of export and production subsidies in agriculture, and elimination of Voluntary Export Restraints and the Multifiber Agreement (MFA). The evaluations were made using a general-equilibrium model containing 24 regions and 22 commodities of which the major agricultural commodities were paddy rice, wheat, grains (other than rice and wheat), non grain crops, wool, milk products, and meat and livestock products. Beef was not separated out in the model but included in the meat and livestock category.

The study found that the world stands to gain \$96 billion annually, with most benefits concentrated in the higher income countries, especially, the EU countries, Japan, and United States. These gains were fairly small when compared with GDP, however (for example, the \$13 billion gain accruing to the United States represents about 0.2 percent of its GDP). In the United States, agriculture contributed only \$1.8 billion of the total \$13 billion in gains, while MFA reforms benefit the country by \$10 billion, and reform in manufacturing contributed \$1.2 billion. The study also reported the percentage changes in employment and prices in each of the 22 sectors. In the United States, the price of meat and livestock products was estimated to increase by about 2 percent. Similar price increases were estimated in the EU, while prices in Japan and South Korea were estimated to decline by 13 percent and 9 percent, respectively. The model expected a 1-percent increase in employment in the meat and livestock sector. The price changes for agricultural products related to the beef industry included a 6-percent increase in grain prices, and a 2-percent increase in the price of dairy products.

Francois (1995)¹⁴ also used a general-equilibrium model to evaluate the URA, consisting of 13 regions and 19 sectors, including four of agriculture—grains, nongrain crops, livestock, and processed food. The model was simulated to included impacts of cuts in export subsidies and the imposition of market access commitments, however, tariff reductions and domestic supports were

¹³G.W. Harrison, T.F. Rutherford, and D.G. Tarr. "Quantifying the Uruguay Round." In *The Uruguay Round and the Developing Economies*. In *The Uruguay Round and the Developing Economies*, Edited by W.J. Martin, and L.A. Winters, World Bank discussion paper No. 307. World Bank, Washington, DC Oct. 1995.

¹⁴J.F. Francois, B. McDonald, and H. Nordstrom. "Assessing the Uruguay Round." *Ibid.*

not included in the URA experiments. The results were reported in terms of changes in production, wages, and welfare. Assuming constant returns to scale and perfect competition, the study estimated the overall benefits to be almost \$40 billion, representing only 0.17 percent of global GDP. Of the \$40 billion in benefits, less than \$5 billion were associated with reforms in agriculture. The model estimated small losses in income for the United States resulting from reforms in agriculture, but overall the United States was expected to gain over \$10 billion (roughly 0.2 percent of GDP). For the United States, the model expected a small decline in livestock production (less than 1 percent). Changes in the production of food products was also found to be less than 1 percent. Meanwhile production was expected to decline in the EU, but by only 2 percent. Grain production in the United States was expected to increase by about 1 percent. Because the livestock sector was not broken out into separate livestock categories, price and income impacts on the beef sector were not reported. This brief review of the literature on the impact of GATT on the beef sector has shown that there are many different ways that the URA can be analyzed empirically. Differences in model approaches and assumptions have been summarized by Sharma et al. (1996)¹⁵, who identified several possible reasons why empirical results from different models given different levels for the magnitude of price changes.

First, not all models fully incorporated all the components of the URA (market access, export subsidies, internal supports, and SPS regulations). Second, different assumptions were made about the extent of tariff reductions actually simulated in the models.¹⁶ Third, differences in results were from differences in the choice of base period used. For example, in the RUNS model simulation II, the 1989-93 benchmark protection level was higher than in RUNS simulation I (1982-93 base), so that liberalization resulted in larger world price increases. Fourth, differences arose due to model structure. One such difference was between the partial equilibrium and the general equilibrium models. As larger adjustments take place within an economy-wide model, the effects of agricultural/food policy changes on prices tend to be muted by relative to

¹⁵R. Sharma, P. Konandreas, and J. Greenfield. "An Overview of Assessments of the Impact of the Uruguay Round on Agricultural Prices and Incomes," *Food Policy*, vol. 21 No.4/5. Sept./Nov. 1996. pp. 365-376.

¹⁶This related to cases when base tariff rates in the country Schedules were found to differ, often markedly from those that were estimated to prevail in the base period. In this case, the researchers had to choose which base tariff to use (the actual or dirty) to apply the committed tariff cuts, or whether in fact to apply any cuts at all (that is, when the dirty base tariff is well above the actual base tariff).

those from partial equilibrium models. Fifth, there were differences stemming from dissimilar aggregations of countries and commodities. For example, where commodities and countries were grouped such that distortions tend to cancel out, the impacts were less pronounced (for example, aggregation of cereals in one group the impact would have been evident for rice (in Japan) was muted. Finally, differences in projected price changes between models were also due to the use of different elasticities for domestic demand and supply.

In spite of the differences, some general conclusions of the various studies on the quantitative impact of the URA on the U.S. beef sector can be summarized as follows:

- The URA will result in small increases in U.S. beef prices, in the range of 4 to 6 percent.
- Gains associated with price beef prices are offset by higher grain and oilseed prices, resulting in small increases in U.S. production.
- Although beef prices increase, higher consumer incomes will also rise, leaving U.S. consumption of beef more or less unchanged.
- The market access provisions of the agreement will provide opportunities to expand trade particularly with Japan and Korea.
- Higher incomes in both high and low-income countries will boost the demand for U.S. beef worldwide, although increased market access will intensify competition for expanded markets.
- The export subsidy and internal support provisions have a negligible impact on U.S. beef trade.

APPENDIX D
STATISTICAL TABLES

Table D-1

U.S. operations with cattle and number of cattle and calves as of Jan. 1, by region, 1992-96

Year	Corn Belt States		Western States		Southeastern States		Other	Total		
	Operations	Cattle and calves	Operations	Cattle and calves	Operations	Cattle and calves	Operations	Cattle and calves	Operations	Cattle and calves
		1,000 head		1,000 head		1,000 head		1,000 head		1,000 head
	Number	head	Number	head	Number	head	Number	head	Number	head
1992	395,000	32,450	370,900	43,370	372,500	17,150	88,460	4,586	1,226,860	97,556
1993	397,000	32,870	368,100	44,250	373,500	17,470	91,140	4,586	1,229,740	99,176
1994	395,000	33,250	380,900	45,200	368,000	18,100	69,790	4,438	1,213,690	100,988
1995	381,000	33,180	380,500	46,490	376,500	18,650	73,110	4,435	1,212,110	102,755
1996	377,000	33,760	378,800	46,580	368,500	19,000	70,090	4,479	1,194,390	103,819
Share of total (percent)										
1992	32.2	33.3	30.2	44.4	30.3	17.6	7.2	4.7	100.0	100.0
1993	32.3	33.1	29.9	44.6	30.4	17.6	7.4	4.6	100.0	100.0
1994	32.5	32.9	31.4	44.8	30.3	17.9	5.8	4.4	100.0	100.0
1995	31.5	32.3	31.4	45.2	31.1	18.1	6.0	4.3	100.0	100.0
1996	31.6	32.5	31.7	44.9	30.9	18.3	5.9	4.3	100.0	100.0

Source: U.S. Department of Agriculture, NASS, *Cattle Final Estimates*, 1989-93 and *Cattle*, Feb. 1996 and Jan. 1997.

Table D-2

Cattle on feed: Number of feedlots and marketings, by size of feedlot capacities, in the five major feeding Corn Belt States and the eight major feeding Western Rangelands States, 1992-95¹

Year and area	<i>(Feedlot capacity in number of head)</i>									
	Under 1,000		1,000-7,999		8,000-31,999		32,000 and over		Total	
	Lots	Cattle marketed	Lots	Cattle marketed	Lots	Cattle marketed	Lots	Cattle marketed	Lots	Cattle marketed ²
	No	1,000 head	No	1,000 head	No	1,000 head	No	1,000 head	No	1,000 head
1992:										
Corn Belt ³	39,490	2,566	1,036	2,809	156	4,385	18	1,785	40,700	11,545
Western Rangelands ⁴ ..	5,175	280	359	1,214	153	3,944	59	4,996	5,746	10,434
Total	44,652	2,826	1,403	3,944	309	7,883	82	7,326	46,446	21,979
1993:										
Corn Belt ³	37,690	2,603	1,038	2,652	151	4,230	21	1,900	38,900	11,385
Western Rangelands ⁴ ..	4,819	239	354	1,306	137	4,106	60	5,340	5,370	10,991
Total	42,503	2,825	1,392	3,851	288	7,827	87	7,873	44,270	22,376
1994:										
Corn Belt ³	36,870	2,348	1,158	2,777	148	4,085	24	2,325	38,200	11,535
Western Rangelands ⁴ ..	4,586	261	344	1,203	140	4,197	62	5,783	5,132	11,444
Total	41,445	2,580	1,502	3,883	294	7,854	91	8,662	43,332	22,979
1995:										
Corn Belt ³	34,915	1,963	1,204	3,104	160	4,615	21	2,315	36,300	11,997
Western Rangelands ⁴ ..	4,524	325	344	1,145	134	3,922	63	5,976	5,065	11,368
Total	39,429	2,269	1,546	4,056	301	8,246	89	8,794	41,365	23,365

¹ The sum of the numbers shown under a specified group may not add to the totals shown for that group, since some area groups are combined to avoid disclosing individual operations.

² The total marketings shown were equal to about 83 percent of the fed cattle marketings in the United States.

³ The Corn Belt includes the States of Illinois, Iowa, Kansas, Minnesota, and Nebraska.

⁴ The Western Rangelands include the States of Arizona, California, Colorado, Idaho, Oklahoma, South Dakota, Texas, and Washington.

Source: 1992-93 data compiled from *USDA, NASS, Cattle Final Estimates, 1989-93* and 1994-95 data compiled from *USDA, NASS, Cattle on Feed*, various issues, see <http://www.usda.gov/nass/pubs/pubs.htm>.

Table D-3

Cattle on feed: Number of feedlots and marketings, by size of feedlot capacities, in cattle-feeding Corn Belt States and cattle-feeding Western Rangelands States, 1996

(Feedlot capacity in number of head)

Year and area	1,000-7,999		8,000-31,999		32,000 and over		Total	
	Lots	Cattle marketed	Lots	Cattle marketed	Lots	Cattle marketed	Lots	Cattle marketed
		1,000		1,000		1,000		1,000
	No	head	No	head	No	head	No	head
1996:								
Corn Belt	1,016	2,728	163	4,830	21	2,340	1,200	9,898
Western Rangelands ..	354	1,002	153	4,261	63	5,959	570	11,222
Total	1,370	3,730	316	9,091	84	8,299	1,770	21,120

Note.--In 1996, cattle on feed reporting procedures changed, so as not to disclose the confidentiality of individual operations.

Source: Data compiled from *USDA, NASS, Cattle on Feed*, Feb. 14, 1997; <http://www.usda.gov.nass/pubs/pubs.htm>.

Table D-4

Cattle: Number of Federally inspected slaughter plants, by sizes, number of cattle slaughtered in such plants, and shares of total commercial slaughter accounted for, 1992-96

Year	Number of cattle slaughtered					Total
	Under 1,000	1,000 to 9,999	10,000 to 49,999	50,000 to 499,999	500,000 and more	
1992:						
Plants	694	144	53	60	20	971
Quantity slaughtered (<i>thousands</i>)	187	458	1,334	10,694	19,182	31,849
Share of commercial slaughter (<i>percent</i>) ...	0.6	1.4	4.1	32.5	58.4	¹ 96.9
1993:						
Plants	667	145	42	60	20	934
Quantity slaughtered (<i>thousands</i>)	182	452	1,066	11,306	20,056	33,062
Share of commercial slaughter (<i>percent</i>) ...	0.5	1.4	3.2	33.9	60.2	¹ 99.2
1994:						
Plants	637	124	42	57	22	882
Quantity slaughtered (<i>thousands</i>)	183	378	995	10,082	21,845	33,483
Share of commercial slaughter (<i>percent</i>) ...	0.5	1.1	2.9	29.5	63.9	¹ 97.9
1995:						
Plants	602	115	39	56	24	836
Quantity slaughtered (<i>thousands</i>)	182	360	1,010	9,893	23,435	34,880
Share of commercial slaughter (<i>percent</i>) ...	0.5	1.0	2.8	27.8	65.8	¹ 97.9
1996:						
Plants	561	131	39	58	23	812
Quantity slaughtered (<i>thousands</i>)	190	391	1,013	11,578	22,898	36,070
Share of commercial slaughter (<i>percent</i>) ...	0.5	1.1	2.8	31.6	62.6	¹ 98.6

¹ Remainder accounted for by State inspection.

Note.--Because of rounding, figures may not add to the totals shown.

Source: *USDA, NASS, Livestock Slaughter*, annual issues, 1992-96.

Table D-5

Calves: Number of Federally inspected slaughter plants, by sizes, number of calves slaughtered in such plants, and shares of total commercial slaughter accounted for, 1992-96

Year	Number of calves slaughtered			Total
	Under 100	100 to 9,999	10,000 and more	
1992:				
Plants	330	66	31	427
Quantity slaughtered (<i>thousands</i>)	4	175	1,145	1,324
Share of commercial slaughter (<i>percent</i>) ...	0.2	12.8	83.5	¹ 96.5
1993:				
Plants	305	68	29	402
Quantity slaughtered (<i>thousands</i>)	3	135	1,043	1,182
Share of commercial slaughter (<i>percent</i>) ...	0.2	11.3	87.3	¹ 98.9
1994:				
Plants	257	63	28	348
Quantity slaughtered (<i>thousands</i>)	3	141	1,093	1,237
Share of commercial slaughter (<i>percent</i>) ...	0.2	11.1	86.1	¹ 97.5
1995:				
Plants	249	62	32	343
Quantity slaughtered (<i>thousands</i>)	3	139	1,250	1,392
Share of commercial slaughter (<i>percent</i>) ...	0.2	9.7	87.4	¹ 97.3
1996:				
Plants	264	79	37	380
Quantity slaughtered (<i>thousands</i>)	3	145	1,581	1,729
Share of commercial slaughter (<i>percent</i>) ...	0.2	8.2	89.4	¹ 97.8

¹ Remainder accounted for by State inspection.

Note.—Because of rounding, figures may not add to the totals shown.

Source: USDA, NASS, *Livestock Slaughter*, annual issues, 1992-96.

Table D-6

Number of U.S. firms slaughtering cattle and calves by type of cattle, 1991-94

Year	Steers and heifers	Cows and bulls	All ¹ cattle	Calves
1991	254	282	321	139
1992	230	256	293	139
1993	217	229	267	129
1994	195	205	239	108

¹ Includes steers, heifers, cows, and bulls.

Source: USDA, *Packers and Stockyards Statistical Report, 1991-94*, Reporting Years, SR-96-1, Oct. 1996, p. 14.

Table D-7

Dairy cows: Inventories by size of operation, production, and milk production per cow, by region, 1993 and 1996

Region/state	Size of operation by herd size										Total inventory		Milk production		Milk production per cow	
	1 - 29		30 - 49		50 - 99		100 - 199		200+							
	1993	1996	1993	1996	1993	1996	1993	1996	1993	1996	1993	1996	1993	1996	1993	1996
	Number of cows (1,000 animals)										Million pounds		Pounds per cow			
Upper Midwest ¹	189	139	702	583	1,092	983	503	558	217	278	2,704	2,541	40,711	39,524	15,056	15,555
Wisconsin	100	74	427	377	665	594	275	304	76	100	1,543	1,449	23,014	22,376	14,915	15,442
Minnesota	61	42	209	155	260	245	88	102	17	54	635	598	9,705	9,440	15,283	15,786
Northeast ²	87	67	307	263	709	662	411	427	277	318	1,790	1,738	28,028	28,449	15,656	16,373
New York	25	19	97	79	284	260	190	197	131	147	727	702	11,425	11,529	15,715	16,423
Pennsylvania	45	39	161	148	271	264	115	129	48	64	640	644	10,190	10,640	15,922	16,522
Central ³	135	114	253	183	606	539	411	427	418	471	1,824	1,733	26,708	25,614	14,645	14,782
Southeast ⁴	44	29	84	57	233	207	263	228	371	337	995	858	13,732	12,185	13,801	14,202
West ⁵	23	15	36	23	132	89	227	217	1,786	2,073	2,204	2,418	40,864	47,680	18,538	19,719
California	2	1	5	4	21	10	46	48	1,136	1,201	1,210	1,264	22,921	25,859	18,943	20,458
U.S. TOTAL	480	364	1,382	1,108	2,772	2,480	1,814	1,858	3,069	3,478	9,517	9,287	150,043	153,452	15,765	16,523

¹ Michigan, Minnesota, North Dakota, South Dakota, Wisconsin.

² Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.

³ Arkansas, Illinois, Indiana, Iowa, Kansas, Louisiana, Missouri, Nevada, Ohio, Oklahoma, Texas.

⁴ Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia.

⁵ Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

Source: Data compiled from USDA, AMS, Dairy Market Statistics, Annual Summary, 1993 and 1996.

Table D-8

Cattle and calves: Share of slaughter accounted for by 4, 8, and 20 largest firms, by type and years, 1990-94

Item	1990	1991	1992	1993	1994
All cattle:					
4 largest firms	58.6	60.6	63.5	66.0	67.8
8 largest firms	67.8	68.8	71.1	73.3	74.3
20 largest firms	79.0	79.3	80.8	83.1	83.6
Steers and heifers:					
4 largest firms	71.6	73.5	77.8	79.8	80.9
8 largest firms	82.1	82.7	85.9	87.6	87.5
20 largest firms	91.5	91.3	92.7	93.8	92.5
Cows and bulls:					
4 largest firms	20.4	21.1	22.0	24.0	26.3
8 largest firms	33.2	32.9	35.8	38.4	41.1
20 largest firms	57.6	59.4	60.0	63.4	67.8
Calves:					
4 largest firms	31.1	20.5	25.1	25.9	24.3
8 largest firms	47.2	33.9	40.1	41.8	40.2
20 largest firms	71.5	56.7	65.4	70.2	65.9

Source: Compiled from official statistics of USDA, *Packers and Stockyards Statistical Report, 1991-94 Reporting Years*, SR-96-1, Oct. 1996, pp. 60-63.

Table D-9

Cattle: U.S. cattle inventories, by type, Jan. 1, 1992-97

(1,000 animals)

Year	All cattle	Beef cows
1992	97,556	33,775
1993	99,176	33,888
1994	100,988	34,650
1995	102,755	35,156
1996	103,819	35,333
1997	101,209	34,280

Source: 1992-93 data compiled from USDA, NASS, *Cattle Final Estimates, 1989-93*, Jan. 1995, p. 1; data for 1994, USDA, ERS, *Red Meat Yearbook*, 1994, p. 105; and data for 1995-96, USDA, NASS, *Statistical Highlights of U.S. Agriculture, 1995/96*, see <http://www.usda.gov/nass/pubs/stathigh/cover/htm>; 1997 from USDA, NASS, *Cattle*, Jan. 31, 1997.

Table D-10

Cattle prices: U.S. auction prices, by types, by quarters and annual average, 1992-96

(Dollars per hundred weight)

Period	Slaughter cattle ¹	Feeder cattle ²	Cull cattle ³	Veal calves ⁴
1992:				
1st. quarter	75.71	84.93	44.91	89.78
2nd. quarter	75.94	85.90	44.67	88.76
3rd. quarter	73.88	88.82	45.61	84.62
4th. quarter	75.86	86.22	44.16	84.87
Annual average	75.35	86.47	44.84	87.01
1993:				
1st. quarter	80.65	90.87	47.75	86.81
2nd. quarter	79.78	96.13	49.20	92.92
3rd. quarter	73.77	92.72	49.29	89.69
4th. quarter	71.23	87.17	43.83	87.03
Annual average	76.36	91.72	47.52	89.11
1994:				
1st. quarter	73.11	88.96	44.44	84.38
2nd. quarter	68.79	85.35	46.16	90.61
3rd. quarter	65.83	80.64	42.77	89.24
4th. quarter	67.63	78.01	36.68	87.78
Annual average	68.84	83.24	42.51	88.01
1995:				
1st. quarter	71.58	77.70	39.58	82.98
2nd. quarter	64.70	72.59	37.18	(⁵)
3rd. quarter	62.65	67.77	34.93	(⁵)
4th. quarter	66.10	63.91	30.61	(⁵)
Annual average	66.26	70.49	35.58	(⁵)
1996:				
1st. quarter	63.06	59.12	32.52	(⁵)
2nd. quarter	60.26	58.81	30.37	(⁵)
3rd. quarter	66.51	62.59	31.74	(⁵)
4th. quarter	70.39	64.70	26.68	(⁵)
Annual average	65.05	61.31	30.33	(⁵)

¹ U.S. prices based on sales of slaughter cattle, steers, Choice Nos. 2 and 4, Nebraska direct, 1100-1300 lbs.

² Feeder cattle prices were accumulated for Med. No. 1, steers, Oklahoma City, 600-650 lbs.

³ U.S. prices on sales of cows, boning utility, Sioux Falls.

⁴ U.S. prices were accumulated for choice veal calves, Albany, NY.

⁵ Data no longer collected.

Source: Facsimile from USDA, ERS, updates to *Red Meat Yearbook*, 1994, Jan. 28, 1997.

Table D-11

Live cattle and calves:¹ U.S. imports for immediate slaughter from Canada, Mexico, and all other sources, 1992-96

Source	1992	1993	1994	1995	1996
<i>Quantity (1,000 animals)</i>					
Canada	960	926	908	1,055	1,296
Mexico	3	2	3	67	2
All other	0	(²)	0	0	0
Total	963	927	910	1,123	1,298
<i>Value (Million dollars)</i>					
Canada	726	733	727	809	895
Mexico	2	1	1	37	1
All other	0	(³)	0	0	0
Total	728	734	728	846	896

¹ Includes HTS subheadings 0102.90.4020, 0102.90.4024, 0102.90.4028, 0102.90.4062, 0102.90.4064, 0102.90.4066, and 0102.90.4068.

² Less than 500 animals.

³ Less than \$500,000 dollars.

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-12

Cattle destined for immediate slaughter: U.S. imports from Canada, by type, 1992-96

Source	1992	1993	1994	1995	1996
<i>Quantity (1,000 animals)</i>					
Steers and heifers ¹	575	584	627	744	901
Cow and bulls ²	346	310	255	294	379
Veal calves ^{3,4}	39	33	25	18	17
Total	960	926	908	1,055	1,296
<i>Value (Million dollars)</i>					
Steers and heifers ¹	487	505	544	625	693
Cows and bulls ²	233	223	178	181	200
Veal calves ^{3,4}	6	5	4	3	2
Total	726	733	727	809	895

¹ HTS subheadings 0102.90.4062 and 0102.90.4068.

² HTS subheadings 0102.90.4064 and 0102.90.4066.

³ HTS subheadings 0102.90.4020, 0102.90.4024, and 0102.90.4028.

⁴ Calves weighing less than 90 kilograms each.

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-13
Cattle for slaughter: U.S. imports from Canada, monthly, 1992-96

(1,000 animals)

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1992	72	80	90	83	84	85	55	71	95	94	73	79	960
1993	73	79	76	94	81	102	70	83	91	71	52	53	926
1994	40	57	72	84	93	90	84	88	98	92	58	50	908
1995	68	76	99	101	94	107	80	97	103	89	84	58	1,055
1996	93	123	112	122	141	111	111	127	114	109	61	74	1,296

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-14
Live cattle and calves: U.S. production,¹ imports for immediate slaughter from Canada, Mexico, and total,² consumption,³ and imports for immediate slaughter as a share of consumption, 1992-96

Year	Production	Imports of slaughter cattle and calves from--			Consumption	Share of consumption supplied by imports from--		
		Canada	Mexico	Total, all countries		Canada	Mexico	Total, all countries
		-----Thousands-----			-----Percentage-----			
1992	38,933	960	3	963	34,245	2.8	(⁴)	2.8
1993	39,448	926	2	927	34,520	2.7	(⁴)	2.7
1994	40,059	908	3	910	35,467	2.6	(⁴)	2.6
1995	40,211	1,055	67	1,123	37,070	2.8	0.2	3.0
1996	39,586	1,296	2	1,298	38,352	3.4	(⁴)	3.4

¹ The calf crop, which is the number of calves born during the year.

² Imports of live cattle and calves from all other sources combined amounted to fewer than 1,000 animals in every year during 1992-96.

³ Commercial cattle and calf slaughter.

⁴ Less than 0.05 percent.

Note.--Because of rounding, figures may not add to the totals shown.

Source: 1992 production and consumption data compiled from official statistics of the USDA, NASS, *Cattle Final Estimates 1989-93*, Jan. 1, 1995, p. 1; 1993 data compiled from USDA, ERS, *Livestock and Poultry Situation and Outlook Report*; 1994-96 data compiled from USDA, NASS, *Cattle*, Jan. 31, 1997; imports compiled from official statistics of the U.S. Department of Commerce.

Table D-15**Calves: U.S. commercial slaughter, imports for consumption from Canada, and imports for consumption from Canada as a share of U.S. commercial slaughter, 1992-96**

Item	1992	1993	1994	1995	1996
U.S. commercial slaughter (1,000 animals)	1,372	1,195	1,268	1,430	1,768
Imports from Canada (1,000 animals)	39	33	25	18	17
Imports from Canada as a share of U.S. commercial slaughter (percent)	2.8	2.8	2.0	1.3	1.0

Source: Imports compiled from official statistics of the U.S. Department of Commerce (HTS subheadings 0102.90.4024 and 0102.90.4028). U.S. commercial slaughter compiled from USDA, ERS, *Livestock, Dairy and Poultry Situation and Outlook*, various issues.

Table D-16

Fresh, chilled, or frozen beef and veal: U.S. imports for consumption, carcass weight equivalent, by major sources, 1992-96

Source	1992	1993	1994	1995	1996
<i>Quantity (1,000 pounds, carcass weight equivalent)</i>					
Canada	328,897	396,679	447,319	439,420	579,530
Australia	1,011,288	905,576	876,079	670,207	544,531
New Zealand	637,887	560,619	526,462	577,775	502,110
Costa Rica	45,085	68,398	65,239	58,366	54,196
Uruguay	0	0	0	381	60,808
Nicaragua	18,960	59,479	60,369	51,348	35,810
Honduras	47,789	47,487	47,706	17,665	18,124
Mexico	876	3,207	2,775	5,631	10,295
Guatemala	20,316	28,074	16,886	10,378	2,075
Japan	18	13	71	19	17
Dominican Republic	18,116	20,062	15,424	5,911	0
All other	6,349	12,093	9,409	1,732	732
Total	2,135,581	2,101,688	2,067,739	1,838,832	1,808,229
<i>Value (1,000 dollars)</i>					
Canada	286,476	357,452	367,315	352,560	454,306
Australia	738,039	685,702	604,198	385,565	281,735
New Zealand	504,317	457,671	412,562	357,378	269,626
Costa Rica	39,868	60,396	53,755	45,154	37,950
Uruguay	0	0	0	257	35,449
Nicaragua	16,237	51,909	49,811	37,719	22,467
Honduras	40,060	40,456	39,885	14,057	12,008
Mexico	1,372	2,565	3,198	5,915	8,760
Guatemala	17,536	22,702	14,490	8,601	1,397
Japan	451	327	449	425	460
Dominican Republic	16,089	17,793	12,258	4,245	0
All other	4,053	8,235	7,461	2,405	2,164
Total	1,664,498	1,705,207	1,565,382	1,214,279	1,126,322

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-17

Beef: U.S. imports of beef and veal from Canadian live cattle and calves, beef and veal from Canada, total imports, U.S. beef and veal production from U.S. cattle and calves, and ratio of imports from Canada to U.S. production, 1992-96

Period	Beef and veal from Canadian-live cattle and calves ¹	Beef and veal from Canada	Total imports	U.S. beef and veal production from U.S. cattle and calves	Ratio of imports from Canada to U.S. production
	-----(<i>Million pounds</i>)-----				<i>Percent</i>
1992	698	329	1,027	22,698	4.5
1993	685	397	1,082	22,649	4.8
1994	709	447	1,156	23,970	4.8
1995	838	439	1,277	24,703	5.2
1996	1,007	580	1,587	25,059	6.3

¹ Carcass weight equivalent of U.S. beef and veal from U.S. imports of live cattle and calves. Data estimated by multiplying the pounds of imported live cattle by a dressed-weight yield of 59 percent and by multiplying the pounds of imported calves by a dressed-weight yield of 56 percent.

Note.--U.S. beef and veal production is less than other tables in this report which include beef derived from imported live cattle for immediate slaughter.

Source: U.S. imports compiled from official statistics of the U.S. Department of Commerce; U.S. production compiled from official statistics of USDA.

Table D-18

Beef and veal:¹ U.S. production, imports for consumption from Canada and all other sources, exports of domestic merchandise, apparent consumption, and imports as a share of consumption and production, 1992-96

Year	Production	Imports of fresh, chilled, or frozen beef for consumption from--			Exports of fresh, chilled, or frozen domestic beef	Apparent consumption ²	Imports as a share of consumption from--			Imports as a share of production from--		
		Canada	All other	Total			Canada	All other	Total	Canada	All other	Total
-----Million pounds-----						-----Percent-----						
1992	23,396	329	1,807	2,136	1,277	24,572	1.3	7.4	8.7	1.4	7.7	9.1
1993	23,334	397	1,705	2,102	1,219	24,292	1.6	7.0	8.7	1.7	7.3	9.0
1994	24,679	447	1,621	2,068	1,547	25,414	1.8	6.4	8.1	1.8	6.6	8.4
1995	25,541	439	1,400	1,839	1,736	25,853	1.7	5.4	7.1	1.7	5.5	7.2
1996	26,066	580	1,228	1,808	1,742	26,324	2.2	4.7	6.9	2.2	4.7	6.9

¹ Includes commercial and farm production, carcass weight equivalent.

² Adjusted for stock changes.

Note.—Because of rounding, figures may not add to the totals shown.

Source: Production and apparent consumption compiled from official statistics of the USDA, ERS, *Red Meats Yearbook*, 1994 and facsimile updates to *Red Meats Yearbook*, Jan. 29, 1997; import and export data compiled from official statistics of the U.S. Department of Commerce.

Table D-19

Cattle: Commercial slaughter, by classes of cattle, 1992-96

Year	Fed cattle	Cows, bulls, and stags (culls)	Calves	Total slaughter	Percent of total		
					Fed cattle	Culls	Calves
-----1,000 head-----							
1992	26,374	6,499	1,372	34,245	77	19	4
1993	26,580	6,745	1,195	34,520	77	20	3
1994	27,616	6,582	1,268	35,467	78	19	4
1995	28,673	6,967	1,430	37,070	77	19	4
1996	28,710	7,862	1,767	38,339	75	21	5

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the USDA, ERS, *Cattle and Sheep Outlook*, a supplement to *Livestock and Poultry Situation and Outlook Report*, LDP-CS-12, Nov. 13, 1996.

Table D-20

Fresh, chilled, or frozen beef and veal: U.S. exports, by principal markets, 1992-96

Country	1992	1993	1994	1995	1996
<i>Quantity (1,000 pounds, carcass weight-equivalent)</i>					
Japan	621,701	715,025	826,892	995,718	972,600
Canada	228,967	219,775	259,076	282,843	264,158
Korea	160,329	112,484	175,321	265,390	195,640
Mexico	184,632	103,986	201,393	84,702	163,739
All other	81,420	67,375	84,154	107,455	128,493
Total	1,277,049	1,218,645	1,546,836	1,736,108	1,742,450
<i>Value (1,000 dollars)</i>					
Japan	1,113,730	1,228,578	1,328,843	1,680,332	1,489,770
Canada	329,218	320,562	336,024	337,773	295,399
Korea	211,570	151,138	226,976	319,244	243,107
Mexico	209,074	112,070	227,406	84,678	161,576
All other	134,508	124,840	132,201	160,244	185,498
Total	1,998,100	1,937,188	2,251,450	2,592,271	2,375,368

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-21
Edible beef and veal offal: U.S. exports to selected markets, 1992-96

Country	1992	1993	1994	1995	1996
<i>Quantity (1,000 pounds)</i>					
Japan	250,588	247,963	209,016	345,352	392,118
Russia	42	10,121	48,526	122,059	114,960
Mexico	88,970	90,103	100,039	56,198	67,220
Canada	22,031	23,343	26,817	23,715	22,878
All other	112,145	179,366	187,480	208,081	187,204
Total	473,776	550,896	571,878	755,405	784,380
<i>Value (1,000 dollars)</i>					
Japan	362,300	325,672	281,958	416,495	422,181
Russia	12	3,409	20,008	51,542	52,459
Mexico	48,509	47,474	48,468	30,165	35,288
Canada	9,844	11,065	10,974	9,315	9,014
All other	48,433	80,336	93,521	106,988	97,954
Total	469,098	467,957	454,929	614,505	616,896

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-22

Frozen boneless manufacturing beef: Comparative average U.S., Canadian, and other imported prices, 65 CL (percent chemical lean), by quarters and annual average, 1993-96

(Cents per pound)

Period	United States ¹	Canada ²	Other imports ³
1993:			
1st. quarter	85	89	78
2nd. quarter	88	98	90
3rd. quarter	81	83	77
4th. quarter	74	77	82
Annual average	82	87	82
1994:			
1st. quarter	66	66	72
2nd. quarter	67	67	68
3rd. quarter	62	61	62
4th. quarter	60	57	58
Annual average	64	63	65
1995:			
1st. quarter	65	64	62
2nd. quarter	59	60	62
3rd. quarter	62	63	62
4th. quarter	58	61	69
Annual average	61	62	64
1996:			
1st. quarter	57	58	61
2nd. quarter	59	61	61
3rd. quarter	64	68	64
4th. quarter	66	70	69
Annual average	62	64	64

¹ U.S. prices are delivered Chicago.

² Converted from Toronto delivered to Chicago, by adding a factor of 3¢ per pound, per telephone conversation with Bill Albanos of *The Meat Sheet*, Chicago, IL, Nov. 26, 1996.

³ Delivered East Coast price.

Source: Derived from daily price quotations of representative market prices as reported in *The Meat Sheet*, Chicago, IL.

Table D-23**Boxed beef:¹ Wholesale price, cut-out value, by quarters and years, 1992-96***(Dollars per hundred weight)*

Period	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average
1992	117.72	118.46	113.85	116.91	116.73
1993	123.21	124.61	115.29	111.87	118.74
1994	113.12	108.92	106.02	105.84	108.47
1995	110.39	104.96	103.80	107.58	106.68
1996	98.98	97.87	103.96	111.55	103.09

¹ Derived from Choice Nos. 2-3, 550-700 lbs.Source: Facsimile from USDA, ERS, updates to *Red Meats Yearbook, 1994*, Jan. 29, 1997.**Table D-24****Feed grain: Domestic use in feed and residual uses, by principal grains, crop years 1992/93 to 1996/97***(Million metric tons)*

Crop year beg. Sept. 1	Corn	Sorghum	Barley	Oats	Wheat	Total
1992/93	134.5	11.9	4.2	3.4	5.3	159.3
1993/94	119.4	11.6	6.1	3.4	9.6	150.0
1994/95	140.6	10.2	4.9	2.8	7.4	166.0
1995/96	119.7	7.9	4.6	2.1	6.2	140.6
1996/97 ¹	126.4	13.3	4.1	2.2	8.0	154.0

¹ Projected, December 1996.

Source: Compiled from official statistics of the U.S. Department of Agriculture.

Table D-25

Livestock: U.S. grain-consuming animal units (GCAUs), by type, and U.S. feed consumption, crop years 1992/93 to 1996/97

Crop year beg. Sept 1--	Type livestock						Feed grain consumption ¹		
	Dairy cattle	Cattle on feed	Other cattle	Hogs	Poultry	Other livestock	Total	Total	Per animal unit
-----Million units-----							Million metric tons	Metric tons	
1992/93 ...	10.9	19.5	4.0	22.4	25.3	0.6	82.7	159.3	1.93
1993/94 ...	10.7	19.8	4.1	22.6	26.0	0.6	83.9	150.0	1.79
1994/95 ...	10.7	19.1	4.1	23.0	26.8	0.6	84.3	166.0	1.97
1995/96 ...	10.6	19.6	² 4.2	22.1	27.8	0.6	84.9	140.6	1.66
1996/97 ³ ...	10.5	20.0	² 4.2	22.2	28.8	0.6	86.3	154.0	1.79

¹ Includes feed wheat.

² Estimated.

³ Projected on Dec. 1996.

Source: Compiled from official statistics of the USDA.

Table D-26

Feed grains (except wheat): U.S. production, imports, exports, domestic consumption, ending stock, and average farm price, crop years 1992/93 to 1996/97

Crop year beg. Sept. 1	Production	Imports	Exports	Apparent consumption			Ending stock	Farm price of corn
				Feed	Food, alcohol, seed	Subtotal		
----- (Million metric tons) -----							Bushel	
1992/93 ...	277.1	1.4	51.1	154.2	44.2	198.7	63.1	\$2.07
1993/94 ...	186.2	3.9	40.3	140.4	46.1	186.5	27.4	2.50
1994/95 ...	284.8	3.3	62.4	158.5	48.8	207.3	45.3	2.26
1995/96 ...	209.3	3.3	57.5	134.4	49.0	183.4	20.0	3.24
1996/97 ¹ ...	267.0	2.4	55.3	146.0	47.8	193.8	46.1	2.65

¹ Projected, December 1996.

Source: Compiled from official statistics of the U.S. Department of Agriculture.

Table D-27**Live cattle and calves:¹ Mexican inventories, production, imports, exports, and apparent consumption, 1992-97***(Thousand animals)*

Year	Inventories	Production ²	Imports	Exports	Apparent consumption ³
1992	30,232	9,650	246	1,019	7,770
1993	30,649	9,850	93	1,292	7,870
1994	30,702	9,500	156	1,045	8,310
1995	30,191	8,900	22	1,656	8,550
1996 ⁴	28,141	8,500	40	1,450	8,180
1997 ⁵	27,286	8,000	30	1,400	8,200

¹ Includes buffalo.² The calf crop, which is the number of animals born during the year.³ Number of cattle and calves slaughtered.⁴ Preliminary.⁵ Forecast.

Source: Inventories and apparent consumption derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P 2-96, (Oct. 1996), pp. 92-93; production, imports, and exports derived from USDA, FAS, U.S. American Embassy Mexico City, Mexico, *Livestock Annual*, various issues.

Table D-28**Mexican cattle inventories: Reporting Mexican States and dates of the inventories**

States	Date of inventory	Number of beef cattle	Number of dairy cattle	Total cattle
Northern States:				
Sonora	Mar. 1996	1,196,404	49,456	1,245,860
San Luis Potosi	Sept. 1995	915,704	273,521	1,189,225
Chihuahua	Jun. 1996	864,774	158,520	1,023,294
Durango	Dec. 1995	711,751	10,000	721,751
Coahuila	Dec. 1995	402,150	10,082	412,232
Nuevo Leon	Mar. 1996	320,000	15,000	335,000
Baja California Norte	Mar. 1996	30,000	30,861	60,861
Other States:				
Jalisco	Dec. 1995	1,290,864	515,916	1,806,780
Sinaloa	Dec. 1995	1,005,000	15,000	1,020,000
Tamaulipas	Dec. 1995	918,972	0	918,972
Yucatan	Mar. 1996	366,816	957	367,773
Aguascalientes	Mar. 1996	61,500	58,950	120,450
Veracruz	Sept. 1996	1,886,000	(¹)	(¹)

¹ Not available.

Source: Compiled from statistics of the National Commission for the Eradication of Bovine Tuberculosis and Brucellosis, Feb. 7, 1997.

Table D-29**Beef and veal: Mexican production, imports, exports, and apparent consumption, 1992-97***(Million pounds, carcass weight equivalent)*

Year	Production	Imports	Exports	Apparent consumption
1992	3,660	287	2	3,944
1993	3,770	212	2	3,979
1994	3,990	198	2	4,187
1995	4,079	93	4	4,167
1996 ¹	3,968	165	4	4,129
1997 ²	3,968	243	7	4,204

¹ Preliminary.² Forecast.

Source: Derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P 2-96, (Oct. 1996), p. 87 and p. 97.

Table D-30**Live steers: Average prices in the Federal District of Mexico, by quarter, 1992-96***(U.S. dollars per 100 pound)*

Year	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.
1992	87	87	85	77
1993	79	79	78	77
1994	77	73	73	69
1995	45	46	46	47
1996	55	56	57	60

Source: Compiled from official statistics of the Servicio Nacional de Informacion de Mercados (the National Service of Market Information) *Anuario Estadístico Abasto de Carne de Bovino al Distrito Federal y A.M.* (Annual Statistical Abstract of Bovine Meat in the Federal District of Mexico), annual issues.

Table D-31**Wholesale beef: Average prices in the Federal District of Mexico, by quarter, 1992-96***(U.S. dollars per pound)*

Year	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.
1992	1.36	1.39	1.34	1.25
1993	1.31	1.34	1.23	1.28
1994	1.24	1.17	1.15	1.08
199568	.71	.73	.71
199692	.91	.91	.96

Source: Compiled from official statistics of the Servicio Nacional de Informacion de Mercados (the National Service of Market Information) *Anuario Estadístico Abasto de Carne de Bovino al Distrito Federal y A.M.* (Annual Statistical Abstract of Bovine Meat in the Federal District of Mexico), annual issues.

Table-D-32**Cattle and calf inventories in Canada, by Provinces and regions, Jan. 1993-97***(1,000 animals)*

Province/region	1993	1994	1995	1996	1997
Alberta	4,363	4,615	4,828	4,958	4,692
Saskatchewan	2,039	2,135	2,307	2,420	2,336
Manitoba	1,052	1,100	1,194	1,251	1,304
Prairie Provinces ¹	7,454	7,850	8,329	8,629	8,332
British Columbia	621	648	694	710	683
Western Canada, total ²	8,075	8,499	9,023	9,339	8,995
Ontario	2,080	2,054	2,115	2,100	1,996
Quebec	1,316	1,385	1,397	1,435	1,466
Central Provinces ³	3,396	5,439	3,512	3,535	3,462
Maritime Provinces ⁴	315	315	314	312	312
Eastern Canada, total ⁵	3,711	3,754	3,826	3,847	3,772
Canada, total	11,786	12,254	12,848	13,186	12,767

¹ Alberta, Saskatchewan, and Manitoba.² Includes Prairie Provinces and British Columbia.³ Ontario and Quebec.⁴ Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland.⁵ Includes Central and Maritime Provinces.

Source: Statistics Canada, Agriculture Division, Cat. No. 23-603-UFE.

Table-D-33**Cattle: Slaughter, in Canada, by Provinces and regions, 1992-95***(1,000 animals)*

Province/region	1992	1993	1994	1995
Alberta	1,372	1,436	1,486	1,537
Saskatchewan & Manitoba	266	158	164	194
Prairie Provinces ¹	1,638	1,594	1,650	1,731
British Columbia	67	59	51	51
Western Canada, total ²	1,705	1,653	1,701	1,782
Ontario	720	648	633	632
Quebec	234	215	217	202
Central Provinces ³	954	863	850	834
Maritime Provinces ⁴	135	25	111	89
Eastern Canada, total ⁵	1,089	888	961	923
Canada, total	2,794	2,541	2,662	2,705

¹ Alberta, Saskatchewan, and Manitoba.² Includes Prairie Provinces and British Columbia.³ Ontario and Quebec.⁴ Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland.⁵ Includes Central and Maritime Provinces.

Source: Statistics Canada, Agriculture Division, Cat. No. 23-603-UFE.

Table D-34
Distribution of Canadian cattle inventories, by Provinces and regions, Jan. 1, 1993-97

(Percent)

Province/region	1993	1994	1995	1996	1997
Alberta	37	38	38	38	37
Saskatchewan	17	17	18	18	18
Manitoba	9	9	9	9	10
Prairie Provinces ¹	64	64	65	66	65
British Columbia	5	5	5	5	5
Western Canada, total ² ...	69	69	70	71	70
Ontario	18	17	16	16	16
Quebec	11	11	11	11	12
Central Provinces ³	29	28	27	27	28
Maritime Provinces ⁴	2	3	3	2	2
Eastern Canada, total ⁵ ...	31	31	30	29	30
Canada, total	100	100	100	100	100

¹ Alberta, Saskatchewan, and Manitoba.

² Includes Prairie Provinces and British Columbia.

³ Ontario and Quebec.

⁴ Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland.

⁵ Includes Central and Maritime Provinces.

Source: Statistics Canada, Agriculture Division, Cat. No. 23-603-UFE.

Table D-35
Distribution of beef cows in Canada, by Provinces and regions, Jan. 1, 1993-97

(Percent)

Province/region	1993	1994	1995	1996	1997
Alberta	42	42	42	41	38
Saskatchewan	23	23	24	25	23
Manitoba	11	12	11	12	13
Prairie Provinces ¹	76	76	77	78	76
British Columbia	6	6	6	6	7
Western Canada, total ² ...	83	83	84	84	83
Ontario	10	10	10	9	9
Quebec	5	5	5	5	6
Central Provinces ³	15	15	15	14	15
Maritime Provinces ⁴	2	2	1	2	1
Eastern Canada, total ⁵ ...	17	17	16	16	16
Canada, total	100	100	100	100	100

¹ Alberta, Saskatchewan, and Manitoba.

² Includes Prairie Provinces and British Columbia.

³ Ontario and Quebec.

⁴ Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland.

⁵ Includes Central and Maritime Provinces.

Source: Statistics Canada, Agriculture Division, Cat. No. 23-603-UFE.

Table-D-36

Beef cow inventories in Canada, by Provinces and regions, Jan. 1993-97

(1,000 animals)

Province/region	1993	1994	1995	1996	1997
Alberta	1,620	1,680	1,776	1,777	1,650
Saskatchewan	885	832	1,045	1,080	1,030
Manitoba	414	480	490	515	540
Prairie Provinces ¹	2,919	2,992	3,311	3,372	3,220
British Columbia	242	255	276	280	280
Western Canada, total ² ...	3,161	3,347	3,585	3,862	3,450
Ontario	399	405	415	400	380
Quebec	195	200	216	220	230
Central Provinces ³	594	605	631	620	610
Maritime Provinces ⁴	61	81	60	61	62
Eastern Canada, total ⁵ ...	655	686	691	681	672
Canada, total	3,815	4,013	4,276	4,333	4,152

¹ Alberta, Saskatchewan, and Manitoba.

² Includes Prairie Provinces and British Columbia.

³ Ontario and Quebec.

⁴ Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland.

⁵ Includes Central and Maritime Provinces.

Source: Statistics Canada, Agriculture Division, Cat. No. 23-603-UFE.

Table D-37

Cattle: Distribution of cattle slaughter in Canada, by Provinces and regions, 1992-95

(Percent)

Province/region	1992	1993	1994	1995
Alberta	49	57	56	57
Saskatchewan & Manitoba	10	6	6	7
Prairie Provinces ¹	59	63	62	64
British Columbia	2	2	2	2
Western Canada, total ²	61	65	64	66
Ontario	26	26	24	23
Quebec	8	8	8	7
Central Provinces ³	34	34	32	31
Maritime Provinces ⁴	5	1	4	3
Eastern Canada, total ⁵	39	35	36	34
Canada, total	100	100	100	100

¹ Alberta, Saskatchewan, and Manitoba.

² Includes Prairie Provinces and British Columbia.

³ Ontario and Quebec.

⁴ Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland.

⁵ Includes Central and Maritime Provinces.

Source: Statistics Canada, Agriculture Division, Cat. No. 23-603-UFE.

Table D-38**Beef and veal: Canadian production, imports, exports, and apparent consumption, 1992-97***(Million pounds, carcass weight equivalent)*

Year	Production	Imports	Exports	Apparent consumption ¹
1992	1,980	487	551	2,116
1993	1,896	595	421	2,053
1994	1,991	631	485	2,121
1995	2,046	564	483	2,136
1996 ²	2,260	518	573	2,194
1997 ³	2,469	441	683	2,231

¹ Includes changes in inventories.² Preliminary.³ Forecast.Source: Derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P 2-96, (Oct. 1996), p. 87.**Table D-39****Live cattle and calves:¹ Canadian inventories, production, imports, exports, and apparent consumption, 1992-97***(Thousand animals)*

Year	Inventories	Production ²	Imports	Exports	Apparent consumption ³
1992	11,713	4,199	37	1,307	3,238
1993	11,786	5,345	61	1,212	3,036
1994	12,254	5,440	90	1,010	3,083
1995	12,849	5,202	86	1,125	3,148
1996	⁴ 13,186	⁴ 5,104	⁴ 40	⁴ 1,511	⁴ 3,603
1997 ⁵	⁴ 12,767	5,390	50	800	3,975

¹ Includes buffalo.² The calf crop, which is the number of animals born during the year.³ Number of cattle and calves slaughtered.⁴ Derived from Statistics Canada Catalogue 23-803-UFE, table 1.⁵ Forecast.Source: Inventories and apparent consumption derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P 2-96, (Oct. 1996), pp. 92-93; production, imports, and exports derived from USDA, FAS, U.S. Embassy Ottawa, Canada, *Livestock Annual*, various issues, except as noted.

Table D-40
Slaughter cows:¹ Prices in Alberta, by quarter, 1992-96

(U.S. dollars per 100 pounds)

Year	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.
1992	44.37	47.05	46.41	45.75
1993	47.36	49.49	51.84	46.37
1994	45.78	47.04	45.16	38.61
1995	42.58	39.43	37.07	30.29
1996	33.75	34.16	35.08	30.52

¹ Grades D1 and D2.

Source: Compiled from facsimile from Canadian Cattlemen's Association, Mar. 18, 1997.

Table D-41
Steers: Direct sales prices in Alberta, by quarter, 1992-96

(U.S. dollars per 100 pounds)

Year	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Oct.-Dec.
1992	65.61	67.28	67.18	71.22
1993	74.75	72.07	69.40	69.83
1994	67.79	63.66	60.85	62.70
1995	67.54	59.77	57.27	59.33
1996	56.94	53.96	61.45	62.38

Source: Compiled from Statistics Canada, Agriculture Division, Cat. No. 23-603.

Table D-42
Costa Rica: Cattle inventories, beef and veal production, exports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal		
		Production	Exports	Apparent consumption
		-----Million pounds, carcass weight equivalent-----		
1992	1,707	185	64	123
1993	1,699	205	66	139
1994	1,693	207	64	143
1995	1,645	205	62	143
1996 ¹	1,585	205	64	141
1997 ²	1,525	203	60	146

¹ Preliminary.

² Forecast.

Source: Derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99.

Table D-43

Nicaragua: Cattle inventories, beef and veal production, exports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal		
		Production	Exports	Apparent consumption
		-----Million pounds, carcass weight equivalent-----		
1992	1,640	110	44	66
1993	1,655	115	55	60
1994	1,630	119	57	62
1995	1,600	110	57	53
1996 ¹	1,650	108	57	51
1997 ²	1,665	108	37	71

¹ Preliminary.

² Forecast.

Source: Derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99.

Table D-44

Honduras: Cattle inventories, beef and veal production, exports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal		
		Production	Exports	Apparent consumption
		-----Million pounds, carcass weight equivalent-----		
1992	2,351	97	49	49
1993	2,315	97	46	51
1994	2,286	99	44	55
1995	2,205	71	26	45
1996 ¹	2,182	66	26	40
1997 ²	2,152	64	24	40

¹ Preliminary.

² Forecast.

Source: Data for 1992-93 and 1997 derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99; data for 1994-96 derived from FAS, *Livestock and Beef--corrected numbers*, HO5027, pp. 2-3.

Table D-45
Guatemala: Cattle inventories, beef and veal production, exports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal		
		Production	Exports	Apparent consumption
		-----Million pounds, carcass weight equivalent-----		
1992	1,790	115	24	90
1993	1,780	117	29	88
1994	1,762	106	13	93
1995	1,717	110	9	101
1996 ¹	1,697	117	7	112
1997 ²	1,667	119	7	115

¹ Preliminary.

² Forecast.

Source: Derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99.

Table D-46
Dominican Republic: Cattle inventories, beef and veal production, exports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal		
		Production	Exports	Apparent consumption
		-----Million pounds, carcass weight equivalent-----		
1992	1,976	97	22	75
1993	1,982	99	20	79
1994	1,983	101	15	86
1995	1,984	106	9	97
1996 ¹	1,985	108	0	106
1997 ²	1,986	110	0	110

¹ Preliminary.

² Forecast.

Source: Derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99.

Table D-47

Uruguay: Cattle inventories, beef and veal production, exports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal			Apparent consumption
		Production	Exports		
		-----Million pounds, carcass weight equivalent-----			
1992	9,508	805	271		534
1993	10,093	681	231		450
1994	10,477	811	335		476
1995	10,512	758	315		443
1996 ¹	10,436	816	375		441
1997 ²	10,600	860	408		452

¹ Preliminary.² Forecast.

Source: 1992-94 data derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99; 1995-97 data derived from USDA, FAS, *Livestock Annual Report*, (UY6002), June 21, 1996, pp. 7-10.

Table D-48

Argentina: Cattle inventories, beef and veal production, imports, exports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal			Apparent consumption
		Production	Imports	Exports	
		-----Million pounds, carcass weight equivalent-----			
1992	55,229	5,556	35	653	4,921
1993	55,577	5,622	4	617	5,011
1994	54,875	5,732	7	829	4,916
1995	54,207	5,732	13	1,131	4,603
1996 ¹	53,569	5,622	9	992	4,641
1997 ²	51,691	5,512	4	1,058	4,464

¹ Preliminary.² Forecast.

Source: 1992-94 data derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99; 1995-97 data derived from USDA, FAS, *Livestock Annual Report*, (AR6050), Aug. 8, 1996, pp. 1-3.

Table D-49

Japan: Cattle inventories, beef and veal production, imports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal		
		Production	Imports	Apparent consumption ¹
		-----Million pounds, carcass weight equivalent-----		
1992	4,980	1,305	1,303	2,624
1993	5,024	1,307	1,612	2,870
1994	4,990	1,327	1,856	3,188
1995	4,916	1,325	2,044	3,347
1996 ²	4,828	1,228	1,969	3,170
1997 ³	4,795	1,202	1,951	3,197

¹ Includes changes in inventories; exports are negligible.

² Preliminary.

³ Forecast.

Source: 1992-94 data derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99; 1995-97 data derived from USDA, FAS, *Livestock Annual Report*, (JA7004), Feb. 3, 1997, p. 12.

Table D-50

Republic of Korea: Cattle inventories, beef and veal production, imports, and apparent consumption, 1992-97

Year	Cattle inventories 1,000 animals	Beef and veal		
		Production	Imports	Apparent consumption ¹
		-----Million pounds, carcass weight equivalent-----		
1992	2,269	302	403	690
1993	2,527	388	291	699
1994	2,814	441	364	820
1995	2,945	472	428	917
1996 ²	3,147	509	432	933
1997 ³	3,423	564	516	1,038

¹ Includes changes in inventories; exports are negligible.

² Preliminary.

³ Forecast.

Source: 1992-95 data derived from USDA, FAS, *Livestock and Poultry: World Markets and Trade*, FL&P2-96, Oct. 1996, pp. 92-99; 1996-97 data derived from USDA, FAS, *Livestock Semi-Annual Report*, (KS7006), Feb. 13, 1997, pp. 1-3.

Table D-51

Canadian beef: Estimated quantity¹ graded under USDA quality grading standards and subject imports as a share of U.S. beef production, 1992-96

Year	Average dressed weight <i>Pounds</i>	Quantity graded based on imports of		Subject imports as a share of U.S. beef production based on grading of imports of	
		2,000 carcasses per week	4,000 carcasses per week	2,000 carcasses per week	4,000 carcasses per week
		<i>Million pounds</i>		<i>Percentage</i>	
1992	705	73	147	0.3	0.6
1993	694	72	144	0.3	0.6
1994	717	75	149	0.3	0.6
1995	711	74	148	0.3	0.6
1996	702	73	146	0.3	0.6

¹ There has been no requirement for collecting data on the quantity of foreign beef carcasses graded in the United States. However, the Agricultural Marketing Service of the USDA estimated in a Mar. 26, 1997 facsimile to the USITC that between 2,000 and 4,000 imported carcasses are graded weekly in the United States.

Note.--Based on U.S. imports of 2,000 carcasses a week, annual imports would total 104,000 carcasses; and at 4,000 carcasses a week, imports would total 208,000 annually.

Source: Average dressed weight of cattle slaughtered under Federal inspection compiled from USDA, NASS, *Livestock Slaughter*, annual issues, 1992-96; pounds of imported beef estimated by the staff of the USITC based on imports of 2,000 carcasses and 4,000 carcasses per week; U.S. beef production used to calculate share of subject imports derived from table D-18.

Table D-52

Beef and veal: Tariff rate in-quota quantity, imports of tariff rate quota type beef, and ratio, 1995-96

Country	Tariff rate in-quota quantity	Imports of tariff rate quota type beef		Ratio	
		1995	1996	1995	1996
		<i>1,000 pounds product weight</i>		<i>Percent</i>	
Australia	833,819	492,316	400,401	59	48
New Zealand	470,471	423,581	369,113	90	78
Japan	441	14	13	3	3
Uruguay ¹	44,092	280	44,688	1	101
Argentina	44,092	(²)	(²)	(³)	(³)
Other	142,871	105,737	73,014	74	57
Total	1,535,786	1,021,928	896,043	67	58

¹ Based on statistics of the U.S. Customs Service's Trade Compliance Division, U.S. imports of quota-type meat from Uruguay totaled 19,400 metric tons (42.8 million pounds), or 97 percent of the in-quota quantity in 1996.

² Argentina had not met U.S. health and sanitary requirements thus was not authorized to ship unprocessed beef to the United States.

³ Not applicable.

Source: Tariff rate in-quota quantity compiled from the *Harmonized Tariff Schedule*; imports compiled from official statistics of the U.S. Department of Commerce.

APPENDIX E
U.S. IMPORTS OF LIVE CATTLE
AND CALVES, BY STATE, AS
REPORTED BY “QUARTERLY
RECAP OF IMPORT ANIMALS
INSPECTED”

Live cattle: U.S. imports by state of destination, 1992-96

	1992 /1	1993	1994	1995	1996
State Destination	Number of cattle				
AL	73	51	0	0	1
AK	0	0	0	0	0
AZ	689	19	0	0	0
AR	169	37	0	0	0
CA	607	728	872	1,804	1,989
CO	46,378	95,668	112,096	100,553	179,345
CT	3	12,548	57	0	0
DE	93	0	0	0	0
FL	292	347	0	0	0
GA	17	105	0	0	0
HI	0	0	0	0	0
ID	1,450	9,710	14,487	29,090	45,994
IL	2,353	2,988	2,455	8,100	16,567
IN	6,134	4,588	33	0	0
IA	21,978	20,357	27,704	24,937	16,426
KS	15,144	21,858	0	123	574
KY	976	9,654	0	0	0
LA	0	6	0	0	0
ME	0	23	0	0	0
MD	306	287	0	0	0
MA	21	84	0	0	0
MI	11,600	14,051	30,741	42,881	44,444
MN	34,688	35,009	82,006	95,965	133,440
MS	0	18,707	0	0	0
MO	208	169	0	0	0
MT	1,615	5,700	77	0	3
NE	42,222	56,519	100,172	83,879	133,648
NV	29	27,048	0	0	0
NH	1	7	0	0	0
NJ	71	107	0	0	0
NM	502	12,234	0	0	76
NY	1,586	2,697	257	248	4,082
NC	562	950	0	0	0
ND	22,347	30,739	54,148	58,747	79,566
OH	384	12,337	0	8	0
OK	1,484	1,436	0	0	0
OR	106	358	0	201	242
PA	10,055	22,419	34,279	61,617	88,631
RI	0	0	0	0	0
SC	29	93	0	0	0
SD	12,522	13,610	8,216	16,389	22,878
TN	76	5,921	0	0	87
TX	9,584	11,682	75	79	0
UT	21,509	59,868	84,675	158,160	150,795
VT	45	768	2,305	2,185	2,311
VA	135	611	0	0	0
WA	86,485	64,272	19,797	271,566	335,308
WV	1	12,108	0	0	0
WI	9,745	21,574	46,931	26,737	29,633
WY	1,427	6,034	975	0	0
Subtotal	365,600	620,082	622,358	983,269	1,286,040
Other	6,278	4,546	251	40	42
Adjusted Total	371,878	624,628	622,609	983,309	1,286,082
Not Designated /2	252	30	0	85	0
FINAL TOTAL	372,130	624,658	622,609	983,394	1,286,082

1/ July - December only.

2/ 'Not Designated' includes incomplete data (i.e., not specified under state destinations or 'Other').

Note.— Data are not available for all ports of entry; thus the data in this table are not necessarily comparable to data in other parts of this report.

Source: Compiled from USDA, Animal, Plant and Health Inspection Service, "Quarterly Recap of Import Animals Inspected, third quarter of 1992 through fourth quarter of 1996."

**APPENDIX F
CATTLE AND MEAT OF CATTLE:
U.S. RATES OF DUTY, BY HTS
HEADING AND RELEVANT LEGAL
NOTES**

HARMONIZED TARIFF SCHEDULE of the United States (1997)

Annotated for Statistical Reporting Purposes

CHAPTER 1

LIVE ANIMALS

I
1-1

Note

1. This chapter covers all live animals except:
 - (a) Fish and crustaceans, molluscs and other aquatic invertebrates, of heading 0301, 0306 or 0307;
 - (b) Cultures of microorganisms and other products of heading 3002; and
 - (c) Animals of heading 9508.

Additional U.S. Notes

1. The expression "purebred breeding animals" covers only animals certified to the U.S. Customs Service by the Department of Agriculture as being purebred of a recognized breed and duly registered in a book of record recognized by the Secretary of Agriculture for that breed, imported specially for breeding purposes, whether intended to be used by the importer himself or for sale for such purposes.
2. Certain special provisions applying to live animals are in chapter 98.

HARMONIZED TARIFF SCHEDULE of the United States (1997)

Annotated for Statistical Reporting Purposes

I
1-2

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
0101		Live horses, asses, mules and hinnies:				
		Horses:				
0101.11.00		Purebred breeding animals.....	No.	Free		Free
	10	Male.....	No.			
	20	Female.....	No.			
0101.19.00		Other.....	No.	Free		20%
	10	Imported for immediate slaughter....	No.			
	90	Other.....	No.			
0101.20		Asses, mules and hinnies:				
		Asses:				
0101.20.10	00	Purebred breeding animals.....	No.	Free		Free
0101.20.20	00	Other.....	No.	10.9%	Free (CA,E,IL,J, MX)	15%
		Mules and hinnies:				
0101.20.30	00	Imported for immediate slaughter....	No.	Free		Free
0101.20.40	00	Other.....	No.	7.3%	Free (E,IL,J,MX) 1% (CA)	20%
0102		Live bovine animals:				
0102.10.00		Purebred breeding animals.....	No.	Free		Free
		Dairy:				
	10	Male.....	No.			
	20	Female.....	No.			
		Other:				
	30	Male.....	No.			
	50	Female.....	No.			
0102.90		Other:				
0102.90.20		Cows imported specially for dairy purposes.....	No.	Free		6.6¢/kg
	11	Weighing less than 90 kg each.....	No. v kg			
	12	Weighing 90 kg or more each.....	No. v kg			
0102.90.40		Other.....	No.	1.6¢/kg	Free (CA,E,IL,J, MX)	5.5¢/kg
	10	Bison.....	No. v kg			
		Other:				
		Weighing less than 90 kg each:				
	24	Male.....	No. v kg			
	28	Female.....	No. v kg			
		Weighing 90 kg or more but less than 200 kg each:				
	34	Male.....	No. v kg			
	38	Female.....	No. v kg			
		Weighing 200 kg or more but less than 320 kg each:				
	54	Male.....	No. v kg			
	58	Female.....	No. v kg			
		Weighing 320 kg or more each:				
		For immediate slaughter:				
	62	Steers.....	No. v kg			
	64	Bulls.....	No. v kg			
	66	Cows.....	No. v kg			
	68	Heifers.....	No. v kg			
		For breeding:				
	72	Male.....	No. v kg			
	74	Female.....	No. v kg			
		Other:				
	82	Male.....	No. v kg			
	84	Female.....	No. v kg			

HARMONIZED TARIFF SCHEDULE of the United States (1997)

Annotated for Statistical Reporting Purposes

CHAPTER 2

MEAT AND EDIBLE MEAT OFFAL

I
2-1

Note

1. This chapter does not cover:
 - (a) Products of the kinds described in headings 0201 to 0208 or 0210, unfit or unsuitable for human consumption;
 - (b) Guts, bladders, or stomachs of animals (heading 0504) or animal blood (heading 0511 or 3002); or
 - (c) Animal fat, other than products of heading 0209 (chapter 15)

Additional U.S. Notes

1. For the purposes of this chapter--
 - (a) The term "processed" covers meats which have been ground or comminuted, diced or cut into sizes for stew meat or similar uses, rolled and skewered, or specially processed into fancy cuts, special shapes, or otherwise made ready for particular uses by the retail consumer.
 - (b) The term "high-quality beef cuts" means beef specially processed into fancy cuts, special shapes, or otherwise made ready for particular uses by the retail consumer (but not ground or comminuted, diced or cut into sizes for stew meat or similar uses, or rolled or skewered), which meets the specifications in regulations issued by the U.S. Department of Agriculture for Prime or Choice beef, and which has been so certified prior to exportation by an official of the government of the exporting country, in accordance with regulations issued by the Secretary of the Treasury after consultation with the Secretary of Agriculture.
2. In assessing the duty on meats, no allowance shall be made for normal components thereof such as bones, fat, and hide or skin. The dutiable weight of meats in airtight containers subject to specific rates includes the entire contents of the containers.
3. The aggregate quantity of beef, entered under subheadings 0201.10.10, 0201.20.10, 0201.20.30, 0201.20.50, 0201.30.10, 0201.30.30, 0201.30.50, 0202.10.10, 0202.20.10, 0202.20.30, 0202.20.50, 0202.30.10, 0202.30.30 and 0202.30.50 in any calendar year shall not exceed the quantities specified in this note.

	<u>Quantity</u> (metric ton)
Canada	No limit
Mexico	No limit
Australia	378,214
New Zealand	213,402
Japan	200
Argentina	20,000*
Uruguay	20,000*
Other countries or areas	64,805

Imports under these provisions are subject to regulations issued by the United States Trade Representative.

* The quantity for Argentina or Uruguay shall be permitted entry pursuant to the provisions of this note on and after the date of publication by the Secretary of Agriculture of a notice in the Federal Register that Argentina or Uruguay has been granted approval by the Department of Agriculture to ship fresh, chilled or frozen beef to the United States. This paragraph and the "*" symbol following the quantity for Argentina and Uruguay shall be deleted from this note on the January 1 following the later date of the date of publication of the notice for Argentina or Uruguay.

HARMONIZED TARIFF SCHEDULE of the United States (1997)

Annotated for Statistical Reporting Purposes

I
2-2

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
			General	Special		
0201		Meat of bovine animals, fresh or chilled:				
0201.10		Carcasses and half-carcasses:				
0201.10.05		Described in general note 15 of the tariff schedule and entered pursuant to its provisions.....	kg	4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
	10	Veal.....	kg			
	90	Other.....	kg			
0201.10.10		Described in additional U.S. note 3 to this chapter and entered pursuant to its provisions.....	kg	4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
	10	Veal.....	kg			
	90	Other.....	kg			
0201.10.50		Other 1/.....		28.8%	Free (MX)	31.1%
	10	Veal.....	kg			
	90	Other.....	kg			
0201.20		Other cuts with bone in:				
		Described in general note 15 of the tariff schedule and entered pursuant to its provisions:				
		Processed:				
0201.20.02	00	High-quality beef cuts.....	kg.....	4%	Free (CA,E*,IL,J, MX)	20%
0201.20.04	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0201.20.06	00	Other.....	kg.....	4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
		Described in additional U.S. note 3 to this chapter and entered pursuant to its provisions:				
		Processed:				
0201.20.10	00	High-quality beef cuts.....	kg.....	4%	Free (CA,E*,IL,J, MX)	20%
0201.20.30	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0201.20.50	00	Other.....	kg.....	4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
0201.20.80		Other 1/.....		28.8%	Free (MX)	31.1%
	10	Bison.....	kg			
	90	Other.....	kg			
0201.30		Boneless:				
		Described in general note 15 of the tariff schedule and entered pursuant to its provisions:				
		Processed:				
0201.30.02	00	High-quality beef cuts.....	kg.....	4%	Free (CA,E*,IL,J, MX)	20%
0201.30.04	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0201.30.06	00	Other.....	kg.....	4.4¢/kg 2/	Free (CA,E*,IL,J, MX)	13.2¢/kg
		Described in additional U.S. note 3 to this chapter and entered pursuant to its provisions:				
		Processed:				
0201.30.10	00	High-quality beef cuts.....	kg.....	4%	Free (CA,E*,IL,J, MX)	20%
0201.30.30	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0201.30.50	00	Other.....	kg.....	4.4¢/kg 2/	Free (CA,E*,IL,J, MX)	13.2¢/kg
0201.30.80	00	Other 1/.....	kg.....	28.8%	Free (MX)	31.1%

1/ See subheadings 9904.02.01-9904.02.37.

2/ See subheading 9903.23.00.

HARMONIZED TARIFF SCHEDULE of the United States (1997)

Annotated for Statistical Reporting Purposes

I
2-3

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
0202		Meat of bovine animals, frozen:				
0202.10		Carcasses and half-carcasses:				
0202.10.05		Described in general note 15 of the tariff schedule and entered pursuant to its provisions.....	kg.....	4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
	10	Veal.....	kg			
	90	Other.....	kg			
0202.10.10		Described in additional U.S. note 3 to this chapter and entered pursuant to its provisions.....		4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
	10	Veal.....	kg			
	90	Other.....	kg			
0202.10.50		Other 1/.....		28.8%	Free (MX)	31.1%
	10	Veal.....	kg			
	90	Other.....	kg			
0202.20		Other cuts with bone in:				
		Described in general note 15 of the tariff schedule and entered pursuant to its provisions:				
		Processed:				
0202.20.02	00	High-quality beef cuts.....	kg.....	4%	Free (CA,E*,IL,J, MX)	20%
0202.20.04	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0202.20.06	00	Other.....	kg.....	4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
		Described in additional U.S. note 3 to this chapter and entered pursuant to its provisions:				
		Processed:				
0202.20.10	00	High-quality beef cuts.....	kg.....	4%	Free (CA,E*,IL,J, MX)	20%
0202.20.30	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0202.20.50	00	Other.....	kg.....	4.4¢/kg	Free (CA,E*,IL,J, MX)	13.2¢/kg
0202.20.80	00	Other 1/.....	kg.....	28.8%	Free (MX)	31.1%
0202.30		Boneless:				
		Described in general note 15 of the tariff schedule and entered pursuant to its provisions:				
		Processed:				
0202.30.02	00	High-quality beef cuts.....	kg.....	4%	Free (A,CA,E*,IL, J,MX)	20%
0202.30.04	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0202.30.06	00	Other.....	kg.....	4.4¢/kg 2/	Free (CA,E*,IL,J, MX)	13.2¢/kg
		Described in additional U.S. note 3 to this chapter and entered pursuant to its provisions:				
		Processed:				
0202.30.10	00	High-quality beef cuts.....	kg.....	4%	Free (A,CA,E*,IL, J,MX)	20%
0202.30.30	00	Other.....	kg.....	10%	Free (CA,E*,IL,J, MX)	20%
0202.30.50	00	Other.....	kg.....	4.4¢/kg 2/	Free (CA,E*,IL,J, MX)	13.2¢/kg
0202.30.80	00	Other 1/.....	kg.....	28.8%	Free (MX)	31.1%

1/ See subheadings 9904.02.01-9904.02.37.
2/ See subheading 9903.23.00.

APPENDIX G
ACTIONS UNDER THE MEAT IMPORT
ACT OF 1979, AND SECTION 204 OF
THE AGRICULTURAL ACT OR 1956

Actions under the Meat Import Act, 1992-94

Year	Adjusted base prescribed under section 2 (a)	Trigger level (adjusted base plus 10%) section 2 ©	Import level estimated under section 2(b)(2)		Actual imports	Action taken by President
			<i>Million pounds</i>			
1992	1,192.0	1,311.2	1st. qtr. 2nd. qtr. 3rd. qtr. 4th. qtr.	1,274 1,286 1,311 1,311	1,321.1	Voluntary restraint agreements negotiated under section 204 with Australia and New Zealand. ¹
1993	1,144.7	1,259.2	1st. qtr. 2nd. qtr. 3rd. qtr. 4th. qtr.	1,259 1,259 1,259 1,259	1,259.1	Voluntary restraint agreements negotiated under section 204 with Australia and New Zealand. ¹
1994	1,218.9	1,340.8	1st. qtr. 2nd. qtr. 3rd. qtr. 4th. qtr.	1,218 1,218 1,218 1,218	1,218.8	Voluntary restraint agreements negotiated under section 204 with Australia and New Zealand. ¹

¹ During 1992-94, the United States signed VRAs with Australia and New Zealand to limit those countries' exports of the subject meats to the United States for the rest of 1992-94. The restraint levels are shown in the following tabulation:

Country	1992	1993	1994
	----- <i>(million pounds)</i> -----		
Australia	736.8	694.9	664.9
New Zealand	446.8	425.0	406.6

Source: Facsimile transmission from USDA, FAS, Jan. 29, 1997.

APPENDIX H
SELECTED PORTIONS OF THE
CANADIAN TARIFF SCHEDULES

SCHEDULE I

02 - 1

Tariff Item	SS	Description of Goods	Unit of Meas.	M.F.N. Tariff	G.P. Tariff	U.S. Tariff	Mexico Tariff	Mexico-U.S. Tariff
02.01		Meat of bovine animals, fresh or chilled.						
0201.10		-Carcasses and half-carcasses						
0201.10.10		---Within access commitment		Free	Free	Free	Free	N/A
	10	-----Veal.....	KGM					
	90	-----Other.....	KGM					
0201.10.20		---Over access commitment		28.8%	X	Free	Free	N/A
	10	-----Veal.....	KGM					
	90	-----Other.....	KGM					
0201.20		-Other cuts with bone in						
0201.20.10		---Within access commitment		Free	Free	Free	Free	N/A
	10	-----Veal.....	KGM					
	20	-----Other, processed.....	KGM					
	30	-----Other, forequarter.....	KGM					
	40	-----Other, hindquarter.....	KGM					
		-----Other:						
	91	-----Rib.....	KGM					
	92	-----Hip.....	KGM					
	93	-----Loin.....	KGM					
	99	-----Other.....	KGM					
0201.20.20		---Over access commitment		28.8%	X	Free	Free	N/A
	10	-----Veal.....	KGM					
	20	-----Other, processed.....	KGM					
	30	-----Other, forequarter.....	KGM					
	40	-----Other, hindquarter.....	KGM					
		-----Other:						
	91	-----Rib.....	KGM					
	92	-----Hip.....	KGM					
	93	-----Loin.....	KGM					
	99	-----Other.....	KGM					
0201.30		-Boneless						
0201.30.10		---Within access commitment		Free	Free	Free	Free	N/A
	10	-----Veal.....	KGM					
	20	-----Other, processed.....	KGM					
	30	-----Other, forequarter.....	KGM					
	40	-----Other, hindquarter.....	KGM					
		-----Other:						
	91	-----Brisket.....	KGM					
	92	-----Chuck.....	KGM					
	93	-----Rib.....	KGM					
	94	-----Hip.....	KGM					
	95	-----Loin.....	KGM					
	99	-----Other.....	KGM					
0201.30.20		---Over access commitment		28.8%	X	Free	Free	N/A
	10	-----Veal.....	KGM					
	20	-----Other, processed.....	KGM					
	30	-----Other, forequarter.....	KGM					
	40	-----Other, hindquarter.....	KGM					
		-----Other:						
	91	-----Brisket.....	KGM					

SCHEDULE I

02 - 2

Tariff Item	SS	Description of Goods	Unit of Meas.	M.F.N. Tariff	G.P. Tariff	U.S. Tariff	Mexico Tariff	Mexico-U.S. Tariff
0201.30.20 Continued	92	-----Chuck.....	KGM					
	93	-----Rib.....	KGM					
	94	-----Hip.....	KGM					
	95	-----Loin.....	KGM					
	99	-----Other.....	KGM					
02.02		Meat of bovine animals, frozen.						
0202.10		-Carcasses and half-carcasses						
0202.10.10		----Within access commitment		Free	Free	Free	Free	N/A
	10	-----Veal.....	KGM					
	90	-----Other.....	KGM					
0202.10.20		----Over access commitment		28.8%	X	Free	Free	N/A
	10	-----Veal.....	KGM					
	90	-----Other.....	KGM					
0202.20		-Other cuts with bone in						
0202.20.10		----Within access commitment		Free	Free	Free	Free	N/A
	10	-----Veal.....	KGM					
	20	-----Other, processed.....	KGM					
	30	-----Other, forequarter.....	KGM					
	40	-----Other, hindquarter.....	KGM					
		-----Other:						
	91	-----Rib.....	KGM					
	92	-----Hip.....	KGM					
	93	-----Loin.....	KGM					
	99	-----Other.....	KGM					
	0202.20.20		----Over access commitment		28.8%	X	Free	Free
10		-----Veal.....	KGM					
20		-----Other, processed.....	KGM					
30		-----Other, forequarter.....	KGM					
40		-----Other, hindquarter.....	KGM					
		-----Other:						
91		-----Rib.....	KGM					
92		-----Hip.....	KGM					
93		-----Loin.....	KGM					
99		-----Other.....	KGM					
0202.30			-Boneless					
0202.30.10		----Within access commitment		Free	Free	Free	Free	N/A
	10	-----Veal.....	KGM					
	20	-----Other, processed.....	KGM					
	30	-----Other, forequarter.....	KGM					
	40	-----Other, hindquarter.....	KGM					
		-----Other:						
	91	-----Brisket.....	KGM					
	92	-----Chuck.....	KGM					
	93	-----Rib.....	KGM					
	94	-----Flank.....	KGM					
	95	-----Eye of round, outside round, inside round, outside flat and sirloin tip.....	KGM					
96	-----Other, hip.....	KGM						

SCHEDULE I

Tariff Item	SS	Description of Goods	Unit of Meas.	M.F.N. Tariff	G.P. Tariff	U.S. Tariff	Mexico Tariff	Mexico-U.S. Tariff
0202.30.10	97	-----Loin.....	KGM					
Continued	99	-----Other.....	KGM					
0202.30.20		---Over access commitment		28.8%	X	Free	Free	N/A
	10	-----Veal.....	KGM					
	20	-----Other, processed.....	KGM					
	30	-----Other, forequarter.....	KGM					
	40	-----Other, hindquarter.....	KGM					
		-----Other:						
	91	-----Brisket.....	KGM					
	92	-----Chuck.....	KGM					
	93	-----Rib.....	KGM					
	94	-----Flank.....	KGM					
	95	-----Eye of round, outside round, inside round, outside flat and sirloin tip.....	KGM					
	96	-----Other, hip.....	KGM					
	97	-----Loin.....	KGM					
	99	-----Other.....	KGM					
02.03		Meat of swine, fresh, chilled or frozen.						
		-Fresh or chilled:						
0203.11.00	00	--Carcasses and half-carcasses	KGM	Free	Free	Free	Free	N/A
0203.12.00	00	--Hams, shoulders and cuts thereof, with bone in	KGM	Free	Free	Free	Free	N/A
0203.19.00		--Other		Free	Free	Free	Free	N/A
	10	-----Spare ribs.....	KGM					
	20	-----Back ribs.....	KGM					
		-----Other:						
	91	-----Processed.....	KGM					
	99	-----Other.....	KGM					
		-Frozen:						
0203.21.00	00	--Carcasses and half-carcasses	KGM	Free	Free	Free	Free	N/A
0203.22.00	00	--Hams, shoulders and cuts thereof, with bone in	KGM	Free	Free	Free	Free	N/A
0203.29.00		--Other		Free	Free	Free	Free	N/A
	10	-----Spare ribs.....	KGM					
	20	-----Back ribs.....	KGM					
	90	-----Other.....	KGM					
02.04		Meat of sheep or goats, fresh, chilled or frozen.						
0204.10.00	00	-Carcasses and half-carcasses of lamb, fresh or chilled	KGM	5.42¢/kg AU/NZ Free	Free	Free	Free	N/A

APPENDIX I
AN EMPIRICAL ANALYSIS OF THE
IMPACT OF THE NAFTA ON
MEXICAN BEEF IMPORTS FROM
THE UNITED STATES

An Empirical Analysis of the Impact of the North American Free Trade Agreement on Mexican Beef Imports from the United States

Introduction

Beef trade between the United States and Mexico consists almost entirely of Mexican imports of U.S. beef. During the 1980s and early-1990s, Mexico's steady per capita income and population growth led to a rapid expansion in the demand for imported beef, and the United States has generally been the major supplier of these imports.¹ Although the United States is important in satisfying Mexican demand for beef, Mexico represents a key market for U.S. beef exports. Thus, beef trade between Mexico and the United States is important to both countries.

The purpose of this empirical analysis is to determine the impact of the NAFTA on Mexican beef imports from the United States. This task is complicated by the many "non-NAFTA" factors that occurred immediately prior to and following signing the Agreement. In particular, separating out the impacts of the NAFTA from those of the peso devaluation of 1995/96 is a key challenge for this analysis. A secondary objective of this analysis is to determine whether there has been a structural change in the demand for imported beef in Mexico following the NAFTA.

Factors Affecting Mexican Beef Imports from the United States in the 1990s

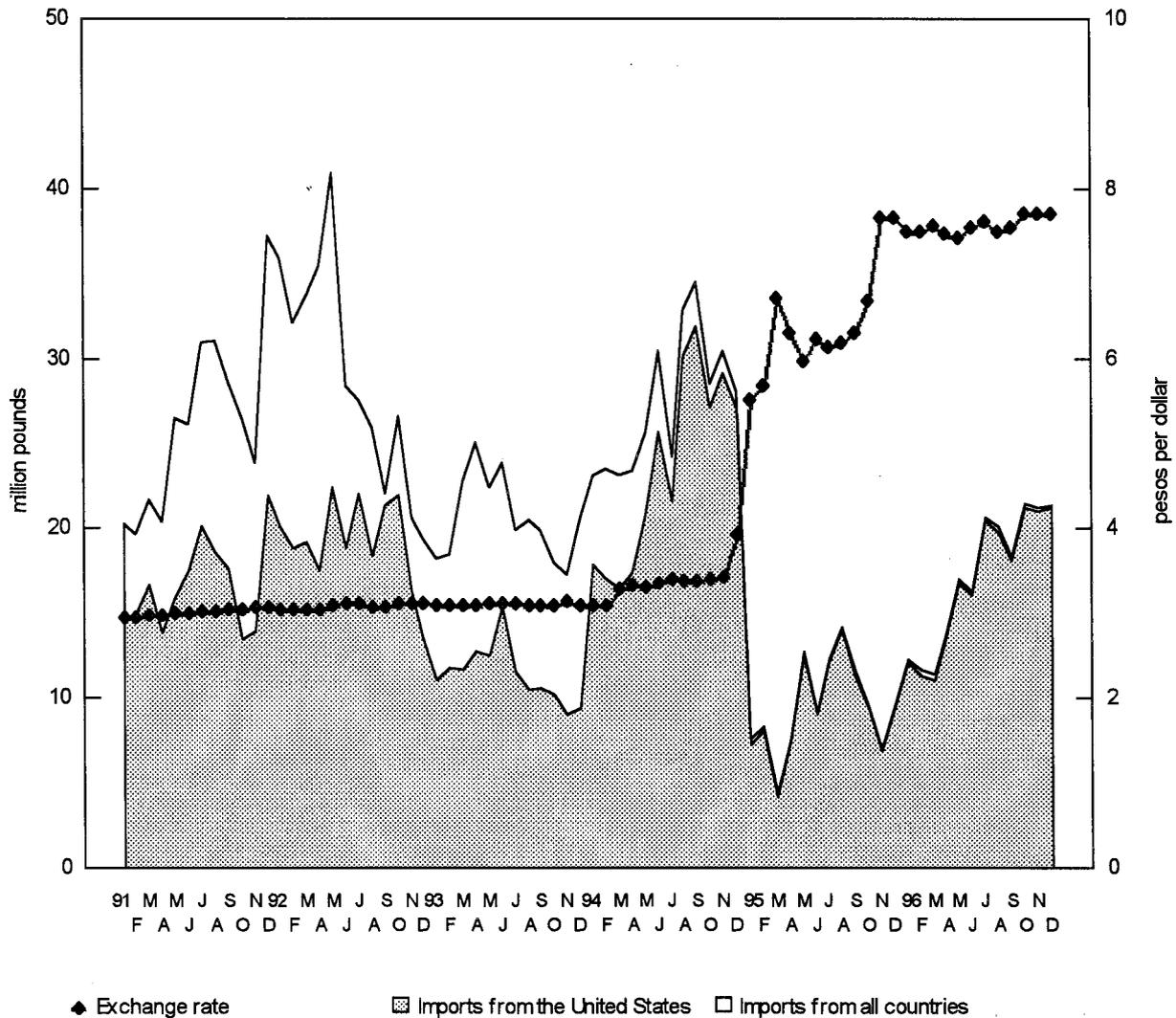
The NAFTA

Immediately upon enactment of the NAFTA, Mexico made several concessions to the United States. Under the Agreement, the 15 percent tariff on live slaughter animals, 20 percent tariff on fresh/chilled beef, and 25 percent tariff on frozen beef were eliminated. In addition, it was agreed that Mexico's 20-percent import tariff on beef edible offal from the United States (and Canada) would be phased out over a 10-year period.

While the NAFTA gave the United States free access to the Mexican market for most meat and livestock products, its main competitors, such as Australia and New Zealand, still faced tariffs on these commodities of between 20 and 25 percent. These tariff differentials provided the United States with a substantial price advantage in the Mexican market. Between 1990 and 1994, the United States' share of Mexican beef imports was about 75 percent. Within 6 months after signing the NAFTA, the share had risen to 98 percent, and remained above 95 percent for all of 1995 and 1996 (figure 1).

¹ For example, in 1980 only 2 million pounds of beef was imported, compared to 300 million pounds in 1992. (Carlos Salinas de Gortari. Quinto Informe de Gobierno, Nov. 1993, Annual Livestock Report, 1994, U.S. Embassy Mexico).

Figure 1
 Mexican imports of fresh, chilled, or frozen beef, and value of peso, monthly, Jan. 1991-Dec. 1996



Source: Secretariat of Commerce and Industrial Promotion (SECOFI), International Monetary Fund.

Peso Devaluation

Less than 1 year after signing the NAFTA, Mexico experienced a period of extreme macroeconomic instability following the devaluation of the peso that began in November 1994. After trading in the range of 3.1 to 3.4 pesos per dollar for most of 1994, the peso fell to 3.9 pesos per dollar in December. It continued to depreciate in January and February 1995 and reached 6.7 pesos per dollar in March 1995.² For the remainder of 1995 the exchange rate remained in the 6.0 to 7.7 pesos per dollar range, and was between 7 to 8 pesos per dollar in 1996. The devaluation of the peso led to rapid inflation (52 percent for 1994), sharply rising interest rates, and a sudden drop in GDP and consumer expenditure per capita. In the second quarter of 1995, GDP was down by almost 10

² International Monetary Fund. Financial Statistics.

percent compared to the same quarter in the previous year, and real GDP declined by almost 7 percent between 1994 and 1995.^{3 4}

The peso devaluation had a dramatic impact on Mexican imports of beef. In addition to the drop in consumer income, the price of Mexican beef imports increased approximately 40 to 50 percent during the first half of 1995⁵, while beef prices at the retail level rose 20 percent.⁶ In each of the third and fourth quarters of 1994, total beef imports were about 90 million pounds.⁷ During the first quarter of 1995, they declined to about 20 million pounds, increasing only slightly in the second quarter to 30 million pounds. Beef imports for 1995 were 114 million pounds compared to 328 million pounds in 1994, a decline of two-thirds. Imports of beef from the United States were significantly disrupted by the peso crisis, falling from 283 million pounds in 1994 to 112 million pounds in 1995, while the value of U.S. imports declined from about \$300 million to a little over \$100 million over the same period.⁸ In spite of the sharp decline in imports from the United States, the U.S. share of Mexico's total beef imports increased from 86 percent in 1994 to 97 percent in 1995, largely because of the preferential tariffs benefitting the United States under the NAFTA.

During 1996, the Mexican economy made a strong recovery, with the peso stabilizing and the inflation rate considerably lower than in the previous year. Real GDP growth for 1996 is expected at 4 percent, and continued growth and economic stability are projected for 1997.⁹ As the economy improved in 1996, beef imports from the United States rebounded and reached about 200 million pounds for the year (representing 98 percent of all beef imports into Mexico).¹⁰

³ The major cause of the peso crisis was Mexico's large current account deficit which approached \$30 billion in 1994. To finance this deficit, the Mexican authorities sold highly liquid short-term bonds. The lack of confidence in the government's ability to continue financing the large current account deficit induced domestic and foreign investors to sell their holdings of short-term government securities. These bond holders rushed to convert their pesos into dollars. In late March, the Mexican Government announced that repayments would be made in dollars. These sales increased the demand for dollars, lowering the value of the peso vis-à-vis the U.S. dollar. In response to this strong demand for dollars, and in an effort to conserve foreign currency reserves (which had fallen from a high of \$30 billion in February 1994 to \$6 billion prior to devaluation), the Mexican authorities devalued the peso on December 20, 1994 to 4 pesos per dollar (a drop of about 15 percent). However, the lack of international currency reserves to support the value of the peso forced the government to abandon its efforts to manage the devaluation, thus allowing market forces alone to determine the exchange rate. Once the peso was allowed to float, speculation started in the financial markets, and the peso slipped to almost 6 pesos per dollar in early 1995, a 42 percent devaluation from the predevaluation levels (USDA, 1995).

⁴ U.S. Embassy Mexico City, *Mexico Economic and Financial Report*, Jan. 1997.

⁵ Secretaria de Comercio y Fomento Industrial (SECOFI).

⁶ U.S. Embassy, Mexico City, Annual Livestock Report, 1996.

⁷ Confederacion Nacional Ganadera. Informacion Economica Pecuaria. Apr. 1996.

⁸ Secretaria de Comercio y Fomento Industrial (SECOFI).

⁹ U.S. Embassy Mexico City, *Mexico Economic and Financial Report*, Jan. 1997.

¹⁰ While the peso crisis significantly reduced overall U.S. exports of beef to Mexico, trade between the United States and Mexico in some meat products was assisted by the weak peso (based on interview with Gilberto Lozano, Director of U.S. Meat Export Federation Mexico City office). This is because the United States supplies two distinct markets in Mexico—the retail sector (where products are sold to Mexican consumers through supermarkets and other retail outlets) and the hotel, restaurant, and institution (HRI) sector (supplying high-quality cuts). While trade in the retail market was cut significantly, the demand characteristics of HRI trade are such that sales are relatively isolated from macroeconomic instability and changes in exchange rates when compared to the retail sector. Moreover, the devalued peso made Mexico attractive to many U.S. tourists which boosted beef sales to high-end hotels and restaurants. As a result, the peso devaluation provided a boost to U.S. sales of high-quality beef to Mexico's HRI sector and lessened the overall negative impact of the peso crisis on U.S. beef exporters (the reporting of trade data does not allow beef sold into the retail and HRI sectors to be distinguished).

Tariffs and Antidumping Action

On November 9, 1992, under pressure from livestock producers, the Mexican Government introduced an ad valorem tariff on several beef products from all countries in an effort to stem the flow of beef imports.¹¹ The tariff rate was 15 percent for live cattle and carcasses, 20 percent for chilled boxed beef and 25 percent for frozen boxed beef. Upon signing the NAFTA, these tariffs were dropped to a rate of duty of "Free" for the United States and Canada.

In May 1994, Mexico commenced an antidumping investigation against beef products from the United States.¹² Under Mexico's antidumping law, imports from the United States could have become subject to large antidumping duties within 6 months of the commencement of the antidumping investigation. This antidumping controversy was resolved in January 1996, when the National Cattlemen's Beef Association and the Mexican National Livestock Confederation signed a memorandum of understanding.

The Mexican Drought

The Mexican beef market was further influenced by a severe drought during most of the early 1990s. The drought is described as the worst in northern Mexico for several decades. The calf crop, which is the number of calves born during the year, declined from 9.7 million animals in 1992 to 8 million in 1996, and is forecast to remain at 8 million in 1997. The decline in the calf crop reflects both the decline in the number of cows and reduced cattle fertility associated with stress on the animals brought on by the drought. The drought ended in parts of Mexico in the fall of 1996, and Mexican cattle producers began to rebuild their herds. Consequently, there have been very few heifer calves entering the United States from Mexico. During the drought the calving rate declined in Mexico, to about 60 percent, down from about 75 percent; some cattlemen did not have their cows bred because there was not adequate nutrition.

Model Specification

In order to separate out the impacts of the NAFTA from other factors affecting U.S./Mexico beef trade, an Armington-type approach was used based on a simple model containing two regression equations and an identity. Armington's approach assumes that utility is weakly separable so that the consumer's decision process may be viewed as occurring in two stages (Armington, 1969,1970). The total quantity of a commodity to be imported is first determined, and then this quantity is allocated among competing suppliers. In this case, Mexican consumers are assumed to determine the total level of beef imports in the first stage, and in the second stage to allocate this total among U.S. and competing import suppliers. The first equation (first stage) explains Mexican demand for beef imports from all countries, while the second equation (second stage) explains U.S. share of total Mexican beef imports. Mexican imports of U.S. beef is derived by multiplying the two dependent variables in these equations.

Mexican demand for beef imports from all countries was specified according to standard theory of demand, in which consumers allocate their income among consumable commodities in an effort to achieve maximum satisfaction. The quantity of imports purchased by any consumer will depend on their income, the price of imports, and the price of other consumable commodities (Leamer and Stern, 1970). In estimating import demand

¹¹ Testimony of Basilio F. Aja, Executive Vice President of the Arizona Cattle Feeders' Association, transcript of the hearing, Mar. 20, 1997, pp. 52-53.

¹² Ibid

functions for agricultural commodities, researchers have typically estimated import demand as a function of the import price of the imported commodity, the domestic price of the imported commodity, prices of other commodities that are close substitutes for the import, and income (for example, Babula, 1997; Ay en Tanyeri and Rosson, 1996).¹³

For this study, Mexican beef imports were specified to depend on the price of imported beef, prices of domestically produced beef, pork, and chicken, and income. In addition, a lagged dependent variable was included in the specification (table 1). This was based on the stock-adjustment model that assumes consumers fail to adjust fully in the short-term to the desired level of imports in response to price and income changes (Nerlove, 1958).

Table 1
Model structure and specification

Equation 1. Mexican beef import demand from all countries:

$$M_t = f(M_{t-1}, IPBF_t, DPBF_t, PPK_t, PCK_t, INC_t)$$

Equation 2. U.S. share of Mexican beef imports:

$$USSHARE_t = f(USSHARE_{t-1}, PBFUS_t, PBFROW_t, NAFTA_t)$$

Equation 3. Mexican beef import demand from the United States:

$$USM_t = USSHARE_t * M_t$$

where:

M_t	=	Mexican beef imports,
$IPBF_t$	=	price of imported beef,
$DPBF_t$	=	price of domestically produced beef,
PPK_t	=	price of domestically produced pork,
PCK_t	=	price of domestically produced chicken,
INC_t	=	income,
$USSHARE_t$	=	United States' share of total Mexican beef imports,
$PBFUS_t$	=	price of imported beef from United States,
$PBFROW_t$	=	price of imported beef from rest-of-the-world,
$NAFTA_t$	=	dummy variable for January, 1994 to December 1996, and
USM_t	=	Mexican beef imports from the United States.

Several studies have estimated equations in terms of shares (for example, Meilke and Griffiths, 1981; Wahl, Hayes, and William, 1991). The U.S. share of Mexican imports of beef is specified as a function of the price of beef imports from the United States, price of beef imports from other countries (mainly Australia and New Zealand), and a zero-one variable for the period covering the NAFTA. A lagged dependent variable was also included in the regression to capture lags in responses (table 1).

¹³ For example, Babula estimated the U.S. demand for New Zealand lamb as a function of the domestic price of lamb, the import price of New Zealand lamb, the import price of Australian lamb, and income (Babula, 1997).

Model Estimation and Results

The equation was estimated using the Ordinary Least Squares (OLS) estimator¹⁴ after all variables had been tested for stationarity.¹⁵ The equations were regressed using monthly data from January 1991 to December 1996 (giving 72 observations). All variables were converted into logs so coefficients represent short-run elasticities. The regression results are reported in equation 4.

$$\text{Eq. 4. } M_t = -19.9 + 0.39 M_{t-1} - 1.12 IPBF_t + 1.04 DPBF_t + 0.19 PPK_t + 0.24 PCK_t + 1.48 INC_t$$

(-2.5)
(5.1)
(-6.1)
(3.2)
(0.6)
(0.5)
(2.6)

Adjusted R² = 0.85 Durbin's h-statistic = 1.12 F-statistic = 68.0

Overall the equation's diagnostics are satisfactory. The *adjusted-R*² indicates that about 85 percent of the variation in Mexican beef imports can be explained by the selected regressors. The Durbin h-statistic indicates that the model errors are not serially correlated.¹⁶ The *F*-statistic shows that the set of variables are statistically significant in explaining imports of beef.

All variables are found to have a sign consistent with economic theory. The price of imported beef (IPBF) is highly statistically significant, with a coefficient indicating that for every 1-percent increase in the price of imported beef, import demand falls about 1.1 percent.¹⁷ The domestic price of beef (DPBF) is also highly significant and indicates that consumers are sensitive to the relative prices of domestic and imported beef. Although the prices of pork and chicken are not statistically significant they have the right sign. The income variable is significant and indicates that for every 1-percent increase in income, imports rise by about 1.5 percent.

The regression results for U.S. share of Mexican beef imports are shown in equation 5.

$$\text{Eq. 5. } USSHARE_t = 0.24 + 0.63 USSHARE_{t-1} - 0.007 PBFUS_t + 0.004 PBFROW_t + 0.13 NAFTA_t$$

(4.1)
(10.8)
(-1.0)
(1.2)
(5.9)

+ 0.30 D9209
(5.6)

R² = 0.92 Durbin's h-statistic = 0.32 F-statistic = 160.0

The U.S. share of Mexican beef imported is explained by a lagged dependent variable, imported beef price from United States, imported beef prices from all other importers, a NAFTA dummy variable, and a dummy variable for September 1992. In this equation a linear functional form was used because it provided a better fit than when variables were converted into logarithms. The imported beef price variables included tariffs. Therefore, the United States price was lowered relative to the rest-of-the-world price following the NAFTA. All variables have the right sign, although the import price variables are not significantly different from zero. The lack of variability

¹⁴ For estimation of single equation models, the OLS estimator is the Best Linear Unbiased Estimator (BLUE).

¹⁵ Pindyck and Rubinfeld, 1981.

¹⁶ The Durbin h-statistic is the appropriate test for serial correlation when a lagged dependent variable is specified (Pindyck and Rubinfeld, 1981).

¹⁷ The price of imported beef variable is a import unit value for beef combining imports from both the United States and all other countries. The variable also includes the import tariffs.

in the dependent variable during 1995 and 1996 may explain this lack of significance, as well as the strong significance of the lagged dependent variable. Also, following the NAFTA, the market for non-U.S. imports became very thin, and the price (measured by the unit value) became highly volatile. Because of the lack of significance of the price variables the NAFTA dummy was included. The coefficient on this variable indicates that the United States increased its share of the Mexican market by a factor of 13 percentage points. The dummy variable for September 1992 captures an unexplained reduction in imports from non-U.S. countries in that month.¹⁸

The estimated values of total Mexican imports of beef and the U.S. share of those imports were multiplied, giving the estimated Mexican beef imports from the United States. These estimated values are compared with actual import data in figure 2. In general the equations track well and capture most of the trends and turning points in the import flows.¹⁹

Analysis

Impact of the NAFTA on Mexico/U.S. Beef Trade

An analysis of the impact of the NAFTA was undertaken based on the econometrically estimated equations presented above. The approach was to evaluate the level of Mexican beef imports from the United States under different assumptions about prices, incomes and trade policies that capture scenarios involving the NAFTA. Four separate scenarios were evaluated, including imports from U.S.:

- with the NAFTA, with peso devaluation (simulation 1),
- without the NAFTA, with peso devaluation (simulation 2),
- with the NAFTA, without peso devaluation (simulation 3), and
- without the NAFTA, without peso devaluation (simulation 4).

Simulation 1 represents the actual situation and serves as a comparison with the counter-factual simulations 2, 3, and 4. The analysis was undertaken from January 1994 to December 1996, and the results are reported in table 2 and figure 3. Each simulation is discussed in detail below.

- *Simulation 1 - Mexican beef imports from U.S. with NAFTA, with peso devaluation*

Simulation 1 represents the factual case and is used as the base simulation with which to compare the three counter-factual simulations. In this simulation, the income variable in the total import demand equations was kept at its actual level, as were other macroeconomic variables, such as the exchange rate and price index. The

¹⁸ A dummy variable to capture the suspension of the antidumping case in January 1996 was found not to be statistically significant in explaining the U.S. share of Mexican beef imports.

¹⁹ The method used here was to estimate an import demand function via a logarithmic transformation, derive parameters by linear regression, and then to retransform the estimated function by taking anti-logs. Kennedy (1982 and 1992) showed that this procedure results in biased predictions of the retransformed dependent variable. This is a small sample problem, however, and the asymptotic properties of the probability density function of the estimated coefficients means that the bias drops to zero as the sample size goes to infinity. Given the large number of observations used in this study, the bias was expected to be insignificant. An adjustment procedure outlined by Stynes, Peterson, and Rosenthal (1986) corrects for this bias by changing the constant of the double-log function, e^c . Applying this procedure also indicated that the bias in the estimated import demand function presented above was very small.

Figure 2. Model results. Actual vs estimated values, Jan. 1991-Dec. 1996

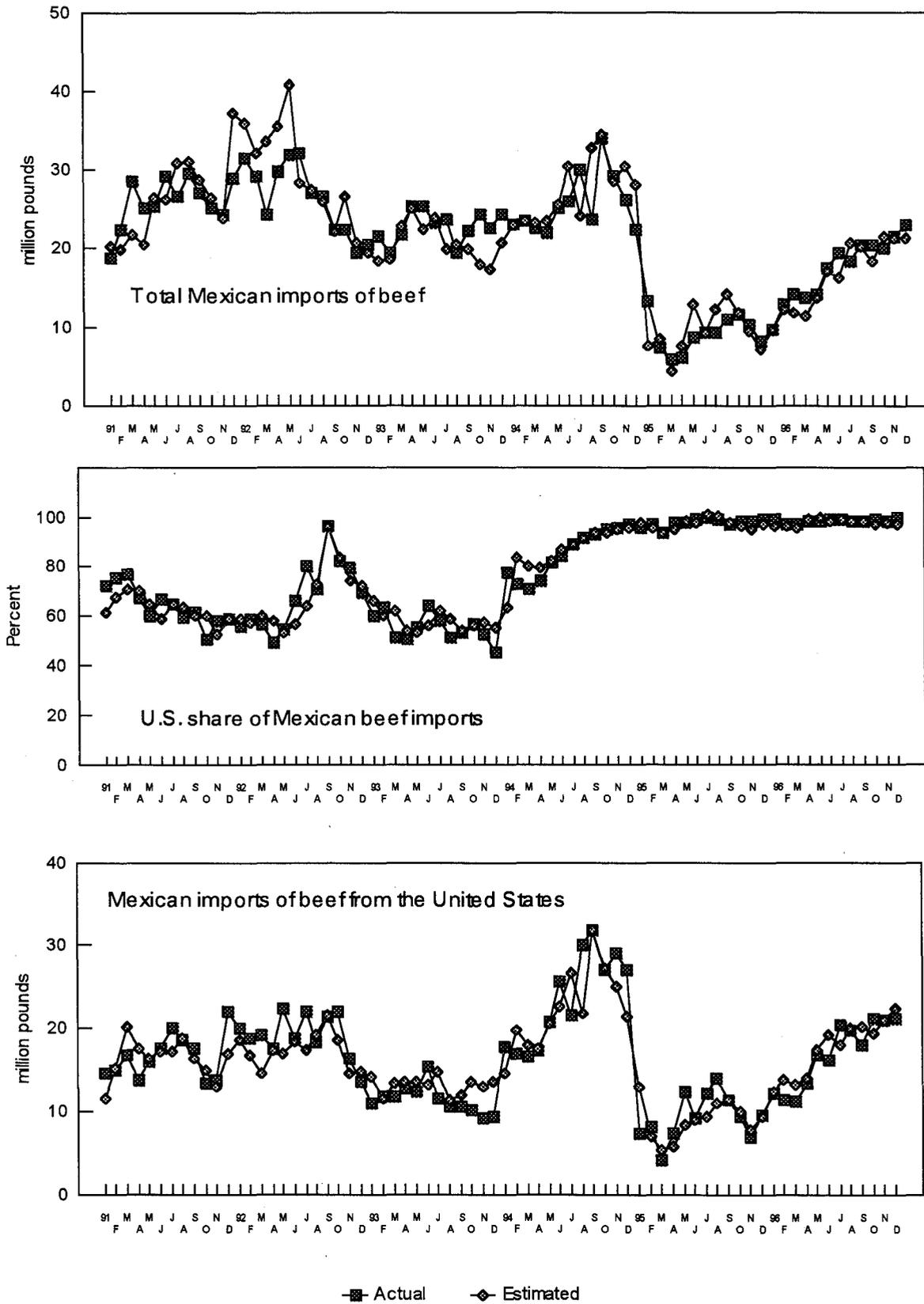


Table 2

Impact of the NAFTA and peso devaluation on Mexican beef imports from the United States, 1994 - 1996

Model Simulation	Scenario		1994			1995			1996			
			Total imports	U.S. share	Imports from U.S.	Total imports	U.S. share	Imports from U.S.	Total imports	U.S. share	Imports from U.S.	
	NAFTA	Peso devaluation	<i>Million pounds</i>	<i>Percentage</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Percentage</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Percentage</i>	<i>Million pounds</i>	
I-10	1 (base) ¹	with	with	308	86	267	111	97	108	216	98	211
	2	without	with	249	73	182	84	84	70	173	85	147
	3	with	without	308	86	267	310	97	301	340	98	332
	4	without	without	249	73	182	177	84	149	275	85	233
	Actual ²	with	with	328	86	282	114	98	112	206	98	202

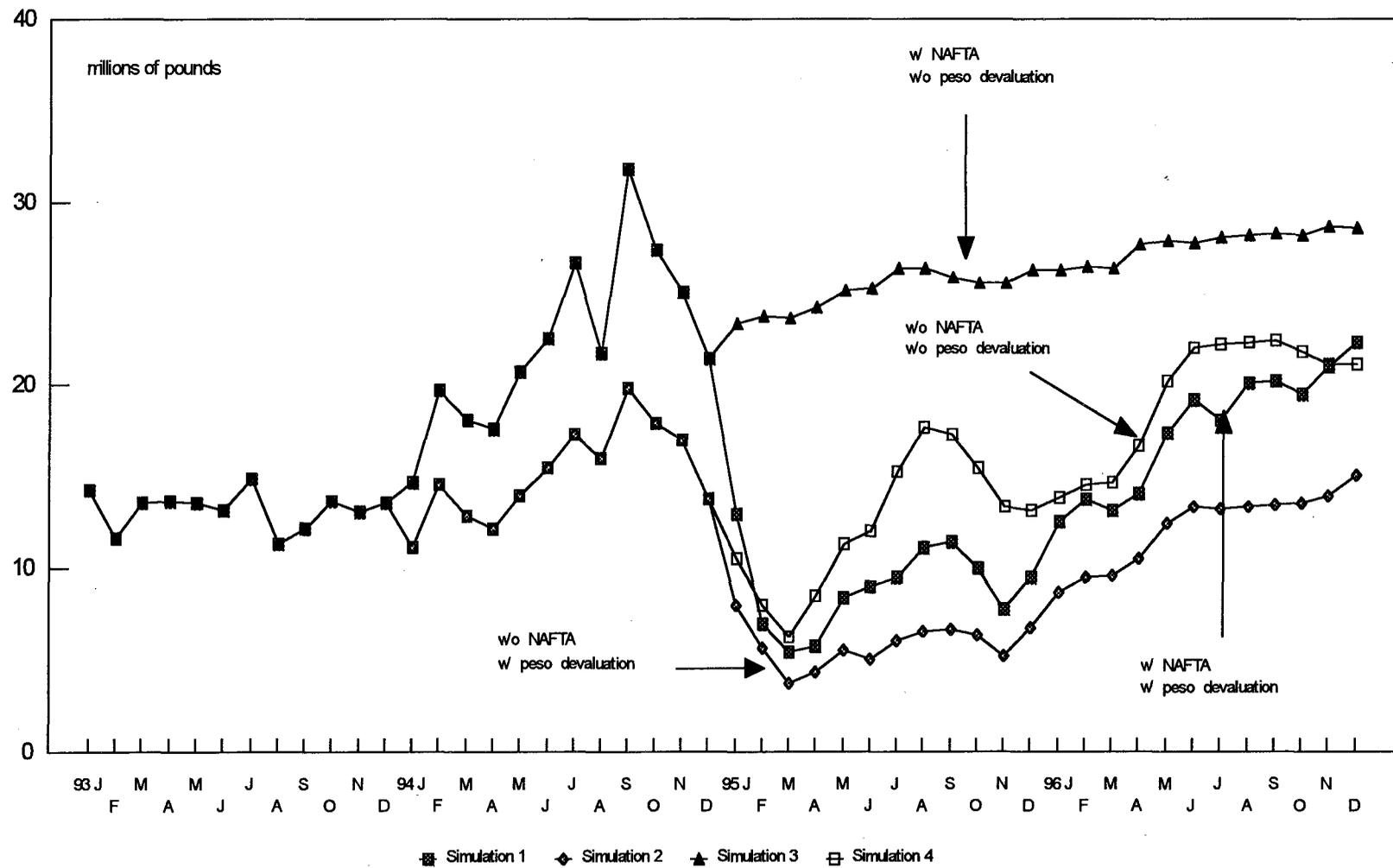
¹ Simulation 1 is referred to as the "base" in the discussion of the results.

² Source: Compiled from official statistics of Mexico's Secretariat of Commerce and Industrial Promotion (SECOFI); other export statistics in this report are derived from official statistics of the U.S. Department of Commerce and are not directly comparable.

Figure 3

Impact of NAFTA and peso devaluation on Mexican beef imports from the United States, by month, Jan. 1993-Dec. 1996

I-11



tariff rates used in the imported beef prices for the United States and rest-of-the-world were set according to the NAFTA (i.e., reduced to zero for the United States and maintained at the 15-25 percent range for the rest-of-the-world). The NAFTA dummy variable in the share equation was set equal to 1.

The model predicted beef imports from the United States at 267 million pounds in 1994, representing an 86 percent share of total imports of 308 million pounds (table 2). Total imports decline to only 111 million pounds in 1995, although the U.S. share of these imports increases to 97 percent. Imports were predicted to rebound in 1996 to 216 million pounds of which the United States supplies 98 percent (211 million pounds).

- *Simulation 2 - Mexican beef imports from U.S. without the NAFTA, with peso devaluation*

Simulation 2 estimates what Mexico's demand for U.S. beef would have been without the NAFTA. Comparing simulations 1 and 2, measures the impact of the NAFTA in beef trade *ceteris paribus*, excluding the effects of the peso devaluation and other factors. In this simulation, the income variable in the total import demand equation was assumed to follow the pattern of actual income with a sharp decline in 1995 because of the peso crisis (i.e., assuming that the NAFTA was not a cause of the peso crisis). However, income growth rate was reduced by 0.5 percent based on the assumption that the NAFTA provides an incremental 0.5 percent increase in the growth rate in GDP.²⁰

It was also assumed that the tariff rates on imported beef from the United States would have remained at the rates prevailing in 1993 (i.e., were not reduced to "Free" in January 1994). This affected the price of imported beef in the total import demand equation (i.e., it was higher than in the base simulation) as well as the U.S. import price in the share equation. The NAFTA dummy variable in the share equation was set at zero over the entire simulation period.

Without the NAFTA, Mexico would have imported about 182 million pounds of beef from the United States in 1994, compared to 267 million pounds with the Agreement. This reduction is due both to a decline in the overall level of imports, as well as to a decline in the U.S. share (only 73 percent compared to 86 percent).²¹ This is because import prices would have been higher without the tariff reductions, and income growth would have been lower without the Agreement. With the NAFTA, Mexico is predicted to import 108 million pounds of U.S. beef in 1995, compared to only 70 million pounds if no agreement had been reached. Thus, for 1995, incremental imports because of the NAFTA were about 38 million pounds. The U.S. share of Mexican beef imports would likely have been about 84 percent compared to the base scenario share of 97 percent. In 1996, Mexico is predicted to import almost 64 million pounds more beef from the United States because of the NAFTA (comparing 211 million pounds with the NAFTA to 147 million pounds without the NAFTA).

- *Simulation 3 - Mexican beef imports from U.S. with the NAFTA, without peso devaluation*

The third simulation represents what would have occurred in U.S./Mexican beef trade in the absence of the peso devaluation. Tariff reductions under the NAFTA are assumed to take place, thereby reducing the price of beef imported from the United States. The NAFTA dummy variable is set at one starting in January 1994. Thus the U.S. share of Mexican beef imports is assumed to remain the same in both the "with" and "without" peso devaluation scenarios. The main impact is through the income variable in the total import demand equation. Here

²⁰ USDA, ERS, "Effects of the North American Free Trade Agreement on U.S. Agricultural Commodities", Mar. 1993.

²¹ The results show that in the absence of the NAFTA the price effects of higher tariff rates outweigh the income effects of lower income growth.

income is assumed to increase by 3.5 percent, equal to the rate experienced in 1994.²² The exchange rate and price deflators were kept at their 1994 levels assuming purchasing power parity holds in the long-run. Tariff rates which affected the prices of imported beef in the total beef import demand equation and share equation were set at their actual levels.

Because the peso devaluation started at the end of 1994, impacts are measured for 1995 and 1996. In 1995, if there had been no peso devaluation total Mexican beef imports would have been 310 million pounds, compared to base imports of about 111 million pounds. Assuming a U.S. share of 97 percent in both cases, imports from the United States would have been 301 million pounds without the devaluation, compared to only 108 million pounds with the devaluation. Thus in 1995, the peso crisis reduced U.S. beef sales to Mexico to roughly one-third of what they otherwise would have been. In 1996, the economic recovery increased Mexican imports of U.S. beef to 211 million pounds. However, if the peso had not devalued, Mexican demand for U.S. beef would have been 332 million pounds, 57 percent more than was the base simulation level. Thus over the two-year period, the peso devaluation resulted in a loss of 314 million pounds of U.S. beef exports to Mexico, valued at almost \$300 million.²³

- *Simulation 4 - Mexican beef imports from U.S. without the NAFTA, without peso devaluation*

The final simulation combines the two previous ones to evaluate what would have been Mexican imports of U.S. beef if there had been no NAFTA and no peso crisis. The price, income and policy assumptions embodied in this simulation are the same as those described above for the individual NAFTA and peso devaluation scenarios.

The results for 1994 are the same as in simulation 2, given that the peso devaluation did not begin until the end of 1994. In 1995 Mexican imports from the United States were estimated to be about 149 million pounds compared to base level imports of 108 million pounds, while for 1996 the total imports and imports from the United States were 233 million pounds and 211 million pounds, respectively. Thus, trade in beef between the United States and Mexico would have been fairly similar to the actual level if there had been no NAFTA and no peso devaluation.

Test for Structural Change

The analysis presented above assumes that equation coefficients do not change because of the NAFTA. However, if a change in one or more of the coefficients had occurred because of the Agreement, then this would represent a structural change in Mexico's import demand for beef. Structural change in demand occurs for many reasons, including: changes in the taste and preferences, changes in the distribution of income, or introduction of new

²² U.S. Embassy Mexico City, *Mexico Economic and Financial Report*, Jan. 1997.

²³ Sensitivity analysis was undertaken to test the robustness of the model results to alternative assumptions about GDP growth in the counter-factual simulations. Without the peso devaluation, GDP was assumed to increase at 3.5 percent annually in 1995 and 1996, based on growth rates experienced in the early 1990s. This growth gave rise to Mexican beef imports from the United States of 301 million pounds in 1995 and 332 million pounds in 1996. With a GDP growth of only 2.5 percent, imports would have been 297 million pounds and 321 million pounds in 1995 and 1996, respectively. Alternatively, with a GDP growth rate of 4.5 percent, the model estimates Mexican imports of U.S. beef in the amount of 305 million pounds in 1995 and 345 million pounds in 1996. This indicates that the results are fairly insensitive to the GDP assumption, with a one percentage point difference in the GDP growth rate assumption giving rise to less than a 4 percent difference in beef trade between the United States and Mexico. In the "without the NAFTA" simulation, the Mexican GDP growth rate was assumed to be one-half of one percentage point lower than its actual level (i.e., "with the NAFTA"). To test the sensitivity of this assumption, two additional model simulations were undertaken—the first assuming no change in Mexican GDP growth rate and the second assuming the GDP growth rate dropped by one percentage point. In each case, the estimated level of Mexican imports of U.S. beef changed by less than 3 percent during the period 1994-96. Again this indicated that the model results are fairly insensitive to GDP growth rate assumptions.

products.²⁴ If structural change did occur after January 1994, then analysis based on regressions covering January 1991 to December 1996 may lead to the impacts of the NAFTA being either over- or under-stated because of bias in the regression coefficients.

To test the hypothesis that the model coefficients have changed because of the NAFTA, a Chow test was employed (see Fisher, 1970, for formal derivations) based on a F test.²⁵ If there are enough observations in the period following the structural change then running two separate regressions allows the parameters to differ between the two time periods. In this case, the general form of the F -statistic (with R and $T - K$ degrees of freedom) is:

$$[(SSE_{constrained} - SSE_{unconstrained}) / K] / [SSE_{unconstrained} / (T_1 + T_2 - 2K)]$$

R is the number of restrictions being tested, K is the number of regressors (including the intercept), T_1 is the number of observations in the first period and T_2 is the number of observations in the second period. The SSE constrained is the sum of squared errors from an equation using data both pre and post the point in time the structural change is expected to have occurred (i.e., data from January 1991 to December 1996). This "constrains" the coefficients in the pre-structural change period to be the same as the coefficients in the post structural change period. The SSE unconstrained is the addition of the sum of squared errors from two separate regressions, the first estimated over a period before structural change is expected to have occurred (January 1991 - December 1993), and the second over the period after structural change is expected to have occurred (January 1994 - December 1996).

With structural change assumed to take place in January 1994, there are sufficient observations to run the post structural change regression. However, the results of this second regression would be confounded because of the peso devaluation that took place just 11 months after January 1994. It was important to test for structural change associated with the NAFTA without capturing the influence of the peso devaluation. One approach would have been to run the second regression between January 1994 and November 1994 thus stopping prior to the devaluation. However, this was not feasible because of a lack of degrees of freedom (only 11 observations). Therefore, an alternative approach was used.

In general, if there are too few observations in the second period to run a separate regression an alternative Chow test can be developed. The procedure is to form T_2 dummy variables, one for each observation in the second period. Each dummy variable has a value of one for its particular observation and zeros elsewhere. Regressing the K independent variables plus the T_2 dummies over $T_1 + T_2$ observations gives the unconstrained regression, identical to the regression using K independent variables and T_1 observations. The constrained version comes from restricting each of the T_2 dummy variable coefficients to be zero, yielding a regression identical to the one using the K independent variables and $T_1 + T_2$ observations. The F -statistics thus becomes:

$$[(SSE_{constrained} - SSE_{unconstrained}) / T_2] / [SSE_{unconstrained} / (T_1 - K)]$$

This procedure was followed to test structural change in the Mexican beef import demand function. The unconstrained SSE was obtained by adding ten dummy variables to equation 1, one dummy variable for each of the first ten months of 1994. The regression was run from January 1991 to October 1994. The constrained SSE was obtained from the regression of equation 1 without the ten monthly dummy variables over the same period (January 1991 to October 1994).

²⁴ Tomek and Robinson, 1985.

²⁵ The discussion on forming the Chow test is taken from Kennedy, 1979.

The F -statistic was estimated to be 1.18. This is clearly less than the critical value of the F distribution at either the 1 or 5 percent level. Therefore, the null hypothesis that there was no NAFTA induced structural change can not be rejected. In other words, the test failed to show evidence of structural change in Mexico's import demand for beef because of the NAFTA.

Conclusions

The analysis presented in this paper shows that the NAFTA has significantly benefited U.S. beef exporters. The preferential tariff treatment enjoyed by the United States following the NAFTA has meant that it now supplies almost all the beef imported into Mexico. This situation is unlikely to change until the tariffs on competing suppliers are removed. According to the model results, the NAFTA expanded Mexican imports of U.S. beef by 187 million pounds during 1994-96, valued at roughly \$180 million.

The results also show that simply comparing the actual level of Mexican imports of U.S. beef before and after the NAFTA implementation and attributing the difference to the NAFTA is a highly flawed analysis. As the modeling results make clear, reduced U.S./Mexican beef trade in 1995 and 1996 compared to earlier years was not the result of the NAFTA, but due largely to the devaluation of the peso. According to the empirical results, the peso devaluation caused a loss in U.S. beef exports to Mexico of about 314 million pounds, valued at \$300 million. Thus the overall impact of the peso devaluation on U.S./Mexican beef trade was more significant than the NAFTA during the period under review.²⁶ ■

²⁶ As in any modeling exercise the results are open to challenge. It is acknowledged that there are several aspects of the modeling exercise that may have led to an under- or over-estimation of the true impacts of the NAFTA. Among these are: possible weakness in the raw data, simplifying assumptions about the decision making processes of importers and exporters, assumption in the model specification, choice of estimator, and assumptions about the model's exogenous variables in the counter-factual analysis.

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APPENDIX J
CANADIAN BLUETONGUE TESTING
REQUIREMENTS

BLUETONGUE REGULATIONS

BREEDERS

	LOW INCIDENCE	MEDIUM INCIDENCE	HIGH INCIDENCE
APRIL 1 - OCT. 14	TEST "A" IF SR - 30, ELSE TEST "B"	TEST "C"	TEST "D"

FEEDERS

	LOW INCIDENCE	MEDIUM INCIDENCE	HIGH INCIDENCE
APRIL 1 - SEPT. 30	TEST "A" IF SR - 30, ELSE TEST "B"	TEST "C"	TEST "D"

	LOW RISK	HIGH RISK
OCT. 15 - JAN. 15	NO TEST IF SR - 60, ELSE TEST "A"	TEST "A"
JAN. 16 - MARCH 31	NO TEST IF SR - 60, ELSE TEST "D"	TEST "D"

	LOW INCIDENCE	MEDIUM INCIDENCE	HIGH INCIDENCE
OCT. 1 - DEC. 31	NO TEST		
JAN. 1 - MAR. 31	NO TEST IF SR - 30, ELSE TEST "A"		TEST "D"

S.R. : State Residency

J-2

①

TEST REGIMES**TEST A:**

All cattle in group to be shipped must have passed one negative test, conducted in the state of export as follows:

1. if no reactors:
ship animals so that importation occurs within 30 days of blood drawn.
2. If reactor(s) found:
remove reactor(s)
wait 30 to 90 days and repeat (1)

TEST B:

All cattle in group to be shipped must have had two (2) consecutive negative tests 30 to 90 days apart, conducted in the state of export as follows:

1. First test:
if no reactors found, wait 30 to 90 days and continue to (2)
else - remove reactor(s), wait 30 to 90 days and continue to (2)
2. Second test:
if no reactors found - ship animals so that importation occurs within 30 days of last blood sample drawn.
else - remove reactor(s), wait 30 to 90 days and repeat (2).

TEST C:

Same test schedule as above Test B with the following addition:

From the time of the first test, the cattle shall be subjected to insect control and be EITHER

- a. isolated from other ruminant animals by at least 200 yards and kept under a roof OR
- b. isolated from other ruminant animals by 500 yards or more.

TEST D:

Same test schedule as above Test B with the following addition:

From the time of the first test the cattle shall be subjected to insect control and isolated from other ruminant animals by at least 200 yards and kept under a roof.

NOTES:

1. Cattle, sheep and goats must be transported directly from the premises of test to the Canada - USA border, except for animals going to a consignment sale as per subsection 22(6).
2. Upon arrival in Canada there are no restrictions on the movement or kill dates of the animals.
3. The required test is currently the Agar Gel Immunodiffusion Test (AGID) or c-ELISA Test, on the condition that when a second test is required it be the same as the first.
4. Purebred cattle, sheep and goats for temporary stay at a show can come in with one test as provided by section 21.1(5).

BLUETONGUE STATUS OF STATES

1995

Low Incidence

Connecticut
Massachusetts
Maine
Minnesota
New Hampshire
New Jersey
Ohio
Pennsylvania
Rhode Island
Vermont
Wisconsin
Alaska
Hawaii
New York
West Virginia
Maryland
Delaware
Michigan
North Dakota
Indiana

Medium Incidence

Colorado
Iowa
Nebraska
Tennessee
Wyoming
Illinois
Kansas
Utah
Virginia
Oklahoma
Idaho
Kentucky
Montana
South Dakota
Missouri
New Mexico
North Carolina
Washington
Oregon

High Incidence

Alabama
Arizona
Arkansas
California
Florida
Georgia
Louisiana
Mississippi
Nevada
South Carolina
Texas

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*No change in 1996
Survey results for
1996 not received yet.*

LOW-RISK STATES

ALASKA

COLORADO

CONNECTICUT

DELAWARE

HAWAII

IDAHO

INDIANA

IOWA

KANSAS

MAINE

MARYLAND

MASSACHUSETTS

MICHIGAN

MONTANA

MINNESOTA

NEBRASKA

NEW HAMPSHIRE

NEW JERSEY

NEW YORK

NORTH DAKOTA

OHIO

PENNSYLVANIA

RHODE ISLAND

SOUTH DAKOTA

UTAH

VERMONT

WASHINGTON

WEST VIRGINIA

WISCONSIN

WYOMING

The Canadian determination of the incidence of bluetongue disease in the various states in the United States is based on an annual bluetongue survey conducted by the APHIS and on published meteorological data.¹ Low incidence states are defined as those that have no more than 2 percent positive tests in a survey of at least 600 samples; medium incidence states are defined as those that have 2 percent or more positive tests in a survey of at least 600 samples in states that have a frost (vector free) period of 90 days or more; and, high incidence states are defined as those that are not low incidence or medium incidence.² In general, Canada's testing requirements are less stringent for states with a low incidence of bluetongue disease, more stringent for states with a medium incidence, and most stringent for states with a high incidence.

Low-risk states have a low incidence of bluetongue or have frost dates before November 1, and after March 31, that kills the vector required for the spread of bluetongue.³ The meteorological data must come from key centers in the state (at least three) and all centers must satisfy the frost requirement.⁴ Test requirements are based on the possible exposure to the vectors experienced by the animals offered for importation. The rationale for the test requirements is shown in the following tabulation.

¹ USITC staff telephone conversation with Claude Lavigne, Food Production and Inspection, Agriculture and Agri-Food Canada, Apr. 17, 1997.

² Facsimile to USITC from W.J. McElhran, International Trade Team, Animal Health Division, Agriculture and Agri-Food Canada, Apr. 21, 1997. USITC staff telephone conversation with Claude Lavigne, Food Production and Inspection, Agriculture and Agri-Food Canada, Apr. 17, 1997.

³ *Canada Gazette*, part II, vol. 129, No. 21, Oct. 18, 1995, p. 2849.

⁴ Facsimile to USITC from W.J. McElhran, International Trade Team, Animal Health Division, Agriculture and Agri-Food Canada, Apr. 21, 1997. USITC staff telephone conversation with Claude Lavigne, Food Production and Inspection, Agriculture and Agri-Food Canada, Apr. 17, 1997.

Purpose and date, for which animal is offered for importation, and incidence of bluetongue or risk in state from which animal is shipped

Test and rationale

- | | | |
|--|------|--|
| (1) Breeder; 1 APR-14 OCT; low incidence state; state resident 30 days | “A” | Exposed only in low incidence state |
| (2) Breeder; 1 APR-14 OCT; low incidence state; <u>not</u> state resident 30 days | “B” | Could have come from other than low incidence state |
| (3) Breeder; 1 APR-14 OCT; medium incidence state | “C” | Exposed in medium incidence state |
| (4) Breeder; 1 APR-14 OCT; high incidence state | “D” | Exposed in high incidence state |
| (5) Breeder; 15 OCT- 15 JAN; low risk state; state resident 60 days | “No” | No exposure for at least 149 days |
| (6) Breeder; 15 OCT-15 JAN; low risk state; <u>not</u> state resident 60 days | “A” | Could have been exposed in other than low risk state |
| (7) Breeder; 15 OCT-15 JAN; high risk State | “A” | From high risk state |
| (8) Breeder; 16 JAN-31 MAR; low risk state; state resident 60 days | “No” | No exposure for at least 75 days |
| (9) Breeder; 16 JAN-31 MAR; low risk State; <u>not</u> state resident 60 days | “D” | Could have been exposed in other than low risk state and exposed in Canada within 15 days of entry |
| (10) Breeder; 16 JAN-31 MAR; high risk state | “D” | Exposed in high risk state and could be exposed in Canada within 15 days of entry |
| (11) Feeders; 1 APR-30 SEP; low incidence state; state resident 30 days | “A” | Exposed only in low incidence state |
| (12) Feeders; 1 APR-30 SEP; low incidence state; <u>not</u> state resident 30 days | “B” | Could have been exposed in other than low incidence state |
| (13) Feeders; 1 APR-30 SEP; medium incidence state | “C” | Exposed in medium incidence state and would be exposed in Canada upon entry |

- | | |
|---|---|
| (14) Feeders; 1 APR-30 SEP; high incidence state | “D” Exposed in high incidence state and would be exposed in Canada upon entry |
| (15) Feeders; 1 OCT-31 DEC; low, medium, or high incidence state | “No” Minimal exposure in Canada |
| (16) Feeders; 1 JAN-31 MAR; low or medium incidence; state resident 30 days | “No” No exposure for 45 days |
| (17) Feeders; 1 JAN-31 MAR; low or medium incidence <u>not</u> state resident 30 days | “A” Could have been exposed in a high incidence state |
| (18) Feeders; 1 JAN-31 MAR; high incidence state | “D” Exposed in high incidence state |

APPENDIX K
ANALYSIS OF CANADIAN EXPORTS OF
LIVE CATTLE FOR SLAUGHTER TO
THE UNITED STATES

Analysis of Canadian Exports of Live Cattle for Slaughter to the United States

Introduction

Following enactment of the United States-Canada Free-Trade Agreement (CFTA) in 1989, live cattle and beef trade between the United States and Canada became an increasingly important feature of the North American livestock economy. CFTA excluded Canada and the United States from each others' respective Meat Import Acts (which had put quantitative restrictions on meat trade), reduced tariffs on live cattle to a rate of duty of "Free," and cutback tariffs on beef. This eliminated almost all trade measures on livestock and bovine meat products between the two countries.¹ Subsequent to CFTA, trade expanded rapidly. Between 1989 and 1992, for example, U.S. beef exports to Canada more than doubled (71 million pounds to 143 million pounds) and continued to increase during the mid-1990s.² Canadian exports of feeder cattle to the United States also increased substantially—from 60,000 animals in 1989 to almost 300,000 in 1992.³

Canadian exports of live cattle for slaughter (LCFS) to the United States also grew strongly during the 1980s, and particularly after the CFTA. From 1989 to 1992, exports rose from 417,000 to 920,000 animals. Between 1992 and 1994, close to 900,000 animals were exported annually, growing to over 1 million animals by 1995 (figure 1). The year 1996 saw a record 1.3 million animals exported, with well over 300,000 sold in each of the first three quarters of the year. In the fourth quarter of 1996, exports moderated to just over 200,000 animals, similar to levels recorded in the fourth quarter of the preceding 2 years.

U.S. trade data indicate LCFS export growth in the first half of 1996 resulted predominantly from increased shipments by producers in Southern Alberta (where the cattle feeding industry in Canada is concentrated). Cattle producers in some Northern States claim Canadian exports depress prices they receive for their cattle.⁴ They argue Canadian exports are a consequence of trade policies favoring the Canadian industry, as well as Canadian grain policies that provide its livestock producers lower production costs.⁵ In response, some producer groups are urging the U.S. Government to intervene through protective trade measures.⁶ Other commentators, however,

¹ U.S. imports of cattle from and exports to Canada have received a rate of duty of "Free" since 1993 as a result of an accelerated duty elimination agreement negotiated under the CFTA. By 1994 most imports of fresh, chilled, or frozen beef received a tariff rate of "Free" as the results of the accelerated duty elimination agreements. The pre-CFTA rates of duty were relatively low.

² Canadian International Trade Tribunal, *An Inquiry into the Competitiveness of the Canadian Cattle and Beef Industries*, Nov. 1993.

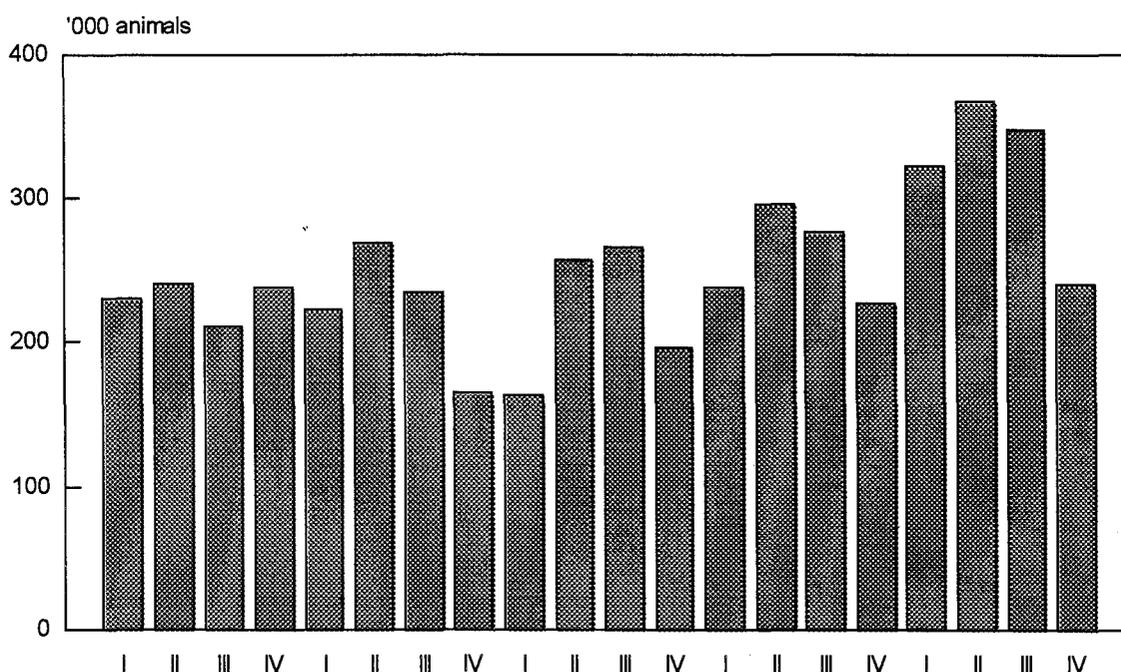
³ Ibid.

⁴ For example, Pat Goggins in address to Conference on Livestock Marketing at the National Cattlemen's Beef Association, Kansas City, Jan. 29-Feb. 1, 1997.

⁵ Resolutions proposed to the International Markets Committee of the annual convention of the National Cattlemen's Beef Association, Kansas City, Jan. 29-31, 1997.

⁶ Ibid.

Figure 1
Canadian exports of cattle for slaughter to the United States, Quarterly 1992-96



Source: U.S. Department of Commerce.

argue Canadian export growth is associated with different factors, such as liquidation of the Canadian cattle herd and unexpected delays in the expansion of processing capacity in Southern Alberta.^{7 8}

Empirical analysis can provide a better understanding of factors accounting for the LCFS trade pattern in the early- and mid-1990s. The scrutiny of LCFS trade is a fairly recent phenomenon, and has not received much attention in the academic literature. Most previous studies focus on trade in beef and feeder cattle (Webber, Graham, and MacGregor 1988; Cluff and Huff 1985). Marsh and Greer (1994) analyzed the U.S. price effects from exports of Canadian live cattle and beef. They estimated that during 1993 and 1994, exports of LCFS and meat from Canada led to a decline in U.S. steer prices by about \$2 per hundred weight (less than 3 percent). In a similar study, Marsh and Peck (1996) looked at the effects of U.S. beef and live cattle trade on the prices of U.S. feeder cattle. In both studies, the relatively minor impact Canadian exports were found to have on U.S. fed and feeder cattle prices reflects the small share of total U.S. beef supplies these exports represent (3 percent). Apart from these analyses, no empirical studies were found specifically dealing with factors affecting Canadian LCFS exports following the NAFTA and repeal of the Western Grain Transportation Act (WGTA).

The purpose of this econometric analysis is to identify and measure the economic and policy factors explaining Canadian exports of live cattle for slaughter to the United States. A single equation econometric model is presented and used to address the following key questions:

- What economic factors influence the trade flow in LCFS between the United States and Canada?

⁷ Interview with Professor John Marsh, Department of Agricultural Economics, Montana State University, Bozman.

⁸ Based on personal interviews with livestock producers from Southern Alberta and representatives of the Canadian Cattlemen's Association.

- Did the NAFTA have an impact on Canadian exports of LCFS to the United States?
- Did changes in Canadian grain policy affect LCFS trade?
- How did changes in plant capacity in Southern Alberta affect Canadian exports of LCFS to the United States?
- What is the likely outlook for LCFS trade in the near-term?

Factors Influencing Trade in Live Cattle for Slaughter

Several short- and long-term factors are known to influence LCFS trade between the United States and Canada. These factors can be separated into those affecting the export supply (excess supply) in Canada and import demand (excess demand) in the United States. They include both domestic demand and supply parameters on either side of the border.

Canadian Export Supply

Offer Prices

Price formation in the Canadian livestock market is dominated by that of the United States which is almost 10 times as large. This, combined with the minor trade restrictions, means livestock prices are determined in the United States, while the Canadian price is the U.S. price times the exchange rates, adjusted for transportation costs (Meilke and Coleman, 1986) (figure 2).

Although this relationship is observed over the long-term, short-term margins between Canadian and adjusted U.S. prices arise frequently. For instance, Canadian steer prices were higher than U.S. prices during the fourth quarter of 1993, while U.S. prices were slightly higher than Canadian prices for the second and third quarters of 1996.

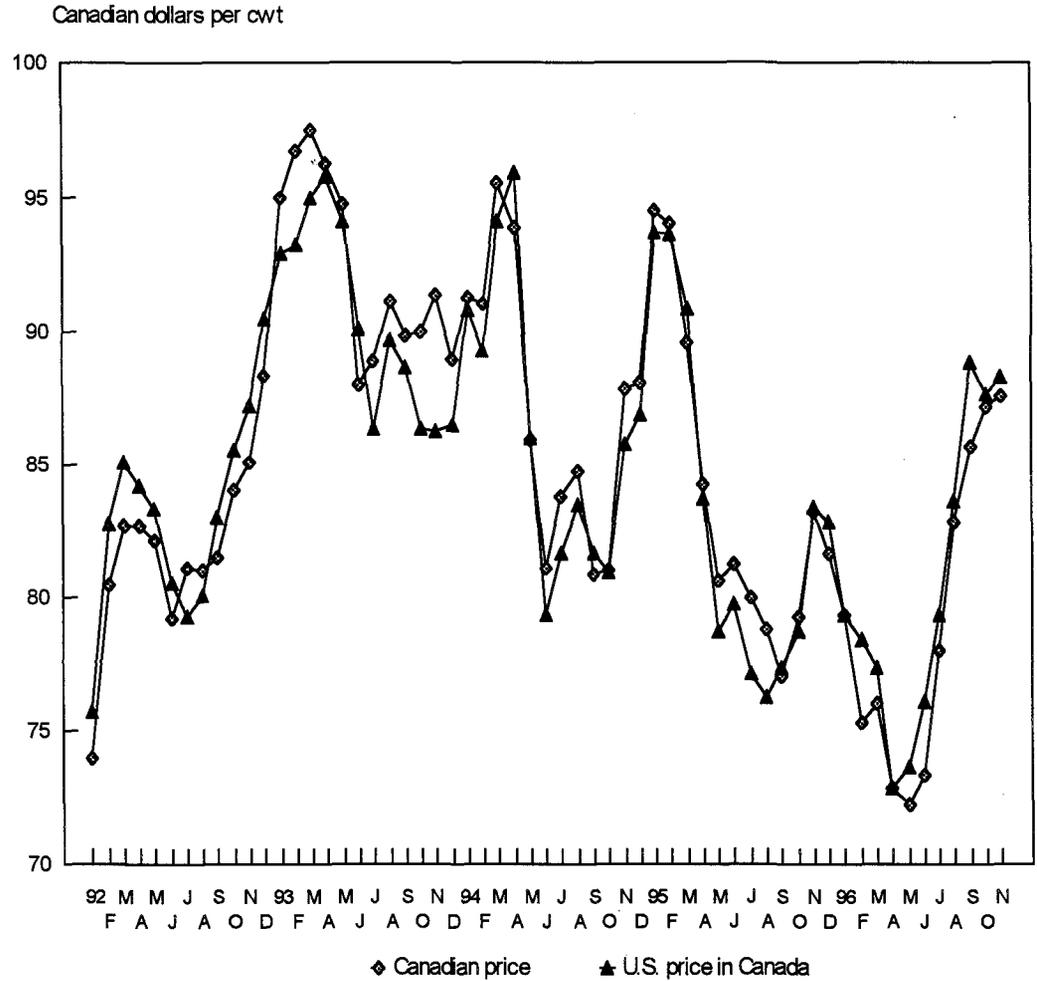
Margins between U.S. and Canadian cattle prices open because of short-term changes in demand and supply conditions. For example, an increase in demand for beef in Canada pushes retail prices higher and enables Canadian packers to bid more for cattle. Alternatively, low plant capacity utilization in Washington State may cause U.S. buyers to bid more for Canadian cattle in order to increase throughput.

In Western Canada, most operators of large lots sell their cattle once a week through a sealed bid system. On average between four and seven bids on each load of cattle marketed are made, with at least three bidders representing U.S. packing plants. Cattle are sold to the highest bidder, so cattle going to the United States are bid away from Canadian packing plants by U.S. firms.^{9 10} No Canadian slaughter cattle are shipped into the

⁹ Cattle are raised on either side of the border with more or less similar production conditions. The main difference is that Canadian cattle are fed mostly barley, wheat and protein supplement (canola), while in the United States cattle are fed corn and protein supplement (soybean meal).

¹⁰ Canadian Cattlemen's Association, 1997, prehearing brief presented to public hearing on U.S. International Trade Commission, *Cattle and Beef: Impact of NAFTA and Uruguay Round Agreements on U.S. Trade*, investigation No. 332-371, Mar. 20, 1997.

Figure 2
Comparison on U.S. and Canadian steer prices



Source: Agriculture Canada and U.S. Department of Agriculture.

United States on a speculative basis, but only after they have been purchased by U.S. companies.¹¹ Because of this tight market integration, Canadian and U.S. prices move very closely, with price margins quickly removed through arbitrage.

Inventories

The level of cattle inventories is another important factor in determining the number of Canadian cattle supplies for export to the United States. Jarvis (1974) argued cattle inventories represent the fixed capital stock associated with beef production, and the breeding herd can be considered a capital asset (since it can be used to produce additional output or it can be sold as a consumption good). Breeding herd size is a key factor determining the number of steers and heifers available for slaughter 18 to 24 months hence. Producers' expectations of weaker

¹¹ Ibid.

feeder cattle prices leads them to reduce their herd size, resulting in fewer feeder cattle raised. Over the long-term (18-24 months) this lowers the supply of steers and heifers marketed, as well as the number of cattle available for export to the United States.

Inventories also affect the supply of cattle for slaughter in the short-term. As the herd is liquidated, the number of cull beef cows and bulls marketed increases in the short-term (1-6 months), leading to more cattle exported to the United States. Thus the relationship between cattle inventories and exports of Canadian LCFS is positive in the long-term and negative in the short-term (Ospina and Shumway, 1980; Meilke and Coleman, 1986).

Grain Prices

Canadian slaughter cattle exports to the United States depend also on production costs. Canadian grain policies (such as the WGTA), have influenced patterns of grain movements and livestock production throughout Canada. The WGTA subsidized grain transportation from West to East Canada, encouraging feedgrain production in the West and cattle feeding in the East.¹² Repeal of the WGTA in July 1995 means Western feedgrain prices likely will drop, and, as feeding cattle becomes relatively more profitable than producing grains, leading to more cattle fed in the West and animals available for exports to the United States.

Slaughtering Capacity

On the demand side of the Canadian market, the level of cattle slaughtering capacity and plant utilization is of great importance. Competition between slaughter plants is strong because they must attract sufficient throughput to be profitable. Canadian cattle slaughtering capacity has grown with the increased production at the Excel plant at High River (in the fall of 1996). Additional capacity is expected once the expansion of the IBP plant at Lakeside is complete (expected in the second quarter of 1997). By the fall of 1997, it is estimated that Alberta's annual capacity will reach 44,500 animals per week. The increased modernization and capacity of these plants will make them more competitive with U.S. packers in purchasing Canadian slaughter cattle.¹³

During 1994-95, Canadian cattle producers built their inventories in order to supply the IBP and Excel plants expected to have their increased capacity fully operational by mid-1996.¹⁴ With these plants not operating fully by fall, 1996, Canadian producers sold their cattle to U.S. slaughter houses where spare capacity had bid up prices relative to Canadian prices. Once the IBP and Excel plants enter full production, exports to the United States may decline as competition from Canadian plants intensifies.¹⁵

U.S. Import Demand

Bid Prices

Canadian cattle move south because of a demand for cattle from U.S. facilities. Canadian LCFS are imported by U.S. packers for a number of reasons. There continues to be over capacity in the U.S. meatpacking industry, especially in the Northwest region. Some believe that without a supply of Canadian cattle, one or more plants

¹² Based on personal interviews with livestock producers from Southern Alberta and representatives of the Canadian Cattlemen's Association.

¹³ Ibid.

¹⁴ Interview with Professor John Marsh, Department of Agricultural Economics, Montana State University, Bozman.

¹⁵ Interview with Mike Mullins, Washington Liaison (Meat) Cargill.

in Washington State would close.¹⁶ In Washington State, and to a lesser extent Utah and Colorado, packing plants are willing to bid Canadian cattle away from Canadian plants because of the shortfall in local available cattle.¹⁷

Lack of specialized Canadian processing facilities concentrating on specific types of animals (cows and bulls, for example) means that such animals are often attracted to U.S. plants. Price bids by U.S. importers also reflect beef demand factors in the United States. These include per capita incomes and prices of alternative meat products.

Trade Policy

Trade policy can influence the flow of live cattle for slaughter between the United States and Canada. As mentioned earlier, following the CFTA, trade in LCFS is with a rate of duty of "Free". There are no quantitative measures that impede the movement of live cattle, although cattle are required to pass border health inspections before proceeding to U.S. packing plants.

The Model Specification

The economic and institutional structure of the production and marketing system suggests U.S./Canada LCFS trade should be modeled as a Canadian export supply function rather than a U.S. import demand function. This is because the Canadian cattle inventory is small relative to the U.S. inventory, making U.S. demand for Canadian cattle perfectly elastic. As reported earlier, economic factors Canadian cattle producers consider important in their production and marketing decisions include relative U.S. and Canadian prices, inventory levels, input prices, and policy variables.

These factors are generally consistent with those predicted by neoclassical theory of the firm. According to theory, a supply function (as well as input demand functions) can be derived from the first order conditions of the firm's profit function (Hotelling's lemma).¹⁸ The result is a supply function in which the product and input prices appear on the right-hand-side. This supply function is conditional on state variables such as the level of technology, fixed inputs, and the opportunity costs of resources allocated to alternative production processes.¹⁹

Diewert and Morrison (1986) used a production theory approach to derive theoretical export supply functions. Their derivations resulted in export supply as a function of the price of the product in the domestic market, the price of the product in the international market, input prices (both domestic and international), and technology. Applying this theory to Canadian cattle producers, LCFS supplies are expected to depend on Canadian prices of live cattle for slaughter, input prices (such as feed grains), opportunity costs (prices foregone for selling in the Canadian market vis-à-vis the U.S. market), capital (inventories), and policy factors.²⁰

¹⁶ Canadian Cattlemen's Association, 1997, prehearing brief presented to public hearing on U.S. International Trade Commission, *Cattle and Beef: Impact of NAFTA and Uruguay Round Agreements on U.S. Trade*, investigation No. 332-371, Mar. 20, 1997.

¹⁷ Ibid.

¹⁸ Varian, 1981.

¹⁹ Tomek and Robinson, 1979.

²⁰ Several factors indicate that the neoclassical theory of the firm may not represent the decision making behavior of Canadian cattle producers. For example, the theory assumes that producers are profit maximizers, do not face production or price risk, and consider only a single production period. Because of the discrepancies between observed

(continued...)

The export supply function was expressed as:

$$Eq. 1. \quad X_t = f(Qi_t, X_{t-1}, (\frac{SP_x * e}{SP_d})_t, INV_{t-i}, GP_{t-i}, SLCAP_t, TRPOL_t)$$

Where:

- Q_i = quarterly seasonal dummy variables,
- X_t = Canadian exports to United States of live cattle for slaughter,
- SP_x = U.S. price of slaughter steers,
- SP_d = Canadian price of slaughter steers,
- e = exchange rate (\$Canadian/\$U.S.)
- INV_{t-i} = lagged cattle inventories in Western Canada,
- GP_{t-i} = lagged price of grains,
- $SLCAP_t$ = dummy variable for expansion of slaughter capacity in Southern Alberta (equals 0 prior to October, 1996, otherwise 1), and
- $TRPOL_t$ = dummy variable for the NAFTA (equals 0 prior to January 1994, otherwise 1).

Canadian exports of LCFS were estimated as a function of the ratio of U.S. and Canadian steer prices (with the U.S. price adjusted for the exchange rate), cattle inventories, grain prices, dummy variables for changes in slaughter capacity in Southern Alberta, and the NAFTA.²¹ The ratio of Canadian and U.S. steer prices captures the producers' response to price differences U.S. and Canadian packers bid for cattle. In ratio form the price elasticities are constrained to be the same, but avoids colinearity problems associated with entering prices as separate regressors. Cattle inventories lagged 18 months captures the capital investment in livestock production. Grain prices were included to account for the response in export supplies to changes in feed costs.

A lagged depend variable was also added to the specification. This accounts for a short-run momentum factor and associated rigidities in the marketing structure that prevent full adjustment to price and policy changes. The lagged dependent variable enables the calculation of short- and long-run price elasticities (Nerlove, 1958). Seasonal dummy variables were included in the model to capture the strong seasonality in Canadian LCFS exports.

Model Estimation and Results

The equation was estimated using the Ordinary Least Squares (OLS) estimator²² after all variables had been tested for stationarity.²³ The regression was run using monthly data from January 1992 to December 1996 (giving 60 observations). The results are reported in equation 2.

²⁰ (...continued)

producer decision making process and that assumed by the theory, the theory should be used only to give guidance in selecting the models explanatory variables, and should not be used to dictate the choice of variables or determine the model specification (Johnson, 1986).

²¹ The U.S. slaughter steer price represents the opportunity costs of selling cattle in the Canadian market.

²² For estimation of single equation models, the OLS estimator is the Best Linear Unbiased Estimator (BLUE) (Kennedy, 1979).

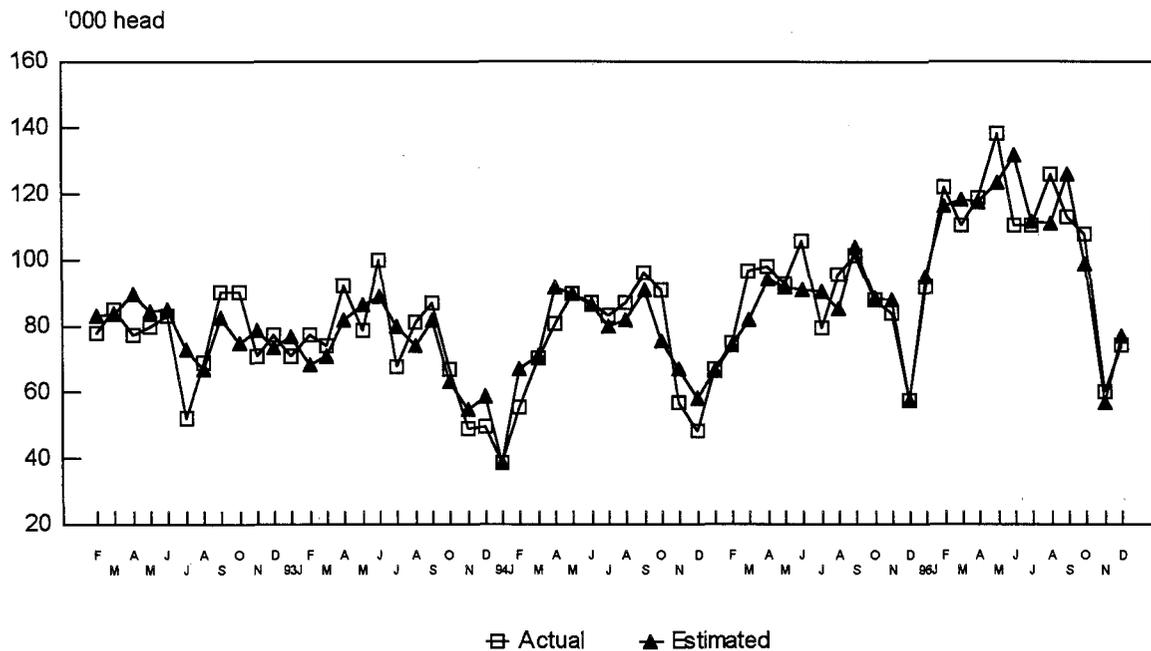
²³ Pindyck and Rubinfeld, 1981.

$$\begin{aligned}
 \text{Eq. 2. } X_t = & -312038 + 8120 Q2 - 6694 Q3 - 10577 Q4 + 0.35 X_{t-1} + 243466 (SP_x .e / SP_d)_t \\
 & (-6.06) (1.87) (-1.56) (-2.64) (4.48) (5.10) \\
 & + 11.66 INV_{t-18} + 0.24 GP_t - 43749 * SLCAP_t \\
 & (4.57) (0.04) (-4.97)
 \end{aligned}$$

Adjusted R² = 0.82 Durbin's h-statistic = -2.06 F-statistic = 24.54

Overall the equation's diagnostics were reasonable. The adjusted R² indicated over 80 percent of the variation in Canadian LCFS exports can be explained by the regressors. The Durbin h-statistic indicated the model errors were not serially correlated.²⁴ The F-statistic showed that the set of variables were statistically significant in explaining exports of LCFS. The model's performance was evaluated further by plotting actual and estimated exports (figure 3). Generally the estimated equation was able to track the historical data fairly well, capturing most of the trends and turning points in export flows.

Figure 3
Canadian exports of live cattle for slaughter
Actual vs estimated, Jan. 1992-Dec. 1996



The ratio of U.S. and Canadian steer prices was found to be highly significant in explaining LCFS trade. The coefficient on the price ratio variable was used to calculate export elasticities with respect to the U.S. price, the Canadian price, and the exchange rate. Given the price ratio specification, the export elasticity with respect to each of the variables was constrained to be the same in absolute value, with a positive sign on the U.S. price and exchange rate and negative sign on the Canadian price. The elasticity was calculated to be 3.7, indicating a 1-

²⁴ The Durbin h-statistic is the appropriate test for serial correlation when a lagged dependent variable is specified (Pindyck and Rubinfeld, 1981).

percent increase (decrease) in the U.S. price gives a 3.7-percent increase (decrease) in shipments of Canadian cattle to the United States. Similarly, a 1 percent devaluation of the Canadian dollar would give rise to a 3.7-percent increase in exports to the United States.²⁵ Conversely, a 1-percent increase (decrease) in the Canadian price of steers would generate a 3.7-percent decrease (increase) in exports of Canadian cattle to the United States. The high elasticity estimate shows producers are highly responsive to price signals. This result was expected based on the discussion of livestock marketing and pricing presented above.

To capture livestock inventory dynamics, the inventory variable was lagged 18 months. This variable was also highly significant and correctly signed. The estimated coefficient indicates that for every thousand animal increase (decrease) in the cattle inventory, shipments to the United States increases (decreases) by about 12 animals per month, 18 months in the future. The lagged dependent variable was statistically significant, giving an adjustment parameter of 0.65.²⁶ This indicates, as expected, producers adjust their marketing decisions fairly quickly in response to changes in price signals.

With the exemption of the third quarter, the seasonal dummy variables are highly significant and captured the increase in trade flows in the second quarter and decreases in the third and fourth quarters, in comparison to the first quarter. The dummy variable for slaughtering capacity in Canada is also highly significant. Its coefficient indicates exports decline an average of 44,000 each month, once Canadian slaughter capacity increased after October 1996.

The feedgrain price is statistically insignificant. One explanation is that expectations of future grain price changes are embodied in the cattle inventories level. To test whether the repeal of the WGTA had an impact on live cattle trade, a dummy variable was included equal to zero between January 1992 and June 1995, and equal to one after July 1995. This variable too was not found to be significant. One explanation is that the end of the WGTA coincided with a period of very high grain prices. As a result, producers in Western Canada remained in grain production during 1996 instead of switching over to cattle.²⁷ In 1997, lower grain prices are expected to reduce the production of grains, providing incentives for more cattle raising and feeding. Finally, the NAFTA variable was found to have a negative sign (indicating a decline in trade after the NAFTA) and was not statistically significant. The NAFTA variable therefore was dropped from the model specification.

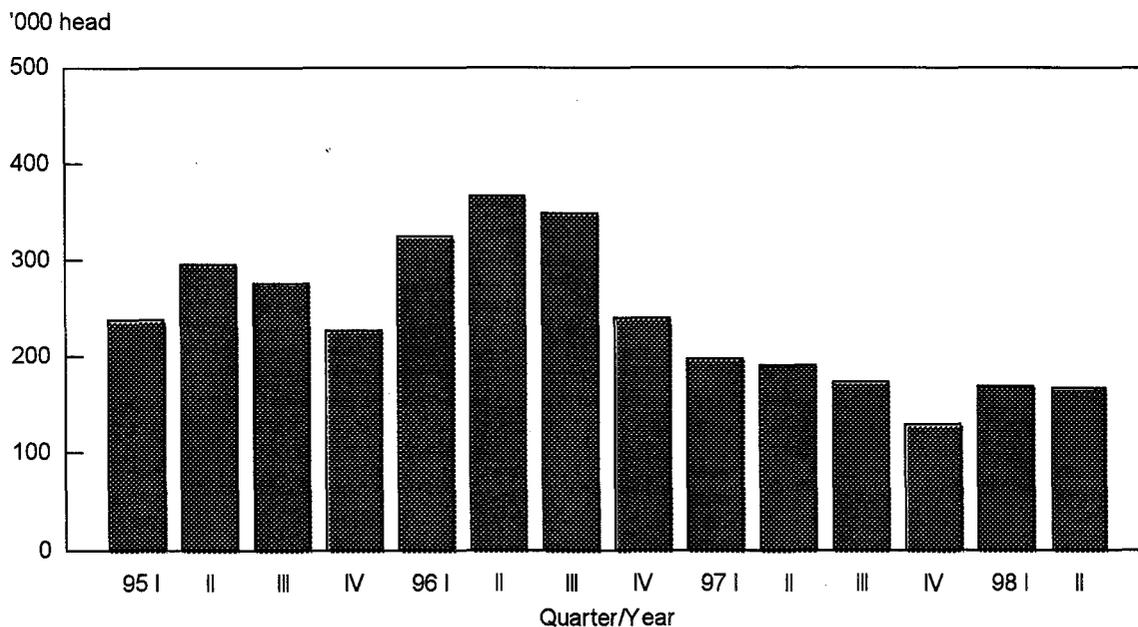
Using equation 2, the flow of LCFS between the United States and Canada was projected until mid-1998. With the exemption of the price variable, actual values for all right-hand-side variables in the equation could be used for the projection of trade until June 1998, since the inventory variable was lagged 18 months and all other regressors in the equation were dummy variables. Over the forecast period the price variable (i.e., the ratio of U.S. and Canadian prices) was set equal to the monthly average during 1996. The projections are reported in figure 4.

²⁵ Some models of Canadian agriculture contain price equations with U.S. price and exchange rate as separate regressors (for example, Agriculture Canada's Food and Agriculture Regional Model). As separate regressors, elasticities with respect to price and exchange rate are not constrained to be the same.

²⁶ 0.65 is the partial adjustment parameter from the adaptive expectations model. It is the fraction between the desired adjustment and actual adjustment in the dependent variable to changes in independent variables (Kennedy, 1979).

²⁷ Based on personal interviews with livestock producers from Southern Alberta and representatives of the Canadian Cattlemen's Association.

Figure 4.
Actual and predicted Canadian exports of live cattle for slaughter



LCFS trade for 1997 is likely to continue the downward trend started in the fourth quarter of 1996. Overall exports of LCFS for the year are projected at about 700,000 animals, and expected to remain less than 200,000 animals in the first 2 quarters of 1998. The expected decline in Canadian exports compared to 1995 and 1996 is driven by two key factors. First, liquidation of the Canadian herd that began in early 1996 means that less fed slaughter steers and heifers will be marketed in 1997 and 1998, and therefore fewer animals will be exported to the United States. Second, the increased slaughtering capacity in Canada will result in significantly more cattle being slaughtered and processed in Canada, and consequently fewer animals will be transported south to packing plants in the United States.

Summary and Conclusions

Although certain cattle producers in the Northwest of the United States argue that the NAFTA and Canadian grain policies are crucial in explaining recent trade flows, other commentators identify the pattern with a different set of factors. In order to test alternative hypotheses about what factors are important, a simple single equation regression model was developed. The model was formulated after detailed discussion of the marketing and pricing system for LCFS in the Northern States of the United States and Southern Alberta (between which regions most of the international trade takes place). The model was developed to address specific questions as outlined earlier, and the overall results and conclusions are presented below.

What economic factors influence the trade flow in LCFS between the United States and Canada? Based on the analysis presented above, the key economic factors influencing trade in live cattle for slaughter are relative prices of slaughter steers on either side of the border. The elasticity of trade with respect to U.S. and Canadian

prices was estimated at 3.7 indicating a high degree of responsiveness in trade to price. Cattle inventories were also found to be highly important in explaining the future level of live cattle trade.

Did the NAFTA have an impact on Canadian exports of LCFS to the United States? The analysis indicates the NAFTA has not had any major impact on the trade in LCFS. This can be explained by the fact that the ad valorem equivalent of the rate of duty for LCFS was less than 2 percent before January 1994 when the NAFTA was signed.

Did changes in Canadian grain policy affect LCFS trade? Grain prices were found not to be important in explaining the pattern of trade over the last few years. Most likely this is because of high grain prices during 1996 meant the effects of repealing the WGTA were not felt in that year. With most forecasts suggesting lower grain prices in 1997, the removal of the grain transportation assistance likely will be felt by producers in Western Canada, and more feeding of cattle in the West is likely to result. With more cattle fed in the West, supplies available for marketing to the United States will increase. However, whether these additional cattle will actually move south depends critically on the relative prices, availability of slaughter capacity on either side of the border, and the development of other foreign markets for beef, such as Japan and the Republic of Korea (Korea).

How did changes in plant capacity in Southern Alberta affect exports of LCFS to the United States? Canadian slaughtering capacity is a key factor in determining future Canadian exports of LCFS to the United States. The increased capacity in the fall of 1996 led to an average decline of 44,000 animals per month moving south. As plant capacity further increases when the additional capacity at the IBP plant comes into production in mid-1997, it is likely even fewer cattle will be shipped to the United States.

What is the likely outlook for LCFS trade in the near-term? The econometric analysis indicates Canadian exports of LCFS will fall during 1997 and into 1998 (assuming no significant change in the relative U.S./Canadian steer price).²⁸ Exports in 1997 could be around 700,000 animals, similar to the level in the early 1990s. This drop is attributed to smaller Canadian cattle inventories during the latter part of 1996, and increased slaughtering capacity in Canada.

While increased slaughter capacity in Canada likely will result in fewer live cattle for slaughter moving south, it may also provide opportunities for increased shipments of feeder and slaughter cattle to Canada. If so, then Canada will increasingly export beef rather than live slaughter cattle, particularly if efforts to harmonize the meat grading system of both countries are successful.²⁹ ■

²⁸ This result must be heavily qualified by the assumptions of the model, its specification and accuracy of data. Readers should interpret the results as likely direction in trend rather than precise forecasts of cattle movements.

²⁹ Interview with Mike Mullins, Washington Liaison (Meat) Cargill.

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APPENDIX L
LETTER FROM THE U.S.
COMMISSIONER OF CUSTOMS
REGARDING TRANSSHIPMENTS



THE COMMISSIONER OF CUSTOMS

WASHINGTON, D.C.

March 18, 1997

MAN-1-FO:TA GM

Ms. Marcia E. Miller
Chairman
United States International Trade Commission
Washington, D.C. 20436

Dear Ms. Miller:

Thank you for your letter of January 27, 1997, within which you ask what steps have been taken by the U.S. Customs Service, since the enactment of the North American Free Trade Agreement (NAFTA), with respect to the possible transshipment of live cattle and fresh, chilled, or frozen beef through Mexico and Canada into the United States.

In calendar year 1995, the Office of Regulatory Audit performed 10 NAFTA verification audits on producers of beef products in Canada and Mexico. Although deficiencies with inventory records at most facilities were noted, no transshipment was detected, and the audit verification reports recommended that positive origin determinations be issued. All of the companies were advised that, absent adequate recordkeeping audit trails, the only acceptable inventory management method available under the NAFTA is specific identification (physical segregation). Further, the companies were told that they must adhere to an acceptable inventory management method to identify the origin of beef goods shipped to the United States claiming NAFTA preferential treatment.

In addition, the NAFTA implementing legislation required Customs to develop a methodology for estimating the compliance with the laws administered by the Customs Service to be presented in an annual report to the Congress. As a result of this legislation a service-wide Compliance Measurement Program, with a NAFTA subset, was implemented in an effort to assure a high level of compliance and enforcement.

"Please visit the U.S. Customs Web at <http://www.customs.ustrcas.gov>"

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OFFICE OF THE ATTORNEY GENERAL
U.S. DEPARTMENT OF JUSTICE

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Prior to the implementation of the NAFTA, the U.S. Customs Service already had in place a National Trade Enforcement Plan (TEP) designed to better focus resources on certain priority industries, which was expanded to include a NAFTA sub-plan to address issues unique to the NAFTA. In support of the TEP, the Office of Strategic Trade performs continuing analysis of import data in order to detect changes in trade patterns within trade sensitive industries. Agriculture is one of these industries.

If an aberration in trade patterns from the above activities were detected, it would attract significant attention from Customs in every regard.

Should you have any further questions regarding this matter, please contact Gary Manes, Trade Agreements, at (202) 927-1133.

Sincerely,

A handwritten signature in cursive script that reads "George J. Weise".

George J. Weise
Commissioner

APPENDIX M
LETTER FROM THE SECRETARY OF
AGRICULTURE REGARDING
TRANSSHIPMENTS



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

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RECEIVED
OFFICE OF THE SECRETARY
US INTERNATIONAL TRADE COMMISSION

10013

Ms. Marcia E. Miller
Chairman
United States International Trade Commission
Washington, D.C. 20436

Dear Madam Chairman:

Thank you for your letter of January 27, 1997, informing the Department of Agriculture (USDA) of the investigation initiated by the International Trade Commission (ITC) on October 28, 1996, to report on the impact of the North American Free Trade Agreement and Uruguay Round agreements on U.S. trade in beef and cattle.

USDA does not have direct responsibility for monitoring or enforcing regulations on transshipments of product entering the United States. That responsibility belongs to the U.S. Customs Service. Nevertheless, our personnel in Food Safety and Inspection Service and Animal Plant and Health Inspection Service are responsible for enforcing health and sanitary requirements for meat and live animals at the border, and thus, would be sensitive to problems potentially relating to transshipments.

We have enclosed two reports that specifically address the issue of transshipments. During 1995, the latest period for which data is available, there were no known incidents of transshipments of meat. We trust that you will find these reports helpful. We look forward to the results of the investigation into these issues which are of great significance to the U.S. beef and live cattle industries, and to USDA. As always, USDA is prepared to provide the ITC with any appropriate resources and expertise that may be required to assist in the investigation.

Please contact me at your convenience if additional participation from USDA is warranted.

Thank you for writing.

Sincerely,

DAN GLICKMAN
Secretary

Enclosures

APPENDIX N
URA SIDE AGREEMENTS BETWEEN
THE UNITED STATES AND URUGUAY;
AND BETWEEN THE UNITED STATES
AND ARGENTINA

Geneva, 9 March 1994

MEMORANDUM OF UNDERSTANDING
RESULTS OF URUGUAY ROUND NEGOTIATIONS ON AGRICULTURE
BETWEEN THE UNITED STATES OF AMERICA AND URUGUAY

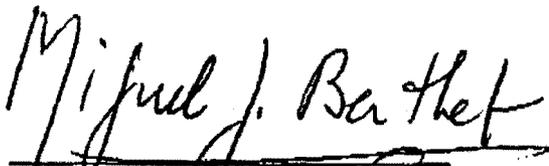
Uruguay and the United States of America have concluded their bilateral negotiations with respect to agricultural products within the framework of the Uruguay Round of trade negotiations. Below are the results of that negotiation.

Beef

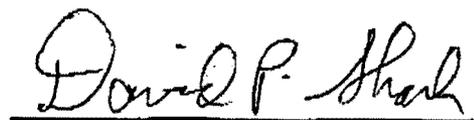
The United States Department of Agriculture (USDA) commits to engage in consultations with Uruguayan authorities and to make its best efforts to achieve a mutually satisfactory resolution of outstanding issues related to U.S. health and sanitary restrictions on Uruguayan beef. Once Uruguay is approved by the appropriate USDA authorities to ship fresh, chilled or frozen beef to the United States, the United States will increase the amount of the tariff-rate quota for beef granted by the United States in its Uruguay Round Schedule of Concessions by at least 20,000 MT (boneless basis) and allocate the amount of the increase to Uruguay.

Tariffs and tariff-rate quotas

The attached lists contain additional concessions exchanged between Uruguay and the United States of America.



H.E. Mr. Miguel J. Berthet
for Uruguay



Mr. David P. Shark
for the United States of America

MEMORANDUM OF UNDERSTANDING
RESULTS OF URUGUAY ROUND MARKET ACCESS NEGOTIATIONS
ON AGRICULTURE BETWEEN THE UNITED STATES OF AMERICA
AND ARGENTINA

1. The Republic of Argentina and the United States of America have concluded their bilateral negotiations with respect to agricultural products within the framework of the Uruguay Round of trade negotiations. Below are the results of that negotiation.

Beef

2. The United States Government, through the Department of Agriculture (USDA), commits to engage in consultations with Argentine authorities and to make its best efforts to achieve a mutually satisfactory resolution of outstanding issues related to U.S. health and sanitary restrictions on Argentine beef.

3. Sanitary agencies of both governments will establish a working group and a specific agenda as soon as possible after the Marrakech Ministerial Meeting.

4. Once Argentina is approved by the appropriate USDA authorities to ship fresh, chilled or frozen beef to the United States, the United States will increase the amount of the tariff-rate quota for beef granted by the United States in its Uruguay Round Schedule of Concessions by at least 20,000 MT (boneless basis) and allocate the amount of the increase to Argentina.

Peanuts and peanut products

5. In implementing its minimum access tariff-rate quota for peanuts the United States will allocate to Argentina 78% of the amount of such tariff-rate quota in a manner consistent with the requirements of Article XIII of the GATT. Access under such quota may require an appropriate certificate of origin. The new allocations to Argentina will be as follows:

Year	Volume
1995	26.341
1996	29.853
1997	33.365
1998	36.877
1999	40.388
2000	43.901

6. Argentina accepts that the United States will establish a tariff-rate quota for peanut butter and peanut paste as part of its Uruguay Round market access offer on peanuts and that such tariff-rate quota will include the following elements: 1) An in-quota amount for peanut butter and peanut paste (tariff line 20.08.11.11) of 3.650 metric tons will be allocated to Argentina in the first year of implementation of the Uruguay Round; 2) An additional in-quota amount of 1.600 metric tons will be allocated for developing countries which are included in the existing list of eligible countries under the General System of Preferences applied by the United States on the date of this Memorandum of Understanding (this allocation is in accordance with Paragraph 1 of Article 15 of the Agreement on Agriculture); of that amount 750 metric tons will be allocated during the first year of implementation of the Uruguay Round and, subsequently, 850 metric tons will be distributed on equal installments during the rest of the implementation period of the Round (1996-2000); 3) An additional in-quota amount of 250 metric tons will be allocated to other countries; 4) The in-quota tariff rate will be fixed initially at the same duty level and reduced on the same schedule as applicable to Canada under the bilateral Free Trade Agreement between Canada and the United States; 5) The over-quota tariff rate will be 155% and applied to all peanut products in 20.08.11 as well as for shelled peanuts in chapter 12.

7. Argentine runner-type or Argentine ground nut kernel-type peanuts, and peanut butter and peanut paste manufactured from these peanuts will be eligible for entry into the United States under these provisions, assuming that the products meet the relevant U.S. standards. In every case, an appropriate certificate of origin will be required.

Cheese

8. The government of the United States will grant to Argentina an additional quota of 2.000 metric tons of cheese (specified in annex 1) to be fully implemented from the beginning of the Uruguay Round implementation period. These quantities will not be subject to reallocation without the consent of the government of Argentina. The government of Argentina may designate a U.S. importer for these quantities if it so chooses.

9. Argentina will fully implement the tariff concessions listed in annex 2 on almonds, in-shell (080211); almonds, shelled (080212); walnuts, in-shell (080231); and walnut, shelled (080232) from the beginning of the implementation period.

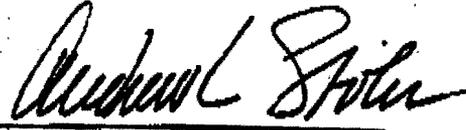
Argentine-U.S. MOU
24 March 1994
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Tariffs and tariff-rate quotas

10. The attached annexes contain additional concessions exchanged between Argentina and the United States of America.



H.E. Mr. Juan Carlos Sanchez Arnau
for the Republic of Argentina



Mr. Andrew L. Stoler
for the United States of
America

**APPENDIX O
RECORD OF UNDERSTANDING
BETWEEN THE REPUBLIC OF KOREA
AND THE UNITED STATES ON BEEF
MARKET ACCESS IN THE URUGUAY
ROUND**



UNITED STATES TRADE REPRESENTATIVE

1-3 AVENUE DE LA PAIX

1202 GENEVA, SWITZERLAND

The Honorable Seung Ho
Permanent Representative to GATT
Republic of Korea

Dear Ambassador Ho:

I have the honor to confirm the following understanding reached between the delegations of the Republic of Korea and the United States of America with respect to agricultural products under the auspices of the Uruguay Round trade negotiations:

1. Korea shall provide an annual combined base access quota for potato flour and meal, tariff line HS 1105.10, and potato flakes, granules and pellets, tariff line HS 1105.20, of 60 MT.
2. Consistent with the intention of the December 13, 1993 Record of Understanding on Uruguay Round market access regarding ice cream mix powder, from January 1, 1995 Korea shall not apply a tariff higher than 40 percent to ice cream mix powder entering under tariff line HS 2106.90.9030. Consistent with the implementation schedule for agricultural products in the Uruguay Round, this tariff ceiling shall be reduced in 10 equal annual installments to 36 percent.
3. Korea shall make its best efforts to expedite the final approval of the U.S. kiln-dried method for preventing the infestation of softwood lumber with pinewood nematode.
4. Korea shall begin immediate bilateral consultations with the United States to develop an approach to meet the phytosanitary requirements for exporting apples from the United States to Korea.
5. In accordance with the December 13, 1993 Record of Understanding on Uruguay Round market access, Korea shall provide duty reductions according to the attached schedules in Annex A.
6. For the tariff lines indicated in Annex B, Korea shall not apply a duty higher than the base rate used for calculating "credit." These credit base rates are indicated in Annex B.

I have the further honor to propose that this letter and its attachments (Annex A and Annex B) and your letter of confirmation in reply constitute a mutual understanding between our two governments concerning the actions that the Korean Government has agreed to take with respect to importation of agricultural products into Korea.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Stoler". The signature is written in a cursive style with a large, sweeping initial "A".

Andrew Stoler
Deputy Chief of Mission

Attachments

BEEF

<u>YEAR</u>	<u>QUOTA AMOUNT (MT RWE)</u>	<u>DUTY (%)</u>	<u>MARK-UP (%)</u>	<u>PERCENT SBS (%)</u>
1993	99,000	20	100	15
1994	106,000	20	95	20
1995	123,000	43.6	70	30
1996	147,000	43.2	60	40
1997	167,000	42.8	40	50
1998	187,000	42.4	20	60
1999	206,000	42	10	70
2000	225,000	41.6	0	70
2001	-	41.2	0	-
2002	-	40.8	0	-
2003	-	40.4	0	-
2004	-	40	0	-

All balance-of-payments restrictions on beef shall expire no later than December 31, 2000. In the year 2001, there shall be no quota, no mark-up, no LPMO involvement, and complete private sector autonomy regarding product quantity, price, quality, and supplier. There shall be no government restrictions on product utilization.

The current July 15, 1993 Record of Understanding (L/7270) shall continue to apply except as modified to incorporate the provisions of the new understanding.

Handwritten:
24 25 26
Dec/13/93

