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# NAFTA

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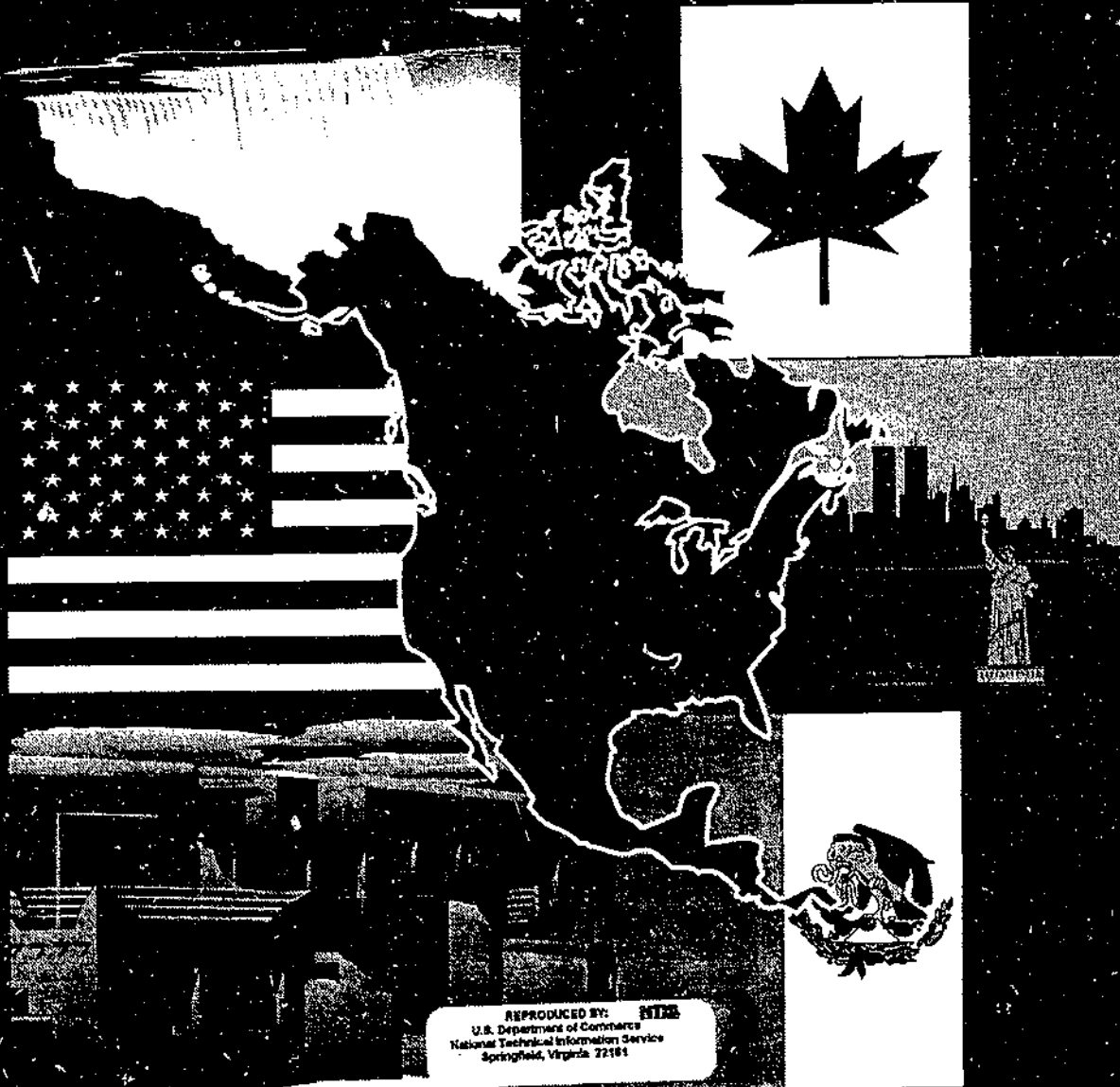
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# NAFTA

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## Foreword

The North American Free Trade Agreement among the United States, Mexico, and Canada has had a positive effect overall on the U.S. agricultural sector, reinforcing the trend toward greater integration of markets in North America. 1996 marked the third year of trade liberalization between the United States and Mexico and the eighth year of liberalization between the United States and Canada. Any assessment of the impact of NAFTA, especially so early in the implementation process, must recognize that NAFTA is only one of many factors that have influenced North American agricultural markets in recent years.

U.S. agricultural exports to Mexico and Canada increased from \$8.87 billion in 1993 to \$11.59 billion in 1996. During the same period, U.S. agricultural imports from the

NAFTA partners grew from \$7.33 billion to \$10.55 billion. The collapse of the Mexican peso in December 1994 and the subsequent recession reduced Mexican consumers' purchasing power and increased the short-term price competitiveness of Mexican exports. Consequently, U.S. agricultural exports to Mexico plunged in 1995, offsetting the 22 percent growth in 1994. The Mexican economy began a strong recovery in 1996 and U.S. exports surged 55 percent, more than regaining the ground lost in 1995.

This report is submitted to the United States Congress to meet the requirements of the NAFTA Implementing Legislation of 1993 requiring a United States Department of Agriculture biennial report starting in 1997.

## Acknowledgments

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U.S. export data from 1990 forward are from Canadian import data, and are not comparable with earlier data.

# Executive Summary

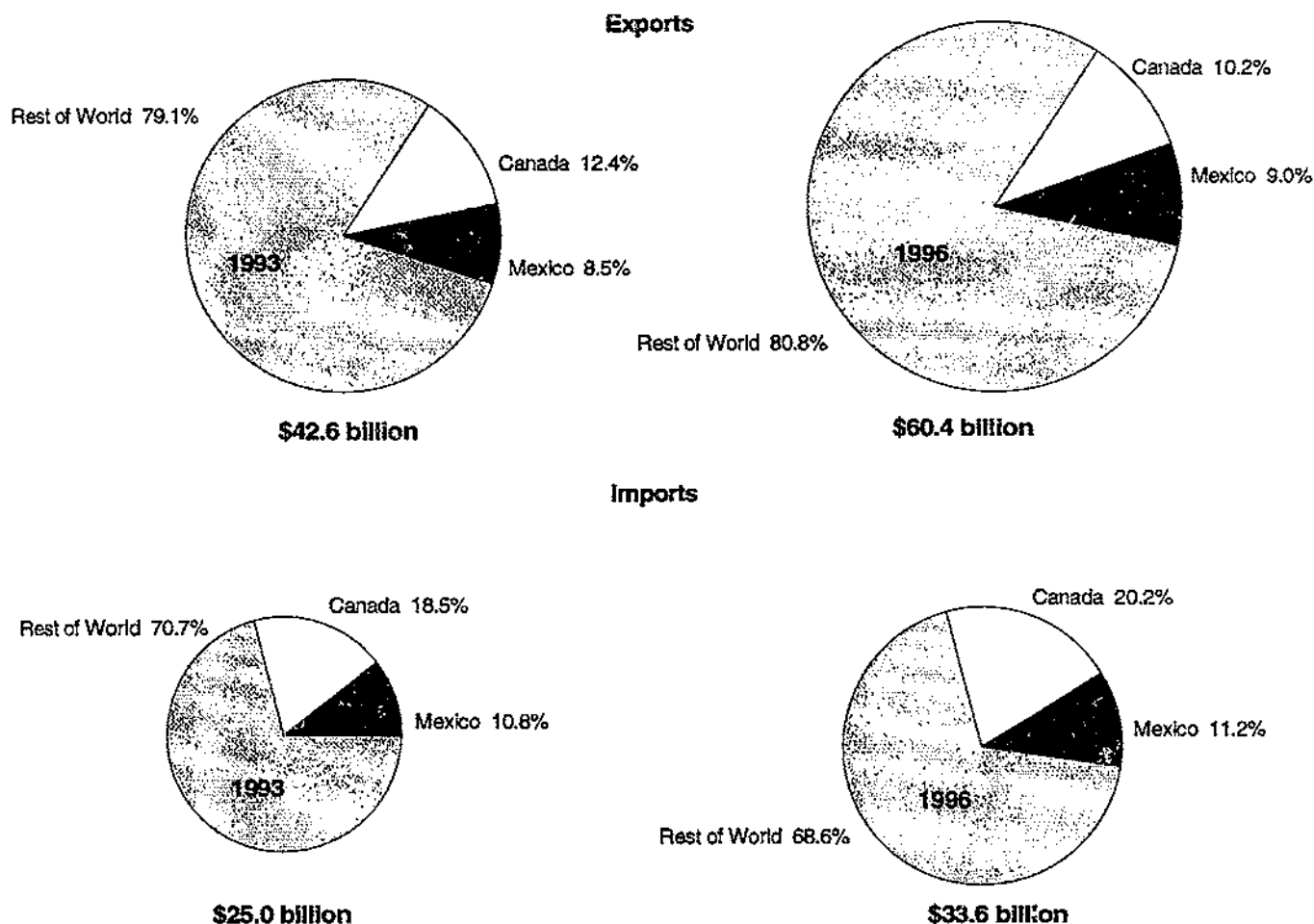
Even at this relatively early stage in its implementation, the North American Free Trade Agreement (NAFTA) among the United States, Mexico, and Canada has had a positive effect overall on U.S. agriculture, reinforcing the trend toward greater integration of markets in North America. The competitiveness of the United States in a broad range of agricultural sectors is enhanced by reduced restrictions at the border. More open trade within North America has mitigated local production shortfalls caused by adverse weather, securing more stable supplies and reducing commodity price volatility. Consumers in all three NAFTA countries have benefited from more access to wider sources of supply.

U.S. agricultural trade with the NAFTA partners is growing rapidly, with exports up 31 percent and imports up 44 percent since 1993 (figure 1). Three years into NAFTA implementation, all non-tariff barriers and many tariffs between the United States and Mexico have already been eliminated, and most of the remaining tariffs have declined

more than one-third. Because Mexico's tariffs on agricultural imports from the United States were much higher than U.S. tariffs on agricultural imports from Mexico, Mexican tariffs have been reduced substantially more than U.S. tariffs. The structural changes caused by trade liberalization take time to develop, so the complete effects of NAFTA will not be felt until the agreement is more fully implemented and markets have adjusted to the new trade environment. Any assessment of the impact of NAFTA, especially so early in the implementation process, must recognize that NAFTA is one of many factors that have influenced North American agricultural markets in recent years.

Since the NAFTA was implemented on January 1, 1994, U.S. agricultural exports to Mexico have increased by \$1.8 billion, and the U.S. agricultural trade surplus with Mexico has grown by \$800 million. NAFTA's preferential tariffs have helped U.S. suppliers solidify, and for some commodities expand, their dominant 76-percent overall market share. Mexico is a rapidly growing market for U.S. agri-

Figure 1  
**NAFTA's Share of U.S. Agricultural Trade**



Source: AWHB/CAD/ERS/USDA.

culture, averaging 14.8 percent growth per year since 1993, compared with 12.4 percent average growth for U.S. exports. The robust performance of U.S. agricultural exports for the period occurred despite the sharp decline in exports to Mexico in 1995 in the wake of the peso crisis. The collapse of the Mexican peso in December 1994 and the subsequent recession reduced Mexican consumers' purchasing power and increased the short-term price competitiveness of Mexican exports. Consequently, U.S. agricultural exports to Mexico dropped 22 percent in 1995, offsetting the gains from 1994, while Mexican exports to the United States grew 32 percent. The Mexican economy began a strong recovery in 1996, and U.S. agricultural exports to Mexico rebounded, increasing almost 55 percent, while imports from Mexico dropped slightly from the previous year (figure 2).

NAFTA facilitated trade and promoted more rapid economic recovery in Mexico than might otherwise have occurred after the peso devaluation (Gould et al., Dallas Fed-

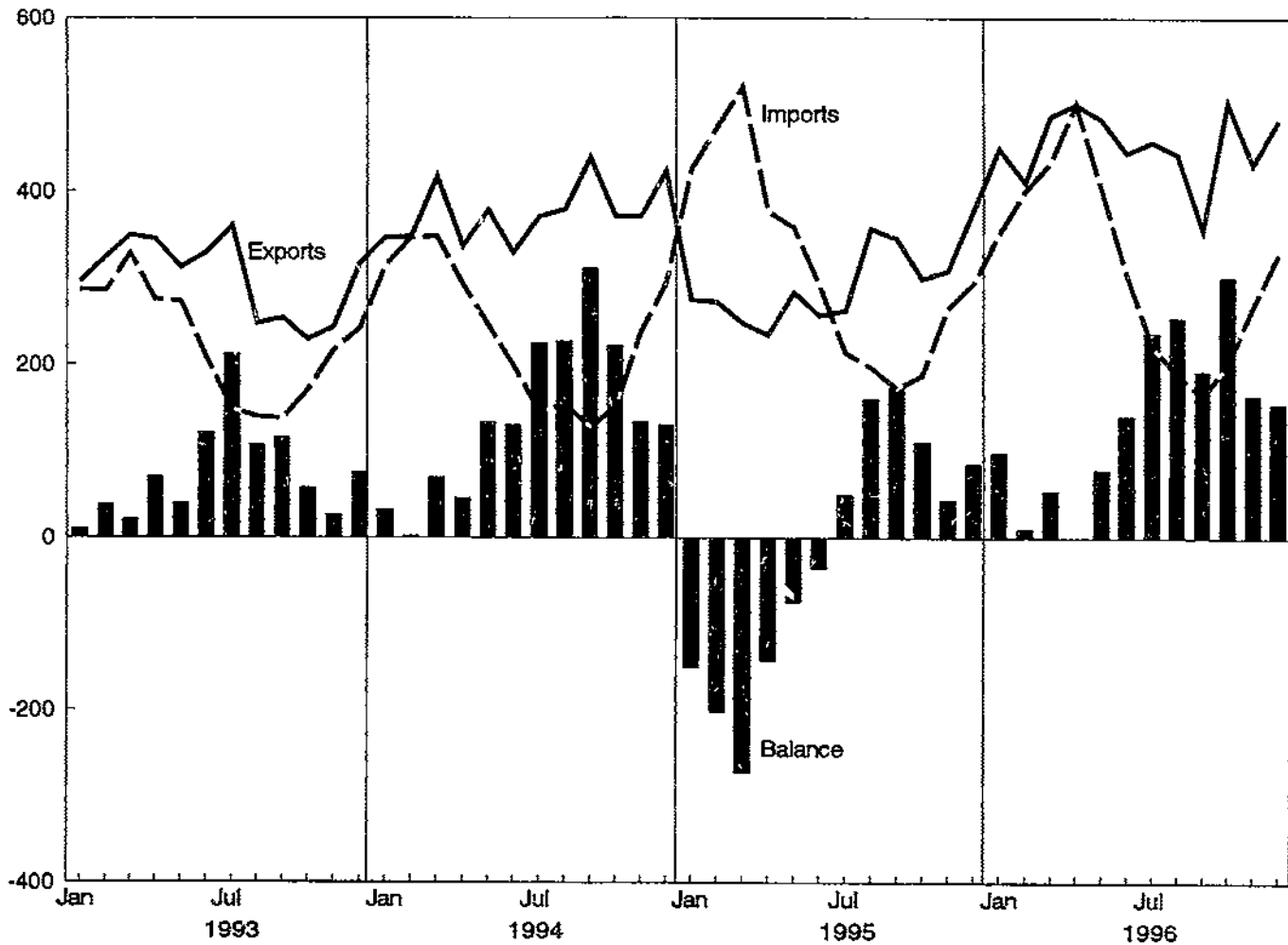
eral Reserve, 1996). One of the greatest contributions of NAFTA was in preventing the Mexican government from reverting to the restrictive trade policies that were so destructive during the debt crisis in the early 1980's. Mexico's adherence to its NAFTA commitments and the rapid recovery of trade in 1996 provide compelling evidence that NAFTA has achieved one of its primary goals of locking in and expanding Mexican trade and investment reforms.

U.S. agricultural exports to Canada increased to a record \$6.1 billion in 1996, accounting for a dominant 65-percent share of Canada's agricultural imports. Even in the mature Canadian market, U.S. agricultural exports have averaged 5.2 percent annual growth since 1993.

NAFTA is one of several factors that has shaped the trading relationships among the United States, Mexico, and Canada. All three countries have adopted fundamental domestic agricultural policy reforms in recent years. The effects of these reforms are sometimes difficult to separate

Figure 2  
**Monthly U.S. Total Agricultural Trade with Mexico**

Million dollars



Source: AWHB/CAD/ERS/USDA.

from the direct effects of NAFTA trade reforms. In addition, for some commodities, adverse weather has been a major factor in recent shifts in cross-border trade patterns.

The agricultural provisions of NAFTA have had a modest positive impact on investment and employment in the U.S. rural economy to date. The effects are modest because NAFTA trade is a small part of U.S. agricultural trade, and because trade liberalization under NAFTA is only partially complete. As NAFTA creates competitive opportunities for rural America, labor and capital will shift toward more efficient firms and industries. The dynamic process of market adjustments will continue throughout the 15-year implementation of the agreement. The strong export performance of U.S. agriculture thus far suggests that NAFTA is creating incentives for resources, labor and capital to remain in the agricultural sector.

## Impacts of NAFTA on U.S. Agriculture

- Since the NAFTA was implemented, U.S. agricultural exports to the NAFTA countries have increased from \$8.87 billion in 1993 to a record \$11.59 billion in 1996. The United States had an agricultural trade surplus of over \$1 billion with its NAFTA partners in 1996.
- U.S. export performance with Mexico has been particularly strong, with exports increasing nearly 15 percent per year, on average, between 1993 and 1996, to a record \$5.4 billion. Twelve commodities having the fastest growth—corn, soybeans, wheat, field seeds, vegetable oils, cotton, sugar and related products, barley, pulses, beef and veal, rice, and soybeans—as a group increased \$2 billion, more than 150 percent.
- U.S. agricultural exports to Canada grew nearly 5 percent per year between 1993 and 1996, to a record \$6.1 billion. Twelve commodities—corn, pork, cotton, orange juice, sugar and related products, hides and skins, beverages except juice, soybean meal, wine, peanuts, field seeds, and rice—as a group, increased \$382 million, up 42 percent from 1993.
- NAFTA has contributed to the significant increase in U.S. exports. Based on USDA economic analysis, U.S. agricultural exports to Mexico and Canada were about 3 and 7 percent higher, respectively, in 1996 than they would have been without NAFTA.
- Some of the biggest gains in U.S. exports to Mexico due to NAFTA have been for sorghum, cattle, beef, dairy products, apples, and pears. U.S. exports of these products were 10 to 30 percent higher in 1996 than would have occurred without the agreement.
- U.S. agricultural suppliers hold dominant market shares in both Canada and Mexico. In 1996, the

U.S. share of Canada's total agricultural imports was 65 percent and the U.S. share for Mexico was 76 percent. NAFTA preferential tariff rates helped U.S. suppliers solidify, and for some commodities expand, their market share.

- U.S. agricultural imports totaled a record \$33.3 billion in 1996. U.S. agricultural imports from the NAFTA partners grew from \$7.3 billion in 1993 to \$10.5 billion in 1996. U.S. agricultural imports from Mexico and Canada were about 3 and 5 percent higher, respectively, in 1996 than they would have been without the agreement.
- U.S. agricultural imports from Mexico increased 11.6 percent per year, on average, between 1993 and 1996, to \$3.8 billion. Twelve commodities—coffee, tomatoes, beverages excluding fruit juices, melons, orange juice, onions, cucumbers, strawberries, grapes, biscuits and wafers, peppers, and molasses—as a group increased \$1.1 billion.
- U.S. agricultural imports from Canada grew 13.7 percent per year from 1993 to 1996 to \$6.8 billion. Twelve commodities—swine, pork, cocoa, potatoes, beef and veal, biscuits and wafers, cattle, oats, barley, sugar and related products, rapeseed, and beverages excluding fruit juices—as a group increased \$1.1 billion.
- NAFTA's biggest impacts have occurred on those products that faced high initial barriers and rapid liberalization. For many commodities, the direct impact of NAFTA has been modest because trade barriers were either relatively low before the agreement began or liberalization is only partially complete. Trade barriers are only one of many factors that influence trade.
- For many agricultural products, NAFTA has fostered two-way trade between the United States and Canada. U.S. beef exports to Canada were about 100 percent higher in 1996 because of NAFTA, while U.S. imports of beef from Canada were about 50 percent higher. Bilateral trade between the United States and Canada in wheat and wheat products and vegetable oils were 5 to 10 percent higher in 1996 than they would have been without the agreement.
- Agricultural commodities that were freely traded before NAFTA have not been directly affected by the agreement. The tariff on coffee imports to the United States was zero before NAFTA; therefore, the recent increase in U.S. coffee imports from Mexico cannot be linked to NAFTA. Likewise, trade in oats between the United States and Canada carried zero tariffs before the CFTA, so the recent increases in U.S. imports of oats from Canada cannot be directly attributed to trade liberalization.



- For U.S. imports of winter vegetables, only a small increase can be attributed directly to the NAFTA tariff changes. NAFTA tariff reductions on U.S. imports of winter tomatoes from Mexico have been very small, less than 1.5 percent on an ad valorem basis. The peso crisis in Mexico, technological shifts in tomato production, and unusual weather in Florida were far more important than the tariff reduction under NAFTA.
- Some products have not experienced significant trade liberalization under NAFTA because at this early stage the over-quota tariffs remain prohibitively high. Most of these tariffs will ultimately be eliminated. On the other hand, the

Mexican government has not enforced the over-quota tariffs in some areas, including corn and poultry, resulting in a rapid growth of U.S. exports. NAFTA can be viewed as indirectly responsible for this export growth.

- The level of total investment in the U.S. economy and the share going to agriculture increased under NAFTA. Investment in U.S. agriculture and rural areas was about 0.19 percent higher in 1996 than it would have been without NAFTA. Employment in U.S. agriculture and related industries was about 0.07 percent higher in 1996 than it would have been without NAFTA.

# The Effects of the North American Free Trade Agreement On Agriculture and the Rural Economy

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The North American Free Trade Agreement (NAFTA), implemented on January 1, 1994, liberalizes trade and investment rules among the United States, Mexico, and Canada. The United States pursued NAFTA as a means of securing its relationships with Mexico and Canada, promoting economic stability in both countries, and locking in policy reforms and trade gains achieved since the mid-1980's. NAFTA encompasses the Canada-U.S. Free Trade Agreement (CFTA), in place since January 1, 1989, and builds on the "Framework of Principles and Procedures for Consultations Regarding Trade and Investment Relations" between the United States and Mexico, initiated in 1987. The United States and Mexico began discussions on a free trade agreement in 1990, and Canada joined the discussions in 1991. Negotiations were completed and the Presidents of all three countries signed the Agreement in December 1992. The U.S. Congress approved the Agreement in November 1993 and NAFTA was signed into law on December 8, 1993. NAFTA came into effect on January 1, 1994.

The agricultural provisions of NAFTA addressed tariffs, nontariff barriers, safeguards, rules of origin, and sanitary and phytosanitary regulations. In general, the rules of the CFTA continue to apply to agricultural trade between the United States and Canada. Tariffs on most agricultural products traded between the United States and Canada will be eliminated by January 1, 1998, as provided in the original CFTA, but restrictions on certain products remain difficult to liberalize. All tariffs, quotas, and licenses that restrict agricultural trade between the United States and Mexico will be eliminated over the 15-year implementation period.

The implementing legislation for NAFTA mandated that the Secretary of Agriculture prepare a biennial report to Congress on the effects of the agreement on American producers of agricultural commodities and on rural communities in the United States. This report addresses both the Canadian and Mexican portions of the NAFTA agreement as it existed in 1996. Because the CFTA was subsumed under NAFTA, this analysis addresses the full scope of agricultural trade liberalization between the United States and Canada since the beginning of the CFTA, not just that which has occurred since NAFTA began in 1994. The congressional mandate specifically requires the following elements contained in this report:

- (A) an assessment of the effects of implementing the agreement on the various agricultural commodities affected by the agreement on a commodity-by-commodity basis;
- (B) an assessment of the effects of implementing the agreement on investments made in U.S. agriculture and on rural communities in the United States;
- (C) an assessment of the effects of implementing the agreement on employment in U.S. agriculture, including any gains or losses of jobs in businesses directly or indirectly related to U.S. agriculture.

## Measuring the Impact of NAFTA on U.S. Agriculture and Rural Areas

The initial years of NAFTA implementation have been characterized by significant, concurrent changes in the domestic agricultural policies of the United States, Canada, and Mexico and in the global trade policy environment for agriculture. The peso crisis and subsequent recession in Mexico seriously disrupted trade in 1995, overwhelming the effects of the early tariff reductions under NAFTA. Adverse weather and changing technology affected trade in several commodities in the North American market. An assessment of NAFTA must disentangle the effects of the changes in tariff and nontariff barriers under the agreement from the other forces that have influenced economic conditions and agricultural markets in North America.

Analysts in the Economic Research Service (ERS) used a dynamic computable general equilibrium (CGE) model to isolate the economic impacts of NAFTA on investment and employment in U.S. agriculture and rural areas and on agricultural trade among the NAFTA partners. First, the model was used to estimate the levels of investment, employment, and trade that would have occurred without NAFTA. This was done by using the Most Favored Nation (MFN) tariffs and nontariff measures that each of the three countries applied to other members of the World Trade Organization (WTO) in 1992. Then the MFN rules were replaced with the NAFTA provisions for 1996 and the impacts on investment and employment were calculated. The difference between the two outcomes represents the pure impact of the tariff and nontariff changes under NAFTA to date. This approach implies that the domestic agricultural policy reforms and multilateral trade reforms undertaken in each member country would have happened without NAFTA.

To evaluate the impact of NAFTA on trade for individual commodities, ERS analysts supplemented the CGE analysis with more detailed country and commodity models. These static equilibrium models were used to backcast two scenarios for 1994-96. Unlike the 1993 USDA study, *Impacts of the North American Free Trade Agreement on U.S. Agricultural Commodities*, which presented long-term trade forecasts based on assumptions about future levels of income growth and exchange rates, this study used actual trade, exchange rate, and income data through 1996. The goal of the analysis was to isolate the direct impacts of the tariff and nontariff trade policy changes under NAFTA from the other forces that have affected specific North American commodity markets in recent years.

The first scenario simulated the trade flows that would have occurred without NAFTA. As in the CGE analysis, the MFN tariffs and nontariff measures for each country were used to generate a base estimate of the trade that would have occurred without NAFTA. Where import li-

censes or quotas were replaced by tariff rate quotas under the Uruguay Round agreement (implemented at the beginning of 1995), analysts made knowledgeable judgments about the level of imports that might have occurred in the absence of NAFTA. The second scenario altered the trade rules for each member country following the terms of the NAFTA agreement. By comparing the difference in the two scenarios to the actual level of trade, an estimate was derived of the impact NAFTA would have had in the absence of the economic and weather disturbances of the past 2 years.

Although NAFTA is essentially three bi-national agreements (Canada-Mexico, United States-Mexico, and United States-Canada under the CFTA), analysis of NAFTA without assessing the impact of changes in Canada would have provided an incomplete picture of the effects of trade liberalization on the United States. Because the CFTA was subsumed under NAFTA at the beginning of 1994, the no-NAFTA scenario explicitly assumes no CFTA as well. Because U.S. bilateral trade liberalization has proceeded further with Canada than with Mexico for many commodities, a return to MFN treatment implies a larger shift in bilateral trade rules with Canada than with Mexico. Consequently, the results for Canada discussed below may seem larger than one would expect intuitively, because they are capturing the full scope of liberalization between the United States and Canada since 1989, not just the liberalization that has occurred since 1994.

## Summary of Findings

The impacts of NAFTA on U.S. agriculture and rural areas have been positive overall, but so far generally small. Two factors account for this small impact. First, the agricultural provisions alone probably will not have major impacts on investment and employment, even in the long run, because NAFTA trade is a small share of U.S. agricultural output and trade. Secondly, the agricultural provisions of NAFTA have had only slight impacts on investment and employment in the rural economy, because it is too early in the implementation process for the full, economy-wide impacts of agricultural trade liberalization to be felt. Three years into NAFTA, investment in U.S. agriculture and rural areas has increased on the order of 0.19 percent, compared with what would have happened without the agreement. Employment in agriculture and rural areas has increased slightly due to NAFTA, on the order of 0.07 percent.

NAFTA's effect on U.S. agricultural trade is somewhat larger than the economy-wide effects. U.S. agricultural exports to Mexico and Canada are about 3 percent and 7 percent higher, respectively, than they would have been without the agreement. Similarly, U.S. agricultural imports from Mexico and Canada are about 3 percent and 5 percent higher, respectively, than they would have been without NAFTA. The products that have experienced the biggest trade changes due to NAFTA are those having the highest tariffs and nontariff barriers before the agreement and facing significant reductions in the first few years. For U.S. exports to Mexico, the largest gains attributable to NAFTA are for live cattle, beef, pork, dairy, sorghum, and vegetable oils. The biggest gains from NAFTA for U.S. ex-

ports to Canada are for processed wheat products, vegetable oils, and beef. The largest increases in U.S. imports attributable to NAFTA are for peanuts, live cattle, and beef. Several commodities experienced large trade shifts in the early years of NAFTA that cannot be attributed to the agreement. The peso collapse and recession in Mexico, adverse weather conditions, domestic policy changes, and technological innovations, rather than NAFTA, are largely responsible for the dramatic trade shifts that have occurred in North American agricultural markets in recent years.

## Review of Other Studies

Dozens of studies of the impact of NAFTA on the U.S. economy have been conducted by academic and government researchers in the last few years.<sup>1</sup> While none of them provides as detailed and comprehensive analysis of NAFTA's impact on U.S. agriculture and rural areas as developed in this report, most are generally consistent with the conclusions reached here. Three recent prestigious studies are reviewed below and compared with the analysis conducted by ERS.

Kouparitsas (Chicago Federal Reserve, 1996) examined the impact of full NAFTA trade liberalization on the general economies of the United States, Canada, and Mexico using dynamic macroeconomic analysis. He found that real income growth in each of the three countries is higher with NAFTA; for the United States and Canada the gains are small, less than 0.5 percent. The income gains are larger for Mexico, almost 3.5 percent, because it is starting from a much lower base. Employment and real wages rise in all three countries, again only slightly in the United States and Canada, and more strongly in Mexico. Trade increases substantially, with U.S. and Canadian exports to Mexico rising about 19 percent, and Mexican exports to the United States and Canada rising about 18 percent.

De Janvry (1996) studied the impact of NAFTA on U.S. agricultural trade with Mexico using an econometric technique to control for the macroeconomic shocks due to the peso crisis. He estimated that U.S. agricultural exports to Mexico would have increased 10 percent in 1994 without NAFTA while in fact they increased 18 percent with the agreement. In 1995, due to the peso crisis and recession in Mexico, U.S. exports would have declined 35 percent without NAFTA while in reality they fell only 14 percent with the agreement. De Janvry predicted that the United States would increase its exports of products like grains, oilseeds, and meats that are land and capital intensive, while Mexico would increase its exports of labor intensive vegetables, fruits, and nuts.

Hinojosa-Ojeda and others (UCLA, 1996) studied the impact of NAFTA on the United States and Mexico. They found that the overall pattern of U.S.-Mexican trade and investment began to change radically nearly a decade before NAFTA when Mexico unilaterally liberalized its trade and investment policies. This unilateral liberalization ushered in a period of dramatic growth in two-way trade of inter-

<sup>1</sup> A list of references appears at the end of this report.

mediate goods that has not changed significantly since the implementation of NAFTA. Their results show that the lowering of tariffs through NAFTA has not had a significant impact on the rate of growth or the composition of trade between the United States and Mexico. They contend that many earlier studies of NAFTA significantly overestimated U.S. job losses due to imports from Mexico, and to a lesser degree, the number of jobs supported by exports. They argue that imports do not always replace domestic production, that a significant part of U.S. exports to Mexico are intermediate goods in production for re-export to the United States, and that much of the trade from Mexico has replaced imports from third countries. They conclude that the net employment impacts of NAFTA for the United States have been positive but small.

In general, these studies are consistent with ERS analysis, although direct comparisons are difficult to make because each looked at different aspects of NAFTA's effect on the United States. Kouparitsas' estimates of positive but small gains in U.S. income and employment are consistent with

our agricultural investment and employment estimates. Kouparitasas and Hinojosa-Ojeda both found that employment growth is positive in the United States and Mexico, with small gains in the United States and larger gains in Mexico. These results support our estimate that NAFTA has increased employment in U.S. agriculture and agriculturally related industries by small amounts. De Janvry looked more closely at the agricultural sector. He estimated larger trade gains for total agriculture than found in this ERS analysis, with U.S. exports to Mexico higher by 8 percent in 1994 and by 21 percent in 1995 than without NAFTA. Hinojosa-Ojeda, on the other hand, found virtually no change in the level or composition of U.S.-Mexican trade due to NAFTA. De Janvry credits NAFTA with some of the trade gains that this ERS analysis attributes to Mexico's domestic agricultural reforms, while Hinojosa-Ojeda attributes all of the trade change to unilateral reform in Mexico predating NAFTA. De Janvry's estimates of higher U.S. exports of meats, grains, and oilseeds and higher Mexican exports of fruits and vegetables due to NAFTA are consistent with ours.

# Impact of NAFTA on Investment in U.S. Agriculture and Rural Areas

Data are not collected on rural investment, and the available data on agricultural investment are not current enough to reveal the changes that have occurred in the sector since NAFTA began. Although actual investment changes cannot yet be measured directly, NAFTA is expected to raise investment in the long run in those export-oriented industries for which the United States has a comparative advantage. The overall export success of the agriculture- and rural-oriented manufacturing sectors during previous rounds of trade liberalization suggests that the impact of NAFTA on rural investment will probably be positive but small. Competition with low-wage Mexican operations will likely put pressure on some U.S. plants, but plants operating in rural areas may have an advantage over urban operations. The wage structure in rural manufacturing is lower than in urban areas, but the skill levels and productivity growth rates are similar, implying that many firms in rural areas will continue to compete effectively.

To the extent that higher exports stimulate output in rural areas, opportunities may develop for increased investment, especially if the growth is sustained. As increases in farm and farm-related industries strain available capacity, it is likely that plant, equipment, and material purchases will rise. Conversely, higher imports could result in excess capacity in some sectors of the rural economy. If alternative markets are not developed, this could result in disinvestment in those industries over time.

It should be noted that the mining industry plays a major role in the rural economy of the United States. However, the impact of NAFTA on the mining industry will be minimal. The United States already permits duty-free imports of oil and gas, the dominant sector of the U.S. mining industry. Many other mining operations are subject to international pressure from lower cost mining operations in other countries, but not especially from potential new Canadian and Mexican competitors.

## Analysis of Investment in U.S. Agriculture and Rural Areas

Many factors besides NAFTA have influenced economies of the United States, Canada, and Mexico since 1994. ERS used a dynamic computable general equilibrium model<sup>2</sup> to isolate the impact of NAFTA on investment in agriculture and agriculturally related industries. The model results capture the investment changes arising directly from NAFTA rather than those outcomes expected from the complex interaction of the global economy. The NAFTA tariff reductions to date are compared with the trade rules that would have applied without the agreement. The model simulation begins in 1992, before the formal conclusion of the agreement, and traces the adjustments that occur in the three economies

<sup>2</sup> The global model includes 7 countries or regions and 12 commodities or sectors. The base-year data used in the study is 1992, drawn from the Global Trade Analysis Project (GTAP) database. The model results for consumption, production, investment, and trade are derived from consumer and producer optimization for each country or region.

through 1996. Investment is time-sensitive, because investment in new plants and equipment generally requires either a historic period of profitability and/or expectations of continued profitability. Time is also required for investment planning, borrowing, and construction or installation of the capital goods. The dynamic framework captures the adjustments that occur over time. Two types of adjustments occur. First, the total level of investment in the economy increases along with income growth. Then, the distribution of investment among different sectors of the economy adjusts as capital moves into more competitive businesses.

Agricultural investment is a small portion of total investment within the NAFTA partners. In 1992, agricultural investment accounted for 5.86 percent of total investment in the United States, 6.39 percent in Canada, and 11.49 percent in Mexico. In the modeling framework, the three economies start to adjust to the expected tariff changes in 1993, the year after the agreement was signed but before implementation began. In reality, the adjustment process began much earlier in Mexico. The unilateral policy reforms adopted by Mexico in the mid-1980's improved the business climate in Mexico and fostered private investment. Mexican and foreign firms wanted to develop the productive capacity to take advantage of increased domestic consumption and trade between Mexico and the United States. Investment in Mexico, the NAFTA economy undergoing the greatest transition, shows the greatest change. By 1996, the share of total investment going to agriculture increases in the three countries, compared with what would have happened without NAFTA. The change is very small for the United States, Canada, and Mexico.

Both the level of total investment and the share of total investment going to agriculture rise, so the quantity of investment in agriculture rises as well (table 1). For the United States, the quantity of investment in agriculture and related sectors increases 0.19 percent by 1996 compared with what would have occurred without NAFTA. Investment growth in the United States is highest in processed food products, but crop and livestock production gain as well. In Canada, investment in the agricultural sector increases more than in the United States, 0.67 percent, with large gains in the livestock and beverages sectors. For Mexico, the overall increase in investment in agriculture and related sectors is somewhat higher at 0.91 percent, with the largest gains in the crops sector, primarily nongrain crops.

The increased capital investment is not necessarily financed by each country's own savings. Because financial capital is mobile, a U.S. company can invest directly in a Mexican production sector or indirectly through a financial arrangement. The model, however, can only capture each country's total foreign borrowing or lending. It cannot distinguish between sources of foreign capital, or between direct and indirect investment. Analysis of changes in each country's total net foreign capital inflows shows that U.S. and Canadian investments in foreign countries rise. These results are consistent with the strong record of U.S. food processing companies operating in Mexico and Canada.

Table 1--Changes in investment due to NAFTA

	United States	Canada	Mexico
		Percent	
Crops	0.36	-0.06	1.55
Livestock	0.14	1.04	0.60
Processed food products	0.19	0.68	0.67
Beverages and tobacco	0.06	1.10	1.17
Total agric. and related sectors	0.19	0.67	0.91

### Box 1—U.S. Investments in Canada and Mexico

U.S. food processing firms have owned food processing affiliates in Canada and Mexico for many years. Over two-thirds of these affiliates are majority-owned by their U.S. parents. Sales from U.S. affiliates located in Canada rose from \$5.5 billion in 1987 to \$11.3 billion in 1994 (the latest year data are available). ERS estimates that sales from U.S. affiliates continued to increase to \$12 billion in 1995 and to \$12.5 billion in 1996. Affiliates of two firms, Kraft Foods and PepsiCo, had sales of nearly \$2 billion each. Other firms ranked in order of their affiliate sales in Canada are: Coca-Cola, Nabisco, H.J. Heinz, Campbell Soup, Ralston Purina, ConAgra, and Cargill.

Sales from U.S.-owned affiliates located in Mexico grew from \$1.6 billion in 1987 to \$6.1 billion in 1993. Affiliate sales fell slightly to \$6.0 billion in 1994 and possibly declined further in 1995 due to the peso devaluation and slow income growth. Indications are that affiliate sales recovered in 1996 to over \$6 billion. U.S. parent companies with the largest food processing affiliates in Mexico are: PepsiCo, Ralston Purina, CPC International, Kraft Foods, Coca-Cola, Campbell Soup, and Pilgrim's Pride. Other U.S. firms with substantial sales from their Mexican affiliates include: Anheuser-Busch, Archer Daniels Midland, Cargill, Hershey Foods, H.J. Heinz, Hormel Foods, Hunt-Wesson, Kellogg, McCormick, Quaker Oats, Nabisco, Simplot, Stokeley, Tyson Foods, and Universal Foods.

*Destination of Affiliate Sales.* With long common borders that facilitate truck and rail transport, one would expect U.S. affiliates in Canada and Mexico to ship a higher share of their sales to the United States than would be the case for all U.S. affiliates worldwide. However, data only partially support this assumption. Worldwide, U.S. affiliates export an average of 2.2 percent of their sales to the United States. In Canada, a relatively high-wage country, U.S. affiliates exported an average of 9 percent of their sales to the United States, with 90 percent of their sales remaining in the host country. In contrast, U.S. affiliates in Mexico, a relatively low-wage country, exported an average of 2.4 percent of their sales to the United States, which is nearly identical to the worldwide average for all U.S. affiliates. Thus to date, most U.S. firms have not established food processing affiliates in Mexico as export platforms to the United States.

U.S. exports to its affiliates and imports from its affiliates in Canada and Mexico are roughly equal. In 1994, the United States exported \$532 million to its affiliates in Canada, which was slightly less than the \$668 million imported from them. In comparison, the United States had a positive trade balance with its affiliates in Mexico. The United States exported \$128 million to its affiliates, while importing \$111 million from them. The vast majority (80 percent) of U.S. trade with its affiliates is between the affiliates and their U.S. parents.

### Box 2—Canadian and Mexican Investments in the United States

Canadian direct investments in U.S. food processing is smaller than U.S. investments in Canada, but is still substantial. Sales from Canadian-owned affiliates in the United States grew from \$3.2 billion in 1987 to \$5.6 billion in 1989. Since 1989, sales from Canadian affiliates in the United States have slowly declined, falling to \$4.6 billion in 1994 (latest available data). The Seagram/Bronfman family is the largest Canadian investor in the U.S. food processing industry. Their investments include wineries in California, canola processing in Idaho, and Tropicana orange juice in Florida. McCain Foods, Canada's largest potato processor, is expanding its investments in U.S. affiliates. George Weston, John Labatt, and Cott Corp. also have food processing affiliates in the United States.

Until recently, Mexican direct investment in the U.S. food processing industry was very small. While aggregate numbers on Mexican-owned U.S. affiliates are not available, several Mexican food processors have rapidly expanded their U.S. operations in the last few years. Gruma S.A. de C.V., Mexico's largest corn flour and tortilla manufacturer, is the largest corn flour producer in the United States. Gruma also owns several tortilla plants in the United States and is rapidly expanding production. In 1996, Gruma and ADM formed two joint ventures. The first venture combines ADM's U.S. corn milling business with Gruma. Gruma will operate the plants and control 80 percent of the venture. Gruma's sales from its U.S. operations (before the ADM joint venture) exceeded \$500 million in 1995. Grupo Industrial Bimbo, Mexico's largest baking company, acquired Pacific Pride Bakeries in California, and has purchased several tortilla manufacturing plants in the United States through its U.S. subsidiary, Bimar Foods. Minsa, Mexico's second largest corn miller, started operating in the United States by acquiring a corn milling plant in Iowa in 1994. Alta Verde Industries, a Texas cattle feedlot and slaughter operation, is owned by a Mexican parent.

# Impact of NAFTA on Employment in U.S. Agriculture and Agriculturally Related Industries

The impact of NAFTA on employment in U.S. agriculture and agriculturally related industries cannot be measured precisely because NAFTA is only one of the many political, social, and economic forces affecting the U.S. labor market. Bureau of Labor Statistics (BLS) data from household and establishment surveys estimate total employment by sector. These estimates provide an indication of employment changes in agriculture and related industries.<sup>3</sup> ERS researchers used two different analytical approaches to evaluate the impact of NAFTA on the U.S. labor market. First, employment trends in agriculture and rural manufacturing industries since 1993 were examined through participation in the NAFTA-Transitional Adjustment Assistance (TAA) Program. Then, a computable general equilibrium model was used to isolate the impact of NAFTA on employment in agriculture and agriculturally related industries. Both analytical methods show that the agricultural components of NAFTA have had a very small impact on employment in U.S. agriculture and agriculturally related industries. The method that assesses changes in job creation and loss show that the net effect has been small and positive.

## Employment in Agriculture and Rural Manufacturing

Food processing, textiles, apparel, lumber and wood, and industrial machinery are the largest manufacturing employers in rural counties, together accounting for 46 percent of rural manufacturing jobs. Four of the five are disproportionately rural in the sense that more than 30 percent of each industry's jobs are in nonmetropolitan counties compared with less than 24 percent for manufacturing as a whole. According to BLS estimates, the U.S. economy as a whole has added 10.3 million jobs since 1993. Employment in agriculture and the five rural-oriented manufacturing industries has increased, with growth in farm employment offsetting a very slight decline in rural manufacturing jobs. The decline in rural manufacturing employment has occurred in the midst of strong job growth in the overall U.S. economy.

## Transitional Adjustment Assistance Program

The NAFTA-TAA Program provides an overstated and incomplete indicator of the impact NAFTA has had on employment. Congress created the NAFTA-TAA Program through the Department of Labor (DOL) to help workers whose jobs were affected by trade flows from NAFTA countries. Congress designed this program for workers losing their jobs between December 8, 1993 and February 23, 1996 as a direct or indirect result of such trade. Groups of

three or more workers, labor unions, community organizations, or employers could file applications. Both the State and Federal Departments of Labor must approve these applications. NAFTA-TAA petitions were certified for 23,037 workers in 1994, 34,100 workers in 1995, and 32,120 workers through October 19, 1996. Of these certified workers, a total of 4,034 worked in farming or food-processing. Table 2 summarizes the TAA data for these farm and food-processing workers.

The TAA data provide one indicator of the employment impacts of NAFTA, but they do not provide a complete assessment. TAA-certified workers are self-identified and directly observable. Certification does not require workers to be unemployed, thus overstating the impact. Further, because the program was not intended to identify workers who were positively affected by NAFTA, the TAA statistics present a pessimistic picture. The early 1990's were a time of manufacturing employment retrenchment in urban areas and slight growth in rural areas, so there may be an urban bias in the TAA program.

Some TAA-certified workers may have been employed in marginal operations that were not directly affected by NAFTA trade. For example, 970 workers in the malt beverage industries in New York and Wisconsin were TAA-certified because of increased imports, but neither Canada nor Mexico was specified as the source of the imports. There was only a small change in net trade in malt beverages between the United States and the NAFTA partners, too little to account for 970 jobs. Perhaps NAFTA-related economic conditions were but one of a set of adverse market conditions that led to the loss of those jobs.

## Impact of NAFTA on Employment

The dynamic computable general equilibrium model discussed in the investment section was also used to simulate the effect of NAFTA implementation on employment. In the model, labor is categorized as either rural or urban, with rural labor defined as employment in agriculture and agriculturally related sectors and all other labor considered urban. The analysis assumed full employment of labor, land, and capital, and no change in the level of total employment. Because labor can move freely across sectors of the economy, employment would be expected to fall in those sectors where output declines and to grow in those sectors where output expands.

In the scenario, which adjusts the economies to reflect the policy changes directly stipulated under NAFTA, U.S. rural employment in 1996 is estimated to be about 0.07 percent higher with NAFTA than it would have been without the agreement (table 3). The greatest rise would be expected in non-grain crops, livestock and meat-related industries, and "other food products." Employment gains would be lower

<sup>3</sup> BLS estimates of nonfarm and farm employment are not strictly comparable for statistical analysis because they are drawn from separate survey instruments. ERS analysts combine information from the two surveys in order to take advantage of the best sector-level employment estimates available.

in both grain crops, and beverages and tobacco. These results imply that NAFTA to date has stimulated employ-

ment growth in sectors providing high-value products for export to Canada and Mexico.

Table 2--Farm and food processing TAA petitions accepted, 1994-96

State	1994		1995		1996	
	Industry	Workers	Industry	Workers	Industry	Workers
California	Crops	43	Crops	170	Crops	600
California	Flavoring extracts and syrups	30	Flour and other grain mill products	325		
Florida	Crops	1,334				
New Jersey			Prepared foods, nec	100		
New York			Malt beverages	900	Livestock	2
North Carolina					Livestock	8
Ohio			Dried fruit, vegetables, and soup mixes	98		
Oregon					Crops	3
Pennsylvania			Crops	40	Candy and other confectionery products	12
Texas	Prepared fresh or frozen fish, and seafood	21	Canned fruits, vegetables, preserves, jams and jellies	13		
Texas			Candy and other confectionery products	16		
Washington	Sausages and other prepared meats	45	Prepared foods, nec	13		
Washington	Potato chips, corn chips, and snacks	20				
Washington	Livestock	25				
Wisconsin			Malt beverages	70		

Table 3--Changes in labor demand due to NAFTA

	United States	Canada	Mexico
		<i>Percent</i>	
Grain crops	0.062	0.193	-0.138
Non-grain crops	0.213	-0.442	0.426
Livestock	0.058	0.710	-0.103
Meat products	0.069	0.670	-0.203
Other food products	0.071	0.361	-0.136
Dairy products	0.011	0.332	-0.190
Beverages and tobacco	-0.006	0.605	0.097
Aggregate rural labor	0.070	0.360	0.090



# Commodity-by-Commodity Assessment of NAFTA

NAFTA has had a positive effect on U.S. commodity markets, reinforcing the trend toward greater integration of markets in North America. The competitiveness of U.S. agriculture has been enhanced by reduced border protection, and American consumers have benefited from access to wider sources of supply. Assessing the impact of NAFTA after only the first 3 years is complicated by the fact that the agreement is only one of many factors that have affected North American agricultural markets. Most tariffs and other barriers to agricultural trade among the United States, Canada, and Mexico were low before NAFTA, and many tariffs have only been partially reduced. It is not likely that such small trade policy changes could generate the magnitude of trade flows that have occurred in some commodities. The Mexican peso crisis was the primary cause of the year-to-year variability in North American agricultural trade since the agreement began, but weather-related production shortfalls, domestic agricultural policy changes, income growth, and changing technology have all contributed to the growth in trade. As the markets of North America become more integrated, regional production shortfalls due to abnormal weather will increasingly be mitigated by trade flows.

U.S. agricultural exports to NAFTA increased from \$8.9 billion in 1993 to \$11.6 billion in 1996 (table 4). After increasing 13 percent in 1994, U.S. agricultural exports to the NAFTA partners dropped more than 7 percent in 1995 in the wake of the Mexican peso crisis. In 1996, U.S. exports to NAFTA rebounded 25 percent on the strength of renewed economic growth in Mexico and high grain prices. ERS analysis shows that a little more than 20 percent of the increase in U.S. exports between 1993 and 1996 can be attributed to trade liberalization under the provisions of NAFTA. During the same period, U.S. agricultural imports from the NAFTA partners grew from \$7.3 billion to \$10.5 billion. ERS analysis shows that less than 20 percent of the increase in U.S. imports since 1993 can be attributed to trade liberalization under NAFTA.

The collapse of the peso in December 1994 and the subsequent recession reduced Mexican consumers' purchasing power and increased the short-term price competitiveness of Mexican exports. Consequently, U.S. agricultural exports to Mexico plunged 22 percent in 1995, offsetting the gains from 1994, while Mexican exports to the United States grew dramatically (table 5). The Mexican economy began a strong recovery in 1996, and trade returned to more normal levels. U.S. agricultural exports to Mexico rebounded 55 percent, more than making up the ground lost in 1995, while U.S. imports from Mexico fell slightly. ERS analysis shows that U.S. agricultural exports to Mexico were about 3 percent higher in 1996 than they would have been without the reduction in trade barriers under NAFTA. At the same time, U.S. agricultural imports from Mexico were about 3.3 percent higher in 1996 than they would have been without the agreement.

The growth in U.S. agricultural trade with Canada has been slower but less volatile than trade with Mexico be-

cause, as a mature market, Canadian consumer demand is relatively stable (table 6). Despite the overall stability of U.S.-Canadian agricultural trade, certain individual commodity markets have experienced wide year-to-year fluctuations that were largely weather-related. ERS analysis indicates that U.S. agricultural imports from Canada were about 5 percent higher than they would have been without NAFTA. Similarly, U.S. agricultural exports to Canada were about 7 percent higher in 1996 than they would have been without the agreement.

The United States, Mexico, and Canada have all adopted fundamental domestic agricultural policy reforms in recent years. Trade liberalization through NAFTA and domestic policy reforms in the member countries are part of a broader global trend toward more market-oriented agricultural policies. Domestic policy reforms have affected some North American agricultural markets in ways that are difficult to separate from the direct effects of NAFTA trade reforms, because the two are compatible and mutually reinforcing. Trade liberalization through NAFTA expands agricultural producers' ability to compete in a larger marketplace, while more market-oriented domestic policies increase producers' reliance on trade.

Table 7 summarizes the commodity-by-commodity analysis of the impacts of NAFTA. The largest export gains for the United States are in cattle, beef, pork, feed grains, wheat and wheat products, vegetable oils, pears, and apples. The largest export gains for Canada are for wheat and wheat products, vegetable oils, and beef, which gains at the expense of live cattle. The largest export gains for Mexico are for fresh and processed tomatoes, other vegetables, and peanuts. The large increase in U.S. imports of peanuts from Mexico is from a very small base, and future growth will be constrained by the tariff-rate quota (TRQ) until the over-quota tariff falls enough to make Mexican peanuts competitive in the United States.

## Grains, Oilseeds, and Products

### Corn

#### *Policy Changes Resulting from NAFTA*

*United States:* Before NAFTA, the United States maintained tariffs of \$2.00 per metric ton on dent corn and \$9.80 per metric ton on non-seed corn other than dent. Under NAFTA, the United States immediately eliminated tariffs on corn imports from Mexico and continued the 10-year elimination of tariffs on imports of corn from Canada as originally negotiated under the CFTA. U.S. tariffs on Canadian corn will be eliminated on January 1, 1998.

*Mexico:* Under NAFTA, Mexico immediately eliminated its import license requirement and established duty-free TRQ's for corn imported from the United States and Canada. The initial TRQ's were set at 2.5 million tons for the

Table 4--U.S. Agricultural Trade with NAFTA Partners (Mexico and Canada), 1986, 1990, 1993, 1994, 1995 AND 1996. \*

Commodity	1986 1990 1993 1994 1995 1996						Change from year to year **						Share of World						
	1986	1990	1993	1994	1995	1996	86-93	90-93	93-94	94-95	95-96	93-96	1986	1990	1993	1994	1995	1996	
	\$ Million						Percent						Percent						
Agricultural exports to world	26,222	39,363	42,608	45,703	55,814	60,431	7.2	2.2	7.3	22.1	8.3	12.4	100.0	100.0	100.0	100.0	100.0	100.0	
Exports to NAFTA																			
Agriculture -- Total	2,622	6,751	8,877	10,017	9,258	11,591	19.0	9.5	12.9	-7.6	25.2	9.3	10.0	17.1	20.8	21.9	16.6	19.2	
Animals and animal products	614	1,464	2,116	2,385	1,856	2,180	19.3	13.1	12.7	-22.2	17.5	1.0	13.5	21.8	26.7	26.1	17.0	19.4	
Grains and feeds	213	962	1,715	2,135	2,037	3,198	34.7	21.3	24.5	-4.6	57.0	23.1	4.6	10.6	12.3	15.8	11.0	15.3	
Fruits & preparations, ex. juice	255	747	839	871	794	812	18.5	3.9	3.8	-8.8	2.2	-1.1	22.1	37.2	35.9	33.5	29.9	30.5	
Fruit juices, including frozen	51	135	160	175	202	213	17.8	5.8	9.7	15.0	5.6	10.0	34.0	38.4	37.2	35.6	34.8	36.7	
Nuts and preparations	80	125	171	169	179	198	11.4	11.1	-1.2	5.5	10.9	5.0	10.7	12.8	14.5	13.2	12.7	12.2	
Vegetables and preparations	332	1,065	1,412	1,607	1,460	1,498	23.0	9.9	13.8	-9.1	2.6	2.0	30.6	46.2	43.1	41.5	37.5	38.7	
Oilseeds and products	583	616	1,024	1,179	1,159	1,557	8.4	18.5	15.1	0.8	31.0	15.0	9.0	10.8	14.1	16.4	13.3	14.4	
Other	493	1,637	1,437	1,496	1,541	1,934	16.5	-4.3	4.1	3.0	25.5	10.4	na	na	na	na	na	na	
Forestry ***	na	1,217	1,597	1,559	1,504	1,508	--	9.3	-1.8	-3.5	0.3	-1.7	na	14.6	15.3	22.9	23.1	20.6	
Total (Agriculture and Forestry)	2,622	7,968	10,461	11,576	10,761	13,099	21.9	9.5	10.7	-7.0	21.7	7.8	na	na	na	na	na	na	
Total Exports (Agric. and Non-Agric.)	67,449	112,000	142,025	165,282	173,518	190,429	11.2	8.2	16.4	5.0	9.7	10.3	29.7	28.5	30.5	32.2	29.7	30.5	
Agricultural imports from world	21,453	22,770	24,981	26,819	29,993	33,552	2.2	3.1	7.4	11.8	11.9	10.3	100.0	100.0	100.0	100.0	100.0	100.0	
Imports from NAFTA																			
Agriculture -- Total	4,096	5,763	7,330	8,087	9,339	10,550	8.7	8.3	10.3	15.5	13.0	12.9	19.1	25.3	29.3	30.2	31.1	31.4	
Bananas and plantains	17	31	94	59	47	44	27.6	45.2	-37.8	-20.0	-5.8	-22.3	9.9	10.8	12.0	10.7	12.7	13.4	
Coffee, including products	660	370	281	385	660	640	-11.5	-8.8	37.0	71.5	-3.0	31.6	14.3	19.3	18.4	15.5	20.2	23.0	
Animals and animal products	1,270	1,938	2,462	2,317	2,724	2,776	9.9	8.3	-5.9	17.6	1.9	4.1	28.0	34.5	41.8	40.4	45.5	45.8	
Cattle - live	441	978	1,341	1,151	1,409	1,121	17.2	11.1	-14.2	22.4	-20.4	-5.8	99.8	100.0	100.0	100.0	99.7	100.0	
Grains, products, & feeds	305	566	1,005	1,361	1,398	1,677	18.6	21.1	35.4	2.7	20.0	18.6	44.1	47.6	55.5	58.2	59.2	61.7	
Fruits & preparations	197	305	389	455	582	616	10.2	8.4	17.1	27.8	5.9	16.6	22.5	24.8	28.0	30.5	35.7	32.1	
Fruit juices, incl frozen	44	105	42	66	94	88	-0.9	-26.5	59.5	41.3	-6.3	28.3	6.1	10.6	6.4	10.1	14.9	9.6	
Vegetables & preparations	780	1,214	1,362	1,462	1,721	2,061	8.3	3.9	7.4	17.7	19.7	14.8	48.4	53.6	55.6	53.5	55.5	59.4	
Tomatoes	329	374	310	326	423	618	-0.8	-6.0	4.9	30.0	45.9	25.8	98.3	99.0	95.4	94.7	94.0	91.9	
Sugar and related products	165	139	206	262	241	354	3.2	14.0	26.7	-8.0	47.4	19.7	16.7	11.9	19.4	23.2	19.2	18.8	
Beverages, ex fruit juices	276	329	377	405	448	593	4.6	4.7	7.3	10.7	32.3	16.3	14.6	17.3	18.8	18.9	18.9	20.6	
Oilseeds and products	93	286	445	669	647	831	25.1	15.8	50.6	-3.4	28.4	23.2	15.3	30.1	37.3	42.8	35.6	38.2	
Cotton	2	0	0	0	2	16	-68.0	-80.2	49.5	%	588.2	%	87.6	14.7	0.1	0.0	22.3	5.7	
Seeds - field & garden	47	63	77	99	96	94	7.1	7.0	29.7	-3.4	-2.6	6.9	39.4	37.6	34.8	39.2	37.1	30.2	
Cut flowers	10	16	16	18	26	30	7.3	-0.8	16.6	40.5	15.7	23.8	4.0	5.1	4.2	4.5	5.2	5.2	
Nursery stock, bulbs, etc.	31	79	105	112	136	155	18.9	9.7	6.7	21.5	14.4	14.0	25.3	36.8	38.6	38.2	39.1	40.9	
Other	200	321	469	416	517	574	13.0	13.6	-11.4	24.4	11.0	6.9	na	na	na	na	na	na	
Forestry ***	na	3,708	6,540	7,771	7,400	9,025	--	20.8	18.8	-4.8	22.0	11.3	na	72.1	77.3	77.4	75.2	78.1	
Total (Agriculture and Forestry)	4,096	9,471	13,869	15,658	16,738	19,575	19.0	13.6	14.3	5.6	16.9	12.2	na	na	na	na	na	na	
Total Imports (Agric. and Non-Agric.)	83,451	121,600	151,133	177,699	207,032	229,469	8.9	7.5	17.7	16.4	10.8	14.9	22.9	24.6	26.0	26.8	27.8	29.0	
Trade balance																			
Agriculture with world	4,769	16,593	17,627	18,885	25,822	26,880	na	na	na	na	na	na	na	na	na	na	na	na	
Agriculture with NAFTA	-1,474	988	1,545	1,930	-81	1,041	na	na	na	na	na	na	na	na	na	na	na	na	
Forestry with NAFTA	na	-2,491	-4,953	-6,212	-5,896	-7,517	na	na	na	na	na	na	na	na	na	na	na	na	
Total (Agric. & Forestry) with NAFTA	-1,474	-1,503	-3,408	-4,282	-5,977	-6,476	na	na	na	na	na	na	na	na	na	na	na	na	
Total (Agric. & Non-Agric.) with NAFTA	-16,001	-9,600	-9,108	-12,617	-33,514	-39,040	na	na	na	na	na	na	na	na	na	na	na	na	

na or -- = not available or does not apply. \* Data for U.S. exports to Canada from 1990 forward is from Canadian import data. \*\* Compound growth rate. \*\*\*Data from FAS BICO reports.

% indicates a large number because of a small base.

Table 5--U.S. Agricultural Trade with Mexico, 1986, 1990, 1993, 1994, 1995 and 1996. \*

Commodity	1986 1990 1993 1994 1995 1996						Change from year to year **						Share of World						
	\$ Million						Percent						Percent						
	1986	1990	1993	1994	1995	1996	86-93	90-93	93-94	94-95	95-96	93-96	1986	1990	1993	1994	1995	1996	
Agricultural exports to world	26,222	39,363	42,608	45,703	55,814	60,431	7.2	2.7	7.3	22.1	8.3	12.4	100.0	100.0	100.0	100.0	100.0	100.0	
Exports to Mexico																			
Agriculture -- Total	1,080	2,553	3,603	4,513	3,519	5,446	18.8	12.2	25.3	-22.0	54.7	14.8	4.1	6.5	8.5	9.9	6.3	9.0	
Animals and animal products	319	662	1,173	1,359	822	1,091	20.4	21.0	15.8	-39.5	32.7	-2.4	7.0	9.9	14.8	14.9	7.5	9.7	
Grains and feeds	212	961	885	1,226	1,050	2,069	22.6	-2.7	38.6	-13.5	95.1	32.7	2.5	6.7	6.3	9.1	5.7	9.9	
Fruits & preparations, ex. juice	6	45	111	185	85	95	53.2	34.9	66.6	-53.7	11.3	-5.0	0.5	2.2	4.7	7.1	3.2	3.6	
Fruit juices, including frozen	0	2	5	11	5	7	70.8	32.1	97.9	-53.6	39.1	8.5	0.1	0.7	1.2	2.1	0.8	1.2	
Nuts and preparations	12	17	37	44	33	45	17.5	30.4	18.0	-23.8	34.6	6.6	1.6	1.7	3.1	3.4	2.4	2.8	
Vegetables and preparations	88	190	184	263	147	250	11.2	-0.9	42.4	-43.9	69.5	10.6	8.1	8.2	5.6	6.8	3.8	6.4	
Oilseeds and products	373	327	655	851	832	1,098	8.4	26.1	29.8	-2.2	32.0	18.8	5.8	5.7	9.0	11.8	9.3	10.2	
Other	70	350	552	576	534	791	34.3	16.4	4.3	-7.3	48.2	12.7	na	na	na	na	na	na	
Forestry ***	na	270	474	397	235	249	-	20.6	-16.3	-40.7	5.7	-19.3	na	4.2	6.5	5.6	3.2	3.4	
Total (Agriculture and Forestry)	1,080	2,823	4,077	4,910	3,755	5,695	20.9	13.0	20.4	-23.5	51.7	11.8	na	na	na	na	na	na	
Total Exports (Agric. & Non-Agric.)	11,937	28,300	41,581	50,843	46,292	56,761	19.5	13.7	22.3	-9.0	22.6	10.9	5.3	7.2	8.9	9.9	7.9	9.1	
Agricultural imports from world	21,453	22,770	24,981	26,818	29,993	33,552	2.2	3.1	7.4	11.8	11.9	10.3	100.0	100.0	100.0	100.0	100.0	100.0	
Imports from Mexico																			
Agriculture -- Total	2,080	2,611	2,709	2,855	3,780	3,763	3.8	1.2	5.4	32.4	-0.4	11.6	9.7	11.5	10.8	10.6	12.6	11.2	
Bananas and plantains	17	31	94	59	47	44	27.7	45.2	-37.9	-19.9	-5.8	-22.3	1.3	7.7	7.0	6.5	8.4	8.4	
Coffee, including products	603	338	251	333	592	570	-11.8	-9.4	32.5	77.9	-3.7	31.4	1.0	17.6	16.5	13.4	18.1	20.4	
Animals and animal products	323	453	459	385	599	171	5.2	0.4	-16.0	55.5	-71.5	-28.0	7.1	8.1	7.8	6.7	10.0	2.8	
Cattle - live	297	419	430	352	546	122	5.4	0.8	-18.1	55.1	-77.7	-34.3	67.4	42.9	32.0	30.6	38.6	10.9	
Grains, products, & feeds	11	28	60	85	105	128	27.8	29.8	41.0	23.7	21.6	28.5	1.6	2.3	3.3	3.6	4.5	4.7	
Fruits & preparations	140	244	314	358	475	508	12.2	8.8	14.0	32.9	6.9	17.4	16.0	19.8	22.6	23.9	29.1	26.5	
Fruit juices, incl frozen	29	101	31	58	80	74	0.8	-32.8	89.5	38.4	-8.1	34.1	4.0	10.2	4.7	8.8	12.7	8.1	
Vegetables & preparations	673	1,002	1,058	1,125	1,306	1,499	6.7	1.8	6.3	16.1	14.7	12.3	41.8	44.2	43.2	41.2	42.1	43.2	
Tomatoes	328	371	304	315	406	580	-1.1	-6.4	3.7	28.7	42.9	24.0	97.9	98.1	93.4	91.7	90.1	86.3	
Sugar and related products	40	21	28	51	63	121	-5.0	10.9	81.7	23.6	92.7	63.0	4.1	1.7	2.6	4.5	5.0	6.4	
Beverages, ex fruit juices	121	167	185	198	248	354	6.3	3.5	6.6	25.7	42.5	24.1	6.4	8.8	9.2	9.2	10.5	12.3	
Oilseeds and products	21	44	29	28	33	44	4.8	-12.5	-2.7	17.4	32.2	14.7	3.5	4.6	2.5	1.8	1.8	2.0	
Cotton	2	0	0	0	2	16	-68.0	-	-100.0	-	587.9	%	87.6	0.0	0.1	0.0	22.3	5.6	
Seeds - field & garden	3	5	8	7	9	11	14.0	19.8	-21.2	35.3	20.8	8.8	2.8	3.0	3.9	2.6	3.5	3.5	
Cut flowers	6	12	12	13	19	20	10.0	-1.2	11.2	41.1	4.2	17.8	2.6	4.0	3.2	3.3	3.8	3.4	
Nursery stock, bulbs, etc.	0	6	9	8	12	10	60.9	13.8	-11.0	53.1	-19.5	3.1	0.3	2.8	3.2	2.7	3.4	2.5	
Other	91	160	170	148	187	194	9.4	2.0	-12.9	26.4	3.5	4.4	na	na	na	na	na	na	
Forestry ***	na	213	318	300	304	393	-	14.3	-5.7	1.2	29.3	7.3	na	4.1	3.8	3.0	3.1	3.4	
Total (Agriculture and Forestry)	2,080	2,824	3,027	3,155	4,083	4,156	6.5	2.3	4.2	29.4	1.8	11.1	na	na	na	na	na	na	
Total Imports (Agric. & Non-Agric.)	17,198	30,200	39,917	49,493	61,684	72,963	12.3	9.7	24.0	24.6	18.3	22.3	4.7	6.1	6.9	7.5	8.3	9.2	
Trade balance																			
Agriculture with world	4,769	16,593	17,627	18,885	25,822	26,880	na	na	na	na	na	na	na	na	na	na	na	na	
Agriculture with NAFTA	-1,000	-57	894	1,658	-260	1,683	na	na	na	na	na	na	na	na	na	na	na	na	
Forestry with NAFTA	na	57	155	96	-68	-144	na	na	na	na	na	na	na	na	na	na	na	na	
Total (Agric. & Forestry) with NAFTA	-1,000	0	1,049	1,754	-329	1,538	na	na	na	na	na	na	na	na	na	na	na	na	
Total (Agric. & Non-Agric.) with NAFTA	-5,260	-1,900	1,664	1,350	-15,392	-16,202	na	na	na	na	na	na	na	na	na	na	na	na	

na or - = not available or does not apply. \* Data for U.S. exports to Canada from 1990 forward is from Canadian import data. \*\* Compound growth rate. \*\*\*Data from FAS BICO reports.  
% indicates a large number because of a small base.

Table 6 -- U.S. Agricultural Trade with Canada, 1986, 1990, 1993, 1994, 1995 AND 1996. \*

Commodity	1986 1990 1993 1994 1995 1996						Change from year to year **						Share of World						
	\$ Million						Percent						Percent						
	1986	1990	1993	1994	1995	1996	86-93	90-93	93-94	94-95	95-96	93-96	1986	1990	1993	1994	1995	1996	
Agricultural exports to world	26,222	39,363	42,608	45,703	55,814	60,431	7.2	2.7	7.3	22.1	8.3	12.4	100.0	100.0	100.0	100.0	100.0	100.0	
Exports to Canada																			
Agriculture -- Total	1,542	4,197	5,271	5,504	5,738	6,145	19.2	7.9	4.4	4.8	7.1	5.2	5.9	10.7	12.4	12.0	10.3	10.2	
Animals and animal products	295	802	943	1,026	1,034	1,089	18.1	5.5	8.8	0.7	5.3	4.9	6.5	12.0	11.9	11.2	9.5	9.7	
Grains and feeds	1	1	830	908	977	1,130	153.7	792.6	9.4	7.5	15.7	10.8	2.1	3.9	5.9	6.7	5.3	5.4	
Fruits & preparations, ex. juice	250	702	728	686	709	717	16.5	1.2	-5.7	3.3	1.1	-0.5	21.6	35.0	31.2	26.4	26.7	27.0	
Fruit juices, including frozen	51	132	154	165	197	206	17.3	5.2	6.7	19.4	4.8	10.1	33.9	37.7	35.9	33.4	33.9	35.5	
Nuts and preparations	69	108	134	126	145	154	10.1	7.5	-6.4	15.7	5.5	4.6	9.1	11.1	11.4	9.8	10.3	9.4	
Vegetables and preparations	244	875	1,227	1,344	1,313	1,248	26.0	11.9	9.5	-2.4	-4.9	0.6	22.5	38.0	37.4	34.7	33.7	32.2	
Oilseeds and products	210	289	369	328	357	459	8.4	8.4	-11.0	8.7	28.5	7.5	3.2	5.1	5.1	4.6	4.0	4.3	
Other	423	1,287	884	920	1,007	1,143	11.1	-11.8	4.0	9.5	13.5	8.9	na	na	na	na	na	na	
Forestry ***	na	947	1,113	1,162	1,268	1,259	--	5.5	4.4	9.1	-0.7	4.2	na	14.6	15.3	16.4	17.5	17.4	
Total (Agriculture and Forestry)	1,542	5,144	6,385	6,666	7,007	7,404	22.5	7.5	4.4	5.1	5.7	5.1	na	na	na	na	na	na	
Total Exports (Agric. & Non-Agric.)	55,512	83,700	100,444	114,439	127,226	133,668	8.8	6.3	13.9	11.2	5.1	10.0	24.4	21.3	21.6	22.3	21.8	21.4	
Agricultural imports from world	21,453	22,770	24,981	26,818	29,993	33,552	2.2	3.1	7.4	11.8	11.9	10.3	100.0	100.0	100.0	100.0	100.0	100.0	
Imports from Canada																			
Agriculture -- Total	2,017	3,152	4,621	5,231	5,559	6,787	12.6	13.6	13.2	6.3	22.1	13.7	9.4	13.8	18.5	19.5	18.5	20.2	
Bananas and plantains	0	0	0	0	0	0	-23.3	-27.6	714.7	-80.0	52.3	35.5	1.6	3.2	4.9	4.2	4.3	5.0	
Coffee, including products	57	33	30	52	68	70	-8.9	-3.0	75.2	30.5	3.4	33.2	1.2	1.7	2.0	2.1	2.1	2.5	
Animals and animal products	947	1,435	2,003	1,932	2,125	2,605	11.3	10.5	-3.5	10.0	22.6	9.2	20.9	26.5	34.0	33.6	35.5	43.0	
Cattle - live	143	559	911	799	863	999	30.3	17.7	-12.3	7.9	15.8	3.1	32.4	57.1	67.9	69.4	61.0	89.1	
Grains, products, & feeds	294	539	945	1,276	1,292	1,549	18.1	20.6	35.0	1.3	19.9	17.9	42.5	45.3	52.1	54.5	54.7	57.0	
Fruits & preparations	57	62	75	98	107	108	4.1	6.9	30.0	9.2	1.4	12.9	6.5	5.0	5.4	6.5	6.5	5.6	
Fruit juices, incl frozen	15	4	11	9	14	14	-4.5	36.0	-23.1	60.9	3.8	8.7	2.1	0.4	1.7	1.3	2.2	1.6	
Vegetables & preparations	107	212	304	337	415	562	16.1	12.8	10.9	23.0	35.5	22.7	6.6	9.4	12.4	12.3	13.4	16.2	
Tomatoes	1	3	6	10	17	37	25.6	25.0	60.9	69.5	114.9	80.3	0.4	0.9	2.0	3.0	3.9	5.6	
Sugar and related products	125	119	179	211	178	234	5.2	14.5	18.0	-15.6	31.3	9.4	12.6	10.1	16.8	18.7	14.2	12.4	
Beverages, ex fruit juices	155	162	192	207	200	239	3.1	5.8	8.0	-3.6	19.5	7.6	8.2	8.5	9.5	9.7	8.4	8.3	
Oilseeds and products	71	242	415	641	613	786	28.6	19.7	54.4	-4.3	28.2	23.7	11.8	25.5	34.8	41.0	33.8	36.2	
Cotton	0	0	0	0	0	0	--	-100.0	--	-63.4	%	%	0.0	14.7	0.0	0.0	0.0	0.0	
Seeds - field & garden	44	58	68	93	87	83	6.5	5.8	36.0	-6.2	-5.0	6.6	36.6	34.6	31.0	36.5	33.6	26.7	
Cut flowers	3	4	4	5	7	10	1.0	0.7	34.2	38.8	47.6	40.1	1.4	1.1	1.0	1.2	1.4	1.7	
Nursery stock, bulbs, etc.	31	73	96	104	124	146	17.6	9.3	8.3	19.1	17.7	14.9	25.1	34.1	35.4	35.5	35.6	38.4	
Other	109	160	299	267	330	380	15.5	23.1	-10.6	23.3	15.2	8.3	na	na	na	na	na	na	
Forestry ***	na	3,495	6,221	7,471	7,096	8,633	--	21.2	20.1	-5.0	21.7	11.5	na	68.0	73.5	74.4	72.1	74.7	
Total (Agriculture and Forestry)	2,017	6,647	10,842	12,702	12,655	15,419	27.2	17.7	17.2	-0.4	21.8	12.5	na	na	na	na	na	na	
Total Imports (Agric. & Non-Agric.)	66,253	91,400	111,216	128,406	145,348	156,506	7.7	6.8	15.5	13.2	7.7	12.1	18.1	18.5	19.1	19.4	19.5	19.8	
Trade balance																			
Agriculture with world	4,769	16,593	17,627	18,885	25,822	26,880	na	na	na	na	na	na	na	na	na	na	na	na	
Agriculture with NAFTA	-475	1,045	651	273	180	-642	na	na	na	na	na	na	na	na	na	na	na	na	
Forestry with NAFTA	0	-2,548	-5,108	-6,309	-5,828	-7,373	na	na	na	na	na	na	na	na	na	na	na	na	
Total (Agric. and Forestry) with NAFTA	-475	-1,503	-4,457	-6,036	-5,648	-8,015	na	na	na	na	na	na	na	na	na	na	na	na	
Total (Agric. & Non-Agric.) with NAFTA	-10,741	-7,700	-10,772	-13,967	-18,122	-22,838	na	na	na	na	na	na	na	na	na	na	na	na	

na or -- = not available or does not apply. \* Data for U.S. exports to Canada from 1990 forward is from Canadian import data. \*\* Compound growth rate. \*\*\*Data from FAS BICO reports.

% indicates a large number because of a small base.

Table 7--Estimated Change in U.S. Agricultural Trade Due to NAFTA, 1996

	U.S. Exports to		U.S. Imports from	
	Canada	Mexico	Canada	Mexico
Grains and products				
Corn	+	++	+	
Sorghum		+++		
Barley		++	++	
Oats			0	
Wheat & wheat products	+++	+	++	
Rice	+	+		
Oilseeds and products				
Oilseeds	0	++	--	
Meals and oilcakes	+	0	+	
Vegetable oils	+++	+++	++	
Animals and animal products				
Cattle and calves	0	++++	---	++++
Beef and veal	++++	+++	++++	
Hogs	0	++	0	
Pork	+	+++	0	0
Poultry meats	+	+		
Dairy products	0	++++	0	
Other Crops				
Peanuts	0	0	0	++++
Dry Beans		0		
Cotton		+		0
Sugar	0	0	0	+
Fruits and vegetables				
Fresh tomatoes	++			+++
Processed tomatoes	++++			+++
Bell peppers				+
Cucumbers	+			++
Squash	++			+
Eggplant	++			++
Snap beans	++			++
Fresh and processed potatoes	+		+++	
Frozen broccoli and cauliflower				+++
Fresh citrus				+
Orange juice				++
Apples		++++		
Pears		++++		
Peaches				
Grapes				0
Cantaloupe				0
Watermelon				+

+ = less than 2 percent higher in 1996 than would have occurred without NAFTA

++ = 2 to 5 percent higher due to NAFTA

+++ = 6 to 15 percent higher due to NAFTA

++++ = more than 15 percent higher due to NAFTA

- = less than 2 percent lower due to NAFTA

-- = 2 to 5 percent lower due to NAFTA

--- = 6 to 15 percent lower due to NAFTA

---- = more than 15 percent lower due to NAFTA

0 = no effect

blank indicates little or no trade

United States and 1,000 tons for Canada for 1994, increasing 3 percent per year thereafter. Imports above the TRQ levels face an over-quota tariff of 215 percent, which will be reduced 24 percent by 1999 and phased out by 2008.

*Canada:* Before the CFTA, Canada maintained tariffs ranging from Can\$1.73 per ton to Can\$2.77 per ton on corn. The CFTA, subsumed under NAFTA, eliminated tariffs on corn imports from the United States over 10 years. The tariff will be eliminated on January 1, 1998.

### **Corn Trade Since NAFTA**

The United States has seen a dramatic increase in corn trade since the inception of NAFTA. U.S. corn exports to NAFTA partners have jumped fivefold in volume and eightfold in value since 1993. Although U.S. imports of corn from Canada have increased, the U.S. net export position has widened each year since the agreement began. In 1996, the net value of U.S. corn exports to Canada and Mexico equaled more than \$1 billion, 10 times the average value of the 3 years preceding the agreement.

Mexico has long been a major market for U.S. corn, with little or no imports from other suppliers. Trade has been quite variable over the years, in large part because of the impact of weather on domestic production. During 1990-93, however, Mexico's imports of corn shrank to very low levels mainly due to Mexican agricultural policies that stimulated domestic corn production. Support prices for corn in Mexico were well above international levels in the early 1990's, pulling acreage from other crops into corn and raising production.

U.S. corn exports to Mexico have almost trebled in value between 1994 and 1996, ranking Mexico as the third largest U.S. corn market. Mexico has imported more than the duty-free amount under the TRQ each year since NAFTA took effect, and has not applied the high over-quota tariffs. U.S. corn exports to Mexico in 1994 were nearly 3.1 million tons against the initial TRQ of 2.5 million tons. In 1995, corn exports exceeded 2.8 million tons against a TRQ of 2.57 million tons. In 1996, exports to Mexico reached a record 6.3 million tons, more than double the 1996 TRQ of 2.65 million tons, despite high U.S. export prices.

The United States also trades small amounts of corn with Canada. U.S. exports of corn to Canada have increased during years when corn production in eastern Canada failed to keep pace with domestic demand. Conversely, imports from Canada increased during 1992-94 and 1996 when U.S. supplies were tight due to weather conditions. The United States maintained an average positive trade balance of \$65-70 million during the past 3 years, about twice the average balance of the 3 years preceding NAFTA.

### **Trade Issues**

There have been no major trade issues involving corn, although there is some concern that Mexico has been delaying issuing import licenses under the TRQ for 1997.

### **Impact of NAFTA on Corn Trade**

U.S. corn exports to Mexico are about 5 percent higher as a direct result of trade liberalization under NAFTA than they would have been otherwise. The strong growth in U.S. corn exports to Mexico in recent years was primarily due to factors other than NAFTA. Domestic policy reforms and severe drought in 1995 sharply reduced corn production in Mexico and stimulated demand for imports from the United States.

Domestic policy adjustments in Mexico that preceded the implementation of NAFTA have contributed to freer trade in corn and fewer market distortions. The very high price supports for corn in Mexico were reduced to bring them more in line with U.S. and international prices. This ended a policy that distorted land use and inflated the costs of corn to users (although corn tortilla prices for many consumers still receive government subsidies). Corn area subsequently fell, and prices have come down to more reasonable levels for industrial users and feeders. In the early 1990's, the Mexican government also ended an official prohibition on feeding corn to livestock. This ban, intended to protect the supply of the country's staple food grain, was so effective that sorghum had become the chief grain fed in Mexico. Thus, while not mandated by the trade agreement itself, these domestic policy changes did reflect the spirit of free trade under the NAFTA and provided an indirect stimulus for corn trade with the United States.

The impacts of NAFTA were negligible on U.S.-Canadian corn trade. Local availability of corn in eastern Canada has had a greater impact on trade than have tariff reductions. ERS analysis shows that U.S. exports of corn to Canada were about 1 to 2 percent higher than they would have been without NAFTA. Similarly, U.S. imports of corn from Canada would have been less than 1 percent lower without NAFTA.

### **Sorghum**

#### **Policy Changes Resulting from NAFTA**

*United States:* Under NAFTA, the United States immediately eliminated tariffs on sorghum imports from Mexico, following implementation on January 1, 1994.

*Mexico:* Under NAFTA, Mexico immediately eliminated its 15-percent seasonal tariff on U.S. sorghum imports. Improved market access for Canada does not apply for sorghum under NAFTA since Canada does not produce the crop due to its cooler climate.

*Canada:* The CFTA, subsumed under NAFTA, immediately eliminated tariffs on sorghum imports from the United States, following implementation on January 1, 1989. Under NAFTA, Canada immediately eliminated tariffs on sorghum imports from Mexico on January 1, 1994.

#### **Sorghum Trade Since NAFTA**

Like corn, nearly all of Mexico's sorghum imports traditionally come from the United States. However, U.S. exports of sorghum to Mexico have trended downward since

NAFTA began, largely reflecting developments in the Mexican corn sector. Sorghum acreage and production have rebounded in Mexico recently since the very high support prices for corn were reduced. In addition, feed use of sorghum has declined as livestock feeders have started to use more corn as a feed grain. Mexico's feeding of sorghum is expected to rise in the 1996/97 crop year, as low water supplies encouraged a shift from corn to sorghum, increasing domestic production.

As a result of product switching in livestock rations to favor corn and increased domestic sorghum production, Mexican sorghum imports have declined despite the elimination of the tariff. In 1994, U.S. sorghum exports to Mexico declined about 6 percent on a volume basis from 1993, and fell another 37 percent in 1995 as imports of corn continued to exceed the TRQ. In 1996, exports fell an additional 8 percent on a volume basis. Due to higher prices in all three years, however, the change in the value of sorghum exported was less than the volume changes. In 1994 and 1996, the value of sorghum exports actually increased 7 and 18 percent respectively.

The United States also exports very small amounts of sorghum to Canada; these volumes are much less than for corn, the leading U.S. feed grain export to Canada. However, U.S. sorghum exports rose significantly in 1995 over pre-NAFTA levels when U.S. sorghum production increased in the 1994/95 crop year.

### **Trade Issues**

In late 1996, sorghum imports were delayed by the Mexican government's slow issuance of phytosanitary permits. After consultations with suppliers, importers, and end-users, they began issuing the permits in a more timely manner.

### **Impact of NAFTA on Sorghum Trade**

Without the reduction of Mexican tariffs under NAFTA, U.S. exports would probably have fallen further than they did during 1994-96. The NAFTA tariff reductions maintained Mexican imports about 10 to 15 percent higher than they would have been otherwise. Had the reduction in tariffs not occurred, it is likely that sorghum would have been less price-competitive against corn and imports would have declined further as increasing quantities of feed corn were imported.

## **Barley**

### **Policy Changes Resulting from NAFTA**

*United States:* Under NAFTA, the United States eliminated all tariffs on barley imports from Mexico upon implementation of the agreement on January 1, 1994. Tariffs on imports of Canadian barley were eliminated in 1996, following the successive tariff reductions under the CFTA, which was subsumed under NAFTA.

*Mexico:* Under NAFTA, Mexico immediately eliminated its import license requirement for barley imported from the United States and Canada, following implementation on January 1, 1994. The United States received a 120,000-ton

duty-free TRQ initially for 1994 with the duty-free access amount increasing 5 percent per year thereafter. Canada received a 30,000-ton duty-free TRQ initially for 1994 with duty-free access increasing 5 percent per year thereafter. Imports from the United States and Canada over the duty-free levels face over-quota tariffs of 128 percent (barley) to 175 percent (malt) which will be phased out over 10 years.

*Canada:* Under the CFTA, later subsumed under the NAFTA, Canada agreed to a 10-year elimination of tariffs on U.S. barley imports. Under Article 705 of the CFTA, Canada agreed to remove its quantitative restrictions when the 2-year average of the level of U.S. Government support for barley is less than that of Canada's. Canada imposed import licenses on U.S. imports of barley and barley products until August 1, 1995, when these licenses were converted to TRQ's in accordance with the Uruguay Round of the WTO. Over-quota tariffs were initially set at more than 100 percent and will be reduced 36 percent over 6 years. The within-quota tariff will be eliminated on January 1, 1998.

### **Barley Trade Since NAFTA**

Although U.S. barley exports to Mexico have increased since NAFTA, the United States has become an increasing net importer of barley from NAFTA partners. Despite increasing fourfold since 1993, barley exports have been overwhelmed by imports of barley from Canada. Over the past 3 years, U.S. imports of barley from NAFTA partners have exceeded exports by an average \$100 million per year; this is about twice the value of net imports in 1991-93.

U.S. barley imports began to trend upward during the late 1980's, and more than tripled in the first year of NAFTA, to a record 1.96 million tons. This reflected a dramatic downturn in U.S. feedgrain production in 1993 because of adverse weather. Not only did flooding harm crops but it also disrupted many transportation links. This situation provided an excellent opportunity for Canadian barley to enter the U.S. market. While both malting and feed barley imports jumped, feed barley increased more, comprising about two-thirds of the total, a larger-than-average share.

In 1995, U.S. barley imports declined 47 percent, but were still very high by historical standards. Nearly all of the decline occurred in feed barley, and its share of total imports fell to about a third, more in line with the average. The rebound in U.S. feedgrain supplies accounted for the reduction in feed barley imports. However, malting imports remained high in 1995, partly reflecting longer-term developments, triggered by the aftermath of the 1988 North American drought. Brewers and maltsters apparently had an interest in diversifying supplies, and imports were further encouraged by the weak Canadian dollar. In recent years, one major brewer contracted acreage of U.S. barley varieties in Canada grown expressly for the U.S. market.

Barley imports in 1996 were down about 24 percent. One key reason was a poor crop in Canada that reduced 1995 production and thus exportable supplies. For the year, less than 20 percent of the imports have been for feed. Although the North American barley market is largely influenced by developments in corn and other feed grains, there



is also a somewhat distinct malting barley market. The United States imports both malting and feed barley along with a small amount of seed barley (trade data do not identify barley for feed as such, only classifying it as "other"). Virtually all the barley imported by the United States comes from Canada.

U.S. exports of barley to Mexico have grown at an increasing pace since NAFTA came into effect. Barley exports rose 14 percent in 1994 to about 92,000 tons, followed by an additional 28-percent gain in 1995 to nearly 118,000 tons. In 1996, exports to Mexico more than doubled to 270,000 tons. In fact, because of slumping sales to other markets, Mexico became the leading U.S. barley export market in the latter half of 1996.

The increases in Mexico's barley imports are mainly tied to the beer industry. About 90 percent of the U.S. barley exports to Mexico have been for malting, with about 10 percent for feed purposes. Rising beer production reflects both domestic and export demand, with Mexico exporting a significant amount of beer to the United States. Mexico is now the second largest supplier of beer to the United States, surpassing Canada in 1996. However, the increase in Mexico's malting barley imports is misleading, because the expansion of malting facilities has led to a shift away from barley malt imports toward malting barley to be processed in Mexico. U.S. exports of barley malt to Mexico have dropped since NAFTA, although they have rebounded slightly so far in 1996.

### **Trade Issues**

*United States Monitors Imports:* The increase in U.S. imports of barley from Canada has not followed a steady trend since the early 1990's, but has changed dramatically in some years, such as the 1993/94 crop year. No formal trade dispute mechanism has been invoked over barley trade with Canada but the United States has indicated that it will monitor Canadian imports to ensure that they do not reach "disruptive levels" such as those of 1993/94 and will seek consultations with Canada before barley imports reach disruptive levels.

*Canadian TRQ on Barley:* Under the market access provisions of the Uruguay Round, Canada converted its barley import license to a TRQ. The United States views Canada's use of a TRQ replacing the barley import license as a violation of NAFTA since the agreement generally prohibits member countries from increasing tariffs or introducing new tariffs. Furthermore, because the United States only applies a NAFTA tariff on barley imports from Canada, the United States believes there is a lack of symmetry in market access for barley exports relative to Canada. Using the dispute settlement process provided in NAFTA, the United States requested consultations with Canada, which were held in March 1995. The two countries subsequently presented written and oral arguments to a five-member NAFTA panel to resolve the dispute. On December 2, 1996, the panel issued its final report, finding that Canada's application of these new tariffs to U.S. goods does conform with its NAFTA obligations. Consequently, U.S. access to Ca-

nadian markets for barley remains unchanged. There is no appeal process in NAFTA's dispute settlement mechanism.

### **Impact of NAFTA on Barley Trade**

U.S. imports of barley from Canada have been very large since 1994, but the impact of NAFTA on this trade has been minor or insignificant. U.S. barley imports from Canada were only about 1 to 3 percent higher in the first 3 years of the agreement than they would have been otherwise. The sharp rise in U.S. barley imports from Canada in 1994 was mainly the result of a feedgrain shortage in the United States caused by the Midwest floods during 1993, not because of NAFTA.

Analysis of U.S. barley trade with Mexico indicates that the tariff and license changes under NAFTA have had a small positive impact on U.S. exports, boosting trade less than 5 percent above what would have occurred without NAFTA. Without NAFTA, Mexican license restrictions could have limited imports of barley for feed, but NAFTA guaranteed annual increases in the TRQ by 5 percent. However, growth in demand from the beer industry would likely have encouraged Mexico to issue import licenses for malting barley without NAFTA.

### **Oats**

#### **Policy Changes Resulting from NAFTA**

*United States:* The United States already had a zero Most Favored Nation (MFN) tariff on oats imports and this was unchanged under the NAFTA.

*Mexico:* Mexico applies a 10-percent ad valorem MFN import tariff on oats. Under NAFTA, the tariff on imports from the United States and Canada is being phased out over 10 years, beginning January 1, 1994.

*Canada:* Canada already had a zero MFN tariff on oats imports and this was continued under the NAFTA. Under Article 705 of the CFTA, subsumed under NAFTA, Canada's import license requirement on U.S. oats and oat product imports was removed in 1989.

#### **Oats Trade Since NAFTA**

The United States is the largest oats importer in the world, despite exporting small quantities to the NAFTA partners, and Canada is the largest oats exporter to the United States. U.S. oats imports from Canada rose 8 percent in 1994, the first year of NAFTA, while total imports increased 17 percent, reflecting larger shipments from Finland and Sweden. In 1995, imports from Canada increased 28 percent, with some of this gain offsetting a reduction in shipments from Finland and Sweden. Imports from Canada fell 7 percent in 1996 because a smaller crop the previous year reduced its exportable supplies, but shipments from Finland and Sweden declined even more, increasing the U.S. reliance on Canadian oats. The expansion of the European Union (EU) in 1995 to include Finland and Sweden and the consequent reduction in the level of export subsidies available for Scandinavian oats accounts for most of



the reduction in their exports to the United States. Meanwhile, Canada's oats sector has continued to focus on the U.S. market, reflecting factors that were present even before NAFTA.

Today, the oats markets in the United States and Canada are more closely integrated than most other commodities. The removal of oats from the control of the Canadian Wheat Board in 1988 was an important step that allowed free markets to evolve. The favorable exchange rate of the Canadian dollar has also made imports attractive, while Canada has produced more consistent supplies of high-quality oats than the United States. While U.S. production of oats has continued to decline in recent years, Canada's oats production has begun to increase slightly. There is some evidence of more oats being grown in Manitoba, closer to the U.S. market, than in the past. However, the major growing areas are more distant, Alberta and Saskatchewan.

### **Trade Issues**

There have been no trade issues involving oats.

### **Impact of NAFTA on Oats Trade**

Oats trade between the United States and Canada since 1994 has not been directly affected by NAFTA, because U.S. tariffs on oats from Canada and other sources were already at zero. The increase in oats imports from Canada during 1994 and 1995 reflects longer-term trends of more integration of the countries' grain economies. The United States has increasingly become a net importer of oats and, because of geographical proximity, an attractive market for Canada. The accession of Finland and Sweden to the EU accelerated this trend by limiting their ability to compete in the U.S. market.

## **Wheat**

### **Policy Changes Resulting from NAFTA**

*United States:* Under NAFTA, the United States will eliminate tariffs for common wheat imports from Mexico over 5 years, and for durum wheat over 10 years, beginning January 1, 1994. Under the CFTA, the United States agreed to phase out tariffs on Canadian wheat over 10 years, set to conclude on January 1, 1998.

*Mexico:* Under NAFTA, Mexico immediately eliminated its import license requirement for all wheat following implementation on January 1, 1994. A 15-percent ad valorem tariff, to be phased out over 10 years, was then applied to wheat imports from the United States and Canada.

*Canada:* The CFTA, subsumed under NAFTA, will continue the 10-year elimination of tariffs on U.S. wheat imports, set to conclude on January 1, 1998. Under the CFTA Article 705 provisions, the import license requirement on U.S. wheat and wheat products was removed in 1991.

### **Wheat Trade Since NAFTA**

Trade in unmilled wheat, flour, and pasta has grown erratically among the United States, Canada, and Mexico since

the inception of NAFTA, but weather rather than trade liberalization has played a dominant role in the trade. U.S. exports to NAFTA partners (predominantly Mexico) in 1996 were 60 percent higher by volume and more than double in value over 1993. U.S. wheat and pasta imports from NAFTA partners (predominantly Canada) in 1996 were about half the level of imports in 1994 by volume but about 15 percent higher by value. U.S. imports declined after an unusual spike in 1994, but remained more than 1 million tons in both 1995 and 1996.

Mexico's total wheat imports and imports from the United States declined in the first year of NAFTA because favorable weather in Mexico produced a large domestic crop in 1994. Two years of drought followed, reducing the Mexican crop and boosting imports. Wheat consumption in Mexico fell dramatically in 1995 and 1996, as the peso devaluation and subsequent recession resulted in an overall decline in consumers' purchasing power. Initially, it was thought that wheat consumption would rise as consumers shifted from meat to bread products. However, the government lifted price controls on wheat products and eliminated a wheat milling subsidy in 1995, but left price controls in place for corn tortillas. As a result, wheat product prices rose relative to tortilla prices and wheat product consumption plummeted. Despite the drop in consumption, imports increased sharply in 1995 and 1996 because of the smaller Mexican crop.

In 1995, U.S. wheat exports to Mexico jumped not only because of Mexico's drought, but also because Canada, which also supplies the Mexican market, had lower export supplies. Both countries provide export credit guarantees to Mexico. These guarantees helped sustain Mexican wheat imports over the last 2 years when importer liquidity was low. NAFTA liberalization facilitated the increase in Mexican imports in the drought years of 1995 and 1996, and the closer links forged between Mexico and the United States through NAFTA probably helped mitigate the damage to Mexican import demand caused by the peso crisis, but the direct impact of NAFTA on Mexican wheat imports was fairly minor.

The CFTA was expected to boost U.S. wheat imports from Canada. Canada is the main source of U.S. wheat imports, being a surplus producer with lower transport costs to the U.S. market, relative to other exporters. In 1994, U.S. wheat imports from Canada rose 36 percent over the previous year. Much of this growth was not caused by NAFTA, but by a coincidence of weather-related events in Canada and the United States. In Canada, the quality of the 1993 wheat crop was damaged by disease and wet weather at harvest, and since the 1992 crop was also of low quality, Canada's supply of feed wheat was exceptionally high. At the same time, the U.S. corn crop was dramatically lowered by the Midwest summer floods. With feed wheat supplies unusually large in Canada and feed grains tight in the United States, the stage was set for a surge in U.S. imports of Canadian wheat. Reduced tariffs under NAFTA eased the increased trade but did not cause the sharp surge of wheat imports in 1994.

U.S. wheat imports from Canada dropped in 1995, as grain supplies on each side of the border returned to a more normal situation. Moreover, the 1-year TRQ and end-use certificates imposed at the latter stages of 1994 for wheat (see Trade Issues section) may have offset any stimulus to trade caused by the reduced tariffs. In 1996, U.S. wheat imports from Canada continued to decline because of limited supplies within Canada and because other export destinations offered higher returns than the U.S. market. This was the result of a dramatic increase in world wheat prices in 1995/96.

Canada is a supplier of pasta to the U.S. market, but the European Union (Italy) has the largest import share. Reduced tariffs may have helped Canada increase shipments to the United States in 1994, but increased competition from subsidized pasta from Turkey caused a decline in 1995. U.S. trade restraints on Turkish pasta may have helped Canada increase shipments to the United States in 1996.

### **Trade Issues**

Of all the grains, wheat has experienced the most contentious trade disputes since the implementation of NAFTA.

#### *Tariff Rate Quota on U.S. Wheat Imports from Canada:*

The sharp rise in U.S. wheat imports from Canada during the 1993/94 crop year, following several years of increasing imports, resulted in the request for a U.S. International Trade Commission ITC Section 22 investigation. The ITC determined that the increased wheat, wheat flour, and semolina imports were materially interfering with USDA's price and income support programs and forwarded their recommendations for possible action to the President. These recommendations ranged from a strict import quota of 900,000 tons to various tariff-rate quotas. In September 1994, the United States and Canada agreed to a 1-year TRQ limiting access at the lower NAFTA tariff levels under the U.S.-Canada Memorandum of Understanding (MOU) on Grains. The TRQ from September 12, 1994 to September 11, 1995 was 300,000 tons for durum wheat and 1,050,000 tons of other wheat (excluding white winter wheat not produced in Western Canada). Two over-quota tariff rates were set for durum: \$23 per ton between 300,000 and 450,000 tons, and \$50 per ton above 450,000 tons. The over-quota rate for other wheat above 1,050,000 tons was \$50 per ton.

The MOU also established a Canada-U.S. Joint Commission on Grains (JCG), composed of 10 private sector members from the grain trade industry in the United States and Canada. The purpose of the JCG was to examine the U.S. and Canadian marketing and support systems for grains and provide recommendations to resolving the long-term grain trade problems between the two countries in binational trade and in third-country markets. The final report of the JCG was released on January 22, 1996 and included recommendations for policy coordination, cross-border trade, grading and regulation, infrastructure, domestic programs, export programs and institutions, and trade agreements. Finally, the MOU included a "peace clause" ensuring that neither country would initiate action against the other for the 12-month period specified under the MOU. Under the peace clause, the United States withdrew its noti-

fication to the GATT of its intention to modify wheat and barley tariffs under GATT Article 28 and Canada did not dispute the TRQ's applied on wheat under the MOU to a NAFTA or GATT Dispute Settlement Panel.

As specified in the MOU, the TRQ expired on September 11, 1995. Subsequently, the United States announced that it would closely monitor exports of Canadian grains to the United States from September 12, 1995 to September 11, 1996 and intended to consult with the Government of Canada to discuss potential problems before grain imports from Canada reach disruptive levels. However, because of limited Canadian wheat supplies and dramatically higher world wheat prices in 1995, Canadian wheat exports to the United States did not increase during the 1-year period following the expiration of the TRQ. The United States is still monitoring imports of Canadian wheat during the MOU period.

#### *Mexico's Countervailing Duty Investigation on U.S. and Canadian Wheat Imports:*

On April 4, 1994, the Mexican Government initiated a countervailing duty investigation on subsidized wheat imports from the United States and Canada. Mexico also began subsidizing flour millers who purchased domestic wheat. The subsidy was set at a value that equaled the difference between the imported price of wheat and the cost of purchasing domestic wheat. However, in 1995, austerity measures led to the elimination of this subsidy. In March 1996, the Mexican Government terminated the investigation because the United States was no longer using EEP and because Canada had eliminated the Western Grain Transportation Act (WGTA). The WGTA, Canada's only wheat export subsidy notified in the Uruguay Round negotiations of the GATT/WTO, was eliminated on July 31, 1995.

*Karnal Bunt:* On March 8, 1996, the USDA Agricultural Research Service announced the discovery of Karnal bunt fungus in durum wheat seed in Arizona, the first known occurrence of this disease in the United States. It was subsequently found in parts of New Mexico, Texas, and California. Karnal bunt is a fungal disease of wheat, durum wheat, and triticale that, if the presence exceeds 3 percent, reduces grain yield and quality. Karnal bunt is harmless to humans but can cause an unpleasant odor and taste in flour made from wheat highly affected by the disease. Karnal bunt is caused by a smut fungus and is spread by airborne spores that can also be carried on plants, soil, farm equipment, and vehicles. Because of the risk to the reputation of U.S. wheat in both the domestic and international markets, USDA imposed a Federal quarantine on the areas where Karnal bunt was detected. An eradication program was established to contain the disease by destroying infected wheat, and farmers are being compensated for certain financial losses resulting from the disease.

At the time of the discovery in the United States, 37 countries had existing quarantines on wheat imports where Karnal bunt is present. Canada and Mexico did not have quarantines, but instead regulated imports of wheat from countries where Karnal bunt was known to occur. Most of the 37 countries agreed to accept U.S. wheat shipments, provided the USDA Animal and Plant Health Inspection Serv-

ice (APHIS) certified that the wheat originates from an area where Karnal bunt is not known to occur.

After the initial Karnal bunt discovery in Arizona, Canada banned all imports and transshipments of U.S. durum wheat and all grain imports from the four quarantine States to ensure the integrity of the Canadian grain system. Although Canada only imports a small amount of U.S. wheat, approximately 1 million tons of U.S. wheat annually pass through the Canadian ports of the St. Lawrence Seaway system to third-country markets. Following bilateral negotiations with the United States, Canada agreed to permit in-transit shipments of U.S. wheat through the Seaway to resume in early April 1996. In-transit shipments are those that do not stop at Canadian ports or that are topped-off with Canadian grain. Canada also allowed non-durum U.S. wheat to be transhipped through Canadian grain elevators and agreed to reassess its prohibition on durum wheat based on additional survey and sampling data provided by the United States. Currently, no such shipments have tested positive for the Karnal bunt disease.

Karnal bunt has been detected in some areas of northwestern Mexico since the late 1970's, long before implementation of NAFTA. The United States banned Mexican wheat imports in 1983 to prevent the introduction of the fungus. Article 722 of NAFTA established a Committee on Sanitary and Phytosanitary Measures. In the committee's June 1996 meeting, Mexico sought recognition from the United States that the Mexicali Valley region is free of Karnal bunt. The United States did so but has not established a protocol for allowing wheat imports from the region.

After regulations related to Karnal bunt were issued in the four U.S. States, Mexico announced it would restrict wheat produced or stored in Arizona, New Mexico, California, and certain parts of Texas from entering Mexico. Mexico will import U.S. wheat from non-quarantined areas if the grain is tested and certified free of Karnal bunt or, if produced within the quarantine area, fumigated with methyl bromide.

*End-Use Certificates:* As a result of the Article 705 calculations under the CFTA, import licenses for U.S. wheat and wheat products were removed in 1991. Subsequently, Canada required that U.S. wheat be accompanied by an end-use certificate (EUC) to ensure that Canadian variety controls and quality standards are maintained. Under the NAFTA Implementation Act, the U.S. Secretary of Agriculture was required to establish EUC's for wheat imported into the United States from any foreign country that required EUC's for imports of U.S. wheat. The purpose of the U.S. EUC requirement is to prevent imports from benefiting from U.S. export programs. The United States will continue this EUC requirement as long as Canada also maintains its EUC requirement.

The Canada-U.S. Joint Commission on Grains examined the EUC requirements for both countries, found them to play a limited functional role, to raise costs, and to be a visible trade irritant. As a result, it was recommended that both countries eliminate EUC's. A satisfactory replacement to EUC's to ensure that both countries' concerns are allayed has not been reached.

## **Impact of NAFTA on Wheat Trade**

The policy changes resulting from NAFTA led to an estimated 1-percent increase in Mexico's wheat imports over what would have otherwise occurred during 1994 to 1996. Since 1993, U.S. wheat exports have risen from 967,000 tons to 1.6 million tons in 1996 and Mexico's market share of total U.S. wheat export volume has risen from 3 percent in 1993 to 5 percent in 1996. The value of U.S. wheat exports to Mexico jumped from \$143 million in 1993 to \$344 million in 1996 as U.S. prices gained strength due to tight supplies and strong demand.

Tariff reductions under NAFTA (and CFTA) increased U.S. wheat imports from Canada an estimated 5 percent above what would have occurred without the agreement. The sharp rise in U.S. wheat imports from Canada in 1994 was mainly the result of weather-related events in both the United States and Canada during 1993 and not because of the NAFTA.

Although U.S. wheat exports to Canada in the form of grain have been insignificant despite the NAFTA (and CFTA) tariff reductions, wheat product exports have continued to grow. These tariff reductions increased U.S. wheat product exports to Canada an estimated 5 percent above what would have occurred without the agreement. Canada's import licenses were removed for U.S. wheat and wheat products in 1991 under the CFTA Article 705 calculations.

## **Rice**

### **Policy Changes Resulting from NAFTA**

*United States:* U.S. tariffs on imported rice ranged from 0.69 to 3.3 cents a kilogram, depending on the type of rice, before NAFTA. These are being phased out over a 10-year period, from 1994 to 2003. Under the terms of the Uruguay Round agreement, the United States is reducing its MFN tariffs by 36 percent through 2000.

*Mexico:* Before NAFTA, Mexico imposed a 20-percent tariff on brown and milled rice and a 10-percent tariff on rough and broken rice. The milled and brown rice tariff rate was raised from 10 percent to 20 percent in 1990 in response to demands from Mexican millers who wanted to import rough rice to maintain a high mill utilization rate. Under NAFTA, these tariff rates are to be gradually lowered to zero by 2003. The first cut was in 1994, which dropped the respective tariff rates to 18 and 9 percent. By 1996, the tariff rates were 14 and 7 percent.

Mexico banned rice imports from Asian sources for phytosanitary reasons in 1994. In December 1996, this policy was modified to allow rice from Asian sources to be imported if the rice passed rigid disease-free requirements and was placed in an extensive quarantine. Imports of Asian rice to Mexico are currently impractical under these rules.

*Canada:* Canada's tariffs on imported U.S. milled or semi-milled rice have been steadily reduced since 1989 under the CFTA, which was subsumed under NAFTA, and will reach zero in 1998. In 1995, Canada's tariff on U.S. bro-

ken rice and whole or semi-milled rice was a \$1.10-per-ton, compared with a \$4.80-per-ton tariff for countries receiving MFN status and for Argentina and Brazil. There is no tariff on imported brown or broken rice. Canada produces no rice domestically and Mexico does not export rice to Canada.

### **Rice Trade Since NAFTA**

U.S. exports of rice to NAFTA partners have increased 37 percent by volume and 53 percent by value since the inception of NAFTA. During this period, exports to Mexico made up 65-70 percent of U.S. exports to NAFTA members. Rice trade with Mexico has continued the general increase that was evident before January 1994 when NAFTA went into effect. In market year (August-July) 1995/96, the United States exported 262,047 tons—milled equivalent—of rice to Mexico, making it one of the largest single-country foreign markets for U.S. rice that year. In 1994/95, the United States exported 260,792 tons to Mexico, up from 172,139 tons in 1993/94. On a milled-equivalent basis, over two-thirds of U.S. rice sales to Mexico are rough rice.

The United States currently has a virtual monopoly on rice trade with Mexico—helped by the ban on importation of Asian rice enacted in 1994. During 1990-93, Mexico imported substantial quantities of Asian rice but Mexico's rice crop was diminished by infestations believed to have come from imported Asian rice. In response, Mexico banned importation of all Asian rice. As of December 1996, the absolute ban on imports of Asian rice was dropped by Mexico in response to its obligations under WTO. Asian rice access to Mexico is now subject to the presentation of a detailed pest risk analysis. No such documentation has been presented by an Asian government to date. The diseases responsible for the damage to Mexico's crop are not known to be active in the United States.

Per capita rice consumption in Mexico has remained about 11 pounds per year for the past 15 years. Rice has generally been the most expensive food grain in Mexico, with consumer prices increasing faster than prices for other staple foods. However, despite the economic crisis following the peso devaluation in December 1994, Mexican rice imports did not decline in 1995 or 1996. A drought in the northern producing areas and a shift toward export-oriented crop production led to a substantial decline in Mexican rice production. Thus, despite a decline in Mexican rice consumption that year, imports of U.S. rice were needed to make up for lower domestic production. As Mexico's economy continues to rebound from the peso devaluation, rice consumption is likely to grow as well.

Canada's rice imports have shown noticeable growth since 1989 after being nearly stagnant during much of the 1980's. Both total imports and imports from the United States have steadily increased this decade. U.S. exports to Canada totaled 167,000 tons in 1995, up from 139,000 tons in 1994, and reached 168,000 tons in 1996. Canada primarily imports high-quality long-grain milled rice, as well as smaller amounts of brown and rough rice. The United States is the major supplier of rice to Canada, accounting for 70 to 80 percent of annual imports, and Thai-

land supplies most of the rest. Canada also imports some high-priced basmati rice from India and Pakistan and very small quantities of high-quality japonica from Italy as well. Imports from these non-U.S. sources have increased this decade.

With no domestic rice producing industry, Canada's import expansion can be traced primarily to population growth and the ethnic composition of recent immigrants. Lower tariffs on rice from United States under the CFTA and from other countries under the WTO have slightly reduced the price of rice in Canada, likely accounting for a small share of the increase in rice consumption since 1989. However, the tariff on U.S. rice was not very high when the CFTA went into effect—less than 2 percent the price of imported U.S. rice—and rice is an inexpensive food in Canada.

### **Trade Issues**

There have been no trade issues between the United States, Canada, or Mexico over rice.

### **Impacts of NAFTA on U.S. Rice Exports**

Mexican rice imports from the United States are slightly higher, about 1 percent or less, than would have occurred without NAFTA. Because Mexico's phytosanitary requirements effectively ban imports of rice from Asian sources, NAFTA's impact on U.S. rice exports to Mexico has only a very minor positive effect. However, without the strict phytosanitary standards for imported rice, the tariff advantages enjoyed by the United States under NAFTA would be very important. Thailand and Vietnam could compete well with the United States on a price basis, even with NAFTA, but Mexican consumers seem to prefer the high quality and consistency of U.S. rice over low-quality Asian or even high-quality Thai rice.

NAFTA's impact on Canada's rice imports is also small, probably less than 1 percent in volume. Continued tariff reductions under NAFTA have helped the United States remain the major rice exporter to Canada and perhaps expanded U.S. sales to Canada a very slight amount. Although NAFTA gives the United States a price advantage over other exporters, most Asian rice exporting countries—except Thailand—currently ship rice of rather low quality that is not favored in high-income countries. Rice shipped from Myanmar, Vietnam, and Pakistan and India (non-basmati) would not compete with U.S. rice in high-quality markets like Canada with or without the NAFTA. With the United States already the principal supplier of high-quality long-grain rice, only a small share of expanding sales could be attributed to NAFTA.

### **Oilseeds and Products**

#### **Policy Changes Resulting from NAFTA**

*United States:* Prior to NAFTA, the United States did not have tariffs on soybean and sunflower seed imports, but did have a 22.5-percent tariff on soybean oil, which will be phased out over 10 years, and a 0.3-cents-per-pound tariff on soybean meal, which was eliminated on January 1,

1994. The United States had a 0.4-cents-per-bushel tariff on rapeseed, a 22-cents-per-bushel tariff on flaxseed, a 0.12-cents-per-pound tariff on rapeseed meal, and a 7.5-percent tariff on canola oil, all of which were immediately eliminated under the CFTA on January 1, 1989 and under NAFTA on January 1, 1994 for Mexico.

*Mexico:* Mexico had a seasonal tariff on soybeans of 15 percent. Under NAFTA, Mexico immediately reduced the 15-percent tariff to 10 percent, reduced the dutiable season from August 1-January 31 to October 1-December 31, and is phasing out the tariff over a 10-year period. Mexico had a 15-percent tariff on soybean meal, a 10-percent duty on crude soybean oil, and a 20-percent duty on refined soybean oil that will be phased out over 10 years. There are similar Mexican tariffs on minor oilseed meals and oils, which will also will be phased out over 10 years.

*Canada:* Prior to CFTA Canada did not have tariffs on soybeans, soybean meal, rapeseed, or other meals. However, there were tariffs of 7.5 percent on soybean oil and 10 percent on other vegetable oils. The CFTA, subsumed under NAFTA, called for a 10-year elimination of tariffs on selected U.S. imports, and will be concluded on January 1, 1998. For NAFTA, Canada immediately eliminated its tariffs on soybean oil and other oil for Mexico, but it maintained the successive tariff elimination with the United States under the CFTA agreement.

### **Trade Since NAFTA**

Since NAFTA, U.S. oilseed exports to Mexico have increased, with soybeans comprising about 95 percent of the total. Since 1993, these exports have risen from 2.0 million metric tons to 2.4 million in 1996, a gain of 20 percent. Mexico's share of U.S. soybean exports has risen from 9 percent in 1993 to 11 percent by 1996. The value of U.S. oilseed exports to Mexico rose by \$237 million between 1993 and 1996, a 50-percent increase.

Mexico's imports of oilseeds from the United States dipped 8 percent by volume in 1995 in the wake of the peso crisis and subsequent recession, which caused difficulties for the poultry, hog, and dairy sectors. The sharpest declines came during the first two quarters of 1995. Mexican soybean imports were also constrained in early 1995 because a surge of imports during the final quarter of 1994 had built Mexican stocks. Confusion over GSM credit payments and strong competition from sunflower and soybean oils contributed to the decline in Mexico's soybean imports. Low prices for oilseeds during the first half of 1995 led Mexican buyers to hedge soybeans, preventing a greater drop in Mexican imports.

As Mexico's economy recovered from the devaluation and began growing again, resumption in consumer demand for meats raised the quantity of Mexico's soybean imports from the United States. In 1996, Mexico's oilseed imports from the United States rose 18 percent from the devaluation-depressed level of 1995, while higher prices raised the value of imports 54 percent. All growth occurred in soybeans.

Since NAFTA, U.S. soybean meal and oil exports to Mexico have generally increased. Since 1993, U.S. oilseed meal exports have risen from 347,700 metric tons to 391,000 metric tons in 1996, an increase of 12 percent. U.S. vegetable oil exports to Mexico also increased by 24 percent. U.S. oilseed and product imports from Mexico are negligible and consist primarily of sesame seed for the U.S. baking industry.

Mexican imports of U.S. vegetable oils rose 65 percent to 353,000 tons during 1995. Despite having excellent crush margins, Mexican processors (mostly family-owned) were hurt by the peso devaluation, small domestic oilseed supplies, and imports of U.S. sunflower, cottonseed, and soybean oils. In addition, consumption of meat suffered more than the vegetable oil sector, limiting the demand for protein meals for animal feed. Thus, large and small companies that rely on domestic processors to fill their needs for vegetable oil were encouraged to purchase vegetable oil directly from the United States. Sunflower oil benefited greatly from competitive prices compared with other vegetable oils during 1995.

A 12-percent drop in the quantity of Mexico's imports of protein meals from the United States occurred in 1996 compared with 1995, although the value of these imports rose 6 percent. Again, soybean meal accounted for the bulk of meal imports. While Mexico's imports of U.S. soybeans increased sharply in 1996, imports of vegetable oils were down 14 percent in quantity and 9 percent in value. As the peso began to recover, the health of Mexico's small domestic oil processing industry began improving again, making domestic processors more competitive with imported oils. Strong global demand for Canada's canola oil and relatively tight Canadian supplies from its 1995/96 crop led Mexico to switch some of its imports of this oil to U.S. oils in the first half of 1996.

U.S. oilseed and product exports to Canada have increased from 369,000 metric tons in 1993 to 459,000 tons in 1996, with increases in vegetable oil offsetting export declines for soybeans, sunflower and safflower. Soybean meal exports to Canada have risen beyond 1993 levels in 2 of the 3 years and in 1996 were 16 percent above 1993. Vegetable oil exports to Canada have nearly doubled from 116,400 metric tons in 1993 to 231,000 tons in 1996. Canada's share of U.S. soybean meal exports remains fairly constant, ranging from 15 percent in 1993 to 17 percent in 1994 to 13 percent in 1996, while Canada's share of U.S. soybean oil exports has increased from 3 percent in 1993 to 10 percent in 1996.

Canada is the largest market for U.S. soybean meal, representing about 15 percent of total U.S. soybean meal exports. However, U.S. soybean exports to Canada are smaller and more volatile. In 1994, record Canadian soybean and rapeseed crops reduced U.S. soybean exports to Canada nearly 90 percent from 1993 levels. However, U.S. soybean meal exports to Canada in 1995 climbed 13 percent to a record 798,000 tons in response to record U.S. meal production, record Canadian poultry production, and the lowest U.S. soybean meal prices in a decade. U.S. soybean exports to Canada increased because of reduced U.S.



prices and increased use of full-fat soybeans in Canadian dairy operations.

U.S. vegetable oil exports to Canada increased 60 percent in 1996. Canada's share of U.S. exports of vegetable oils rose sharply in 1996 to 10 percent, compared with just under 4 percent in 1995. Canada's oil imports from all sources reached a record level for 1995/96, while U.S. vegetable oil exports to other destinations dropped. Low Canadian vegetable oil stocks at the end of 1994/95 and continued strong demand in 1995/96, particularly for canola oil, attracted imports.

U.S. oilseed imports from Canada have not changed much since 1993, although there were small increases during 1994 and 1995. U.S. imports of oilseed meals from Canada have increased since 1993, and the U.S. share of Canada's exports has increased from 68 percent in 1993 to 80 percent in 1996. U.S. imports of vegetable oils from Canada have also increased since 1993, and the U.S. share of Canada's exports has risen from 69 percent in 1993 to 75 percent in 1996.

Although Canada is a major importer of U.S. protein meals and vegetable oils, the United States is an even larger importer of Canada's protein meals, oilseeds, and vegetable oils. Canola and canola products account for most U.S. oilseed and product imports from Canada. New U.S. crushing facilities caused canola imports from Canada to more than double during 1994, but the value-added from crushing was captured in the United States.

Increased canola production in the United States, the removal of the Canadian WGTA subsidies, and construction of new crushing facilities in Canada contributed to a 50-percent decline in U.S. canola imports from Canada during 1995. An expansion of Canadian canola crushing has led to greater availabilities of Canadian canola meal for exports. In 1995, sharp increases in global vegetable oil prices led to large stocks of canola meal and thus extremely low prices. Despite a sharp reduction of Canadian canola production in 1996, U.S. seed, meal, and oil imports continued to grow. High prices for soybean meal encouraged a 19-percent increase in U.S. canola meal imports during 1996, reaching a record of 800,000 metric tons. U.S. canola oil imports have risen at a faster rate than imports of canola seed because of expanding crushing capacity in Canada and its price competitiveness versus its close substitute, soybean oil.

### **Trade Issues**

There have been no trade issues over oilseeds or products.

### **Impacts of NAFTA on Oilseed Trade**

The reduction of soybean tariffs under NAFTA increased U.S. exports of soybeans to Mexico 2 to 5 percent over what would have been shipped in the absence of the agreement. Mexican imports of other oilseeds are expected to decline slightly because of the relatively lower protection on soybeans under NAFTA. A similar analysis estimated that NAFTA had little effect upon the volume of U.S. exports

of soybean meal to Mexico, but the tariff reduction on soybean oil is estimated to have increased soybean oil exports 5 to 10 percent over what would have been shipped in the absence of the agreement.

In NAFTA's first 3 years, Mexico increased its share of edible oil that came from crushing imported oilseeds, a trend boosted by slightly greater tariff reductions for soybeans than for competing oils and meals. Import demand for oil is now evenly split between imported oils and oil from imported oilseeds.

Overall, NAFTA does not appear to have had a major effect on U.S.-Canadian oilseed trade, because trade was fairly free before the CFTA, but vegetable oil trade has been affected. The reduction of vegetable oil tariffs increased U.S. exports of vegetable oil to Canada in 1996 by 7 to 12 percent over what would have been shipped without the agreement. A similar analysis estimated that NAFTA could have a slight positive effect on U.S. export volume of soybean meal to Canada, on the order of 1 percent or less. However, this depends upon the increased volume of cattle feeding in Canada relative to its domestic meal supply, since there was no duty on soybean meal prior to NAFTA. NAFTA is estimated to have increased U.S. imports of Canadian vegetable oils in 1996 by 3 to 5 percent over what would have been shipped without the agreement. A similar analysis estimates little effect on the level of Canadian oilseed and oilseed meal exports to the United States, with a small increase in oilseed meal exports offsetting a similar decrease in oilseed exports.

## **Peanuts**

### **Policy Changes Resulting From NAFTA**

*United States:* Prior to NAFTA and the Uruguay Round agreement of the GATT/WTO, peanut imports were limited by quotas established under Section 22 of the Agricultural Marketing Act of 1932. Under NAFTA, the United States established a TRQ for Mexican peanuts (shelled/in-shell). The original annual quota was 3,377 metric tons with over-quota tariffs of about 123 percent for shelled peanuts and 186 percent for in-shell. The TRQ increases at 3 percent per year and the over-quota duties are scheduled to decline 15 percent in the first 6 years and then be phased out by 2008 under the agreement. NAFTA rules require peanut products imported from Mexico to be made from NAFTA-grown peanuts to qualify for NAFTA benefits.

U.S. imports of peanut butter from Canada are governed by the Uruguay Round agreement. Under the Uruguay Round market access commitments, the United States has established a TRQ on peanut butter and peanut paste imports, with most allocated to Canada and Argentina. The Canadian portion of the TRQ is set at 14,500 tons. There is no constraint on peanut butter imports from Mexico, other than that peanut products must contain 100 percent NAFTA-grown peanuts.

*Mexico:* Mexico had no quantitative restrictions on peanuts but maintained a 20 percent tariff on peanut butter. Under NAFTA, the tariff on peanut butter will be phased out by 2003.

*Canada:* Canada has no restrictions or tariffs on imports of peanuts. However, prior to the CFTA there was a \$44.10-per-metric-ton tariff on peanut butter and a 7.5-percent tariff on peanut oil. The CFTA, subsumed under NAFTA, eliminates these tariffs over a 10-year period to be concluded January 1, 1998. Under NAFTA, Canada immediately eliminated its tariffs on peanut oil and peanut butter from Mexico, but maintained the progressive tariff elimination with the United States.

### ***Peanut and Product Trade Since NAFTA***

U.S. exports of peanuts and peanut oil to NAFTA partners have increased in each of the 3 years since NAFTA began. Although export growth in 1996 was slower than in 1994 and 1995, sales for 1994 through 1996 equaled \$247 million, 43 percent higher than in the 3 years preceding the agreement.

Exports to Mexico represent 20-25 percent of U.S. exports to NAFTA partners and are mainly peanuts rather than products. After increasing dramatically in the first year of the agreement, sales dropped slightly in 1995 but recovered in 1996. U.S. exports to Mexico in 1996 were more than double the 1993 level, but U.S. imports from Mexico rose even faster. In 1993, U.S. imports of peanuts from all origins were only about 775 metric tons, shelled. Mexico shipped 1,916 metric tons to the United States in 1994 and 4,023 metric tons by 1996. Thus, while U.S. peanut exports to Mexico have generally risen, net exports have declined over the last few years.

Shelled or in-shell peanuts represent the majority of U.S. peanut exports to Canada. Since Canada produces no peanuts, imports are necessary to fill domestic demand. U.S. exports of peanuts to Canada have been variable since the NAFTA began, but were almost 25 percent higher during the past 3 years than during the 3 years preceding the NAFTA.

### ***Trade Issues***

There have been no major disputes involving peanuts. However, a Section 22 action on peanut butter was considered in 1994, prior to implementation of the Uruguay Round TRQ.

### ***Impact of NAFTA on Peanut Trade***

Although NAFTA has had a direct impact on U.S.-Mexican peanut trade, other factors such as the peso devaluation and loss of access to credit by Mexican importers may have had a greater impact. U.S. exports of peanuts to Mexico have increased, but since Mexico had no restrictions on peanut imports prior to NAFTA the increase cannot be directly attributed to the agreement. Rather, U.S. peanut policies during the period, which mandated surplus U.S. peanut production, caused total U.S. exports to reach unusually high levels. Much of the increase in exports to Mexico is likely attributable to the effects of these policies. Undoubtedly, NAFTA has increased U.S. imports of peanuts from Mexico up to the TRQ level. In 1996, U.S. peanut imports from Mexico were four times the level of U.S. imports from all sources in 1993. Attributing the entire increase to NAFTA suggests a maximum estimate of 400 per-

cent higher imports (from a very low base) than would have occurred without the agreement. All of that growth came in the first 2 years of the agreement while Mexican exports expanded to fill the amount permitted under the TRQ. The TRQ increases 3 percent per year, so future gains will be limited to that rate until the over-quota tariff falls enough to make Mexican peanuts competitive with domestic production.

NAFTA-CFTA has not affected trade flows of peanuts between Canada and the United States. The U.S. peanut program allows exports of "additional" peanuts but requires exports of peanut products be manufactured from quota peanuts. Canada produces no peanuts and only a small quantity of peanut butter.

## **Livestock and Livestock Products**

### **Cattle**

#### ***Policy Changes Resulting from NAFTA***

*United States:* Tariffs on cattle entering the United States from Canada and Mexico have historically been low. Purebred breeding cattle and those for dairy purposes were admitted duty-free; other cattle were charged 2.2 cents per kilogram. The United States began tariff elimination with Canada over a 10-year period but accelerated the reduction to complete elimination by 1993. Duties on cattle from Mexico were completely eliminated at the start of NAFTA.

*Canada:* Purebred breeding cattle and those imported into Canada for dairy purposes are admitted duty-free, other cattle were charged 2.2 cents per kilogram. Canada began tariff elimination with the United States over a 10 year period but accelerated the reduction to complete elimination by 1993. Duties on cattle from Mexico were completely eliminated at the start of NAFTA.

*Mexico:* Prior to the implementation of NAFTA, Mexico had raised tariffs on non-breeding cattle from 0 to 15 percent. Once NAFTA took effect, the tariffs on U.S. and Canadian cattle were eliminated.

#### ***Cattle Trade Since NAFTA***

The United States trades three basic classes of cattle with Canada and Mexico. Purebred breeding cattle are imported from Canada and exported to both Mexico and Canada. Cattle for slaughter are both imported from and exported to Canada and primarily exported to Mexico, although large numbers of Mexican cattle were slaughtered in the United States during 1995. Historically, the animals imported for slaughter tended to be either cows or leaner steers and heifers than the animals produced in the United States. However, recent shortages of Choice grade beef have encouraged imports of higher-grade Canadian fed cattle, which can then be graded in the United States. U.S. slaughter cattle exports to Mexico tend to be older cull animals. The United States also imports feeder cattle from both Mexico and Canada. These animals, which have been

raised on grass, are then placed in U.S. feedlots where they are fed grain to produce the marbling characteristics desired by the American consumer.

Trade in breeding animals is a small portion of cattle trade and tends to reflect beef and/or dairy producer decisions to expand or upgrade herds. In the case of Mexico, the availability of GSM credit guarantees or Mexican government policies concerning herd upgrading are also a major factor in breeding animal imports. The United States is a net exporter of breeding cattle and exports to Mexico grew rapidly in 1994. The growth was not sustained, however, and exports fell dramatically in 1995 as a combination of the peso collapse and drought discouraged Mexican herd upgrading. Although the U.S. government offered GSM credits for cattle imports, Mexican banks, themselves facing liquidity problems, have been unable or unwilling to lend to producers.

U.S. imports of feeder cattle represent between 55 and 65 percent of all U.S. cattle imports. Mexico is the source of 75-90 percent of U.S. feeder cattle imports and Canada supplies the balance. U.S. purchases of feeder cattle are dependent on a number of factors including domestic and foreign inventories, grain prices, and exchange rate differentials. Cattle feeding has increased in western Canada, giving cow-calf operators there an alternative to selling cattle in the United States. Mexican producers never developed a major cattle feeding sector prior to NAFTA and lack a strong domestic market for grain-fed beef. Faced with considerably higher feed prices, they have little choice but to market feeder cattle to U.S. feedlots. U.S. feeder cattle imports have fluctuated widely since 1994. Imports were down 25 percent in 1994, up 40 percent in 1995, and down 60 percent in 1996. The large increase in 1995 was the result of Mexican producers liquidating inventories in response to the economic situation and a severe drought in Mexico. Given the peso's weakness, U.S. feeder cattle prices, although weaker than in the past 9 years, made the United States an attractive market. In 1996, imports from Mexico declined due to Mexican inventory reductions and falling U.S. feeder cattle prices due to high grain prices. Imports from Canada declined during 1994 and 1995 before rebounding strongly during 1996.

A substantial proportion of U.S. cattle trade in both directions are cattle for immediate slaughter while about half of U.S. cattle exports to Mexico are for breeding purposes. Cattle trade between the United States and Canada has increased since the CFTA, although the United States remains a substantial net importer of slaughter cattle. In 1993 and 1994, U.S. exports of non-breeding livestock increased 19 and 30 percent respectively; concurrently, imports of slaughter cattle fell 3 and 1 percent. However, when two large U.S.-owned slaughter plants in Alberta began undergoing renovation and expansion in 1995, U.S. exports fell 26 percent while imports rose 16 percent. Although imports continued to rise in 1996, it is likely that when these plants return to operation in 1997, imports from Canada will decline and U.S. exports may rise.

U.S. slaughter cattle exports to Mexico increased dramatically in the first year of NAFTA as tariffs fell, but dropped almost 90 percent in 1995 as declining incomes forced a re-

duction in Mexican beef consumption. U.S. exports in 1996 began to recover but still remain below pre-NAFTA levels. Imports from Mexico skyrocketed in 1995 as producers liquidated their herd in response to the drought and economic conditions. However, with the end of the drought and a depletion of Mexican herds, imports have returned to historic levels. It is likely that as beef consumption slowly recovers, U.S. imports of slaughter animals will remain low and exports of cattle will increase.

### **Trade Issues**

*Northwest Cattle Project:* U.S. cattle producers have complained that they face unfair health restrictions in marketing feeder cattle in Canada. The Canadian Cattlemen's Association has proposed a pilot program that would allow U.S. feeder cattle to be marketed directly to specific feedlots in Canada without testing for four diseases (anaplasmosis, bluetongue, brucellosis, and tuberculosis). These feedlots would then be required to market the animals for slaughter only. In exchange, the Animal and Plant Health Inspection Service and the exporting States would recognize Canada's disease-free status for brucellosis and tuberculosis and waive testing requirements for imported cattle. At this time, the proposal is undergoing risk assessment. Canada has proposed an October 1 target date.

*U.S. ITC Cattle and Beef Study:* The U.S. International Trade Commission (ITC) has instituted an investigation of the impact of the NAFTA and the Uruguay Round on imports and exports of live cattle for slaughter and fresh, chilled, and 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, and frozen beef through Mexico and Canada for importation into the United States. The ITC report, entitled "Cattle and Beef: Impact of the NAFTA and Uruguay Round Agreements on U.S. Trade," was released on July 7, 1997.

### **Impacts of NAFTA on Cattle Trade**

Cattle trade with Canada has been influenced more by the exemption of Canada from the U.S. Meat Import Law than by tariff changes. Tariffs on cattle traded between the two countries were low and were eliminated by 1993. However, cattle trade could have been influenced if beef imports from Canada were still included in the Meat Import Law. Under the Meat Import Law, the weight of imported cattle was included in calculation of the next year's meat quota. Thus, higher imports of cattle in one year could result in a lower quota the next year as imported cattle weights are subtracted from domestic production. When the Uruguay Round TRQ was set for beef, the effect of live cattle imports on production could not be considered as it had been under the Meat Import Law. Under these circumstances, if Canada were included in the TRQ, imports of slaughter cattle would have risen by an amount roughly equal to Canada's over-quota beef exports; that is, Canada would have avoided the over-quota tariffs by shipping live animals to the United States for slaughter. This would have increased U.S. cattle imports 20-30 percent. Likewise, U.S. exports of cattle to Canada would have likely increased if



the United States had been subject to the 25-percent surtax imposed on boneless beef in 1993 and U.S. beef exports rose to a level at which Canada placed a surtax on U.S. beef.

NAFTA's greatest effect on U.S. cattle trade was Mexico's immediate elimination of the 15-percent duty on live cattle exports. Considering only the reduction of the duty, U.S. exports of cattle to Mexico would probably have been 15-25 percent lower than in the absence of an agreement. Although the tariff reduction was insufficient to offset the effects of the economic crisis on beef consumption and the rise in the price of U.S. beef in pesos, had the tariffs been in place the sales of slaughter cattle would have fallen even further. NAFTA probably had less of an impact on U.S. cattle imports from Mexico than the forced liquidation of Mexican herds. The size of the tariff that would have been in place without the NAFTA would not have been sufficient to forestall producers from marketing slaughter cattle in the United States.

## **Beef**

### ***Policy Changes Resulting from NAFTA***

*United States:* Under the terms of NAFTA and CFTA, the United States exempted both Canada and Mexico from the U.S. Meat Import Law. This exemption from any quantitative restrictions on shipment of fresh, chilled, or frozen beef was carried forward in calculating the TRQ's under the Uruguay Round of the GATT. The United States also applies a 2-cent-per-pound tariff on imports of most types of beef. Under the CFTA, this duty was eliminated over a 10-year period; however, the reduction in beef duties was accelerated and Canadian beef now enters the United States duty-free. Tariffs on imports from Mexico were eliminated in the first year of the agreement.

*Mexico:* Prior to the implementation of NAFTA, Mexico had raised tariffs on beef from 0 to 20 percent for fresh beef and 25 percent on frozen beef. Once NAFTA took effect, the tariffs on U.S. and Canadian beef were eliminated. Prior to NAFTA, there was a 20-percent tariff on beef offal exported to Mexico, which is being phased out over 10 years.

*Canada:* Canada has eliminated both the United States and Mexico from its Meat Import Law and subsequent TRQ calculations. Canadian tariffs on U.S. beef were eliminated under an accelerated schedule, while those on imports from Mexico were eliminated at the start of NAFTA.

### ***Beef Trade Since NAFTA***

U.S. trade in beef has increased since the inception of NAFTA in 1994. Trade with Canada has increased during the past 3 years, but U.S. exports to Mexico have shown considerable variability. As a result of the increasingly transparent of the border between the United States and Canada, beef trade between the two countries has followed a geographical pattern. U.S. exports to Canada increased about 15 percent by volume between 1993 and 1996 as higher-grade U.S. product competes very favorably in the population centers of eastern Canada. In addition, "no-roll"

beef (USDA inspected but not graded) sells well in Canada where retailers generally do not specify the grade of product marketed. Imports from Canada have also increased 51 percent during the same period as western Canadian slaughter plants market their product to the U.S. West Coast. U.S. beef imports are likely to increase since there has been U.S. investment in the Alberta slaughter industry. Two U.S. firms own the two largest slaughter plants in Canada. These plants are currently operating at limited shifts as the plants expand capacity. Record inventories have led to double-digit increases in Canadian slaughter during 1996 but there have also been a larger number of heavier animals exported to the United States for slaughter. As a result, during 1996, beef imports from Canada grew 30 percent by volume and by value; the United States has reverted to a negative beef trade balance. It is likely that Canadian beef exports will increase further once these plants are back on line.

Beef trade with Mexico increased dramatically in the first year of NAFTA, increasing 86 percent by volume as lower duties and optimism over the Mexican economy stimulated an upgrading of diets. However, the economic collapse in December 1994, high debt loads, and diminished expectations forced Mexican consumers to reallocate their household budgets. Although trade in high-value cuts continued to serve the hotel-restaurant-institutional trade, lower incomes among the majority of Mexican consumers forced them to purchase lower-value cuts of beef or switch to sausage or other forms of protein. U.S. exports declined almost 60 percent between 1994 and 1995 despite lower U.S. prices. Although some recovery occurred in 1996, a severe drought in northern Mexico encouraged increased domestic slaughter, further pressuring U.S. product. Through the end of 1996, exports from the United States to Mexico have increased in volume almost 49 percent over 1993. Mexico ships only a small amount of beef to the United States. Given the proximity of the drought-stricken regions to the U.S. border and the relative prices resulting from the peso devaluation, Mexican producers marketed many of their animals for slaughter in the United States in 1995.

### ***Trade Issues***

Trade in beef has been subject to trade disputes between the United States and Canada over equivalency of inspection and between the United States and Mexico over charges that the United States is dumping beef in Mexican markets. Although neither has resulted in any major disruption of trade, both issues are recurring irritants.

*Inspection Issues:* Under the terms of CFTA, Canada and the United States agreed to work towards harmonizing their inspection regimes. In 1990, the USDA proposed that meat be allowed to move between the two countries with only random border inspection on a trial basis. However, U.S. inspectors rejected several shipments from Canada and the ensuing publicity resulted in a cancellation of the trial. In 1992, Canada and the United States agreed that shipments of meat between the two countries could be inspected at either the border or at specified destinations. Canada has complained that although they have fully im-

plemented the agreement, shipments from Canada to the United States are still facing delays.

*Mexican Anti-Dumping Investigation Against U.S. Beef:* A Mexican anti-dumping dispute began in June 1994 with charges that U.S. exporters engaged in discriminatory pricing practices between August 1993 and January 1994. After a brief investigation, the Mexican government published a preliminary finding against the United States showing some margin of price discrimination on the part of some U.S. packers, but not a threat of injury sufficient to justify immediate imposition of anti-dumping duties. Before a final ruling was issued, the Mexican Confederation of Cattle Producers and the U.S. National Cattlemen's Association reached an "understanding" to improve communication between the two groups. Subsequently, the complaint was withdrawn. However, charges have been made recently that the United States is dumping product in Mexico. At this time, there has been no formal complaint made before the Mexican government.

### **Impacts of NAFTA on Beef Trade**

Beef trade has benefited greatly from the liberalization of trading rules among the NAFTA partners. The greatest impact has probably been from the elimination of quotas between the United States and Canada, but the elimination of Mexican tariffs on beef would have also been significant had there not been a reduction in Mexican incomes and a worsening in the terms of trade due to the peso devaluation.

It is difficult to quantify how much NAFTA boosted trade. Calculating Canada's share of the quota under the Meat Import Law indicates that Canada would have had been able to ship 130-135 million pounds per year in 1994. If the WTO TRQ were to include Canada, Canada would have been able to ship about 145 million pounds to the United States. This is about one-third the level of actual imports from Canada during 1994-96, indicating higher imports due to NAFTA.

Likewise the United States has benefited from elimination of restrictions on exports to Canada. Although Canada has not invoked its Meat Import Act since 1985, the Ministry of Agriculture has closely monitored imports of beef from non-NAFTA countries and imposed a 25-percent surcharge on boneless beef from non-NAFTA sources in 1993. The initial TRQ for all non-NAFTA boneless beef was set at 72,000 metric tons (the United States exported 67,000 metric tons or 37 percent of Canada's boneless beef imports). In 1994, rules were relaxed to relieve pressure on manufacturing beef and the effective TRQ was expanded to 91,000 tons. In 1995, Canada replaced its Meat Import Act with a TRQ of 76,409 tons and a 30.3-percent over-quota duty. Although the pre-Uruguay Round surcharge affected lower-value manufacturing beef, had the United States not been exempt from these restrictions, it is likely that between one-third and one-half of U.S. exports to Canada would be subject to over-quota duties. This implies that NAFTA may be responsible for increasing U.S. beef exports to Canada by as much as twice the level that would occur without the agreement. In 1994-96, the United States maintained a 40- to 50-percent share of the Canadian import market, consid-

erably above the 10- to 15-percent share prior to the CFTA when the United States was subject to Canada's Meat Import Act.

The Mexican tariff elimination also boosted U.S. exports by allowing a higher level of imports than would have been expected if Mexico continued to maintain the 20- to 25-percent duty on imports from the United States. The elimination of the duty in 1994 increased the quantity of U.S. exports to Mexico by 10-15 percent over what would have been shipped to Mexico in each of the years since NAFTA. Had the MFN duty been in place during the peso devaluation, the quantity of U.S. exports would have been lower than what was actually shipped. In addition, NAFTA rules prevented Mexico from imposing any additional tariffs on U.S. products.

## **Hogs**

### **Policy Changes Resulting from NAFTA**

*United States:* There are no tariffs on hogs entering the United States. However, the United States has maintained a countervailing duty (CVD) on hogs imported from Canada since 1984. The level of the CVD has varied depending upon Canadian Federal and Provincial payments to hog producers. In 1994, Canada replaced its tripartite payment system with coverage under the National Income Stabilization Accounts program, which is not countervailable since it is not industry-specific. Although the current duty (which is based on program payments from April 1993 - March 1994) still include tripartite payments, CVD's calculated on data after July 1994 will likely be substantially lower. According to the U.S. Commerce Department, in reviewing payments for 1994-95, tripartite payments represented about 63 percent of value of all subsidies conferred on Canadian producers. In November 1996, the Commerce Department indicated that it would no longer collect CVD's on slaughter sows, boars, or feeder pigs. It ordered the return of all duties collected on those animals since 1991. Mexico is considered hog cholera endemic and any hogs exported to the United States are subject to a 90-day quarantine. This effectively precludes hog imports from Mexico.

*Canada:* There is no duty on hog imports.

*Mexico:* Prior to NAFTA, Mexico maintained a 20-percent duty on non-purebred hogs. Under NAFTA, the duty is to be reduced over 10 years. A safeguard TRQ was placed on imports; if imports rise above that level, the duty reverts to the MFN (or pre-NAFTA if lower) level. The safeguard, initially set at about 370,000 head, expands 3 percent per year.

### **Hog Trade Since NAFTA**

Over the past several years, U.S. imports of live hogs from Canada have developed along two tracks. The United States imports live slaughter hogs, primarily from producers in western Canada but also imports feeder pigs from Manitoba and Saskatchewan for finishing in the United States. Imports of feeder pigs have steadily expanded over the past 3 years as Canadian inventories increased. Imports of slaughter hogs have fluctuated with Canadian invento-

ries, U.S. prices, and changes in the CVD. Imports were also boosted by a weak Canadian dollar. Although U.S. hog prices fell 13 percent in 1994, the value of the Canadian dollar fell 6 percent; as a result, the U.S. price in Canadian dollars fell about 8 percent and imports fell 7 percent. In 1995, the Canadian dollar stabilized, U.S. hog prices strengthened and as inventories continued to expand, imports of slaughter hogs doubled, reaching their highest levels in history. U.S. prices in 1996 reached their highest levels since 1990 and the strength of U.S. prices relative to those in Canada helped push imports to new records.

Exports to Mexico increased dramatically in 1994. This represented a substantial increase in non-breeding animal shipments to Mexico, most probably for slaughter. However, following the peso devaluation, imports in 1995 fell to less than one-tenth of the 1994 level. Slaughter hog exports recovered somewhat in 1996 but remain substantially below 1995. Less of a recovery has occurred in exports of breeding hogs due to the drought's effect on feed prices and the lack of access to credit for expansion or upgrading of Mexican herds.

### **Trade Issues**

*U.S.-Canada Binational Panel Reviews:* Over the history of CFTA, Binational Panels have issued several rulings modifying the U.S. Commerce Department's administrative reviews of the CVD. In several cases, the Panel ordered the Commerce Department to change the level of duty collected for a historical period but these rulings had no impact on level of duty collection then in force. (CVD's are calculated from historical subsidy payouts and collected for a specific historical period. However, for a given period, a bond equal to the most recent CVD is collected and held in escrow until the actual subsidies are calculated. If, at a later date, the bond is determined to be greater than the actual CVD, a refund plus interest is made. If the bond is less, then additional funds are collected.) In March 1994, the Binational Panel was requested to consider whether the Commerce Department should be required to split the classification of live non-breeding hogs to include slaughter sows and boars and weanlings (feeder pigs) as separate categories with separate CVD calculations for each category. In May 1995, the Panel ruled that the Commerce Department should reinstate its previous classification of slaughter sows and boars and consider the creation of a new classification for feeder pigs. In August 1995, the Commerce Department provided new classifications. Currently, no duty is collected on slaughter sows, boars, or feeder pigs.

*Hog Cholera Restrictions and Regionalization:* In 1994, Mexico officially requested that the U.S. recognize the states of Sonora, Sinaloa, Chihuahua, Baja California, and Baja Norte as low risk regions for hog cholera in order to ship pork to U.S. markets, and in 1995, added Yucatan to this list. The U.S. is committed to accepting the concept of regionalization of disease restrictions, and in April 1996, published preliminary rules for public comment, which led to the publication (July 1997) of a final rule in which the U.S. officially recognized Sonora as a low risk region for hog cholera.

*Pseudorabies Regulation:* On August 13, 1997, the Canadian government announced that Canadian imports of U.S. swine will be exempt from quarantine requirements due to pseudorabies. Prior to this change, Canada required a 30-day, post-entry quarantine of all U.S.-origin swine because Canada is free of pseudorabies while the U.S. is still eradicating this disease. This prior requirement effectively prevented U.S. swine for immediate slaughter from being exported to Canada. The new regulation will exempt U.S. swine imported into Canada from the current testing and quarantine requirements, provided they are taken directly to an abattoir and slaughtered immediately.

*Mexican Anti-Dumping Investigation of U.S. Hogs:* In March 1993, a confederation of Mexican pork producers requested an investigation of alleged pork dumping during May 1991-May 1992. The investigation included live hogs as well as a variety of pork products. In September 1993, the Mexican government found that there was evidence of dumping and that the dumping margins ranged from 0-32 percent. The duties were held in abeyance until a determination was made as to whether the pork in question was injuring or threatening injury to the Mexican pork industry. On August 26, 1994, the Mexican Ministry of Trade and Industry found that there was no evidence of injury or threat of injury. The case was closed and no antidumping duties were levied.

### **Impacts of NAFTA on Hog Trade**

NAFTA has had little direct impact on hog trade. With respect to Canada, the only restrictions on hog trade are the CVD and health restrictions. Since the CVD was in place prior to CFTA, the Binational Dispute Panel can assess whether administrative reviews to determine the level of duty are in keeping with the CFTA, but cannot revoke the CVD. In the case of Mexico, the Mexican tariff on hogs imports has been reduced from 20 percent to 14 percent in 1996. The impact of the change in the exchange rate in 1994 and the drought's impact on feed prices and the forced liquidation of Mexican herds offset the gains from a lower duty. It is estimated that the duty reduction thus far would have raised U.S. exports of hogs by 5 percent over levels expected without NAFTA.

## **Pork**

### **Policy Changes Resulting from NAFTA**

*United States:* The majority of imported pork enters the United States duty-free but there are duties on several categories of processed pork. These duties range from 1.2 cents per kilogram for sausages to 6.4 cents for canned hams. Under the CFTA, these duties were to be reduced over a 10-year period but the schedule was accelerated and Canadian product now enters duty-free. Mexico is considered hog cholera endemic and any pork exported to the United States must be cooked and in air-tight containers. Duties were eliminated at the start of NAFTA.

*Canada:* The Canadian duty schedule for pork is similar to that for the United States. Although CFTA called for pork duties to be reduced over 10 years, the reductions were ac-

celerated and U.S. pork is now admitted duty-free. Mexico is considered hog cholera endemic and any pork exported to Canada must be cooked and in air-tight containers. Canada eliminated duties on Mexican pork at the start of NAFTA.

*Mexico:* Mexico has a 20-percent duty on most imported pork products. Under NAFTA, the duty for the United States and Canada is to be reduced over 10 years. A safeguard quota was placed on imports of certain cuts of pork; if imports rise above that level, the duty reverts to the MFN (or pre-NAFTA if lower) level. The safeguard, initially set at about 68,500 metric tons for all categories, expands 3 percent per year.

### **Pork Trade Since NAFTA**

Trade in pork has increased since the inception of NAFTA. Although within NAFTA the United States remains a net importer of pork (from Canada), U.S. exports have grown more rapidly than imports and the imbalance between U.S. imports from NAFTA partners and exports has narrowed in both volume and value. The U.S. pork trade deficit averaged \$350 million from 1994 to 1996.

Pork trade with Canada has been relatively free of barriers and like beef began to resemble a "U" as producers in western Canada export pork and live hogs to serve the population centers of the U.S. West Coast and U.S. producers export product to eastern Canada. However, there has been substantial growth over the past 2 years in exports of live hogs from Ontario as U.S. packers have outbid packers in that Province. U.S. pork exports have more than doubled in both volume and value since 1993. Imports of pork from Canada increased in 1994 and 1995 but declined sharply in 1996 as large hog shipments to the United States reduced Canadian pork production.

Pork trade with Mexico grew dramatically in the first year of NAFTA, increasing 75 percent by volume and 63 percent by value. The greatest increase in demand was for fresh, chilled, and frozen pork; growth in imports of prepared and preserved products lagged. However, following the economic crisis, demand for fresh, chilled, and frozen pork declined more rapidly than for processed product. Although hotels and restaurants geared to tourist trade continued to import product, the middle class was forced to reduce consumption of imported pork. U.S. exports of fresh, chilled, and frozen pork fell 65 percent in 1995 but exports of prepared and preserved pork only declined 35 percent. In 1996, the recovery in U.S. pork sales was led by lower-value products; volume exports of prepared and preserved pork were up 27 percent while exports of fresh, chilled, and frozen pork continued to decline.

### **Trade Issues**

*Health and Sanitary Issues:* As in the case of hogs, U.S. health restrictions over the status of hog cholera in Mexico have led pork producers to complain that they are unjustly being prevented from marketing their pork in the United States. Although the United States is committed to accepting the concept of regionalization of disease restrictions, general rules for monitoring and acceptance of products

from non-disease areas for all commodities are still being developed. Preliminary rules were published by USDA's Animal and Plant Health Inspection Service in April 1996 and are currently undergoing revision following public comment.

*Mexican Anti-Dumping Investigation:* In March 1993, a confederation of Mexican pork producers requested an investigation of alleged pork dumping during May 1991-May 1992. The subsequent investigation included live hogs as well as a variety of pork products. In September 1993, the Mexican government found that there was evidence of dumping and that the dumping margins ranged from 0-32 percent. The duties were held in abeyance until a determination was made as to whether the pork in question was injuring or threatening injury to the Mexican pork industry. On August 26, 1994, the Mexican Ministry of Trade and Industry found that during the period in question, there was no evidence of injury or threat of injury. The case was closed and no antidumping duties were levied.

### **Impacts of NAFTA on Pork Trade**

NAFTA has had some impact on pork trade. With respect to Canada, pork trade has been relatively free of restrictions. Mexican tariffs on pork imports have been reduced from 20 percent to 14 percent. At most, the duty reduction would have raised U.S. exports of pork by 5-10 percent over the level expected in the absence of NAFTA. However, the impact of changes in the exchange rate in 1994 and the drought's impact on feed prices and the forced liquidation of Mexican herds reduced incentives to purchase U.S. pork more than the positive incentives from a duty reduction on the price of imported pork.

### **Poultry**

#### **Policy Changes Resulting from NAFTA**

*United States:* The United States has tariffs ranging from 2 cents to 10.6 cents per kilogram on poultry. Under the CFTA, tariffs on poultry imports from Canada were to be phased down over a 10-year period. However, as with other meats, tariff reductions were accelerated and have been eliminated. Tariffs on poultry imported from Mexico were eliminated in the first year of the agreement. However, the United States considers Mexico to be Newcastle disease endemic and does not import anything but cooked and sealed product from Mexico.

*Canada:* Prior to the Uruguay Round agreement, Canada maintained import quotas that are tied to production decisions for supply controls. The quota for broilers was set at 6.3 percent of the previous year's production level and the quota for turkeys was set at 2 percent of the current year's expected production. Under the CFTA and later included in NAFTA, the global quota allocations were increased to 7.5 percent for broilers and 3.5 percent for turkeys. Canada has also offered supplemental quotas, which in many cases raise imports well above the formal quotas. Under the terms of the Uruguay Round, Canada converted its MFN quotas to a TRQ with a high over-quota tariff. Canada's

new TRQ also included poultry products, which had not been included in its global quotas.

*Mexico:* Prior to the Uruguay Round, Mexico had controlled poultry imports through import licenses and a 10-percent duty. Under NAFTA, an initial TRQ was established on a variety of poultry categories equaling 95,000 metric tons. Quantities above that amount were subject to over-quota duties ranging from 133 to 260 percent. The TRQ will expand 3 percent per year and the duties will decline by 24 percent during the first 6 years of the agreement and then be eliminated by year 10.

### **Poultry Trade Since NAFTA**

U.S. exports of poultry and poultry products to Mexico and Canada have declined about 15 percent by volume and 5 percent by value since 1993. Sales of fresh and frozen chickens have increased to both Canada and Mexico but were offset by declines in turkeys and other poultry and prepared poultry products.

Prior to the Uruguay Round, Canadian poultry imports were limited to set percentages of either a previous year's production or an estimate of current-year production, but the inclusion or elimination of supplemental licenses could change import quantities. A large increase in Canadian poultry production resulted in a slight decline in the quantity of U.S. exports of fresh, chilled, and frozen poultry to Canada in 1994 and 1995 but was offset by higher sales of live birds. Higher prices left value sales about the same in 1994 and 4 percent higher in 1995. Due to a differential in tariffs, exports of prepared poultry grew steadily in 1995 and 1996 but will likely slow since they have been included in the Uruguay Round global quotas.

On January 1, 1996, Canada changed its method of allocating import permits for chicken. Under the revised system, new allocation pools will exist for each of the following categories of importer: processors, distributors, or food service. Through 1999, participants may choose to join one of those pools or to retain a fixed traditional import allocation. By 1999, the chicken TRQ will be allocated to firms importing chicken before the introduction of import controls in 1979 (to the extent of their initial share), to processors producing chicken products competing with non-controlled imports (e.g., TV dinners), and to food service companies (sharing an allocation of 2.5 million kg on the basis of market share). The remainder of the TRQ will be split 70/30 between processors (on the basis of market share) and distributors (on the basis of equal share). The system is designed to increase the import allocation share of firms who contribute to employment and value-added activity in Canada and to eliminate allocations to firms that have not demonstrated an active involvement in the chicken industry. It is expected that potentially greater allocations will result for companies choosing to join the new pools.

As with other meats, U.S. exports of poultry to Mexico increased substantially in the first year of NAFTA. Sales in the first 3 years of NAFTA have been above the TRQ levels established by the Mexican government. Led by sales of chicken (up 17 percent), sales of poultry meat

in 1994 increased 11 percent by volume and 12 percent by value. However, in 1995 demand for poultry fell as the economic crisis reduced consumer incomes and increased the peso price of imported poultry. The volume of U.S. exports of fresh, chilled, and frozen chicken meat declined 8 percent while turkey sales fell 17 percent. U.S. exports of poultry were supported by pressure from Mexican sausage manufacturers who argued that charging over-quota rates on mechanically deboned poultry meat would put domestic sausage at a price disadvantage by substantially raising the price of a major input. Imported sausage enters at a lower duty than poultry meat and Mexican poultry producers cannot supply sufficient quantities of low-priced mechanically deboned meat to serve the domestic sausage industry. Therefore the Mexican government increased within-quota poultry quantities. With the recovery of the economy in 1996, U.S. exports of poultry increased 15 percent in quantity and 27 percent in value.

### **Trade Issues**

Canada's conversion of absolute quotas on poultry to TRQ's under the Uruguay Round resulted in a significant trade dispute between the United States and Canada. Using the dispute settlement process provided in NAFTA, the United States requested consultations with Canada, which were held in March 1995. The two countries subsequently presented written and oral arguments to a five-member NAFTA panel to resolve the dispute. The United States argued that under NAFTA, neither country may impose higher tariffs on imports from the other country than agreed to under NAFTA. The United States has also argued that each country must eliminate tariffs in accordance with the NAFTA. Canada's view was that it had a right to convert nontariff barriers to TRQ's under the World Trade Organization and to apply those TRQ's to the United States under NAFTA.

On December 2, 1996, the panel issued its final report, finding that Canada's application of these new tariffs to U.S. goods does conform with its NAFTA obligations. Consequently, U.S. access to Canadian markets for poultry remains unchanged. There is no appeal process in NAFTA's dispute settlement mechanism.

### **Impacts of NAFTA on Poultry Trade**

It is difficult to assess the impact NAFTA/CFTA had on U.S. poultry exports to Canada. Had Canada strictly enforced its pre-NAFTA quota of 6.3 percent of production for broilers and 2 percent for turkeys, U.S. poultry exports to Canada could have been 40-50 percent less than under the CFTA quotas. However, Canada has a history of offering supplemental permits to meet internal demand. Since 1993, U.S. broiler exports have averaged 10 percent of the previous year's production although the quota has been set at 7.5 percent. U.S. turkey exports have not reached the quota set under the CFTA.

Although Mexico could have limited U.S. exports to its TRQ levels, since the advent of NAFTA Mexico has been allowing larger in-quota imports than set under NAFTA. It is likely that the waiver would have occurred regardless of



whether Uruguay Round or NAFTA rules were in place. In either case, exports to Mexico would have remained at current levels due to pressure from the sausage manufacturing sector.

## Dairy

### **Policy Changes Resulting from NAFTA**

*United States:* Historically, the United States maintained a series of quotas on dairy products under Section 22 of the Agricultural Adjustment Act of 1932. Under the terms of CFTA, the United States agreed to eliminate tariffs on dairy products over 10 years. However, quotas would remain on imports of dairy products from Canada. Under NAFTA, the United States granted Mexico a duty-free TRQ of 422 metric tons for milk powder, 5,550 metric tons for cheese, and a basket of quotas for other dairy products. The over-quota tariffs on milk powder ranged from 78 to 83 percent, the tariffs on cheese equaled 69.5 percent and other products were assessed a tariff equal to the average of import protection in 1989-91. The TRQ's expand 3 percent per year and the over-quota tariffs are eliminated over 10 years. Under the Uruguay Round, the United States replaced its quotas with TRQs and high over-quota duties.

*Canada:* Prior to the Uruguay Round, Canada maintained a system of import quotas and licensing requirements to protect its domestic supply management regime for dairy. Under CFTA, tariffs were reduced but most quotas and licenses remained in place and little opportunities to expand dairy trade were offered. Mexico and Canada agreed to exclude dairy from NAFTA. Under the Uruguay Round, Canada converted its import quotas on dairy products into a series of TRQ's. The TRQ's were calculated on the basis of 5 percent minimum access for all dairy products, with some products receiving greater protection than others.

*Mexico:* Prior to NAFTA and the Uruguay Round, Mexico used import licenses to control the flow of dairy products. Tariffs tended to be modest, ranging from zero to 20 percent. Under NAFTA, Mexico guaranteed the United States duty-free access for 40,000 metric tons of milk powder with an over-quota tariff of 139 percent. The TRQ grows at 3 percent per year and the tariff is reduced 24 percent in the first 6 years and then eliminated by year 15. Other dairy products are subject to straight 20- to 40-percent tariffs, which in turn are reduced over 10 years.

### **Dairy Trade Since NAFTA**

The United States is a major net exporter of dairy products to NAFTA countries. Although the trade balance fell in 1994 and 1995, increased sales in 1996 boosted the surplus to \$145 million. In volume terms, U.S. dairy exports to NAFTA partners increased in 1994 and 1996, but lower sales value and a large reduction in 1995 sales offset any growth from 1993. Increased imports from NAFTA partners also lowered the surplus. Imports from Canada increased in both 1994 and 1995 while Mexico increased shipments to the United States in 1996.

The United States maintains a positive trade balance with Canada in a wide variety of dairy products. After averaging \$8.9 million in 1994-95, the surplus ballooned to \$48 million in 1996. U.S. exports of all dairy to Canada have more than doubled since 1993. Sales of whey and "soft" (ice cream, yoghurt, etc) dairy products have increased every year. Sales of soft products began increasing with the advent of the CFTA and have increased three-fold since 1993. Soft products represent the largest sales category, averaging 55 percent of dairy exports to Canada during 1994-96. Exports of whey, which have averaged 25 percent of sales to Canada, have increased in volume in each of the years following NAFTA but declined slightly in value in 1994. Canada has no restrictions on the import of whey protein concentrate; given the pricing structure in Canada, processors have had an incentive to substitute whey for skim milk solids in a number of products.

U.S. dairy imports, mainly cheese and "other" products, have been variable over the past several years. Imports of casein, cheese, and fluid milk have increased somewhat since 1993 but imports of other dairy products have fallen.

The United States maintains a large trade surplus in exports of dairy products to Mexico. Although the size of the surplus has declined due to reduced sales of nonfat dry milk and increased imports of a variety of dairy products from Mexico, in 1996 the surplus equaled \$97 million. Nonfat dry milk is the single largest category of U.S. dairy exports to Mexico, averaging 18 percent of the total value during 1994-96. Total U.S. dairy exports to Mexico have fallen as a result of the devaluation, a reduction in Dairy Export Incentive Program (DEIP) sales, and high international prices in 1996, but whole milk exports have reversed the decline of 1995 and are above pre-devaluation level. Whey and cheese exports increased in 1996 but remain below pre-NAFTA levels. U.S. exports of butter were depressed as sales under DEIP were lower and high butter prices during much of 1996 reduced Mexican demand.

### **Trade Disputes**

*Canada's TRQ on Dairy Products:* Canada's conversion of dairy quotas to TRQ/s under the Uruguay Round resulted in a significant trade dispute between the United States and Canada. Using the dispute settlement process provided in NAFTA, the United States requested consultations with Canada, which were held in March 1995. The two countries subsequently presented written and oral arguments to a five-member NAFTA panel to resolve the dispute. The United States argued that under NAFTA, neither country may impose higher tariffs on imports from the other country than agreed to under NAFTA. The United States has also argued that each country must eliminate tariffs in accordance with the NAFTA. Canada's view was that it had a right to convert nontariff barriers to TRQ's under the WTO and to apply those TRQ's to the United States under NAFTA.

On December 2, 1996, the panel issued its final report, finding that Canada's application of these new tariffs to U.S. goods does conform with its NAFTA obligations. Consequently, U.S. access to Canadian markets for dairy

products remains unchanged. There is no appeal process in NAFTA's dispute settlement mechanism.

**Mexican Milk Standards:** In October 1994, the Mexican Department of Health published a proposed new rule for pasteurized fluid milk standards including domestic and imported products, replacing a longstanding 24-hour expiration norm that had not been enforced either for local or imported products. The proposed regulation would have limited fluid milk shelf-life to 48 hours after pasteurization. While under discussion, conflicts between domestic dairies and importers in border areas occurred, including the removal of U.S. milk from supermarket shelves in the State of Sonora. After the comment period, the Mexican Department of Health eliminated the rule and allowed suppliers to establish voluntary expiration dates.

### **Impacts of NAFTA on Dairy Trade**

The tariff reductions granted under both CFTA and NAFTA likely had little impact on dairy trade with Canada as there was no change in dairy access under either the CFTA or NAFTA. Market access into Canada was limited by quotas and licenses prior to the Uruguay Round and remains limited by prohibitive tariffs on over-TRQ quantities.

Market access into Mexico guaranteed by NAFTA has proven useful in expanding opportunities to market U.S. products, but other factors have limited growth in exports to Mexico. A reduction in incomes, the impact of higher international prices in general, and higher prices facing Mexican consumers following the peso devaluation limited demand during 1995-96. In addition, a reduction in Dairy Export Incentive Program sales also limited the ability of the United States to market both butter and non-fat dry milk. As a result, in most cases, U.S. exports did not reach the level of the Mexican TRQ's. However, had the United States been able to reach its TRQ levels for nonfat dry milk, the levels granted by the TRQ were about 25 percent higher than the average of the licenses issued in the 3 years prior to NAFTA. The United States remains concerned that Mexico allows only CONASUPO, a state trading enterprise, to import milk powder, which is then resold at a lower price for use in domestic feeding programs.

## **Other Crops**

### **Dry Beans**

#### **Policy Changes Resulting From NAFTA**

**United States:** Prior to the NAFTA and the CFTA, the United States maintained duties ranging from 1.7 to 3.3 cents per kilogram on imports of dry beans. Under the CFTA, which was subsumed under NAFTA, duties on imports from Canada were scheduled to be reduced over a 10-year period but tariff reductions were accelerated and duties have been eliminated. Under NAFTA, the tariffs on imports from Mexico were removed immediately upon implementation.

**Mexico:** Before NAFTA, Mexico restricted dry bean imports through import licenses. Under NAFTA, the Mexican

licenses were eliminated and the United States was granted a duty-free TRQ of 50,000 metric tons. Canada received a TRQ of 1,500 metric tons. Over-quota tariffs for both countries were set at \$480 per metric ton (but not less than 139 percent ad valorem). During the 15-year transition period, the over-quota tariff will decline 24 percent in the first 6 years and then be phased out in equal increments over the remaining 9 years, that is, by 2008. Concurrently, the quotas will expand at 3 percent each year through the 15 years.

**Canada:** Prior to the CFTA, Canada maintained duties of 2.21 or 3.31 Canadian cents per kilogram on imported dry beans. Under the CFTA, duties on imports from the United States were scheduled to be reduced over a 10-year period, but tariff reductions were accelerated and duties have been eliminated.

### **Dry Bean Trade Since NAFTA**

Mexico has been a highly variable but at times a substantial market for U.S. dry beans. Due to the important role of dry beans in the Mexican diet, especially among lower-income consumers, Mexican policy has tended to provide support for domestic producers while ensuring sufficient quantities for consumption. This has led to "feast or famine" in trade; imports are either rather low or very high depending on domestic production. Since NAFTA, U.S. exports have fallen short of the TRQ in 1994 and 1995, but were double the TRQ level in 1996. Imports in 1994, although higher than in 1993, were below the TRQ level as domestic agricultural policies in Mexico encouraged an expansion of domestic supplies. Imports were less than 40 percent of the TRQ in 1995 due to increased production. The economic crisis in Mexico actually led to an increase in dry bean consumption as many middle- and lower-income families were forced to reallocate household budgets toward cheaper sources of protein. However, in 1996 a combination of drought and a freeze dramatically reduced dry bean production in the largest producing states. To ensure sufficient supplies to meet demand, the Mexican government authorized auctions of licenses for more than triple the NAFTA-allotted TRQ for the year. Auctions took place three times during the year. The first auction, in February, was for the entire NAFTA quota of 53,000 metric tons but two supplemental auctions were held in May and June. These auctions each offered licenses for an additional 100,000 tons of beans. Neither of the supplemental auctions was fully subscribed; by June, high U.S. prices, in part because of sales to Mexico, lowered importer interest and only slightly more than half the license volume was allocated.

U.S. imports of dry beans from Mexico increased slightly in 1994 and 1995 but remained equivalent to levels in the early 1990's.

### **Trade Issues**

There have been no major disputes concerning dry beans, but traders have complained about an initial requirement of the Mexican government that import licenses, which are granted through auctions, be exercised by July 15. In 1995, Mexico extended the date to October and in 1996 the licenses were valid all year.

## **NAFTA Impacts on Dry Beans**

NAFTA has had little effect on trade in dry beans. Despite substantial duty-free access for dry beans, Mexico imported less than its available quota allocations in the first 2 years of NAFTA. When production shortfalls made it necessary to import dry beans in 1996, the Mexican government showed a willingness to issue licenses well in excess of the TRQ to offset the domestic shortfalls. This type of activity is in keeping with Mexico's historical import patterns. Although increased exports of beans to Mexico supported dry bean prices in the United States, the increased exports were not the direct result of NAFTA.

## **Cotton**

### **Policy Changes Resulting from NAFTA**

*United States:* Under NAFTA, the United States established a duty-free cotton import quota for Mexico of 46,000 bales, two-and-one-half times Mexico's previous quota under Section 22. Pre-agreement tariffs on cotton imports ranged between 1.5 and 4.4 cents per kilogram. The NAFTA quota has grown 3 percent annually, and after 10 years the 26-percent tariff for over-quota shipments will be phased out.

For textile products (yarn, fabric, and apparel), the United States reduced tariffs and expanded quota-free access for textile products derived from yarn and fiber produced by a NAFTA country. U.S. duties are being eliminated over 5 years on 95 to 99 percent of Mexico's textile goods that qualify under NAFTA rules of origin. All duties between the United States and Canada on trade in qualifying yarn and thread, and for all fabric and apparel, will be at zero as of January 1, 1998 under the original terms of the CFTA. Quotas were eliminated for Mexico's exports of yarn, and for fabric and apparel produced from yarn from a NAFTA country.

*Mexico:* Mexico's pre-NAFTA 10-percent tariff on cotton imports is being phased out over 10 years. Mexico's duties are being eliminated after 5 years on 89 to 97 percent of U.S. textile exports that qualify under NAFTA rules of origin. Duties were eliminated immediately in Mexico for key products of export interest for U.S. producers.

*Canada:* All duties between the United States and Canada on trade in qualifying yarn and thread, and for all fabric and apparel, will be at zero as of January 1, 1998 under the CFTA. Textile trade between Canada and the United States was not affected by Multi-Fiber Arrangement quotas, so no changes were necessary. Similarly, Canada had no tariff on imported cotton before the agreement.

### **Cotton Trade Since NAFTA**

U.S. cotton exports and textile trade with Canada have grown steadily since NAFTA's passage, with large surpluses for the United States in both raw and processed products. Trade with Mexico is more complicated. The United States exports raw cotton to Mexico and there is significant two-way trade in textile products, with the

United States exporting fabric and other intermediate products and importing finished goods. Cotton and textiles trade with Mexico has fluctuated, with Mexican imports high in 1994, falling sharply in 1995 after the peso crisis, and rebounding in 1996.

Traditionally, Mexico has been an important producer and exporter of cotton, but in 1992 producers shifted area to corn and dry beans in response to high government support prices and favorable credit policy, and left cotton area fallow as world prices plummeted to near-record lows. Mexican cotton area in 1993 was one of the lowest on record, and resulted in record-high imports, virtually all from the United States. Mexico's cotton area rose more than 400 percent in 1994, helping cut imports in 1994 and 1995.

The reduction of Mexico's price support for corn came as world cotton prices began recovering, and in 1994 Mexico's cotton area began recovering as well. Mexican cotton producers also benefited from a production subsidy in 1994, with payments varying across regions according to water costs. Despite increasing to 458,000 bales in 1994, Mexican cotton production remained less than half of the average output during the 1980's, and while U.S. cotton exports to Mexico fell 13 percent, they remained among the largest ever by far at 581,000 bales.

Mexico's 1995 cotton area rose still further as world prices again rose more than 20 percent in inflation-adjusted terms, and substantially more in peso terms due to the devaluation. Area rose 36 percent despite water constraints in some areas, approaching its average from the 1980's, and U.S. cotton exports to Mexico fell another 16 percent during 1995, despite growing Mexican consumption. In 1996, Mexico's imports rebounded, and U.S. shipments to Mexico rose 203,000 bales to 688,000 bales. Mexico's cotton production rose in 1996, but consumption continued growing strongly.

Mexican imports rose despite higher production due to a transformation in Mexico's textile industry. Since 1992, at least half of all cotton consumed in Mexico has been imported from the United States. Many new and modernized spinning units operate more efficiently with U.S. cotton than domestic Mexican cotton due to the higher and more consistent quality of U.S. cotton, the location of the mills, and the nature of the equipment purchased for the mills. As result, while expected cotton production and exports by Mexico during the 1996/97 marketing year are about equal to their averages during the 1980's, imports and consumption are estimated to be 700,000-800,000 bales higher, with the United States virtually the sole import supplier.

Cotton trade in the form of textiles between the United States and Mexico has also grown significantly during the 1990's, but since Mexico's devaluation the trade balance has swung into deficit for the United States. During the late 1980's, Mexico began liberalizing its textile and cotton industries, and Mexico—along with the Caribbean Basin Initiative (CBI) countries—gained quota-free access for apparel and other products produced from U.S. fabric. With NAFTA, Mexico's access to the U.S. market surpassed that available to the CBI countries, but CBI exports to the



United States continued to grow. The U.S. cotton textile trade deficit with Central America and the Caribbean during 1995 and 1996 averaged 316,000 bales, compared with the 1992 and 1993 average of 228,000.

Cotton textile trade between Mexico and the United States was already large in both directions before NAFTA. With substantial U.S. exports of cut fabric and other intermediate textiles, and Mexican exports of finished goods, trade was nearly balanced with a U.S. deficit in cotton products of about 50,000 bales. During 1994, growing Mexican purchasing power caused a shift to a U.S. surplus of about 60,000 bales, but by 1996 the U.S. deficit had grown to 362,000 bales.

Canada's cotton consumption and imports have risen sharply since the advent of NAFTA. Canada's textile industry has benefited from the opportunities under the trade agreement and from textile export problems in a number of Asian countries. The United States is Canada's principal export market for textiles, and one of its largest sources of imports. The United States has enjoyed a slowly growing surplus in cotton textile product trade with Canada of about 225,000 bales during the 1990's, and U.S. raw cotton exports to Canada rose 148,000 bales between 1993 and 1996, reaching 294,000 bales.

### **Trade Issues**

There have been no significant trade disputes among the NAFTA countries concerning cotton. Mexico's proposed phytosanitary regulations have elicited some concern, but to date the implementation of these regulations has not created serious controversy.

### **Impacts of NAFTA on Cotton Trade**

NAFTA's direct impacts on cotton trade have been smaller than the impacts of pre-NAFTA changes in Mexico's agricultural policy, the peso devaluation, and changes in textile trade with Asia. All North American textile producers have benefited from a slowdown in exports by traditional Asian exporters. Rising wages have crimped exports from countries like South Korea, while China—for several years the largest source of U.S. textile imports—has seen its exports reduced by turmoil in its domestic cotton industry, credit problems in state mills, a rising real exchange rate, and slow quota growth. NAFTA may have indirectly stimulated Mexican imports of raw cotton by accelerating investment in spinning capacity in Mexico oriented toward U.S. cotton.

Changes in U.S. policy had little impact on U.S. imports of raw cotton from Mexico. While Mexico's NAFTA quota was larger than its earlier Section 22 quota, the 1990 U.S. farm legislation created a mechanism that opened even larger quotas for any country during the infrequent periods that price differentials favored importing into the United States. During 1996, the United States imported 47,000 bales of cotton from Mexico, but also imported 754,000 bales from elsewhere.

Textile trade between Mexico and the United States was probably affected more by exchange rates than NAFTA.

While Mexico's access to the U.S. market was much improved by the agreement, the countries with the same access as pre-NAFTA Mexico also continued to increase their exports to the United States.

While U.S. obligations under the Uruguay Round agreement of the WTO would have increased Mexico's access to U.S. markets, the effect would have been much smaller without NAFTA. Multi-Fiber Arrangement quotas are eliminated in the WTO agreement, but the agreement permits importing countries to maintain most critical import restrictions until 2005, much longer than under NAFTA. It is also likely that the trade-liberalizing commitment by all parties represented by NAFTA provided a greater degree of assurance for investment in textile capacity, increasing the volume of trade in cotton textile products among the NAFTA countries.

## **Sugar and Sweeteners**

### **Policy Changes Resulting from NAFTA**

*United States:* Mexico and Canada both had a share of the U.S. sugar import quota, which began in 1982. Canada paid the "low" duty of 0.66 cents a pound on refined beet sugar exported to the United States under the quota, and a similar duty was waived for Mexico under the Generalized System of Preferences. Under the CFTA, the quantity provisions of the U.S. quota system continued to apply to Canadian sugar, and duties on sugar between the United States and Canada will decline to zero by 1998.

In 1990, the United States unilaterally converted its absolute sugar import quota to a tariff-rate quota system, after a GATT panel ruled in a case brought by Australia against the absolute quota system. A second-tier tariff of 16 cents a pound was established to apply to import quantities above the TRQ levels. The United States interpreted the CFTA to mean that the second-tier tariff could not be applied against Canada. From 1990 through 1994, Canadian sugar entered the United States freely, paying only the low CFTA duty. These imports from Canada were small relative to the size of the U.S. market and thus did not seriously disrupt the U.S. sugar program.

When Uruguay Round provisions started to apply in 1995, Canada became subject to the MFN over-quota tariff of approximately 16 cents a pound. The CFTA tariff applies to within-quota shipments. Canada can compete for a share of the small global (first-come-first-served) U.S. refined sugar TRQ of 22,000 metric tons, but quantities over the TRQ face the MFN over-quota tariff. Since Canada does not produce raw cane sugar, it was not given a share of the larger raw sugar TRQ.

*Mexico:* NAFTA contains special provisions covering bilateral U.S.-Mexican sugar trade. The NAFTA sugar provisions for the United States and Mexico are reciprocal. The following summary description of Mexican access to the U.S. market also applies to U.S. access to the Mexican market.

A formula defines "net surplus production," which is projected production minus projected domestic consumption.

A side agreement stipulates that, for purposes of the formula, high fructose corn syrup (HFS) will be included on the consumption side only. Thus, projected Mexican sugar production would have to exceed Mexican consumption of both sugar and HFS for Mexico to be considered a net surplus producer.

For 1994-99 (years 1-6 of NAFTA), Mexico will have duty-free access for sugar exports to the United States for the amount of its projected net surplus production, up to a maximum of 25,000 metric tons, raw value. If Mexico is not a net surplus producer, it will still have duty-free access for 7,258 tons, or the "minimum boatload" amount authorized under the U.S. TRQ. In years 7-14, Mexico will have duty-free access to the U.S. market for the amount of its surplus as measured by the formula, up to a maximum of 250,000 tons, with minimum duty-free access still at the "minimum boatload."

By the end of year 6, Mexico will install a tariff-rate quota system, with a second-tier tariff applicable to other countries that is equal to the U.S. second-tier tariff. Sugar tariffs between the United States and Mexico are scheduled to decline by 15 percent over the first 6 years, and then to zero by year 15.

The Mexican tariff on U.S. HFS is declining from 15 percent to zero over 10 years, and was 10.5 percent in 1996 (raised to 12.5 percent on December 13, 1996 as compensation for the U.S. implementation of broomcorn safeguards). Barriers to sugar-containing products have been converted to tariffs, and are declining to zero over 10 years. U.S. refiners shipping sugar to Mexico under the U.S. Refined Sugar Re-Export Program receive MFN treatment, but NAFTA will not provide any special benefit for re-export sugar because it is not considered to be of U.S. origin. NAFTA does allow for reciprocal duty-free access between the United States and Mexico for refined sugar that is refined from raw sugar produced in the other country.

*Canada:* As a result of CFTA, the Canadian duty on sugar imports from the United States is 0.11 cents a pound, refined basis, in 1997, and will be zero in 1998. Canada made no changes in sugar trade policies as a result of NAFTA.

### **Sugar Trade Since NAFTA**

U.S. sugar imports from Mexico and Canada continue to be restricted by the U.S. TRQ. Mexico's annual share of the U.S. sugar TRQ has been 7,258 metric tons, raw value, since 1994, and each year Mexico filled the quota. The United States determined in September 1996 that, under the NAFTA provisions, Mexico was projected to be a net surplus producer of sugar in fiscal 1996/97 (October-September), and thus gave Mexico a duty-free quota of 25,000 metric tons, raw value, which can be shipped as either raw or refined sugar. Mexico is expected to fill the quota in 1997.

U.S. sugar imports from Canada were under quota from 1982 to 1990, and ranged from 10,000-30,000 tons per year. From 1991 to 1994, U.S. sugar imports from Canada averaged about 40,000 tons a year, as Canadian sugar was relatively unrestricted and paid only a low duty. Since

1995, Canada has had low-duty access a share of the U.S. 22,000-metric-ton global refined sugar TRQ; additional shipments to the United States would pay the second-tier (prohibitive) MFN duty.

U.S. sugar exports to Canada have largely been under the U.S. Refined Sugar Re-Export Program, and prior to 1995 averaged about 100,000 tons a year. This is sugar that has been imported from a third country, refined in the United States, and re-exported. U.S. sugar exports to Canada have declined to almost zero since anti-dumping duties were imposed by Canada in late 1995.

U.S. sugar exports to Mexico have also been almost entirely under the Refined Sugar Re-Export Program. Mexico was a net importer of sugar in the early 1990s, and U.S. sugar exports to Mexico were 219,000 metric tons in 1991 and 97,000 tons in 1992. Since 1993, Mexico has become largely self-sufficient in sugar, and U.S. exports to Mexico have fallen to 27,000 tons in 1994 and 32,000 tons in 1995.

### **Trade Disputes**

*Canadian Anti-Dumping Investigation of Canadian Sugar Imports:* On November 6, 1995, the Canadian International Trade Tribunal ruled that sugar imports from the United States, certain members of the European Union, and Korea were being dumped in Canada. Anti-dumping duties were imposed on U.S. companies ranging from 69 to 85 percent, ad valorem, effectively eliminating most U.S. sugar exports to Canada.

*Sugar Re-Export Negotiations:* In November 1996, consultations between the United States and Canada were held regarding a claim by Canada that continued use by U.S. exporters of the U.S. Sugar-Containing Products Re-Export Program for products exported to Canada is a violation of Article 303 of NAFTA. Under this program, U.S. producers can obtain sugar at the (lower) world price if they can demonstrate a re-export of a like amount of sugar in products within 2 years. Canada claims that the program amounts to a duty drawback or deferral, and should thus be prohibited. Canada raised the issue at the March 20, 1997 meeting of the NAFTA Commission and may request a dispute panel if no settlement is made soon.

*Mexican Retaliation for Broomcorn TRQ:* On December 12, 1996, the Mexican government announced increases in import duties on various U.S. products to compensate for the damage caused to Mexico when the United States raised tariffs on Mexican broomcorn brooms. Included in the list is an increase in the duty on U.S. corn sweeteners, tariff line items 1702.40.01 (HFS-42), 1702.40.99 (HFS-42), 1792.50.01 (crystalline fructose), and 1702.60.01 (HFS-55). Mexican import duties on these items were increased from 10.5 percent to 12.5 percent effective December 13, 1996. Under NAFTA, the tariff on these items was scheduled to drop from 10.5 percent in 1996 to 9 percent in 1997.

*Mexican Anti-Dumping Investigation of U.S. High Fructose Corn Syrup (HFCS):* In February 1997, the Mexican government announced it was launching an anti-dumping in-

vestigation on imports of HFCS from the United States. After a 4-month investigation, the Mexican Department of Commerce (SECOFI) announced (June 25) temporary anti-dumping measures on imports of HFCS, which require U.S. exporters of HFCS to post a bond for the amount of damage specified in the finding—between US\$63 and US\$175 per metric ton—while these measures are in place. The U.S. Senate passed a resolution calling for a review of Mexico's anti-dumping case in the context of World Trade Organization rules.

### **Impacts of NAFTA on Sugar Trade**

U.S. sugar trade is largely controlled by a TRQ system, and NAFTA has not had a large impact on sugar trade. Trade in sugar between the United States and Canada was not affected by the original CFTA. However, when a GATT panel ruled against the U.S. absolute quota system and it was replaced with a TRQ in 1990, the United States determined that the (prohibitive) high tariff could not be applied to Canada. After 1990, Canadian sugar exports to the United States rose to about 40,000 tons a year, almost all from a Manitoba beet sugar factory, one of two in Canada. The price of refined sugar in the United States is 25 to 50 percent higher than in Canada.

NAFTA granted no further concessions to Canada on sugar. U.S.-Canadian sugar trade has, however, been strongly affected by the Uruguay Round WTO agreement and by anti-dumping duties. Each country's actions have limited the ability of the other to ship increasing quantities of sugar. U.S. companies are forced to pay anti-dumping duties ranging from 69 to 85 percent; Canada has to pay higher duty rates on over-quota shipment to the United States. The Manitoba beet sugar factory was closed in early 1997, with the loss of the U.S. market cited as the cause of the closure.

With regard to Mexico, the most direct effect of NAFTA comes from the provision that, during 1994-99, if Mexico is projected to be a net surplus producer, it can get duty-free access to the U.S. market for the amount of its surplus up to a maximum of 25,000 tons. In the first 2 years of the NAFTA, Mexico filled its original allocation of 7,258 tons, which would have been allocated even if there had not been a NAFTA. Having been projected to be a net surplus producer for 1996/97, Mexico is likely to ship 25,000 tons of sugar duty-free to the United States, 17,742 tons more than its original allocation. The price of refined sugar in the United States is currently at least 25 percent higher than in Mexico.

The United States has duty-free access to the Mexican market for 7,259 tons of U.S. origin sugar during the first 14 years of the NAFTA. The over-quota tariff will not be eliminated until 2008, limiting U.S. cross-border exports, which might have occurred on an occasional basis into northern Mexico, where sugar prices are much higher than in southern Mexico. The United States can continue to send sugar to Mexico under the Refined Sugar Re-Export Program, but in recent years Mexico has been a net exporter of sugar and U.S. exports to Mexico have been very small.

Mexican policies to support the price of sugar may or may not have occurred without NAFTA; in any event, the recent Mexican policy of raising the price of sugar is inducing a significant amount of substitution of HFS for sugar in Mexico, decreasing Mexico's sugar consumption and contributing to Mexico's sugar surplus. U.S. HFS exports to Mexico rose from 9,000 tons in fiscal 1991 to 78,000 tons in fiscal 1996, and are forecast to continue to grow in coming years. Two facilities to produce HFS in Mexico, both joint ventures with U.S. corn refining companies, came on line in 1996 and are expected to be in full production in 1997. All Mexican HFS production is likely to be based on corn imported from the United States. To the extent that NAFTA contributes to the decline of Mexican sugar consumption and reduces Mexico's sugar import requirements, potential U.S. refined sugar exports to Mexico are also reduced.

## **Vegetables**

### **Fresh Tomatoes**

#### **Policy Changes Resulting from NAFTA**

*United States:* Prior to NAFTA, the general U.S. tariff on imported tomatoes was 4.6 cents per kilogram for the March 1-July 14 and September 1-November 14 periods, and 3.3 cents per kilogram for July 15-August 31 and November 15 to the last day of February. With NAFTA, the tariff rates for Mexican tomatoes during July 15-August 31 and September 1-November 14 are phased out over 5 years beginning in 1994. The tariffs for March 1-July 14 and November 15 to the last day of February are phased out over 10 years and a tariff-rate quota will be in effect for each period. In the first year of NAFTA, the quota during the March 1-July 14 period was 165,000 metric tons and the quota for November 15 to the last day of February was 172,300 metric tons. The quota amounts increase at a 3-percent compounded annual rate during the 10 year phase-out period. Over-quota imports are charged the pre-NAFTA MFN tariff or the MFN rate in effect at the time of the over-quota trade, if lower. With NAFTA, cherry tomatoes receive separate tariff treatment from other tomatoes. The tariff for cherry tomatoes was eliminated immediately for the December 1-April 30 period. The base tariff on cherry tomatoes for the May 1-November 30 period is 3.3 cents per kilogram and is phased out over 5 years. There is no tariff-rate quota for cherry tomatoes.

With the CFTA, subsumed under NAFTA, the tariff on tomatoes from Canada is reduced over a 10-year period beginning in 1989, until it falls to zero in 1998. The agreement also includes a snapback to MFN tariff levels until 2008 under certain price and acreage conditions.

The MFN tariff is tied to the Uruguay Round GATT/WTO agreement which requires at least a 15-percent decrease in tariffs, phased in over 6 years beginning in 1995. Tariffs for the March 1-July 14 and August 1-November 14 periods decrease from 4.6 to 3.9 cents per kilogram. Tariffs for the July 15-August 31 and November 15 to the end of February periods decline from 3.3 to 2.8 cents per kilogram.

*Mexico:* Prior to NAFTA, Mexico had a ten-percent tariff on fresh tomato imports. Under NAFTA, Mexico matches the U.S. tariffs and transition periods but during the transition period the duty assessed on U.S. imports cannot exceed Mexico's pre-NAFTA duty.

*Canada:* Prior to the CFTA, the seasonal Canadian tariff on imported tomatoes was 5.51 cents per kilogram, but not less than 15 percent ad valorem. Under the trade agreement, the Canadian tariff decreases 10 percent per year until 1998 when it falls to zero. The seasonal tariff can be divided into two separate periods, which cannot exceed a total of 32 weeks in any 12-month period ending March 31. The agreement also includes a snapback provision to MFN tariff levels until 2008 under certain price and acreage conditions.

### **Fresh Tomato Trade Since NAFTA**

Tomato imports constitute a large proportion of U.S. domestic tomato consumption and Mexico is the main source of imports. Between 1990 and 1993 (excluding 1992, which was a poor production year for Mexico), tomato imports averaged 21 percent of total U.S. consumption and Mexican tomatoes accounted for 97 percent of the imports. During the winter months, Mexico's share of the domestic market is even higher.

In 1994, the first year of NAFTA, U.S. imports of Mexican tomatoes totaled 376,034 metric tons, down 6 percent from the previous year. The March-July 14 quota was only 86 percent filled. U.S. imports of Mexican tomatoes climbed 58 percent in 1995 and another 16 percent in 1996 to 685,681 metric tons. The winter and spring quotas were filled in both 1995 and 1996.

Both short- and long-run factors help explain the increase in tomato imports. Much of the increase in tomato imports can be attributed to factors unrelated to NAFTA. The Mexican economic crisis had several short run impacts on Mexican producers. First, the Mexican domestic market contracted drastically. Since producers in Sinaloa, the main producing area, can ship to either the domestic or export markets, reduced domestic market opportunities made the United States a much more attractive and critical market. In addition, the devaluation of the Mexican peso made prices in the United States more attractive to Mexican producers. The average input costs of Mexican fresh tomatoes increased 64 percent in terms of pesos from 1994 to 1995, but fell 28 percent in terms of U.S. dollars.

Weather also had a short-run effect on tomato trade in the first 3 years of NAFTA. At the beginning of the 1994/95 season, Tropical Storm Gordon damaged crops in Florida. During the same season, Sinaloa experienced unusually favorable weather conditions and production exceeded expectations by 15-20 percent. The start of the Florida 1995/96 season was delayed by cold and rainy weather. Cold weather in February 1996 decreased supplies in the important Florida growing areas of Immokalee and Homestead.

Adoption of new tomato varieties in Mexico is a long-run factor that has resulted in significant changes in trade. In the last 2-3 years, Mexican tomato exporters in Sinaloa

and Baja California have successfully adopted new technology to produce vine-ripe extended shelf-life (ESL) tomatoes. During the winter and spring, the Mexican vine-ripe tomatoes from Sinaloa compete against Florida's mature green tomatoes. Current varieties of ESL tomatoes do not grow well in Florida because heavy rains cause the tomatoes to crack on the vine. An ESL vine-ripe tomato lasts a week longer in storage than a mature green tomato which reduces waste and marketing costs. A vine-ripened tomato is bright red and firm, which is considered an important factor in consumer demand. Supermarkets desire a larger supply of vine-ripe tomatoes, while the foodservice industry demands the firmer mature green tomato for slicing. The market is becoming more segmented and Mexican and American tomatoes are not always perfect substitutes. An analysis of f.o.b. prices for Mexican and Florida tomato prices indicates that consumers are willing to pay more for ESL's, giving credence to the idea that buyers see the two types of tomatoes as distinct products.

The United States exports a small amount of tomatoes to Mexico. In 1994, the United States exported 21,897 metric tons of tomatoes to Mexico, up 24 percent from the previous year. The increased demand in 1994 may be partly due to lower Mexican production in Sinaloa. As consumer demand contracted in 1995, exports fell to 2,282 metric tons. In 1996, U.S. tomato exports to Mexico increased slightly to 2,562 metric tons.

Canada is the major market for U.S. tomato exports, accounting for 92 percent of tomato exports from 1994 to 1996. Exports to Canada were 128,025 metric tons in 1996. U.S. imports of Canadian tomatoes averaged only 2 percent of total U.S. tomato imports during 1994-96 but the volume is growing rapidly. The Canadian greenhouse industry is increasing and the United States is importing a larger volume of greenhouse tomatoes from Canada. In 1993, total tomato imports from Canada totaled 4,733 metric tons and 1996 imports were 21,774 metric tons.

### **Trade Disputes**

In April 1995, Florida winter vegetable growers petitioned the U.S. ITC to seek economic relief from increased tomato imports. The petition was rejected on the basis that Florida winter tomatoes could not be considered a separate industry on the basis of seasonality.

For several months beginning in January 1996, Florida began additional inspections of all foreign produce entering the State, looking for potential sanitary and phytosanitary violations and proper labeling on produce shipping containers. Florida required an additional inspection, at cost, of all produce entering the State by truck. Florida rescinded these inspection requirements in April 1996, and additional inspectors were added at major points of entry.

In March 1996, growers from Florida and several other States, and the Florida Department of Agriculture petitioned the ITC again under U.S. trade law for economic relief against import surges of fresh tomatoes and bell peppers. Tomatoes and bell peppers account for the majority of the value of the Florida winter vegetable market. On

July 2, the ITC found that imports of fresh tomatoes and bell peppers were not a substantial cause of serious injury or threat of serious injury to the U.S. industries.

A second petition was filed in April 1996 with the U.S. Department of Commerce charging Mexico with dumping tomatoes on the U.S. market at below-fair market value prices and materially injuring the domestic industry. On October 28, 1996, the U.S. Department of Commerce announced a negotiated plan with principal Mexican producers/exporters to settle the dispute, and on November 1, 1996, the U.S. Department of Commerce suspended the anti-dumping investigation. The Department of Commerce had determined that fresh tomatoes from Mexico were likely to sell in the United States at less than "fair value." As long as the negotiated settlement is honored, the dumping investigation remains suspended.

The negotiated plan will run from November 1, 1996 to September 30, 1997, establishing a reference price, or minimum price, covering most Mexican fresh-market tomatoes exported to the United States. The net price, after rebates, discounts, etc., of Mexican tomatoes cannot fall below the reference price of \$5.17 per 25-pound box, or 20.68 cents per pound. This price represents the lowest average monthly price for fresh-market tomatoes from Mexico observed at the U.S.-Mexican border during the base period of 1992-94. This price can be adjusted periodically to accommodate changes in the U.S. market. Greenhouse cocktail-type tomatoes are exempted from the agreement since they are viewed as a separate market from field-grown tomatoes.

Over 85 percent of the Mexican producers/exporters signed the negotiated agreement. Non-signatories are not covered by the agreement. U.S. Customs will examine the tomato shipments from non-signatories to ensure that product from signatories is not included, thereby circumventing the agreement.

Florida growers have discussed ways to prevent a reduction in the reference price. The Florida Tomato Growers Exchange, an agricultural marketing cooperative that handles over 90 percent of the fresh tomatoes sold in Florida, has reached an agreed-upon floor price of \$5 per 25-lb carton. The Exchange would impose a fine of \$1 per carton on members who sold tomatoes for less than this price. Under the Capper-Voistead Act of 1922, farmers have the right to form cooperatives that are largely exempt from U.S. antitrust statutes.

### **Impacts of NAFTA on Fresh Tomato Trade**

U.S. tariffs are not an important impediment to tomato imports. The pre-NAFTA tariff rates for tomatoes were in fixed dollar amounts and had eroded in value over time because the general price level for tomatoes has increased. During the November-February period, the ad valorem equivalent tariff rate averaged about 4 percent in recent years. Tariff changes have been relatively small to date, but many other important factors have had a greater impact on tomato trade.

From 1993 to 1996, U.S. imports of fresh Mexican tomatoes increased 52 percent. NAFTA tariff changes would be expected to raise U.S. tomato imports from Mexico only about 5 to 9 percent from what they would be without the agreement. The tariff changes mandated by the Uruguay Round of GATT/WTO would have been expected to increase U.S. imports less than 1 percent. The tariffs were already very small in 1993 and have declined only 30 percent through 1996. Tomato imports from Mexico declined during the first year of NAFTA, and when imports increased in 1995 and 1996, the higher tariffs on over-quota tomatoes seem to have had little impact on slowing imports. Much of the change in imports must be attributed to other factors such as the peso devaluation, good weather in Mexico and poor weather in Florida, and technical change in Mexico.

U.S. tomato exports to Canada decreased 7 percent from 1993 to 1996. Considering the NAFTA tariff changes alone, U.S. tomato exports to Canada would be expected to be 2 to 4 percent higher than they would have been without the agreement. Clearly, other factors besides tariff changes are influencing U.S. tomato trade with Canada. Poor growing conditions in Florida and the rapidly developing greenhouse industry in Canada are responsible for the recent decline in U.S. exports.

## **Processed Tomatoes**

### **Policy Changes Resulting From NAFTA**

*United States:* Before CFTA and NAFTA, the U.S. tariff on processed tomatoes, whole or in pieces (preserved otherwise than by vinegar or acetic acid), was 14.7 percent. For other processed tomatoes, such as purees and pastes, the tariff was 13.6 percent. The Uruguay Round of the GATT agreement reduces these duties by 15 percent over 6 years, beginning in 1995. With NAFTA, there was an immediate decrease to a new tariff base of 11.5 percent for other processed tomatoes. The tariffs for both types of processed tomatoes decline by 10 percent a year from the tariff base, until they fall to zero in 1998. Under the CFTA, the tariff on Canadian processed tomatoes decreases 10 percent a year, starting in 1989, until the tariff falls to zero in 1998.

*Mexico:* Before NAFTA, Mexico's duty on imported tomato paste was 20 percent. Under NAFTA, Mexico lowers its duties to match U.S. levels.

*Canada:* In 1989, Canada instituted a 10-year phase-out of the 13.6-percent tariff on imports of U.S. processed tomatoes. For tomato ketchup and other sauces, Canada will phase out the 15-percent pre-CFTA tariff on U.S. product over 10 years.

### **Processed Tomato Trade Since NAFTA**

Processed tomato trade is a small portion of U.S. production and consumption, less than 1 percent on average. During 1996, paste accounted for about 15 percent of U.S. processed tomato imports and 71 percent of exports. During 1994-96, U.S. imports of tomato paste came mainly from Mexico and Canada. In 1996, Mexico was the domi-



nant foreign supplier to the United States, with a 50-percent share, up from 28 percent in 1995, while Canada's share increased to 46 percent from 27 percent in 1995. Canada's processing tomato industry is roughly the same size as Mexico's, but Canada specializes in ketchup production while Mexico specializes in paste, which is almost all exported.

In 1994, U.S. imports of processed tomatoes from Mexico increased by 41 percent from the previous year, in part prompted by high U.S. domestic prices. The U.S. processing tomato crop in 1992 and 1993 was 13 percent lower than the previous 2 years. During spring 1994, U.S. wholesale prices of tomato paste were 20 percent higher, compared with a year earlier—coinciding with Mexico's peak export months. During 1994, the United States also imported 33 percent more processed tomatoes from countries other than Mexico. The larger increase in imports from Mexico can be attributed to weak U.S. demand for Mexico's fresh-market tomatoes during spring 1994, which diverted Mexican fresh product into the processing sector. A lack of storage facilities requires Mexico to export most of its tomato paste in April to June.

U.S. imports of processed tomatoes decreased each year since 1994, as U.S. production of tomatoes for processing continued to increase and domestic prices softened. U.S. processing tomato production in 1996 was a record high 10.6 million metric tons, putting downward pressure on prices, lowering demand for imports, and boosting exports. In 1995 and 1996, U.S. imports of processed tomatoes from Mexico averaged 8,668 metric tons, 66 percent below the 1993-94 average. Imports from Canada totaled 12,969 metric tons in 1996, down from 18,251 metric tons in 1995 but up from 9,005 in 1994.

U.S. exports of tomato paste to NAFTA countries increased to 51,770 metric tons in 1996 but Canada's share of U.S. processed tomato exports fell to 51 percent from more than 60 percent during 1990-94. Mexico's share of U.S. exports also fell, from about 3 percent before NAFTA (excluding 9 percent in 1992) to 1-2 percent in 1995 and 1996.

### **Trade Disputes**

There have been no trade disputes involving processed tomatoes.

### **Impact of NAFTA and CFTA on Processed Tomato Trade**

From 1993 to 1996, U.S. processed tomato imports from Mexico decreased 57 percent. Tariff changes alone would be expected to produce a 7-percent increase in imports from Mexico (less than a 1-percent increase considering just GATT tariff changes). Record U.S. processed tomato production had more impact on trade than tariffs.

The CFTA may have contributed to a more than doubling of U.S. exports of processed tomatoes to Canada initially, and continued tariff reductions following NAFTA have led to increases in U.S. exports. U.S. processing tomato ex-

ports to Canada increased 14 percent from 1993 to 1996. In 1996, tariff changes alone would have given a 20-percent increase in exports to Canada over 1993 levels (with a 5-percent increase considering just GATT tariff changes).

## **Bell Peppers**

### **Policy Changes Resulting from NAFTA**

*United States:* Before CFTA and NAFTA, the U.S. general tariff on bell peppers was 5.5 cents per kilogram. Under GATT, the United States lowers the tariff to 4.7 cents per kilogram over 6 years, beginning in 1995. With NAFTA, the United States phases out the tariff on bell peppers between June and October over 5 years but phases out the November-May tariff over 10 years. Under the CFTA, the tariff on Canadian bell peppers declines to zero over 10 years, falling to zero in 1998.

*Mexico:* Prior to NAFTA Mexico had a 10 percent duty on bell peppers. With the trade agreement, Mexico phases out the tariff over 5 years.

*Canada:* Prior to the CFTA, the seasonal tariff on bell peppers was 4.41 cents per kilogram but not less than 10 percent. With the CFTA, the tariff declines 10 percent a year until it falls to zero in 1998. The seasonal tariff cannot exceed 12 weeks in any 12-month period ending March 31.

### **Bell Pepper Trade Since NAFTA**

Trade is an important component of the U.S. fresh bell pepper market. Imports of fresh bell peppers account for about 18 percent of U.S. supply while about 7 percent of supply is exported. About 81 percent of U.S. bell pepper imports come from Mexico and 5 percent from Canada.

Almost all Mexican bell pepper exports to the United States occur between December and April. During the winter vegetable seasons of 1989/90 to 1992/93, Mexico accounted for 28 to 38 percent of the U.S. market. In 1994, total U.S. bell pepper imports from Mexico were 96,713 metric tons, down 4 percent from the previous year. In 1995, imports of bell peppers increased 20 percent to 116,173 metric tons. The increase was due in part to the peso devaluation. In addition, Florida production was down 20 percent in 1995. In 1996, imports were 143,734 metric tons. U.S. per capita use of bell peppers has risen one-third during the 1990's to 6 pounds per person.

Imports from Canada have increased from 3,839 metric tons in 1994 to 6,723 metric tons in 1995 but slipped back to 6,445 metric tons in 1996. An increasing proportion of U.S. imports from Canada are coming from greenhouse/hydroponic facilities. It appears that around one-fourth of the bell peppers imported from Canada are now from greenhouse/hydroponic facilities. These peppers are priced about twice the value of field-grown varieties.

U.S. export data for fresh peppers include all types of peppers (e.g., bell, pimento, and chile peppers), although most of the trade is bell peppers. Canada is the primary destination for U.S. fresh peppers with more than 95 percent of

export volume. Exports averaged 73,295 metric tons during 1990-92 but dropped sharply to 50,365 metric tons during 1993-95 as market prices jumped. Driven by poor weather in Florida and strong competing domestic demand, average export value moved from an average of 26 cents per pound to 40 cents during 1993-95. Exports in 1996 totaled 59,353 metric tons.

### **Trade Disputes**

In March 1996, Florida growers, joined by growers from several other States, and the Florida Department of Agriculture petitioned the U.S. ITC for economic relief against import surges of fresh tomatoes and bell peppers under U.S. trade law. Tomatoes and bell peppers are the two most important winter vegetables for Florida in terms of value. On July 2, the ITC found that imports of fresh tomatoes and bell peppers are not a substantial cause of serious injury or threat of serious injury to the U.S. industries.

### **Impacts of NAFTA on Bell Pepper Trade**

Imports of bell peppers from Mexico increased 42 percent from 1993 to 1996. The average pre-NAFTA ad valorem tariff on Mexican bell peppers was 7.43 percent and the winter tariff is being phased out over 10 years, so it seems unlikely that tariff reductions of less than 1 percentage point per year were the most important factor in the growth of trade. Increased U.S. consumer demand, the peso devaluation, and adverse weather in some periods appear to be important explanations for the growth in bell pepper imports.

## **Cucumbers**

### **Policy Changes Resulting from NAFTA**

*United States:* The U.S. general tariff on cucumbers varies by season. Before CFTA and NAFTA, the highest rate was 6.6 cents per kilogram which was in effect during March 1-May 31, June 1-June 30, September 1-September 30, and October 1-November 30. From December 1 to the last day of February the tariff was 4.9 cents per kilogram. The lowest rate was 3.3 cents per kilogram during the months of July and August.

The NAFTA eliminated tariffs in the two lowest tariff seasons, December-February and July-August. The December-February period is a time of low Florida production and the July-August period is a time of low imports from Mexico. For the higher tariff periods, the tariff is being phased out gradually; the March-May and October-November tariffs are phased out over 15 years, and the June-September tariffs are phased out over 5 years. CFTA reduces the tariffs for Canadian cucumbers 10 percent a year until the tariffs fall to zero in 1998. The agreement includes a snapback to MFN tariff levels until 2008, under certain price and acreage conditions.

Under GATT, the United States lowers the MFN tariff from July 1 to August 31 from 3.3 to 1.5 cents per kilogram. From December 1 to the end of February, the tariff is lowered from 4.9 to 4.2 cents per kilogram. During the

rest of the year, the tariff is lowered from 6.6 cents to 5.6 cents per kilogram. These tariff changes are phased in over 6 years, beginning in 1995.

*Mexico:* Prior to NAFTA, Mexico's tariff on imported cucumbers was 10 percent. Under NAFTA, Mexico matches the U.S. seasonal tariffs and phase-out schedule but Mexico's maximum phase-out period is 10 years.

*Canada:* Before CFTA, Canada's seasonal tariff on fresh cucumbers (not for processing) was 4.96 cents per kilogram, but not less than 15 percent. With CFTA, the tariff declines 10 percent a year until it falls to zero in 1998. The seasonal tariff cannot exceed a total of 30 weeks in any 12 month period ending March 31, and snapback provisions are in place under certain price and acreage conditions.

### **Cucumber Trade Since NAFTA**

Imports are important in the U.S. fresh cucumber market, with about 36 percent of supply imported, almost all from Mexico. During the winter vegetable seasons of 1989/90 to 1992/93, Mexico accounted for 40 to 47 percent of the U.S. market. Part of this relatively large reliance on imports is due to low domestic production during the winter months. Cucumbers suffer chilling injury at temperatures below 50 degrees—a common occurrence in Florida during the winter. In 1996, cucumber imports from Mexico were valued at \$118 million, 6 percent of the total value of U.S. fruit and vegetable imports from Mexico. Canada supplies 2 percent of U.S. imports. It is estimated that at least half of the cucumbers imported from Canada are produced in greenhouses.

In contrast to the import market, only about 5 percent of U.S. fresh cucumber supply is exported. Canada accounts for 98 percent of U.S. cucumber exports with smaller amounts sent to Mexico and Taiwan. Thanks to salad bars and increased interest in health and nutrition, U.S. per capita use of cucumbers has increased 1 pound during the 1990's—as it did during each of the two previous decades.

During December, January, and February, almost all cucumbers in the U.S. market come from Mexico. In 1994, U.S. cucumber imports from Mexico increased 12 percent to 228,229 metric tons. Of all the winter vegetables, cucumbers had the highest pre-NAFTA ad valorem tariff, 19.60 percent during the highest tariff season. In 1995, cucumber imports from Mexico increased only 5 percent. Since Mexican cucumbers already dominated the midwinter market, it was more difficult for cucumber imports to increase than for some other winter vegetables. In 1996, cucumber imports were 293,753 metric tons. Florida cucumber production in 1996 was 23 percent lower than in 1993. U.S. cucumber exports to Mexico are small and variable.

### **Trade Disputes**

There have been no trade disputes involving cucumbers.

## **Impacts of NAFTA on Cucumber Trade**

Between 1993 and 1996, U.S. imports of Mexican cucumbers increased 44 percent. The average pre-NAFTA ad valorem equivalent tariff on Mexican cucumbers was almost 20 percent. The changes in tariffs alone would only have led to a 2-percent increase in imports of Mexican cucumbers. Considering just Uruguay Round tariff changes, the increase would have been less than 1 percent. Other factors such as the peso devaluation and adverse weather conditions account for much of the observed change in cucumber trade.

U.S. cucumber exports to Canada decreased 12 percent from 1993 to 1996. With existing tariff changes, exports were expected to increase 6 percent. Without NAFTA, exports were predicted to increase 1 percent. Factors besides tariff changes, such as adverse weather conditions in the United States, are influencing cucumber trade with Canada.

## **Squash**

### **Policy Changes Resulting from NAFTA**

**United States:** Before CFTA and NAFTA, the general U.S. tariff on squash was 2.4 cents per kilogram. In accordance with the GATT Uruguay Round, the United States is lowering the tariff on squash to 1.5 cents per kilogram by 2001. Under NAFTA, the tariff for July-September is phased out over 5 years and the tariff for October-June is phased out over 10 years. In addition, the more sensitive period of October-June has a 120,800-metric-ton tariff-rate quota. The excess over the quota will be charged the pre-NAFTA MFN tariff of 2.4 cents per kilogram or the current tariff rate when the over-quota trade occurs, if lower. The volume is increased at a 3-percent compounded annual rate over the 10-year transitional period. Under the CFTA, which was subsumed by the NAFTA, the tariff on Canadian imports is reduced 10 percent per year until 1998 when the tariff falls to zero. A snapback provision is included until 2008 under certain price and acreage conditions.

**Mexico:** With NAFTA, Mexico eliminated immediately its 10-percent duty on squash from the United States

**Canada:** Prior to CFTA, Canada had an ad valorem tariff of 5 percent on squash. Under the CFTA, the tariff declines 10 percent a year until it falls to zero in 1998.

### **Squash Trade Since NAFTA**

The United States receives 95 percent of fresh squash imports from Mexico with a minor amount coming from Canada during the summer months. Over 80 percent of squash enters the country between November and April and competes primarily with squash produced in Florida. During the winter vegetable seasons of 1989/90 to 1992/93, Mexico accounted for 59 to 65 percent of the U.S. market. In 1996, the United States imported \$81 million of squash from Mexico, 4 percent of the value of total fruit and vegetable imports from Mexico. Although the USDA does not collect national production data, state-supplied information indicates that Florida is the leading producer of squash

with about 86,183, metric tons followed by California with 57,153 metric tons. Estimates based on available information suggest per capita use of fresh-market squash is around 2 pounds per person and has been relatively steady during the 1990's, after increasing from about 1.5 pounds in the 1980's.

U.S. squash imports from Mexico have been increasing slowly over many years. In the first year of NAFTA, Mexican exports to the United States totaled 99,257 metric tons, an 11-percent increase over the previous year. In 1995, Mexican exports to the United States increased 14 percent but the quota was only 87 percent filled. Imports for 1996 were 135,440 metric tons, 20 percent above 1995. The 1996 quota was filled on May 6, 1996. U.S. squash exports to Canada are not reported as a separate category.

### **Trade Disputes**

There have been no trade disputes involving squash.

### **Impacts of NAFTA on Squash Trade**

Between 1993 and 1996, the volume of U.S. imports of Mexican squash increased 52 percent. The average pre-NAFTA ad valorem equivalent tariff on Mexican squash was 5.21 percent. Considering tariff changes alone, squash imports were expected to increase about 1 percent. With only the Uruguay Round tariff changes, imports would be expected to increase less than 1 percent.

Tariff changes alone would have led to a 5-percent increase in U.S. squash exports to Canada. Without NAFTA, and just considering Uruguay Round tariff changes, exports would have also increased by 5 percent.

## **Eggplant**

### **Policy Changes Resulting from NAFTA**

**United States:** Before CFTA and NAFTA, the general U.S. tariff on eggplant was 3.3 cents per kilogram for April-November and 2.4 cents a kilogram for December-March. Under the terms of the Uruguay Round agreement, the tariffs on eggplant fall from 2.4 to 1.9 cents per kilogram during December-March and from 3.3 to 2.6 cents per kilogram during the rest of the year. The tariff reduction is phased in over 6 years, beginning in 1995.

Under NAFTA, the tariffs from December to March and July to September were eliminated immediately. Tariffs for the two remaining periods, April-June and October-November are phased out over 10 years. In addition, a tariff rate quota of 3,700 metric tons was established for April-June. The quota volume increases at a compounded 3-percent annual rate over the 10-year phase-in period. Over-quota volume is charged the lower of either the pre-NAFTA or current MFN rate.

**Mexico:** Under NAFTA, Mexico immediately eliminated its 10-percent duty on eggplant imports.



*Canada:* Prior to CFTA, Canada had no tariff on eggplant so there has been no tariff change.

### **Eggplant Trade Since NAFTA**

Trade is important in the U.S. fresh eggplant market. During the 1990's, an average of 36 percent of supply was imported with about 98 percent of these imports from Mexico. During the winter vegetable seasons of 1989/90 to 1992/93, Mexico accounted for 42 to 52 percent of the U.S. market. In 1996, imports of Mexican eggplant were valued at \$17 million, less than 1 percent of total fruit and vegetable imports from Mexico. U.S. imports of Mexican eggplant increased 17 percent in 1994 and another 15 percent in 1995. Imports in 1996 totaled 29,780 metric tons, up 24 percent from 1995. In each year of NAFTA, the eggplant quota was filled completely. The peso devaluation explains some of the increase in eggplant imports from Mexico. During the 1990's, an average of 15 percent of the U.S. eggplant supply was exported. About 99 percent of U.S. exports go to Canada with minor amounts going to Mexico.

### **Trade Disputes**

There have been no trade disputes involving eggplant.

### **Impacts of NAFTA on Eggplant Trade**

Eggplant imports from Mexico increased 66 percent from 1993 to 1996. The average pre-NAFTA ad valorem equivalent tariff on Mexican eggplant was 5.69 percent. Considering only tariff changes, an increase of only 4 percent was expected. With only Uruguay Round tariff changes, and no NAFTA tariff changes, an increase of less than 1 percent would be anticipated. The peso devaluation partially explains changes in trade. With the existing tariff changes, U.S. eggplant exports to Canada were expected to increase 3 percent. Considering only Uruguay Round GATT tariff changes, exports would have increased less than 1 percent.

## **Snap Beans**

### **Policy Changes Resulting from NAFTA**

*United States:* Before CFTA and NAFTA, the general U.S. tariff on snap beans (not reduced in size) was 7.7 cents per kilogram. Beginning in 1995, the United States began to phase in a 6-year tariff reduction in accordance with the GATT Uruguay Round to 4.9 cents per kilogram. In accordance with the NAFTA, the tariff from June 1 to October 31 is phased out over 5 years and the tariff from November 1 to May 31 is phased out over 10 years. Under the CFTA, the tariff charged imports of Canadian snap beans will be reduced 10 percent a year until the tariff falls to zero in 1998. A snap-back provision is included until 2008.

*Mexico:* Before NAFTA, Mexico had a 10-percent tariff on imports of fresh snap beans. This tariff was eliminated with NAFTA.

*Canada:* Before the CFTA, the seasonal tariff on snap beans was 4.41 Canadian cents per kilogram, but not less than 10 percent. Under the CFTA, which was incorporated

into the NAFTA, the tariff declines 10 percent a year until it falls to zero in 1998. The seasonal tariff, which may be divided into two separate periods, cannot exceed a total of 14 weeks in any 12-month period ending March 31.

### **Snap Bean Trade Since NAFTA**

In the 1990's, the United States has been a net exporter of snap beans. During 1993-95, about 6 percent of U.S. fresh-market snap bean supply was imported while 9 percent of supply was exported. Part of this has likely been due to lower prices in the United States and is reflected in per-unit import values, which averaged 18 percent higher than per-unit export values. More than three-fourths of imports come in during December to April, supplementing production in Florida. About 90 percent of fresh snap bean imports come from Mexico with Canada providing about 7 percent. In 1996, U.S. imports of Mexican snap beans were valued at \$20 million, less than 1 percent of the total fruit and vegetable imports from Mexico.

In 1994, the United States imported 9,819 metric tons of Mexican fresh and frozen snap beans (but almost all are fresh), down 9 percent from the previous year. In 1995, imports from Mexico increased 60 percent. Florida production increased 34 percent over the previous year. Of all the winter vegetables, Mexico's share of the U.S. market has been the smallest for snap beans, only 14 to 20 percent during the 1989/90 to 1992/93 winter vegetable seasons. With the peso devaluation, it was easier for hand-picked Mexican snap beans to compete with machine-harvested Florida snap beans. In 1996, the United States imported 17,285 metric tons of Mexican snap beans, 10 percent higher than in 1995.

About 80 percent of U.S. fresh-market snap bean exports go to Canada. Snap bean trade is variable with exports ranging from 14,948 metric tons in 1994 to 16,885 metric tons in 1996. Trade in 1992-93 averaged 17,879 metric tons.

### **Trade Disputes**

There have been no trade disputes involving snap beans.

### **Impacts of NAFTA on Snap Bean Trade**

Between 1993 and 1996, U.S. snap bean imports from Mexico increased 76 percent with the majority of the increase occurring in 1995. The average pre-NAFTA ad valorem equivalent tariff on Mexican snap beans was 8.04 percent. Considering tariff changes only, an increase of 4 percent would be expected. With just the Uruguay Round tariff reductions, imports from Mexico would have increased 1 percent. Other factors such as weather and the peso devaluation account for the majority of the change in trade.

Snap bean exports to Canada decreased 5 percent from 1993 to 1996. With CFTA and GATT tariff changes since 1993, an increase of 4 percent was expected (a 1-percent increase considering just the GATT tariff changes).

## Fresh and Processed Potatoes

### Policy Changes Resulting from NAFTA

*United States:* Before CFTA and NAFTA, U.S. tariffs were 0.77 cent per kilo on all fresh and seed potatoes, 17.5 percent on frozen potatoes, 10 percent on frozen french fries, 10 percent on potato chips, and 10 percent on other prepared potatoes. In the Uruguay Round of GATT, the United States agreed to a 6-year phase in of tariff reductions beginning in 1995. The tariff on fresh and seed potatoes falls to 0.50 cents per kilo, the tariff on frozen potatoes falls to 14 percent, the tariff on frozen french fries (yellow) falls to 6.4 percent, the tariff on other frozen french fries falls to 8 percent, the tariff on potato chips falls to 6.4 percent, and the tariff on other prepared potatoes falls to 6.4 percent.

Under NAFTA, the United States eliminated the tariff on fresh yellow (Solano) potatoes. The tariff on other fresh potatoes is phased out over a 5-year period. The duty on seed potatoes was eliminated also. The tariff on frozen potatoes declines over 5 years. For potato chips and other prepared potatoes, the tariff was eliminated. The tariff on yellow frozen french fries was eliminated and the tariff on other frozen french fries declines over 5 years. With CFTA, the tariffs on fresh potatoes and frozen french fries from Canada are phased out over 10 years. A snapback to MFN tariff levels is included until 2008.

*Mexico:* Prior to NAFTA, Mexico had a 15-percent tariff on frozen potatoes, and 20-percent tariffs on dried, frozen french fries, and other prepared potatoes. Under NAFTA, all processed potato tariffs are phased out over 10 years. Prior to NAFTA, Mexico also had import licensing requirements for fresh potatoes from the United States and Canada. Under NAFTA, this licensing requirement was eliminated and a tariff-rate quota was instituted in its place. Fresh potatoes can only be shipped to the border States of northern Mexico. The United States received an initial 15,000-metric-ton duty-free tariff-rate quota. The in-quota amount will increase at a 3-percent annual compounded rate over the 10-year transition period. Over-quota imports were assessed a tariff initially equal to \$354 per metric ton, but not less than 272 percent. Over the first 6 years of the agreement, 24 percent of the over-quota tariff is eliminated with the remainder phased out over the last 4 years of the reduction period. The Mexican processed potato industry is also protected by tariff-rate quotas, but the over-quota tariff is the MFN rate, which is not very high. In 1994, the tariff-rate quota was 1,800 metric tons for frozen potatoes, 200 metric tons for dried potatoes, 3,100 metric tons for frozen french fries, and 5,400 metric tons for other prepared potatoes. The quotas grow at a compounded 3-percent annual rate.

*Canada:* Prior to CFTA, the tariff on fresh and seed potatoes was \$7.72 per metric ton, and the tariff on frozen french fries and other prepared potatoes was 10 percent. All the tariffs on potatoes and potato products are phased out over 10 years in equal reductions until falling to zero on January 1, 1998.

### Potato Trade Since NAFTA

U.S. fresh potato exports to Mexico grew from 5,152 metric tons in 1989 to 17,409 in 1993. Since the beginning of NAFTA, the volume of fresh potato exports fell slightly in 1994 and 1995, then rose to 25,536 metric tons in 1996. U.S. exports exceeded the Mexican tariff-rate quota in each year. The United States imports virtually no fresh potatoes from Mexico. For the 4 years prior to NAFTA, the United States imported an average of 1,528 metric tons of potato chips from Mexico, but since then the United States has only imported chips from Mexico in one year—1994 (448 metric tons).

U.S. fresh and seed potato exports to Canada have trended up since 1990, ranging from 132,553 in 1991 to 264,736 metric tons in 1994. Frozen french fry exports to Canada have averaged 9,326 metric tons for the 1994-96 period, increasing since December 1995 when Canada relaxed its strict packaging and labeling rules for U.S. frozen french fries sold to the Canadian foodservice sector. During 1994-96, potato chip exports to Canada averaged 9,647 metric tons.

U.S. fresh and seed potato imports from Canada have varied substantially since 1990, ranging from 181,990 metric tons in 1992, to 447,391 metric tons in 1996. The average for the 1994-96 period was 349,825 metric tons, 34 percent above the average for 1991-93. Traditionally, a large share of the imported fresh potatoes from Canada have come from Prince Edward Island (PEI), and have been distributed primarily along the east coast of the United States. Stiff competition from PEI in eastern markets was particularly noticed by shippers throughout the United States during 1995. Increased fresh and seed potato imports from Canada are due to several large Canadian crops, the weak Canadian dollar, poor yields in Maine, and strong demand and prices in the United States.

Total french fry imports from Canada have increased steadily since CFTA. U.S. french fry imports from Canada totaled 126,003 metric tons in 1993 and increased to 191,849 tons in 1996. The majority of imports come from eastern Canada, where processors have benefited from the exchange rate, as well as a transportation cost advantage over competing firms in the Pacific Northwest in shipping to east coast markets. Frozen french fry imports from Canada will likely continue to increase because a Canadian processor recently won a large contract from an American fast food company.

### Trade Issues

*Canadian Potato Exports:* The surge of potatoes from Canada into U.S. markets in the 1995/96 marketing season has led to an evaluation of U.S.-Canadian potato trade issues by the U.S. government. The main potato trade issues, past and present, have revolved around (1) the perceived negative effects of Canadian exports on U.S. fresh potato prices, and (2) unfair trade practices. Product quality issues and perceived unfair government subsidy advantages of Canadian growers have been concerns raised by producers in Maine. Another concern of various U.S. producers deals with bulk shipment restrictions for sales to Canada. These

restrictions prohibit commercial shipments of fresh potatoes in containers over 50 kilograms unless an easement has been granted by the Canadian government. It is difficult to determine what (if any) impact bulk easement restrictions have on potato exports to Canada. However, at least one major Canadian processor has received a bulk easement to import some potatoes from Maine during the 1996/97 season. In 1997, the U.S. Trade Representative requested the ITC to conduct a fact-finding study of the structure and performance of the U.S. and Canadian potato industries. This inquiry is legally known as a Section 332 investigation. On June 18, 1997, the ITC released its report, which identified several Canadian barriers affecting U.S. potato exports.

*Anti-Dumping Duties on U.S. Potatoes:* Canada currently imposes an anti-dumping duty against U.S. potatoes imported into British Columbia. Potatoes imported between May 1 and July 31 are not subject to the duty. The anti-dumping duty will be in effect until 2000.

*Mexican Phytosanitary Rules for Potatoes:* U.S. seed potatoes are not allowed into Mexico, and fresh potatoes are restricted to the northern border States of Mexico. The U.S. Animal and Plant Health Inspection Service is currently working with Mexico to develop phytosanitary guidelines to open trade in seed potatoes and in fresh potatoes beyond the northern States.

### **Impacts of NAFTA on Potato Trade**

It is difficult to separate out the effects of tariff changes on trade from other changes in the market-place. Holding Canadian tariffs to levels that existed prior to NAFTA would reduce U.S. potato exports by about 1 percent and imports by 5 to 10 percent. Factors that have contributed to changes in U.S.-Canadian trade are the relative size of the crop in the two countries in any particular year, the exchange rate, and changes in the processing industry.

## **Frozen Broccoli and Cauliflower**

### **Policy Changes Resulting from NAFTA**

*United States:* Before CFTA and NAFTA, the general U.S. tariff on frozen broccoli and cauliflower was 17.5 percent. Under the Uruguay Round of the GATT, the United States decreases the tariff from 17.5 to 14 percent over a 6-year period beginning in 1995. Under NAFTA, the base tariff on Mexican frozen broccoli and cauliflower imports was decreased immediately to 15 percent and is being phased out over 10 years. CFTA mandated that the U.S. tariff on Canadian frozen broccoli and cauliflower imports be phased out by 10 percent per year until 1998 when the tariffs will fall to zero. The CFTA includes a snapback to MFN tariff levels until 2008 under certain price and acreage conditions.

*Mexico:* Before NAFTA, Mexico had a 15-percent tariff on imports of frozen broccoli and cauliflower. With NAFTA, the tariffs are phased out over 10 years.

*Canada:* Prior to CFTA, Canada had a 20-percent tariff on frozen broccoli and cauliflower. With CFTA, the tariff declines 10 percent a year until it falls to zero in 1998.

### **Frozen Broccoli and Cauliflower Trade Since NAFTA**

Even before NAFTA, Mexico had come to dominate the U.S. market for frozen broccoli and cauliflower. Between 1990 and 1993, Mexico was the source of 91 percent of total frozen broccoli imports and 94 percent of frozen cauliflower imports. The U.S. industry had already adjusted to Mexican imports which have grown steadily since the late 1970s. In 1978, imports of Mexican frozen broccoli were 7 percent of U.S. frozen broccoli production, but were 273 percent of U.S. production by 1992. In 1996, imports of Mexican frozen broccoli and cauliflower were valued at \$101 million, 5 percent of the total value of fruit and vegetable imports from Mexico.

In 1994, the first year of NAFTA, U.S. imports of Mexican frozen broccoli were 126,966 metric tons, a 5-percent decline from 1993. Frozen broccoli imports increased 23 percent in 1995, but trade was still slightly below the pre-NAFTA peak of 1992. In 1996, Mexican frozen broccoli exports to the United States were 158,779 metric tons, 2 percent above 1992 levels.

Frozen cauliflower trade increased in 1994 to 26,620 metric tons, but declined in 1995 and 1996, apparently due to production and quality problems. This appears to be a temporary situation caused by poor weather conditions. In 1996, Mexican exports of frozen cauliflower to the United States were 16,940 metric tons, a 36-percent decline from 1994.

Almost all Mexican frozen broccoli and cauliflower is exported to the United States and much of it is under contract to U.S. firms; the chaos of the devaluation and contracting domestic market seems to have had little impact on trade in 1995.

### **Trade Issues**

There have been no trade disputes involving frozen broccoli and cauliflower.

### **Impacts of NAFTA on Frozen Broccoli And Cauliflower Trade**

From 1993 to 1996, imports of frozen broccoli increased 19 percent and frozen cauliflower decreased 22 percent. Considering only changes in tariffs, a 7-percent increase in frozen broccoli imports and a 2-percent increase in frozen cauliflower imports were expected by 1996. If only Uruguay Round GATT tariff changes are considered, frozen broccoli imports would have increased 1 percent and frozen cauliflower imports less than 1 percent. Changes in consumer demand for more vegetables and production problems have had a greater impact on trade than tariff changes.

# Citrus and Products

## Fresh Citrus

### *Policy Changes Resulting from NAFTA*

*United States:* Before CFTA and NAFTA, the general U.S. tariff on fresh oranges was 2.2 cents per kilogram. For fresh grapefruit, the general tariff was 2.2 cents per kilogram from August through September, 1.8 cents per kilogram during October, and 2.9 cents per kilogram during the rest of the year. The general tariff on limes was 2.2 cents per kilogram.

With the Uruguay Round of GATT, beginning in 1995 the United States decreases the tariff on fresh oranges and grapefruit by 15 percent over 6 years and decreases the tariff on fresh limes by 20 percent over the same period. The tariff on fresh oranges falls from 2.2 cents to 1.9 cents per kilogram. For grapefruit, the tariff from August 1 to September 30 falls from 2.2 to 1.9 cents per kilogram, the tariff for October falls from 1.8 to 1.5 cents per kilogram, and the tariff from November 1 to the following July 31 will fall from 2.9 to 2.5 cents per kilogram. For limes the tariff decreases from 2.2 to 1.8 cents per kilogram.

With CFTA, the tariff for both fresh oranges and fresh grapefruit is reduced 10 percent per year until 1998, when the tariffs will fall to zero. With NAFTA, the June-November tariff on Mexican oranges was eliminated immediately, and the December-May tariff is phased out over 5 years. Under NAFTA, the August-September tariff on grapefruit was eliminated and the other tariffs are phased out over 10 years.

*Mexico:* Mexico had a 20-percent tariff on fresh oranges, grapefruit, and limes prior to NAFTA. Mexico now matches the U.S. tariff line changes and duties on oranges and grapefruit. The lime duty was eliminated.

*Canada:* Before the CFTA, Canada had no tariff on fresh citrus.

### *Fresh Citrus Trade Since NAFTA*

The United States is a net exporter of fresh oranges and grapefruit, and a net importer of limes with almost all imports originating in Mexico. Historically, U.S. exports of fresh citrus to Mexico have been quite small and variable. Since 1994, Mexico has accounted for less than 1 percent of total U.S. citrus exports.

In the 1990's, U.S. orange and tangerine exports to Mexico ranged from 138 metric tons in 1993 to 1,583 metric tons in 1990. The United States shipped 1,538 metric tons in 1994, 1,370 metric tons in 1995 and 3,887 metric tons in 1996. In 1996, exports of oranges (and tangerines) to Mexico were valued at \$2 million, less than 1 percent of the value of total fruit and vegetable exports to Mexico. In 1994, grapefruit exports to Mexico were only 178 metric tons. While this was an increase from 1993, it was clearly within the range of past trade, which has been very erratic. In 1995, grapefruit exports increased to 1,736 metric tons, the largest trade since 1985. Grapefruit exports to Mexico fell to 1,047 metric tons, valued at \$306,812, in 1996.

In the first years of NAFTA, Mexico allowed citrus imports only from California producing areas not regulated for fruit fly. In January 1996, the United States and Mexico finalized a phytosanitary protocol to allow export of citrus products from Texas producing areas not regulated for fruit fly. The increase in grapefruit trade in 1996 may be the result of the lifting of the ban on citrus exports from Texas and the very low prices for grapefruit in the U.S. market. Florida and Arizona are still trying to gain export approval.

Mexican fresh citrus exports to the United States are mostly limes. In 1996, imports of Mexican fresh citrus were valued at \$38 million, about 2 percent of the total value of fruit and vegetable imports from Mexico. Fresh citrus imports from Mexico increased from 109,721 metric tons in 1993 to 140,823 metric tons in 1996.

During the 1993/94 and 1994/95 seasons, U.S. lime production accounted for only 6 percent of domestic consumption. Mexico is the main supplier of limes to the U.S. market; in 1996, Mexico accounted for 98 percent of total lime imports. While lime consumption in the United States nearly doubled from the 1980's to the 1990's, U.S. lime production is decreasing. Florida lime bearing acreage began declining from a high of 7,300 acres in 1982/83. Following Hurricane Andrew in August 1992, bearing acreage fell to 1,900 acres in 1993. Replanting has slowed substantially from the high rates immediately following the hurricane.

While Florida production was declining, imports from Mexico have grown steadily. Mexican imports first exceeded domestic production in 1991. Part of the increase in Mexican limes was due to Mexican limes compensating for the decline in U.S. production following Hurricane Andrew. In 1993, the first full year after Hurricane Andrew, imports from Mexico were up 37 percent from the average of 1990-91 trade. Imports of Mexican limes have continued to increase since the beginning of NAFTA when the 10-year phase out of the 2.2-cents-per-kilogram tariff began. In 1994 and 1995, lime imports from Mexico were up 114 and 13 percent, respectively, from the previous year. In 1996, imports grew by less than 1 percent.

Mexican fresh citrus, except limes, from all areas other than Sonora must be treated for fruit fly before shipment to the United States. Methyl bromide is the main treatment. Fruit from the fruit-fly free areas of Sonora requires only a Mexican government certification regarding place of origin. New protocols for treatment are proposed, as producers search for cheaper and less damaging treatment processes. Mexican producers are currently experimenting with a hot air chamber treatment on fresh citrus exports to the United States. Mexico has proposed a systems approach which includes trapping pests as an alternative to spraying. This proposal is under review. Limes are somewhat fruit-fly-resistant and no treatment is required before export to the United States.

Canada is a mature market, representing about one quarter of all U.S. fresh citrus exports, and orange and grapefruit exports are relatively stable. From 1994 to 1996, orange exports averaged about 195,000 metric tons compared with 176,000 in the early 1990's. Grapefruit exports averaged

73,000 metric tons, compared with 68,000 metric tons in the early 1990's. Although trade data occasionally show U.S. imports from Canada, these are thought to be re-exports of specialty citrus purchased elsewhere.

### **Trade Issues**

There have been no trade disputes involving fresh citrus, but Florida and Arizona have been unable to gain export approval for grapefruit under Mexico's phytosanitary standards.

### **Impacts of NAFTA on Fresh Citrus Trade**

NAFTA has helped bring about the resolution of phytosanitary barriers, which will probably have more impact on U.S. exports of fresh oranges and grapefruit than tariff reductions since these barriers limited U.S. exports from some States.

Lime imports continue to increase, following a trend that was well established before NAFTA. From 1993 to 1996, lime imports from Mexico increased 35 percent. Tariff changes would have led to an increase of only 1 percent in lime imports from Mexico, and the Uruguay Round GATT tariff changes alone would have produced an increase of less than 1 percent. The decrease in the tariff for Mexico does, however, displace some imports from other countries. The long-term decline in the Florida industry, accelerated by the impact of Hurricane Andrew, has had more impact on lime trade than the tariff reductions under NAFTA.

## **Orange Juice**

### **Policy Changes Resulting from NAFTA**

*United States:* Before CFTA and NAFTA, the MFN tariff on frozen concentrated orange juice (FCOJ) was 35 cents per single-strength equivalent (SSE) gallon. With the Uruguay Round of GATT, the United States decreases the tariff on orange juice by 15 percent over 6 years, beginning in 1995.

Under NAFTA, all tariffs on Mexican orange juice are phased out over a period of 15 years. A quota of 40 million SSE gallons of FCOJ and 4 million SSE gallons of single-strength orange juice (SSOJ) can enter the United States annually at the reduced tariff rate of half the MFN rate, or 17.5 cents per SSE gallon in 1994. Mexican imports in excess of the quota enter at an over-quota rate that declines to zero over 15 years. During the first 5 years the over-quota rate declines 15 percent from the 1993 MFN level, over the second 5 years the rate is constant, and then during the last 5 years the rate declines to zero. When the over-quota rate finally falls below the in-quota rate, the over-quota rate will apply to all imports from Mexico and the quota will be eliminated. All Mexican citrus juice exports to the United States must be made from 100 percent NAFTA fruit.

A snapback provision was included to protect U.S. producers from sudden surges in imports from Mexico. If imports from Mexico exceed certain volume and price levels, snapback provisions automatically trigger the return to MFN

tariff rate. From 1994 through 2002, the volume trigger is 70 million SSE gallons, and from 2003 to 2007 it is 90 million SSE gallons. If for 5 consecutive days, the daily closing price for FCOJ on the New York futures market falls below the most recent 5-year monthly average futures closing price for the same month (excluding the highest and lowest monthly closing averages for the same 5-year period), then the price trigger is effective.

The GATT tariff reductions beginning in 1995 resulted in some minor adjustments to the NAFTA tariff rate schedule, which is based on the MFN rate. In the original tariff schedule, the over-quota rate would have remained constant from 1999 to 2005 at 29.8 cents per SSE gallon. The revised schedule requires a slight reduction in 2000 so that the Mexican over-quota rate does not exceed the new Uruguay Round MFN tariff rate of 29.71 cents. The snapback tariff rate is equal to the MFN rate so it must also decline in accord with the new tariff rate.

With CFTA, the rate is reduced 10 percent a year until 1998, when it will fall to zero.

*Mexico:* Before NAFTA, Mexico had a 20-percent import tariff on orange juice. Mexico will match the U.S. tariff line changes, duties, and 15-year phase out period (but duties cannot exceed the pre-NAFTA duty of 20 percent). Mexico also has a tariff-rate quota of 194,100 SSE gallons.

*Canada:* Before the CFTA, bulk FCOJ entered Canada duty-free but retail-ready orange juice had a tariff of 3 percent. Under the CFTA, the tariff is reduced 10 percent per year until 1998, when it falls to zero.

### **Orange Juice Trade Since NAFTA**

The United States is a net importer of orange juice. Most of the U.S. supply is from Florida. After severe freezes in the 1980's, Florida production fell and imports increased. As the industry rebuilt, the reliance on imports declined. From 1985/86 to 1989/90, 40 percent of the FCOJ consumed in the United States was imported. From 1990/91 to 1995/96, the share of imports fell to 23 percent.

The same freezes that damaged Florida's industry also affected Mexico's citrus industry. As in the case of Florida, the Mexican industry expanded production farther south to warmer climates when it began to rebuild. When prices were high following the freezes, Mexico invested heavily in the citrus industry. Between 1980 and 1995, orange production area increased from 350,000 to 765,700 acres. However, much of this new production land is in small holdings and yields are often much lower than in the older production regions.

Processing facilities also increased in the 1980's, although most Mexicans consume fresh oranges or purchase fresh oranges and prepare juice at home. The Mexican FCOJ market is a residual market and almost all juice is exported. In 1989/90, processed utilization reached more than 60 million SSE gallons of orange juice. In the early 1990's, Mexico appeared to be poised to expand exports.

As Florida production recovered from the freeze and world prices declined, Mexican opportunities in the U.S. market have declined. In 1989-91, Mexican exports to the United States averaged 52.6 million SSE gallons, but in 1992-93 exports averaged only 13.5 million SSE gallons. Under the first 3 years of NAFTA, Mexican exports to the United States have increased to an average of 52.3 million SSE gallons. In 1994, trade was 43.6 million SSE gallons, almost filling the FCOJ quota but not the SSOJ quota. In the 1994/95 season, Mexican production and quality were exceptionally good. In 1995, exports to the United States increased to 63.6 million SSE gallons, virtually filling both the FCOJ and SSOJ quotas (97 and 95 percent filled) but falling short of the 70-million-SSE-gallon level that would have triggered the snapback provision. In 1995, Mexico also exported to Europe and Japan. Imports from Mexico in 1996 were 49.7 million SSE gallons which almost filled the quotas. In 1996, imports of Mexican orange juice were valued at \$55 million, 3 percent of total fruit and vegetable imports from Mexico.

Since Mexicans generally buy fresh oranges to make juice, U.S. exports of orange juice are very small. Exports were only 790,326 SSE gallons in 1994 and 282,375 SSE gallons in 1995. Exports in 1996 were 1.1 million SSE gallons. The Mexican tariff-rate quota was exceeded in each year of NAFTA.

In the last 3 years, orange juice exports to Canada have ranged from 26.2 million SSE gallons in 1994 to 34.9 million SSE gallons in 1996. The United States imports very small amounts of orange juice from Canada and this trade is extremely variable.

### **Trade Issues**

There have been no trade disputes involving orange juice.

### **Impacts of NAFTA on Orange Juice Trade**

U.S. imports of Mexican orange juice increased 145 percent from 1993 to 1996. Mexico exported an unusually small amount of orange juice in 1993 and has gained market share at the expense of Brazil. Considering only the tariff change under NAFTA, a small increase of 2 percent in Mexican exports would be expected. The Uruguay Round GATT tariff changes alone would have resulted in less than a 1-percent increase in imports. So far, NAFTA has had little impact on the FCOJ industry, although the potential for increased trade always remains if there are production problems in the United States or elsewhere.

## **Fresh Fruit**

### **Apples**

#### **Policy Changes Resulting from NAFTA**

*United States:* All apples entered the United States duty-free prior to NAFTA so there was no policy change. Likewise, GATT tariff reductions are not applicable.

*Mexico:* Before NAFTA, Mexico had a 20-percent tariff on fresh apples. Import licenses were eliminated in 1991. Under NAFTA, a TRQ was established and the in-quota tariff is being phased out over 10 years. Safeguards to protect the Mexican domestic apple industry were instituted. For U.S. apples, only 55,000 metric tons were allowed to be imported at the preferential NAFTA tariff in the first year. The TRQ is below pre-NAFTA trade levels, but it will increase at a 3-percent compounded annual rate. Over-quota apples enter at the lower of Mexico's 1993 MFN duty (20 percent) or the MFN rate in place at the time of the over-quota imports.

Until September 1994, only certain counties in the States of Washington and Oregon had been cleared to supply apples to Mexico. Now specified counties in California, Idaho, Colorado, Utah, Michigan, New York, Pennsylvania, Virginia, and West Virginia are free to ship as well. All exports must be from areas free of fruit fly regulation. Certain limitations still exist, however. Only U.S. growing areas and packing facilities that have been inspected and cleared by Mexican phytosanitary officials can ship apples. This requirement may have some regional impacts in the United States. Since U.S. producers pay for the cost of maintaining inspectors during the shipping season, areas such as the Northeast may be at a disadvantage relative to producers in the Northwest who can spread the inspection costs over a much larger volume of exports. Apples destined to Mexico must receive cold treatment.

*Canada:* Canada had no tariffs on U.S. apples prior to CFTA, so there was no policy change. Canada generally restricts bulk sales in large nonstandard containers such as bins or trucks, which makes trade more difficult for U.S. producers. Sales of apples in containers over 50 kilograms are prohibited unless an easement is granted by the federal government.

### **Fresh Apple Trade Since NAFTA**

The United States is a net exporter of apples. During 1994-96, Canada accounted for an average of 13 percent of U.S. apple exports and Mexico accounted for 16 percent. In 1996, exports of apples to Mexico were valued at \$41.5 million, 12 percent of the value of fruit and vegetable exports to Mexico.

Over the last 5 years, Mexico has emerged as a major market for U.S. apples. Removing the Mexican import licensing requirement in 1991 was the first step to increasing U.S. apple exports to Mexico. In 1990, apple exports to Mexico totaled 12,027 metric tons. Trade increased dramatically from 1991 to 1993, rising from 21,624 to 108,380 metric tons. In 1994, exports increased to Mexico by 29 percent over the previous year. U.S. apple prices were quite low in 1994 due to a record apple crop, which helped to boost Mexican demand. In 1995, apple exports to Mexico fell to 74,370 metric tons as Mexican demand collapsed in the midst of economic problems. Apple exports to Mexico were 81,215 metric tons in 1996.



The United States imports such small numbers of apples from Mexico that they rarely show up in trade statistics. NAFTA did not change trade incentives for Mexican exporters.

During 1993, U.S. apple exports to Canada were 80,870 metric tons. During 1994-96, U.S. apple exports to Canada have averaged 82,259 metric tons per year. The Canadian anti-dumping duty may have a dampening effect on variability of apple trade by limiting U.S. exports in periods with lower U.S. market prices. Apple imports from Canada have varied more widely, ranging from 37,194 to 78,663 metric tons per year.

### **Trade Issues**

U.S. Red Delicious apples have faced anti-dumping duties in Canada since 1989. The original anti-dumping case expired in early 1994 but growers filed a new complaint. In October 1994, Revenue Canada made a preliminary determination that dumping was occurring and imposed temporary anti-dumping duties on Red and Golden Delicious apples. The final determination in January 1995 concurred with the preliminary finding. The Canadian International Trade Tribunal found that there was material injury to the Red Delicious apple industry, but not to the Golden Delicious apple industry, so the dumping duty on Golden Delicious apples was dropped. The anti-dumping duty will be in effect until 2000. Since February 1995, whenever U.S. f.o.b. export prices to Canada fall below U.S. \$12.99 per 42-pound box, Revenue Canada applies a dumping duty to raise the price to that level. There is no duty during July, August, and September. This practice reduces U.S. marketing opportunities for smaller or lower grade apples.

Mexico initiated an anti-dumping investigation against U.S. apples in 1997.

### **Impacts of NAFTA on Fresh Apple Trade**

U.S. apple exports to Mexico increased after the licensing requirements were lifted in 1991 as part of a general pre-NAFTA trade liberalization. Resolving phytosanitary restrictions ought to further boost trade. Changes in tariffs seem less important to the trade flows. From 1993 to 1996, apple exports to Mexico decreased 25 percent (despite record trade in 1994) due to the economic crisis in Mexico. Considering just the tariff change with Mexico under NAFTA, U.S. exports to Mexico in 1996 would have been expected to increase 30 percent. With just GATT tariff changes, U.S. apple exports to Mexico would have decreased 1 percent as greater tariff reductions in other countries would make them more appealing markets than Mexico.

## **Pears**

### **Policy Changes Resulting from NAFTA**

*United States:* There is no tariff on fresh pears during the months of April, May, and June. A tariff of 1.1 cent per kilogram is charged during the rest of the year. With GATT, the 1.1 cent tariff is reduced to 0.3 cent per kilo

over a 6-year period, beginning in 1995. Under NAFTA, the United States agreed to immediately eliminate the import tariff on fresh Mexican pears. With the CFTA, the tariff on Canadian pears declines 10 percent per year until 1998, when it will fall to zero. The United States and Canada have a snapback to MFN tariff rates until 2008 under certain price and acreage conditions.

*Mexico:* Prior to NAFTA, Mexico had a 20-percent tariff on pear imports. With NAFTA, the tariff was cut immediately to 15 percent, with the remainder to be phased out over 5 years. The U.S. Animal and Plant Health Inspection Service must ensure that the fruit moth, apple maggot, and plum curculio are not present before issuing the required USDA phytosanitary export certificate for U.S. pears entering Mexico. Shipments must be substantially free of leaves (a limit of two leaves per box) and debris. Unlike apples, Mexican inspection in the United States is not required.

*Canada:* Before CFTA, Canada had a 3.31-cents-per-kilogram, but not less than 12.5 percent ad valorem, seasonal tariff on imports of fresh pears. The seasonal tariff was in effect during the marketing season but could not exceed 24 weeks in any 12-month period ending March 31. Canada is divided into three regions and the seasonal tariff need not begin at the same time in the different regions. With the trade agreement, the tariff declines 10 percent per year until it falls to zero in 1998.

### **Fresh Pear Trade Since NAFTA**

The United States is a net exporter of pears. Canada is the major market for pear exports; during 1994-96, Canada accounted for 31 percent of U.S. pear exports. Mexico accounted for 29 percent of exports during the same period. In 1996, exports of pears to Mexico were valued at \$16.5 million, 5 percent of the value of all fruit and vegetable exports to Mexico.

U.S. exports of fresh pears to Mexico began to grow rapidly in the late 1980's. From 1989 to 1993, pear exports grew from 20,785 metric tons to 38,653 metric tons. In 1994, exports increased 68 percent. In the same year, U.S. pear production for the fresh market was a record and prices were very low, which probably helped spur Mexican demand for pears. Pear exports declined by 61 percent in 1995. Pear exports in 1996 increased 30 percent to 33,320 tons, still 14 percent below the 1993 trade volume. Mexican pear exports to the United States are very small.

U.S. exports of pears to Canada averaged 43,606 metric tons a year from 1994 to 1996. U.S. imports of Canadian pears are small compared with exports to Canada. U.S. imports declined steadily from 546 metric tons in 1990 to 68 metric tons in 1994. In 1995, Canadian pear imports climbed to 566 metric tons but fell to 457 metric tons in 1996.

### **Trade Issues**

There have been no trade disputes involving fresh pears.

## **Impacts of NAFTA on Fresh Pear Trade**

Overall, U.S. pear exports to Mexico decreased 14 percent from 1993-96, but trade was quite variable during this period. The Mexican tariff on pears decreased from 20 to 15 percent in 1994 and trade increased 68 percent that year. The size of the change in tariff may be relatively important for pears compared with apples, but low prices in the United States in 1994 may also have contributed to the high volume of exports. The economic conditions in Mexico have had an important impact on pear trade; in 1995, U.S. pear exports to Mexico declined 61 percent.

## **Peaches**

### **Policy Changes Resulting from NAFTA and CFTA**

*United States:* Peaches enter duty-free from December through May; at other times, the tariff is 0.4 cent per kilogram. With the Uruguay Round GATT agreement, the tariff is reduced by half (to 0.2 cents per kilogram) over a period of 6 years, beginning in 1995. Under NAFTA, the United States eliminated the duty on Mexican peaches. With CFTA, the tariff on fresh peaches declines 10 percent a year until it falls to zero in 1998. The United States and Canada have a snapback to MFN tariff levels until 2008.

*Mexico:* Before NAFTA, Mexico charged a 20-percent tariff on fresh peach imports from the United States. With NAFTA, Mexico cut the tariff to 15 percent immediately and the remainder is phased out over 5 years. Mexico requires peaches destined to the fresh market to be fumigated with methyl bromide for oriental fruit fly. A similar requirement for peaches destined to the processing market was eliminated. No box may contain more than two leaves.

*Canada:* Prior to the CFTA, Canada charged a seasonal tariff of 6.61 cents per kilogram, but not less than 12.5 percent ad valorem, on U.S. peaches. The seasonal tariff applies during a specified period, which cannot exceed 14 weeks in any 12-month period ending March 31. With CFTA, the tariff declines by 10 percent a year until it falls to zero in 1998. Canada generally applies a seasonal duty during the domestic harvest period. Canada can invoke a snapback duty under special circumstances regarding import prices and Canadian peach production area.

### **Peach Trade Since NAFTA**

U.S. peach (and nectarine) exports to Mexico have been trending upward since the late 1980's. Exports were a record 16,226 metric tons in 1994, but that was only 11 percent higher than the previous high in 1991. In 1995, peach exports to Mexico fell only 28 percent (apple exports fell 51 percent). One reason that peach exports did not fall as much as other tree fruit exports is that the United States exports fresh peaches to Mexico for processing. Industry experts estimate that almost 70 percent of 1995 fresh peach exports to Mexico were peaches that went directly to a processing plant. A processing plant with high fixed costs is less likely to reduce imports of raw products than are consumers of the fresh product; typically, the raw fruit or vegetable cost is small compared with the cost of the final

processed product. Peach shipments to Mexico in 1996 were down 25 percent, due in part to very low processed peach prices in Mexico. In 1996, U.S. peach exports to Mexico were valued at \$4.5 million, 1 percent of the total value of fruit and vegetable exports to Mexico.

Mexico exports very small amounts of peaches to the United States, almost exclusively in April. Currently, exports are limited to those produced in the Sonora fruit-fly-free zone. Exports are highly variable, ranging from 37 to 197 metric tons in the 4 years prior to NAFTA. In the first year of NAFTA, Mexican peach exports were zero. In 1995, peach exports were 166 metric tons, due in part to the peso devaluation, and in 1996 shipments declined again to 127 metric tons.

U.S. peach exports to Canada between 1994 and 1996 averaged 43,837 metric tons. Imports from Canada were more variable, ranging from 187 metric tons in 1994 to 456 metric tons in 1996.

### **Trade Issues**

Producers in the Southeastern United States have voiced concerns about Mexico's regulations that require methyl bromide treatment as a condition of entry for all imported peaches and also require on-site monitoring, with all costs borne by U.S. industry. Currently, California is the only state that has opted to ship fruit under Mexico's modified certification procedures.

### **Impacts of NAFTA on Peach Trade**

U.S. peach exports to Mexico increased 40 percent from 1993 to 1996 (but declined 46 percent from 1994 to 1996). The tariff rate reductions should have encouraged consumer and processing demand in Mexico, although consumer demand has been limited by the economic crisis beginning in 1995.

## **Grapes**

### **Policy Changes Resulting from NAFTA**

*United States:* The MFN tariff on grapes is zero during the months of April, May, and June. The tariff from July 1 to February 14 is \$2.12 per cubic meter, and from February 15 to March 31 the tariff is \$1.31 per cubic meter. Under the Uruguay Round of GATT, the United States agreed to reduce the tariff during February 15-March 31 from \$1.41 to \$1.13 per cubic meter, and during July 1-February 14 from \$2.12 to \$1.80 per cubic meter. These changes are phased in over 6 years beginning in 1995. With CFTA, the tariff rate for Canada is reduced 10 percent a year until it falls to zero in 1998. There is a snapback to MFN tariff levels until 2008 under certain conditions. Under NAFTA, all tariffs on Mexican grapes were eliminated immediately.

*Mexico:* Before NAFTA, Mexico had a 20-percent tariff on imported grapes and required import licenses on fresh table grapes. With NAFTA, import licenses were eliminated and replaced with tariffs. The tariff during the period October 15-May 31 was eliminated immediately. The 20-percent tariff during the rest of the year will be reduced to



zero in 10 years, with equal declines each year. Currently, imports can only come from California, and only from areas without fruit-fly quarantine.

*Canada:* Before CFTA, Canada had a 2.21-cent-per-kilogram seasonal tariff on grapes. The tariff was limited to 15 weeks in any 12-month period ending March 31. With the CFTA, the tariff declines 10 percent a year until it falls to zero in 1998. Snapback provisions apply.

### **Grape Trade Since NAFTA**

The United States is a net importer of grapes. Most grape imports come from Chile in the U.S. off-season. Mexico is the second largest source of imports and ships grapes to the United States in May and June with a very small amount in early July. The California grape industry ships fresh table grapes from June through January, although volume in June is very small. Most of the trade with Mexico is complementary. In 1996, imports of Mexican grapes were valued at \$86.8 million, 5 percent of the value of total fruit and vegetable imports from Mexico. Canada is the biggest market for U.S. grape exports. Mexico is the third most important market for U.S. grapes. In 1996, exports of grapes to Mexico were valued at \$11 million, 3 percent of the value of total fruit and vegetable exports to Mexico.

In 1994, U.S. grape imports from Mexico were 41,074 metric tons, just slightly lower than the previous year. Imports nearly doubled to 80,492 metric tons in 1995 despite the U.S. table grape crop being the largest since 1988. Mexico also had a very large crop in 1995. Imports in 1996 were down to 60,032 metric tons.

In 1993, U.S. grape exports to Mexico rose to a then-record 9,001 metric tons. Although exports to Mexico had been increasing since the early 1980's, the 1993 level was 136 percent above the previous record. In 1993, import licensing restrictions were replaced with a quota and the U.S. and Mexican governments agreed on phytosanitary standards. In 1994, exports soared to 24,380 metric tons. Exports to Mexico in 1995 and 1996 were more moderate, due to reduced consumer buying power in Mexico. Between 1994 and 1995, domestic grape consumption in Mexico fell 39 percent. 1996 grape exports to Mexico were 10,858 metric tons, almost back to 1994 levels.

U.S. exports to Canada have been decreasing since 1990, and exports of 86,964 metric tons in 1996 were the lowest since the beginning of the decade. U.S. imports of grapes from Canada are small and erratic. Most imports from Canada are in September.

### **Trade Issues**

There have been no trade issues involving fresh grapes. However, U.S. grape exporters have faced some difficulties in shipping to Mexico because of new labeling requirements on grapes.

### **Impacts of NAFTA on Grape Trade**

Before NAFTA, U.S. imports of Mexican grapes were duty-free from April through June. The trade agreement eliminated

all tariffs, which affected only a small amount of imports in July. Grapes entering the United States during July 1995 increased from earlier years to 11,582 metric tons, but this was still just 14 percent of total imports from Mexico. In 1990 and 1992, imports from Mexico during the month of July ranged from 10 to 17 percent of total annual imports. The July tariff appears not to have been much of a barrier.

The opening of trade under NAFTA, specifically the end of licensing requirements, was very important for U.S. grape exports to Mexico. Eliminating the Mexican tariff against U.S. exports in the fall helps the U.S. industry, but the tariff reductions in the rest of the year are still very small and have had only minor impacts.

## **Cantaloupe**

### **Policy Changes Resulting from NAFTA**

*United States:* The general U.S. tariff on cantaloupe is 20 percent from August 1 through September 15, and 35 percent the rest of the year. From the mid-1980's through 1992, there was frequently an exemption to the general tariff for fresh cantaloupe entering the United States from January 1 through May 15. During this time, imports entered duty-free. Beginning in 1995, GATT-mandated tariff reductions began phasing in. Over 6 years, the tariff on cantaloupe falls from 20 to 12.8 percent in the August 1-September 15 period, and from 35 to 29.8 percent during the rest of the year. With the CFTA, the Canadian tariffs are reduced 10 percent a year until 1998 when they fall to zero. The CFTA includes a snapback to MFN tariff levels until 2008. Under NAFTA, the tariff on Mexican cantaloupes from August 1 to September 15 is phased out over 10 years. The May 16-July 31 and September 16-November 30 tariffs are phased out over 15 years. The tariff from December through May 15 was eliminated in 1994.

*Mexico:* Mexico had a 20-percent tariff on cantaloupe imports before NAFTA. Now Mexico matches the U.S. tariff line changes and phase-out periods.

*Canada:* Canada did not have a tariff on cantaloupe before the CFTA so there has been no change.

### **Cantaloupe Trade Since NAFTA**

The United States is a net importer of cantaloupe. During the 1990's, cantaloupe imports have averaged 24 percent of supply, compared with 13 percent during the 1980's. This increase is due to stronger off-season demand for fruits and vegetables in general, some of which can be linked to the popularity of fruit and salad bars. Per capita use of cantaloupes reached 9.9 pounds per person in 1995, up from 9.2 pounds in 1990 and 5.8 pounds in 1980. For cantaloupe and other melons, this expanded off-season demand can only be served by imports. While growth in domestic production between the 1980's and 1990's kept pace with population growth, imports doubled. Most cantaloupe imports enter the country between November and June. Mexico is a major supplier to the United States with about 37 percent of the import market. However, the CBI nations account for about 60 per-

cent of imported cantaloupes, and product from these countries enters the United States duty-free.

Cantaloupe imports from Mexico have risen since NAFTA was enacted in 1994, but Mexico is just beginning to export the volume common in the early 1990's. In 1992 and 1993, some areas in Mexico suffered weather-related production problems and it has taken a few years for the industry to reorganize from the associated economic problems. Imports of Mexican cantaloupes in 1996 were 146,146 metric tons, still below the 1991 peak of 163,641 metric tons. In 1996, imports of Mexican cantaloupe were valued at \$46 million, 2 percent of total fruit and vegetable imports from Mexico.

About 4 percent of U.S. cantaloupe supply is exported annually. Canada is the destination for 97 percent of U.S. cantaloupe exports. In 1996, strong U.S. production and low prices (export value per unit fell 43 percent) prompted cantaloupe exports to Canada to more than double. Similarly, when cantaloupe prices fell in 1992 (export value per unit fell 34 percent), exports to Canada also surged. The United States also exports a small amount to Mexico, primarily during the summer months.

### **Trade Issues**

There have been no trade disputes involving cantaloupes.

### **Impacts of NAFTA on Cantaloupe Trade**

The tariff for cantaloupes during the periods May 16-July 31 and September 16-November 30 are being phased out over 15 years, the longest phase-out category, so any tariff effect would be small during the first 3 years of NAFTA. From 1993 to 1996, Mexican exports of cantaloupe to the United States increased 114 percent but Mexican exports in 1993 were very low. Considering only tariff changes, Mexican exports to the United States were expected to increase between 10 and 15 percent. Even without NAFTA, imports from Mexico would be predicted to increase 3 percent due to the Uruguay Round GATT tariff changes. Production problems in Mexico outweighed any gains that might have accrued from the first 3 years of NAFTA tariff reductions.

From 1993 to 1996, U.S. exports to Canada increased 11 percent. With the tariff changes, an increase of 3 to 4 percent was expected. With just the Uruguay Round tariff changes, exports would have increased less than 1 percent.

## **Watermelon**

### **Policy Changes Resulting from NAFTA**

*United States:* Before CFTA and NAFTA, the general tariff on watermelons was 20 percent. With the Uruguay Round, the United States pledged to decrease the tariff from December 1 to March 31 from 20 to 9 percent, and during the rest of the year to reduce the tariff from 20 to 17 percent. These reductions began in 1995 and will be complete in 6 years.

With NAFTA, the tariff from May 1 to September 30 (the main U.S. production period) is phased out over 10 years.

The tariff for the rest of the year was eliminated immediately. For the May-September period, a tariff-rate quota of 54,400 metric tons was introduced. This quota volume is based on the highest annual volume between 1989 and 1991, plus 5 percent. The quota grows at a compounded 3-percent annual rate over the transition period. Imports from Mexico over the quota will be charged the MFN rate in place on July 1, 1991 or the current MFN, whichever is lower. With CFTA, the tariff on Canadian watermelon is reduced 10 percent a year until the tariff falls to zero in 1998. A snapback provision to MFN tariff levels applies until 2008.

*Mexico:* Before NAFTA, Mexico had a 20-percent tariff on watermelons. With NAFTA, this tariff is limited to the same May 1-September 30 period as the U.S. tariff. The tariff is phased out over 10 years.

*Canada:* Canada did not have a tariff on watermelon before the CFTA so there has been no change.

### **Watermelon Trade Since NAFTA**

U.S. imports of watermelons have increased annually since 1993. Most of the increase has come from Mexico, with smaller gains from Central American countries. Mexico accounts for about 90 percent of U.S. watermelon imports, with most volume arriving during December to April, the U.S. off-season. Mexican watermelon production suffered a decline in the early 1990's with export volume to the United States reaching a low of 81,763 metric tons. Exports to the United States have increased steadily since then. U.S. imports of Mexican watermelons were 106,706 metric tons in 1994, 135,972 metric tons in 1995, and 192,497 metric tons in 1996. In 1996, imports of Mexican watermelons were valued at \$46 million, 2 percent of the total value of U.S. fruit and vegetable imports from Mexico. The U.S. quota for Mexican watermelons has not been filled in any year, ranging from 41 percent full in 1994 to 31 percent full in 1996. Very little watermelon volume comes from Canada.

The catalyst for this import growth is stronger demand in the U.S. market, with per capita use of watermelon on an upswing in the 1990's. Part of this increase reflects strong industry promotion efforts through various programs, but perhaps more importantly, increased demand also reflects a surge in availability of new seedless watermelon varieties, which appear to be popular with consumers. These new varieties, which are grown both in the United States and Mexico, are more expensive to produce and these higher costs are reflected in the average import value. The import value for watermelons averaged a rather steady 9 cents per pound during 1990 to 1993. However, it jumped to 13.5 cents in both 1994 and 1995. Overproduction in both the United States and Mexico during the spring of 1996 forced prices lower for both domestic and imported product. As a result, import value averaged 11 cents per pound in 1996—still a fifth higher than the early 1990's.

On the export side, about 97 percent of all U.S. watermelon exports go to Canada. Exports enjoyed a surge from

1992 to 1996 as large U.S. crops dropped the average export value from 25 cents per pound in 1990 and 1991 to 12 cents. Export volume doubled during this 4-year period. However, when average export prices rose in 1996 to 20 cents, export volume plummeted back to pre-1992 levels. Since U.S. watermelon production was very strong and market prices lower in 1996, higher export prices may have reflected the prevalence of higher-priced seedless varieties in the United States

### ***Trade Issues***

There have been no trade disputes involving watermelons.

### ***Impacts of NAFTA on Watermelon Trade***

Between 1993 and 1996, U.S. imports of Mexican watermelon increased 128 percent, but in 1993 the United States imported an unusually small volume of watermelon. There are no discernible impacts on producers due to NAFTA since most import volume comes in the U.S. off-season. Consumers gain from cheaper watermelons.

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