



NAFTA COMMODITY SUPPLEMENT

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Foreword

This is the second part of ERS's report on the effects of the North American Free Trade Agreement (NAFTA) on U.S. agriculture. The first part, WRS-99-1, was published in August 1999 and contains the following sections: Developments in Trade, Policies, and Dispute Resolution; Employment in U.S. Agriculture and Related Industries; Investment in Agriculture and Food Processing; and Beyond the Farm Gate. This second part of the report provides a commodity-level assessment of NAFTA's impact on U.S. agricultural trade with Canada and Mexico. Thirty-five commodities and commodity groupings, which constitute over half of this trade, are examined in close detail.

Both parts of this report were submitted to the U.S. Congress in 1999, as mandated by the North American Free Trade Agreement Implementation Act. Thus, the materials in this report reflect the research team's understanding of economic and policy developments through early 1999. The next issue of the entire report is scheduled for completion in 2001.

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LIVESTOCK AND LIVESTOCK PRODUCTS

Cattle

Policy Changes Resulting from NAFTA

United States Historically, U.S. tariffs on cattle entering from Canada and Mexico have been quite low. Purebred breeding cattle and cattle imported for dairy purposes were admitted duty-free, while other cattle were charged 2.2 cents per kilogram. Under the Canada-U.S. Free Trade Agreement (CFTA), the United States began to gradually eliminate its tariffs on cattle imports from Canada. This process, originally intended to last 10 years, was accelerated to completion by 1993. Duties on cattle imports from Mexico were completely eliminated at the start of NAFTA.

Canada Even before CFTA, Canada's import regime on U.S. cattle exports largely resembled the U.S. regime on Canadian cattle exports. Purebred breeding cattle and cattle intended for dairy purposes were admitted duty-free, and other cattle were charged 2.2 cents per kilogram. Under CFTA, Canada began tariff elimination with the United States over a 10-year period and accelerated this process to completion by 1993. Canadian duties on cattle imports from Mexico were completely eliminated at the start of NAFTA.

Mexico In late 1992, Mexico raised its tariffs on non-breeding cattle from zero to 15 percent. Once NAFTA took effect in 1994, Mexico eliminated its tariffs on U.S. and Canadian cattle.

Cattle Trade Since NAFTA

The United States trades three basic classes of cattle with Canada and Mexico: cattle for slaughter, purebred breeding cattle, and feeder cattle. U.S.-Canadian trade in slaughter cattle runs in both directions. In contrast, U.S.-Mexican trade consists primarily of U.S. exports for slaughter in Mexico, although large numbers of Mexican cattle were slaughtered in the United States in 1995.

The cattle imported for slaughter in the United States have tended to be either cows or steers and heifers that were leaner than the animals produced domestically. However, recent shortages of Choice grade beef have encouraged the importation of higher-grade Canadian fed cattle, which can then be graded in the United States. U.S. slaughter cattle exported to Mexico are usually older cull animals. The United States also imports feeder cattle from both Mexico and Canada. These animals, which have been raised on grass, are placed in U.S. feedlots, where they are fed grain to produce the marbling characteristics desired by American consumers.

A substantial part of U.S.-Canadian cattle trade in both directions is destined for immediate slaughter. The number of cattle imported for slaughter from Canada has increased under NAFTA. Primarily, however, the United States ships feeder cattle to Canada, and Canada then ships slaughter-ready animals to the United States. U.S.-Canadian cattle trade has increased since CFTA, although the United States remains a substantial net importer of slaughter cattle.

U.S. slaughter cattle exports to Mexico increased dramatically in the first year of NAFTA, but they dropped almost 90 percent in 1995, as declining incomes forced a reduction in Mexican beef consumption. These exports began to recover in 1996 and peaked at three times their pre-NAFTA level in 1997, but they fell in 1998 to twice the 1993 level. U.S. cattle exports are expected to fall slightly in 1999 given tight supplies and high prices.

The United States generally imports relatively few slaughter cattle from Mexico. However, these imports increased 60 percent in 1995, as Mexican producers liquidated their herds in response to drought and adverse economic conditions. With the associated depletion of Mexican herds, imports have returned to historic levels. As beef consumption in Mexico recovers, it is likely that U.S. imports of slaughter animals from Mexico will remain low and that cattle exports to Mexico will increase. However, imports of feeder cattle by the United States are expected to increase moderately in 1999 because of continued drought in Mexico.

Breeding cattle constitute a small portion of U.S. cattle trade with Canada and Mexico. For instance, about 10 percent of U.S. cattle exports to Mexico are for breeding purposes. Breeding cattle are primarily imported from Canada and exported to both Mexico and Canada. The purchase of such animals generally reflects the decisions of beef and dairy producers to expand or upgrade their herds.

A number of factors influence Mexican imports of U.S. breeding animals. These include Mexican government policies concerning herd upgrading, the availability of General Sales Manager (GSM) credit guarantees, large outstanding debts among some Mexican producers, and difficulties among producers in general in obtaining new loans. The United States is a net exporter of breeding cattle, and exports to Mexico grew rapidly in 1994. However, these exports fell dramatically in 1995 as the peso collapse and drought discouraged Mexican herd upgrading. Although the United States offered GSM credits for cattle imports, Mexican banks, themselves facing liquidity problems, have been less willing to lend to producers.

U.S. imports of feeder cattle represent about two-fifths 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 depend on a number of factors, including domestic and foreign inventories, grain prices, and exchange rate differentials. Cattle feeding has increased in western Canada, giving that region's cow-calf operators an alternative to selling cattle in the United States.

Mexico does not possess a major cattle feeding sector. Thus, Mexican producers lack a strong domestic market for grain-fed beef. Faced with considerably higher feed prices, there is a strong incentive to market feeder cattle to U.S. feedlots. U.S. feeder cattle imports from Mexico have fluctuated widely since 1994. Imports declined 25 percent in 1994, rebounded 40 percent in 1995, and dropped 60 percent in 1996. The large increase in 1995 stemmed from the liquidation of Mexican inventories in response to the depressed domestic economy and a severe drought in Mexico. Given the devalued peso, U.S. feeder cattle prices, although weaker than in the previous 9 years, made the United States an attractive market.

In 1996, imports from Mexico declined because of Mexican inventory reductions and falling U.S.

feeder cattle prices due to high grain prices. Because of Mexican herd reductions in 1995-96, U.S. imports of Mexican feeder cattle fell in 1997-98 to half their pre-NAFTA level. In 1999, these imports are expected to rise slightly given strengthening prices and drought in Mexico.

While total cattle imports from Canada have varied considerably since the early 1990's, the preparation of animals destined for U.S. feedlots has declined. An average of 1.1 million head was imported in 1991-93, in contrast to 1.4 million during 1996-98. However, the proportion of feeder cattle fell from 44 percent to 14 percent between these two periods. Since NAFTA's implementation, more cattle have been imported from Canada for immediate slaughter, but this number is expected to decline as Canada increases its slaughter capacity.

Trade Issues

U.S. ITC Cattle and Beef Study The U.S. International Trade Commission (ITC) has investigated the impact of NAFTA and the Uruguay Round Agreement on Agriculture (URAA) on the trade of live cattle for slaughter and fresh, chilled, and frozen beef, and the steps taken by the United States since NAFTA's enactment to prevent the transshipment of cattle and beef through Mexico and Canada for importation into the United States. An ITC report entitled "Cattle and Beef: Impact of the NAFTA and Uruguay Round Agreements on U.S. Trade" was released on July 7, 1997. The study found injury and then found there was no monetary compensation due from Canada. The petition against Mexico was dismissed.

R-CALF Dumping and CVD Petitions In the fall of 1998, a group of U.S. cattle producers called the Ranchers-Cattlemen Action Legal Fund (R-CALF) filed a petition requesting that ITC investigate charges that Canada and Mexico were dumping cattle in the U.S. market at less than their fair market value. R-CALF also alleged that Canadian subsidies help that country's producers to sell cattle in the United States at a discount. The "Record of Understanding" (ROU) signed by the United States and Canada in December 1998 states that if one country imposes new duties on cattle trade, the other may re-balance certain commitments made under the ROU for the duration of the duty increase.

On January 19, 1999, the ITC ruled 4-2 that there was evidence that Canadian cattle shipments pose a sufficient threat to U.S. industry to justify continuing the probes begun in December 1998 by the U.S. Department of Commerce. However, ITC did not find evidence that Mexican cattle shipments were a threat. On May 11, 1999, Commerce issued a preliminary determination that countervailing subsidies are not being provided to producers or exporters of live cattle in Canada. The final determination report is currently expected in mid-July. However, R-CALF has asked Commerce to issue this report at the same time as its ruling in the case of alleged Canadian dumping. In July, the Commerce Department implemented the countervailing duties.

Northern Plains Truck Interceptions In the fall of 1998, the Governor of South Dakota directed his State's highway patrol to intercept commercial truck traffic carrying Canadian beef, pork, or grain. The governor's actions won at least tacit support from governors of four neighboring States across the northern tier and led to threats by Canada to take the matter before NAFTA or the World Trade Organization (WTO). Resulting negotiations culminated on December 4 with the signing of a 17-

point “Record of Understanding” by cabinet members from both countries. Canada agreed to revise and simplify its animal health regulations governing imports, including its regulations on the importation of U.S. feeder cattle. In addition, the two countries agreed to increase their cooperation on cattle trade data and to work towards harmonizing animal drug registrations.

Impacts of NAFTA on Cattle Trade

U.S.-Canadian cattle trade has been influenced more by the exemption of Canadian beef from the U.S. Meat Import Law than by tariff changes. Cattle tariffs between the two countries were low before CFTA, and they were eliminated completely by 1993. However, CFTA’s tariff reductions might have had a greater impact on the cattle trade if beef imports from Canada were still subject to the Meat Import Law. Under this law, the weight of imported cattle was used to calculate the next year’s meat quota. Thus, higher imports of cattle in one year could lower the quota for the next year, as imported cattle weights were subtracted from domestic production.

When the Uruguay Round TRQ for beef was established, the effect of live cattle imports on production could not be considered as it had under the Meat Import Law. If Canada had been included in the TRQ, U.S. imports of slaughter cattle would have risen by an amount roughly equal to Canada’s over-quota beef exports. In other words, 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 some 20 to 30 percent. Likewise, U.S. cattle exports to Canada would have increased if the United States had been subject to the 25-percent surtax imposed on boneless beef in 1993 and if U.S. beef exports rose to a level at which Canada imposed a surtax.

NAFTA’s greatest effect on U.S.-Mexican cattle trade was Mexico’s immediate elimination of its 15-percent duty on live cattle imports. Without considering the impact of other elements of NAFTA, this policy change probably boosted U.S. cattle exports to Mexico by 18-33 percent. The tariff elimination was insufficient to offset the effects of the economic crisis on beef consumption and the accompanying rise in the peso-denominated price of U.S. beef. Moreover, had the tariff been in place during the 1995 recession, 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 pre-NAFTA tariff would also have been insufficient to forestall producers from marketing slaughter cattle in the United States.

Beef

Policy Changes Resulting from NAFTA

United States Under CFTA and NAFTA, the United States exempted both Canada and Mexico from the U.S. Meat Import Law. This exemption from quantitative restrictions on the shipment of fresh, chilled, or frozen beef was carried forward in calculating the TRQ's under the Uruguay Round. The United States also applies a tariff of 2 cents per pound on most types of imported beef. Under CFTA, this duty originally was to be eliminated over 10 years. 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 NAFTA.

Mexico In late 1992, Mexico raised its tariffs on beef from zero to 20 percent for fresh beef and to 25 percent for frozen beef. Once NAFTA took effect, tariffs on U.S. and Canadian beef were eliminated. Prior to NAFTA, there was a 20-percent tariff on beef offal exported to Mexico. That tariff, which is now 8 percent, is being phased out over 10 years.

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

Beef Trade Since NAFTA

The increasingly open border between the United States and Canada has caused beef trade between the two countries to follow geographical and weather patterns more closely. Between 1993 and 1998, U.S. exports to Canada increased at about the same rate in both volume and value, with substantial fluctuations in between. Higher-grade U.S. product competes very favorably in the population centers of eastern Canada. In addition, "no-roll" beef (inspected by USDA but not graded) sells well in Canada, where retailers generally do not specify the grade of product. Imports from Canada increased 81 percent during the same period, as slaughter plants in western Canada marketed their product to the U.S. west coast.

U.S. beef imports are likely to increase even more because of U.S. investment in the Alberta slaughter industry. Two U.S. firms own the two largest slaughter plants in Canada. These plants currently operate at less than full capacity. Large inventories led to increases in Canadian slaughter from 1994 to 1998, but a larger number of heavier animals were exported to the United States for slaughter. As a result, U.S. beef imports from Canada doubled in value and grew 97 percent in volume between 1993 and 1998, and U.S. beef trade reverted to a negative balance. Canadian beef exports are likely to increase as U.S. prices rebound with herd rebuilding.

U.S. beef exports to Mexico increased dramatically in 1994, growing 85 percent by volume, as lower duties and optimism about 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. Since 1996, trade has

rebounded. In 1998, U.S. beef exports to Mexico were more than three times their 1993 value, despite lower U.S. prices. Although some recovery started in 1996, a severe drought in northern Mexico encouraged increased domestic slaughter in 1995-96. Initially, this development pressured U.S. exporters, but ultimately it paved the way for increased U.S. beef exports in 1997-98. In 1998, the volume of U.S. beef exports to Mexico was more than twice its 1993 level.

Mexico ships only a small amount of beef to the United States. Given the proximity of Mexico's drought-prone northern regions to the U.S. border and the relative prices resulting from the peso devaluation, Mexican producers at times have marketed many of their animals for slaughter in the United States. In 1995, record cattle exports from Mexico to the United States reduced future supplies of Mexican cattle available to the United States. In 1998, these supplies equaled half of what was exported to the United States in 1993 and 40 percent of 1995 exports.

Trade Issues

Beef trade has been the subject of disputes between the United States and Canada over the equivalency of inspections and among all three NAFTA signatories over charges of dumping. Mexican producers have charged that the United States has dumped beef in their market, while U.S. cattlemen have alleged dumping by Canadian and Mexican producers. Although none of these disputes has led to a major disruption of trade, both issues are irritants. In 1998, State governors from the Northern Plains resorted to stopping Canadian trucks at the border to pressure Canada to limit shipments.

Inspection Issues As part of CFTA, Canada and the United States agreed to work towards harmonizing their inspection regimes. In 1990, USDA proposed that meat be allowed to move between the two countries on a trial basis with only random border inspections. However, U.S. inspectors rejected several shipments from Canada, and the ensuing publicity caused the trial to be cancelled. In 1992, Canada and the United States agreed that meat shipments between the two countries could be inspected either at the border or at specified destinations. Canada has complained that shipments from Canada to the United States still face delays sometimes.

Mexican Anti-Dumping Investigation Against U.S. Beef An anti-dumping dispute with Mexico surfaced 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 showing some margin of price discrimination on the part of some U.S. packers but not a threat of injury sufficient to justify the 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 were made again in 1998 that the United States was dumping beef in Mexico. An investigation is underway. On August 1, 1999, Mexico announced anti-dumping tariffs, which varied by company. The complex set of tariffs ranged from 2.67 percent to 215 percent and varied by type of cut within the range. The impact will be more on who exports than on how much is exported.

Impacts of NAFTA on Beef Trade

Beef trade has benefited greatly from trade liberalization under NAFTA. The greatest impact probably originates from the elimination of quotas between the United States and Canada. The elimination of Mexican tariffs on U.S. and Canadian beef has also been significant.

It is difficult to quantify how much NAFTA boosted trade because of other economic factors. Calculating Canada's share of the quota under the U.S. Meat Import Law indicates that Canada would have had been allowed to ship 130-135 million pounds in 1994. If the WTO TRQ had included Canada, that country would have been able to ship about 145 million pounds (roughly 65,772 metric tons) annually to the United States during 1994-98. This is about one-fourth the actual level of imports from Canada for that period, indicating higher imports due to NAFTA.

Similarly, the United States has benefited from the elimination of Canadian import restrictions since 1989. Although Canada had not invoked its Meat Import Act since 1985, the Ministry of Agriculture closely monitored imports of beef from countries outside NAFTA. In 1993, Canada imposed a 25-percent surcharge on boneless beef from non-NAFTA sources. 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 an over-quota duty of 30.3 percent. 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 have been subject to over-quota duties. This implies that NAFTA may have doubled U.S. beef exports to Canada. During 1994-98, the United States maintained a 40- to 50-percent share of the Canadian import market, considerably above its 10- to 15-percent share before CFTA, when the United States was subject to Canada's Meat Import Act.

Mexico's elimination of its tariff on U.S. beef is responsible for an increase of some 10-15 percent in the annual quantity of U.S. beef exports to Mexico between 1994 and 1998. Had the most-favored-nation (MFN) tariff been in place during the peso devaluation, the quantity of U.S. beef exports would have been even lower during the 1995 recession. The recovery of U.S. beef exports over the last several years is more closely linked to factors other than NAFTA, such as Mexican herd reductions forced by the 1995 drought and strong economic growth starting in 1996. In 1998, U.S. beef exports to Mexico were more than three times their pre-NAFTA level.

Hogs

Policy Changes Resulting from NAFTA

United States There are no tariffs on hogs entering the United States. While the United States has maintained a countervailing duty (CVD) on hogs imported from Canada since 1984, recent policy changes in Canada prompted the U.S. Department of Commerce to declare the CVD rate to be *de minimis*, or effectively zero, in September 1998. With the exception of certain regions, Mexico is considered hog-cholera endemic, and any hogs exported to the United States are subject to a 90-day quarantine. This effectively precludes most 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, this 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 lower of the MFN and pre-NAFTA levels. 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 western Canada and Ontario, but also imports feeder pigs from Manitoba and Saskatchewan for finishing in the United States. Imports of feeder pigs and slaughter hogs have increased significantly since 1995. Increased Canadian hog exports to the United States are the consequence of expanding Canadian inventories, lower CVD's, the strength of the U.S. dollar versus the Canadian dollar, and restructuring in the Canadian slaughter industry.

Restructuring in the Canadian slaughter industry is ongoing and significant. One likely inducement of restructuring was a recent series of decreases of the CVD, which highlighted differences in the wage structures of the U.S. and Canadian slaughter industries. Lower wages in the U.S. slaughter industry allow U.S. packers to outbid Canadian packers for hogs. The higher Canadian wage structure has been a determining factor in the closure of several Canadian slaughter facilities over the last 2 years. In 1998, lower wage contracts were negotiated and adopted in several major Canadian slaughter facilities, but work stoppages preceding contract ratification increased the flow of Canadian hogs to the United States.

Exports to Mexico depend largely on the health of the Mexican economy. U.S. hog exports to Mexico peaked just prior to the peso crisis, nosedived in 1995, and have since recovered, far surpassing the 1994 numbers in 1998. Other factors that influence the flow of U.S. hogs to Mexico include Mexican grain prices, the Mexican hog cycle (expansion or liquidation), exchange rates, and relative prices.

Trade Issues

Sunset Reviews URAA revised the amended Tariff Act of 1930 by requiring that CVD orders be revoked after 5 years unless revocation or termination would likely lead to a continuation or recurrence of a countervailable subsidy, and material injury to the domestic industry. Notice of the initiation of the Review process to determine whether the CVD order should be revoked was published in the *Federal Register* on December 2, 1998.

Hog Cholera Restrictions and Regionalization In 1994, Mexico officially requested that the United States 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. In 1995, Mexico added Yucatan to this list. In October 1997, the United States published final rules that recognize regions, and levels of risk among those regions, with regard to the international trade of live animals. In July 1997, a final rule recognizing Sonora to be free of hog cholera was published in the *Federal Register*.

Pseudorabies Regulation On December 3, 1998, Canada amended its Health of Animal Regulation to permit the importation of slaughter swine from certain U.S. States. This amendment exempts imported slaughter hogs from States with stage IV or stage V status (under the U.S. Pseudorabies Eradication Program) from undergoing disease testing and quarantine requirements.

Canadian packers have yet to import U.S. hogs because of the stringent requirements specified by the new regulations. Requirements that are deemed excessively onerous include truck washdowns, disposal of manure in the trucks and waterwash, reconfiguration of plant grounds to segregate U.S. hogs, and special bangle ear tags for U.S. hogs. Canadian packers also are contesting requirements to slaughter U.S. hogs within 4 hours after arriving at the plant and within 24 hours after arriving in Canada. In addition, these animals must travel to Canadian slaughter plants along defined routes and within specified time frames.

On March 30, the Canadian Food Inspection Agency (CFIA) met with various Canadian stakeholders (including Canadian producer associations, packers, and meat industry officials) to explore various strategies to address these concerns. The challenge facing CFIA is to open the channels of trade without weakening the risk-protection aspects of the regulation. Once new amendments to the regulation are written, publication in the *Canada Gazette* is required. If non-controversial, the Canadian Agriculture Minister may implement the regulatory amendments without opening them to further public comment.

Mexican Anti-Dumping Investigations In March 1993, a confederation of Mexican pork producers requested an investigation of alleged dumping by U.S. producers between May 1991 and 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, with margins ranging from zero to 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 Secretariat of Commerce and Industrial Promotion (SECOFI) found that there was no evidence of injury or threat of injury. The case was closed and no anti-dumping duties were levied.

On October 21, 1998, SECOFI initiated an anti-dumping investigation of U.S. hog exporters at the request of the Mexican Pork Producers' Council. On January 31, 1999, Mexico announced its plan to impose "compensatory" duties on U.S. hogs. The duty equals the difference between the export price and the "normal reference value" for production and marketing, fixed at \$1.08 per kilogram. Thus, the duty raises the U.S. export price to \$1.08 per kilogram. This duty remained in effect until a change in the anti-dumping amount was made in June 1999 and set the duties at \$0.351 per kilogram. A final decision imposing anti-dumping duties occurred in October 1999.

With U.S. slaughter hogs averaging 57 cents per kilogram (26 cents per pound) in January 1999, U.S. hog exports to Mexico are clearly at risk. The break-even price for U.S. hog producers is calculated to be 88 cents per kilogram (40 cents per pound). U.S. hog exports to Mexico averaged 14,000 hogs per month in 1998 (January-November). The Mexican government is also investigating charges that imports of live cattle, beef, and edible beef offal from the United States have been sold in the Mexican market at less than fair value, but it has not yet made a decision on this allegation.

Impacts of NAFTA on Hog Trade

NAFTA's direct impact on U.S.-Canadian hog trade is fairly limited, but the agreement has definitely affected this trade through several indirect channels. Analysts in Canada believe that NAFTA has cleared the way for investment in the hog industry in western Canada. In addition, lower feed prices in Canada's prairie provinces have increased incentives for raising livestock. There also has been substantial growth over the past 4 years in the export of live hogs from Ontario, as U.S. packers have outbid packers in that province. The primary U.S. restrictions on hog imports from Canada are the CVD and various health restrictions. Currently, the CVD is effectively zero, and the pending Sunset Review is likely to revoke the order altogether.

Under NAFTA, Mexico has lowered its tariff on U.S. hogs from 20 percent in 1993 to 8 percent in 1999. Partially in response to this reduction, Mexican imports of live swine from the United States increased 169 percent in value and 593 percent in number between 1993 and 1998. Efforts to identify Mexican states that are free of hog cholera may lay the foundation for expanded U.S.-Mexican hog trade in the not too distant future.

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. Originally under CFTA, the duties were to have been reduced over a 10-year period, but this schedule was accelerated and Canadian pork exports now enter the United States duty-free. Mexico is considered hog-cholera endemic, and any pork exported from there to the United States must be cooked and in air-tight containers. U.S. duties on Mexican pork were eliminated at the start of NAFTA.

Canada Although CFTA called for Canadian duties on U.S. pork to be reduced over a 10-year period, this process was accelerated and U.S. pork is now admitted duty-free. Any pork exported to Canada from Mexico must be cooked and in air-tight containers. Canada eliminated its duties on Mexican pork at the start of NAFTA.

Mexico Prior to NAFTA, Mexico had a duty of 20 percent 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 lower of the MFN and pre-NAFTA levels. 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. Within NAFTA, the United States remains a net importer of pork (from Canada). But U.S. exports have recently grown more rapidly than imports, and the imbalance between U.S. imports from NAFTA partners and exports has narrowed in both volume and value.

U.S.-Canadian pork trade is now relatively free of barriers and follows a geographic pattern similar to beef trade. 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 to eastern Canada. Since 1993, U.S. pork exports to Canada have more than tripled in volume and nearly tripled in value.

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

preserved pork exports grew 27 percent, while exports of fresh, chilled, and frozen pork continued to decline. Continued economic recovery in 1997 and 1998 further stimulated U.S. exports. Year-over-year volume increases were 30 percent and 73 percent in those years respectively.

Trade Issues

Health and Sanitary Issues As in the case of hogs, U.S. health restrictions regarding hog cholera have led Mexican pork producers to complain that they are unjustly being prevented from marketing their pork in the United States. Because the United States is committed to the concept of regionalization in the area of disease restrictions, the USDA Animal and Plant Health Inspection Service adopted rules in October 1997 that recognize regions, and levels of risk among those regions, with regard to the importation of animals and animal products. Moreover, in July 1997, the United States officially recognized the Mexican state of Sonora as being free of hog cholera.

Impacts of NAFTA on Pork Trade

NAFTA has had a moderate impact on pork trade. U.S.-Canadian pork trade is relatively free of restrictions. Mexican tariffs on pork imports have been reduced from a pre-NAFTA level of 20 percent to 8 percent in 1999. 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 benefits of tariff reductions were partially offset by other factors such as the depreciation of the peso in late 1994 and the impact of the 1995 drought on feed prices. Mexican herd liquidation further reduced the incentives to purchase U.S. pork. More recently, economic growth has combined with tariff reductions to drive dramatic increases in Mexican imports of U.S. pork.

Poultry

Policy Changes Resulting from NAFTA

United States Prior to NAFTA, the United States imposed tariffs on poultry ranging from 2 to 10.6 cents per kilogram. Under CFTA, U.S. tariffs on Canadian poultry were to be gradually reduced over a 10-year period. As with other meats, the tariff reductions on poultry were accelerated, and the tariffs on Canadian poultry have since been eliminated.

U.S. tariffs on Mexican poultry were eliminated during the first year of NAFTA. The United States still requires that all imported poultry products from Mexico be cooked and sealed. The United States is in the process of determining whether certain parts of Mexico are free of both highly pathogenic avian influenza and exotic Newcastle disease. In May 1999, USDA issued a proposal to ease restrictions on the importation of poultry and poultry products from Sinaloa and Sonora. Under the proposal, these imports would be subject to documentation that the poultry was indeed from those states and had not been in contact with exotic Newcastle disease. A second proposal would allow live birds to be shipped to Mexico for processing and the processed parts to be shipped back to the United States. USDA has not yet published rules governing this second proposal, but it is in the process of doing so.

Canada Prior to URAA, Canada's import quotas were tied to production decisions for its domestic supply controls. The import quota for broilers was set at 6.3 percent of the previous year's broiler production, and the import quota for turkeys was set at 2 percent of the current year's expected production. Under CFTA and subsumed into 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 includes poultry products, which had not been included in its global quotas.

Mexico Prior to URAA, Mexico controlled poultry imports through import licenses and a 10-percent duty. Under NAFTA, an initial TRQ of 95,000 metric tons was established on a variety of poultry categories. 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 24 percent during the first 6 years of the agreement and then be eliminated by year 10. To date, the Mexican government has chosen not to enforce its poultry TRQ's. Mexico's annual poultry imports from the United States, especially in parts and machine-deboned meat (MDM), have greatly surpassed the TRQ's.

Poultry Trade Since NAFTA

Between 1993 and 1998, U.S. exports of poultry and poultry products to Mexico and Canada rose 62 percent in volume and 71 percent in value. Exports to Canada and Mexico of turkey, broiler, and other chicken products have all increased. However, the growth in shipments has not been steady. Most of the increase occurred in 1997 and 1998.

Prior to URAA, Canadian poultry imports were limited to set percentages of either the previous year's production or an estimate of current-year production, but the inclusion or elimination of supplemental licenses could change import quantities. On January 1, 1996, Canada changed its method of allocating import permits for chicken. The revised system establishes new allocation pools for each of the following categories of importer: processors, distributors, or food service. Through 1999, participants could choose to join one of those pools or to retain a fixed traditional import allocation. By 1999, the chicken TRQ was to 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 kilograms on the basis of market share). The remainder of the TRQ was to be split 70/30 between processors (on the basis of market share) and distributors (on the basis of equal share). The new system is designed to increase the import allocation share of firms that contribute to employment and value-added activities 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 that join the new pools.

As with other meats, U.S. poultry exports to Mexico increased substantially in the first year of NAFTA. In subsequent years, sales have been above the TRQ levels established by the Mexican

government. However, in 1995, the 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. With the recovery of the Mexican economy, U.S. exports of poultry have steadily increased. Broiler exports reached 275 million pounds in 1998, up 35 percent from 1995, while turkey exports equaled 249 million pounds, up 83 percent. The value of broiler and turkey exports increased at a somewhat slower rate as unit values declined.

U.S. poultry exports have been supported by pressure from Mexican sausage manufacturers who argue that charging over-quota rates on mechanically deboned poultry meat would put them at a disadvantage by substantially raising the price of a major input. Imported sausage enters under a lower duty than poultry meat, and Mexican poultry producers cannot supply sufficient quantities of low-priced MDM to serve the domestic sausage industry. Therefore, the Mexican government has increased the within-quota quantities for certain kinds of poultry.

Trade Issues

Canada's conversion of absolute quotas on poultry to TRQ's under URAA resulted in a significant trade dispute with the United States. 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 also argued that each country must eliminate tariffs in accordance with NAFTA. Canada's view was that it had a right to convert non-tariff 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 the new tariffs to U.S. goods conforms with its NAFTA obligations. Consequently, U.S. access to Canadian markets for poultry remains unchanged. NAFTA's dispute settlement mechanism contains no appeal process.

Discussions between Mexico and the United States continue as to how the concept of regionalism in regards to disease-free status can be applied in Mexico. Questions still to be resolved include the disease-free status of the states involved and the procedures to be used to restrict interstate poultry shipments from states not declared to be disease-free.

On April 14, 1999, Mexico implemented a new rule that all raw poultry imports, except those destined for further processing, have a certificate stating that they came from flocks free of avian influenza. The tests must be done within 15 days of slaughter. Also certain northern states may now import live poultry for slaughter and processing and ship the meat back to the United States.

Impacts of NAFTA on Poultry Trade

It is difficult to assess the impact of NAFTA on U.S. poultry exports to Canada. Had Canada strictly enforced its pre-NAFTA quotas 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.

While broiler exports declined between 1993 and 1996, they have since risen sharply. The quantity of broiler exports was 59 percent higher in 1997 and was expected to increase another 9 percent in 1998. Exports of other chicken (spent egg-type or broiler-breeder hens) have also rapidly risen, almost doubling between 1996 and 1998 to 70 million pounds.

Although Mexico could have limited U.S. exports to its TRQ levels, it has been allowing larger in-quota imports than set under NAFTA. It is likely that this waiver would have occurred in the absence of NAFTA and the Uruguay Round agreement. In either case, exports to Mexico would have remained at current levels due to pressure from sausage manufacturers. Increases in broiler and turkey shipments to Mexico over the last 2 years have made Mexico one of the largest export markets for U.S. poultry products. In 1998, Mexico was the fourth largest market for broiler exports and by far the largest export market for U.S. turkey products.

Dairy

Policy Changes Resulting from NAFTA

United States For many years, the United States maintained a series of quotas on dairy products under Section 22 of the Agricultural Adjustment Act of 1932. Under CFTA, the United States agreed to eliminate tariffs on dairy products over a 10-year period. These tariffs now stand at zero. However, TRQ's remain on imports of dairy products from Canada, in accordance with URAA.

Under NAFTA, the United States granted Mexico duty-free TRQ's of 422 metric tons for milk powder and 5,550 metric tons for cheese, as well as a basket of TRQ's for other dairy products. Initially, the over-quota tariffs on milk powder ranged from 78 to 83 percent, and the tariffs on cheese equaled 69.5 percent. 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 being eliminated over a 10-year period. Under the Uruguay Round agreement, the United States replaced its quotas with TRQ's and high over-quota duties.

Canada Prior to URAA, 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. Canada and Mexico agreed to exclude their bilateral dairy trade from NAFTA. Under the Uruguay Round, Canada converted its import quotas on dairy products to 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 URAA, Mexico used import licenses to control dairy trade. Tariffs tended to be modest, ranging from zero to 20 percent. Under NAFTA, Mexico provided 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 tariffs of 20-40 percent, which in turn are reduced over 10 years.

Dairy Trade Since NAFTA

The United States is a major net exporter of dairy products to the other NAFTA countries. Although the trade balance decreased 6 percent from 1993 to 1998, export sales are twice the level of imports, although slightly less in 1998 than 1993. 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 throughout 1994-98, accounting for most of the increase in U.S. dairy imports from NAFTA countries. Mexico also increased shipments from a very small base to the United States.

The United States maintains a positive trade balance with Canada in a wide variety of dairy products. After averaging roughly \$9 million in 1994-95, this surplus ballooned to \$48 million in 1996 but fell to only \$2 million in 1998. U.S. exports of dairy products to Canada have doubled since 1993. Sales of whey and "soft" dairy products (ice cream, yogurt, etc.) have increased every year. Sales of soft products began increasing with the advent of CFTA and have increased three-fold since 1993. Soft products represent the largest sales category, averaging 55-65 percent of dairy exports to Canada during 1994-98. Exports of whey to Canada have increased in volume in each of the years following NAFTA. 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. imports from Canada, mainly cheese and other products, have grown steadily over the past 5 years. Imports of casein, cheese, and fluid milk (ultra-high-temperature pasteurized [UHT] milk to Puerto Rico) have increased somewhat since 1993, but imports of other dairy products have increased.

The United States maintains a large surplus in its trade of dairy products with Mexico. Although the surplus has declined due to reduced sales of nonfat dry milk and increased imports of various dairy products from Mexico, it equaled \$144 million in 1998. Nonfat dry milk is the largest single category of U.S. dairy exports to Mexico. Total U.S. dairy exports to Mexico fell almost 40 percent due to the devaluation, a reduction in Dairy Export Incentive Program (DEIP) sales, and higher international prices in 1996-98.

Trade Disputes

Canada's TRQ on Dairy Products Canada's conversion of dairy quotas to TRQ's under URAA resulted in a significant trade dispute with the United States. 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 also argued that each country must eliminate tariffs in accordance with NAFTA. Canada's view was that it had the right to convert non-tariff barriers to TRQ's under the WTO and to apply those TRQ's to the United States under NAFTA.

On December 2, 1996, the NAFTA dispute settlement panel issued its final report, finding that Canada's application of these new tariffs to U.S. goods conforms 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.

Tariff Classification for Butteroil/Sugar Blends The United States is awaiting a ruling by the Canadian International Trade Tribunal (CITT) on whether the import of butteroil/sugar blends should be reclassified under a different tariff line. Since 1995, Canadian processors have been importing a blend of 49 percent butteroil and 51 percent sugar from various countries, including the United States. When taken separately, the two products face high import barriers. Butterfat imports face a TRQ, while a countervailing duty applies to sugar. Currently, there is not a tariff and no limit on how much of the butteroil/sugar blend may enter Canada, so imports have increased considerably. The blend is primarily used to produce ice cream. Dairy producers claim that the government applied the wrong tariff classification when the product was first imported and that imports are circumventing Canada's TRQ's on dairy products.

Impacts of NAFTA on Dairy Trade

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

NAFTA has substantially expanded U.S. access to the Mexican market, but other factors have limited the growth of U.S. dairy 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 DEIP sales limited the ability of the United States to market both butter and nonfat dry milk. As a result, in most cases, U.S. exports did not reach the level of the Mexican TRQ's. For nonfat dry milk, the levels granted by the TRQ are about 25 percent higher than the average of the licenses issued in the 3 years prior to NAFTA.

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 its 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 Canada-U.S. Free Trade Agreement (CFTA). U.S. tariffs on Canadian corn were eliminated on January 1, 1998.

Mexico Under NAFTA, Mexico immediately eliminated its import license requirement and established duty-free tariff-rate quotas (TRQ's) for corn from the United States or Canada. Initially, the TRQ's were set at 2.5 million tons for the United States and 1,000 tons for Canada for 1994, increasing 3 percent per year thereafter. Imports above these levels face an over-quota tariff of 215 percent, which was reduced 24 percent by 1999 and will be phased out by 2008.

Canada Before CFTA, Canada maintained tariffs on imported corn ranging from Can\$1.73 to Can\$2.77 per ton. CFTA, subsumed into NAFTA, eliminated tariffs on corn imports from the United States over a 10-year period that ended January 1, 1998.

Corn Trade Since NAFTA

U.S. corn exports to NAFTA partners generally have increased since the agreement went into effect, but they continue to fluctuate with changes in those countries' production and policies. In 1993, U.S. corn exports to Mexico were exceptionally low because of a large crop in Mexico and because relative prices favored purchasing sorghum instead of corn. However, by 1996, Mexico suffered a severe drought and imported record amounts of U.S. corn. U.S. imports of corn from Canada have declined in most years since NAFTA, and the U.S. net export position has generally widened.

Mexico has long been a major market for U.S. corn, with few imports from other suppliers. Trade has varied substantially over the years, in large part because of the impact of weather on Mexican production. During 1990-93, however, Mexico's corn imports 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. Moreover, Mexican trade barriers made it easier to import sorghum instead of corn.

U.S. corn exports to Mexico 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, except in

1997. U.S. corn exports to Mexico in 1994 almost reached 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 that year's TRQ of 2.65 million tons, despite high U.S. export prices. However, feed use of corn in Mexico declined in 1996 and had not recovered through 1998. In 1997, imports of 2.57 million tons fell within the TRQ, as Mexican production increased and total consumption declined. With reduced support prices and reduced production in 1998, imports surged to over 5 million tons.

The United States trades smaller but significant amounts of corn with Canada. U.S. corn exports to Canada have increased in years when corn production in eastern Canada failed to keep pace with domestic demand. U.S. imports of Canadian corn have generally been around 300,000 tons a year under NAFTA, but they slipped to nearly 200,000 tons in 1997 and 1998. These imports primarily move to corn-deficit areas in the eastern United States. Strong demand in Canada, both for feeding and industrial processing, caused record imports above 1 million tons in 1998, while Canada's exports to the United States remained low. In the fall of 1998, Canada harvested a record large corn crop, so Canada's corn exports increased in 1999 and its corn imports decreased.

Trade Issues

There have been no major trade issues involving corn.

Impact of NAFTA on Corn Trade

U.S. corn exports to Mexico are somewhat higher due to NAFTA than they would have been otherwise. However, the strong growth in U.S. corn exports to Mexico in recent years is primarily due to other factors. 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 prior to 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 world prices. This ended a policy that distorted land use and inflated the cost of corn to users (although many consumers received government subsidies for corn tortillas). 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 ended an official prohibition on feeding corn to livestock. This ban, intended to protect the supply of corn used for food, was so effective that sorghum had become the chief grain fed in Mexico. While not mandated by NAFTA itself, these domestic policy changes reflect the general spirit of free trade and provide an indirect stimulus to corn trade with the United States.

The impact of NAFTA on U.S.-Canadian corn trade has been small. Local availability of corn in eastern Canada has had a greater influence on trade than have tariff reductions. U.S. exports of corn to Canada were slightly higher than they would have been without NAFTA. Similarly, U.S. imports of corn from Canada would have been slightly lower.

Sorghum

Policy Changes Resulting from NAFTA

United States The United States immediately eliminated its import tariffs on Mexican sorghum, following NAFTA's implementation on January 1, 1994.

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

Canada Canada immediately eliminated its import tariffs on U.S. sorghum following CFTA's implementation on January 1, 1989. Similarly, Canada immediately eliminated its tariffs on Mexican sorghum following NAFTA's implementation.

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. Recently, sorghum acreage and production in Mexico have rebounded, since the very high support prices for corn were reduced. Feed use of sorghum declined from 1991 until 1994, as livestock feeders started to use more corn as a feed grain. However, sorghum feed use has grown since 1995, mainly supplied by increased Mexican production. Limited water supplies for irrigation encouraged a shift from corn to sorghum, increasing domestic production.

Because of product switching in livestock rations in favor of corn and increased domestic production of sorghum, Mexican imports of sorghum initially declined despite the elimination of the tariff. In 1994, U.S. sorghum exports to Mexico declined about 6 percent in volume and fell another 37 percent in 1995 as corn imports continued to exceed the TRQ. In 1996, the volume of exports fell an additional 8 percent. Due to higher prices in all 3 years, the value of U.S. sorghum exports to Mexico changed less than the volume. In fact, the value of these exports actually increased in 1994 and 1996. However, this trend reversed in 1997 and 1998, as prices declined and the volume of sorghum imports increased.

The United States exports very small amounts of sorghum to Canada--less than 1 percent of the volume of corn, the leading U.S. feed grain export to Canada. Since NAFTA, exports of sorghum have risen, but they remain small compared with corn.

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, the government 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. sorghum exports would probably have fallen more than they did during 1994-96. Had the reduction in tariffs not occurred, it is likely that sorghum would have been less price-competitive against corn and that imports would have declined further as increasing quantities of feed corn were imported.

Reduced tariffs in Canada help U.S. sorghum compete for that market, but potential growth is limited by transportation costs. Other feed grains in the United States are produced closer to Canada, and sorghum's price discount is not usually enough to interest Canadian users.

Barley

Policy Changes Resulting from NAFTA

United States The United States eliminated all tariffs on barley imports from Mexico upon NAFTA's implementation on January 1, 1994. Import tariffs on Canadian barley were eliminated in 1996, following successive reductions under CFTA and NAFTA.

Mexico On January 1, 1994, Mexico immediately eliminated its import license requirement for barley imported from the United States and Canada. The United States initially received a 120,000-ton duty-free TRQ for 1994, with the duty-free amount increasing 5 percent per year thereafter. Canada received a duty-free TRQ of 30,000 tons for 1994, with duty-free access also increasing 5 percent per year thereafter. Imports from the United States and Canada over the duty-free levels face over-quota tariffs ranging from 128 percent (barley) to 175 percent (malt). These tariffs will be phased out over 10 years.

Canada Under CFTA and NAFTA, Canada agreed to a 10-year elimination of tariffs on U.S. barley imports. In Article 705 of CFTA, Canada agreed to remove its quantitative restrictions on these imports when the 2-year average of the U.S. Government's support for barley is less than that of Canada. 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 URAA. Over-quota tariffs were initially set at more than 100 percent and will be reduced 36 percent over 6 years. The within-quota tariff was eliminated on January 1, 1998.

Barley Trade Since NAFTA

Although U.S. barley exports to Mexico have increased under NAFTA, the United States remains a net importer of barley from its NAFTA partners because of imports from Canada. However, after surging in 1994, the first year of the agreement, U.S. net imports have been successively declining. Market factors basically account for the changes in barley flows rather than trade policy adjustments due to NAFTA.

The United States routinely imports significant amounts of malting barley from Canada, reflecting a

trend that began in the late 1980's. This is driven by favorable prices for Canadian suppliers due to the weakness of the Canadian dollar. It also reflects an apparent interest in diversifying supplies after the North American drought of 1988. The largest U.S. brewer now contracts Canadian farmers to cultivate U.S. barley varieties, to be grown expressly for the U.S. market. The spike in U.S. barley imports in 1994, when imports more than tripled to a record 1.96 million tons, largely consisted of feed barley. This event followed a sharp drop in U.S. feed grain production in 1993 because of adverse weather. Virtually all the barley imported by the United States comes from Canada.

U.S. exports of barley to Mexico have grown since NAFTA took effect. Barley exports rose in each of the first 3 years of the agreement, more than doubling in 1996 to 270,000 tons. This temporarily made Mexico the largest U.S. market, as sales to other markets slumped. Since 1996, barley exports to Mexico have dropped, slipping to only 103,000 tons in 1998, because of competition with Canada. Still, Mexico remains among the top three markets for U.S. barley.

Mexico's barley imports are largely tied to the beer industry. Most U.S. barley exports to Mexico have been for malting. Rising beer production reflects strong domestic and export demand. Mexico is the largest exporter of beer to the United States, surpassing Canada in 1996 and Holland in 1997. However, the increase in Mexico's malting barley imports during the first 2 years of NAFTA was accompanied by a drop in U.S. exports of barley malt as Mexico expanded its malting facilities. However, U.S. exports of barley malt to Mexico have begun to rebound in the last 3 years. In contrast, Mexico's imports of U.S. barley fell during the last 2 years due to competition from Canada.

Overall, U.S. barley exports experienced large annual fluctuations during 1994-98 because of developments in the global marketplace, which is predominantly for feed barley. The large increase in U.S. exports in 1997 largely occurred at the expense of the European Union (EU), the world's largest exporter. Low EU subsidies at that time made U.S. barley, which is unsubsidized, more price-competitive, leading to large sales to Saudi Arabia.

Trade Issues

United States Monitors Imports The increase in U.S. barley imports from Canada has not followed a steady trend since the early 1990's, but it 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. However, the United States has indicated that it will monitor imports from Canada to ensure that they do not reach "disruptive levels" such as those of 1993/94 and that it will seek consultations with Canada before barley imports reach such levels.

Canadian TRQ on Barley Under the market access provisions of URAA, Canada converted its barley import license to a TRQ. The United States views Canada's use of a TRQ in place of the barley import license as a violation of NAFTA, since the agreement generally prohibits member countries from increasing tariffs or introducing new tariffs.

Using the NAFTA dispute settlement process, 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 indeed conform with its NAFTA obligations. Consequently, U.S. access to Canadian markets for barley remained unchanged. NAFTA's dispute settlement mechanism contains no appeal process. However, in 1998, Canada eliminated the TRQ for the United States.

Impact of NAFTA on Barley Trade

U.S. imports of Canadian barley have been very large since 1994, but NAFTA's impact on this trade has been minor as imports during 1994-98 were only slightly higher than what would have occurred otherwise. The sharp rise in U.S. barley imports from Canada in 1994 stemmed mainly from a U.S. feed grain shortage following the Midwest floods of 1993, not from NAFTA.

The tariff and license changes under NAFTA have had a small positive impact on U.S. barley exports to Mexico. Without NAFTA, Mexican license restrictions could have limited imports of barley for feed, but NAFTA guaranteed annual increases in the TRQ of 5 percent. However, growth in demand from the beer industry would likely have encouraged Mexico to issue import licenses for malting barley without NAFTA. Moreover, the major competitor for the Mexican barley market is Canada, also part of 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 not changed by 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 has continued under NAFTA. Under Article 705 of CFTA, subsumed into NAFTA, Canada's import license requirement on U.S. oats and oat products was removed in 1989.

Oats Trade Since NAFTA

The United States is the world's largest importer of oats, despite small exports to its NAFTA partners. Canada is the largest oats exporter to the United States. U.S. oats imports from Canada rose 8 percent in 1994, while total imports increased 17 percent, reflecting larger shipments from Finland and Sweden. In 1995, imports from Canada increased 28 percent, with some of the 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 U.S. reliance on Canadian oats. The expansion of the EU in 1995 to include Finland and Sweden and the consequent reduction in export subsidies available for Scandinavian oats account for most of the reduction in their exports to the United States. In 1997, U.S. oats imports from Canada reached a record 1.5 million tons, but the EU provided increased competition in 1998. The Canadian oats sector has continued to focus on the U.S. market, as was the case before NAFTA.

Today, the U.S. and Canadian oats markets are more closely integrated than the markets for 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. A favorable exchange rate between the Canadian and U.S. dollars has also made Canadian oats more attractive to U.S. buyers. In addition, Canada generally produces 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, located in the provinces of Alberta and Saskatchewan.

Trade Issues

There have been no trade issues involving oats.

Impact of NAFTA on Oats Trade

NAFTA has not directly affected U.S.-Canadian oats trade, because U.S. tariffs on oats from Canada and other sources were already at zero prior to the agreement. The increase in oats imports from Canada in 1994 and 1995 reflects a long-term trend of closer integration of the two countries' grain markets. The United States has increasingly become a net importer of oats and, because of geographical proximity, an attractive market for Canada.

Wheat

Policy Changes Resulting from NAFTA

United States Under NAFTA, the United States eliminated tariffs on common wheat imports from Mexico over 5 years and is doing the same for durum wheat over 10 years, beginning January 1, 1994. Under first CFTA and then NAFTA, the United States phased out its tariffs on Canadian wheat over a 10-year period that ended January 1, 1998.

Mexico Mexico immediately eliminated its import license requirement for all wheat following NAFTA's 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 Canada completed its 10-year elimination of tariffs on U.S. wheat imports on January 1, 1998, as was agreed under CFTA. According to CFTA's Article 705, Canada removed its import

license requirement on U.S. wheat and wheat products in 1991.

Wheat Trade Since NAFTA

NAFTA trade in unmilled wheat, flour, and pasta has grown erratically since the agreement's inception, and weather has played an important role. U.S. wheat exports to NAFTA partners (predominantly Mexico) in 1998 were well above the 1994-97 average. Volume rose more than value. U.S. wheat and pasta imports from NAFTA partners (predominantly Canada) rebounded in 1997 to 2.2 million tons, up over 70 percent from 1996. The strong import pace continued in 1998. But at 2.0 million tons, these imports did not quite match those of 1997 and remained well below the record 2.5 million tons in 1994. Lower prices caused the value of imports to drop in 1998.

Mexico's total wheat imports, as well as its wheat imports from the United States, declined in 1994 because favorable weather in Mexico produced a large crop there. Two years of drought followed, reducing Mexican production and boosting imports. Wheat consumption in Mexico fell dramatically in 1995 and 1996, as the peso devaluation and subsequent recession hammered the purchasing power of Mexican consumers. Initially, it was thought that wheat consumption would rise as consumers shifted from meat to bread products. However, in 1995, the Mexican government lifted price controls on wheat products and eliminated a wheat milling subsidy. However, it left price controls in place for corn tortillas. As a result, the prices of wheat products rose relative to tortilla prices, and the consumption of wheat products plummeted.

Despite the drop in consumption, imports increased in 1995 and 1996 because of smaller Mexican production. From 1996 to 1998, Mexico's wheat area remained below its average during the previous 2 decades because of the many alternative uses for irrigated land. As consumption has grown with an improving economy, total wheat imports have grown to record levels, and competition between the United States and Canada has been intense.

In 1995, U.S. wheat exports to Mexico jumped not only because of Mexico's drought, but also because Canada had lower exportable supplies. Both the United States and Canada provide export credit guarantees to Mexico. These guarantees helped sustain Mexican wheat imports when foreign exchange might have been a constraint. NAFTA facilitated an increase in Mexican imports during the drought years of 1995 and 1996, and the closer links forged between Mexico and the United States during that time probably helped mitigate the damage to Mexican import demand caused by the peso crisis.

In 1997, U.S. wheat exports to Mexico declined even though Mexico's imports increased. The Canadian Wheat Board faced snow-induced logistical problems on the west coast that year, which greatly hampered shipping to many destinations. However, the Board could ship wheat to Mexico via the U.S. transportation system, making Mexico an especially attractive market. In 1998, Mexico's imports increased and the U.S. share expanded, pushing U.S. exports to Mexico above the 1996 record.

CFTA was expected to boost U.S. wheat imports from Canada. As a surplus producer with

affordable transport access to much of the United States, Canada is the main source of U.S. wheat imports. In 1994, U.S. wheat imports from Canada rose 36 percent over the previous year. However, much of this growth was caused not by NAFTA, but by weather-related events in Canada and the United States. In 1993, Canada's wheat crop was damaged by disease and wet weather at harvest. Since the 1992 crop was also of low quality, Canada's supply of feed wheat was exceptionally high. At the same time, flooding in the Midwest dramatically reduced the U.S. corn crop. These conditions set the stage for a surge in U.S. imports of Canadian wheat in 1994. Reduced tariffs under NAFTA facilitated this surge but were not a main causal factor.

In 1995 and 1996, U.S. wheat imports from Canada dropped, 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. U.S. imports from Canada rebounded to 2.2 million tons in 1997 and stabilized at 2.0 million in 1998.

Canada supplies pasta to the U.S. market, but 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 EU and Turkish pasta helped Canada increase shipments to the United States during 1996-98. Pasta imports from Canada reached a record 21,000 tons in 1997 and nearly doubled in 1998 to 39,000 tons.

Trade Issues

Of all the grains, wheat has sparked the most contentious trade disputes since NAFTA's implementation.

Canadian TRQ on U.S. Wheat Imports The sharp rise in U.S. wheat imports from Canada during the 1993/94 crop year, following several years of increasing imports, resulted in a request for a Section 22 investigation by the U.S. International Trade Commission (ITC). ITC determined that the increased wheat, wheat flour, and semolina imports were materially interfering with USDA price and income support programs and forwarded recommendations for possible action to the President. These recommendations ranged from a strict import quota of 900,000 tons to various TRQ proposals. 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. This TRQ was in place from September 12, 1994 to September 11, 1995. It allowed for the duty-free access of 300,000 tons of durum wheat and 1,050,000 tons of other wheat, excluding white winter wheat not produced in western Canada.

The MOU also established a Canada-U.S. Joint Commission on Grains (JCG), composed of 10 private-sector members from the U.S. and Canadian grain trade industries. The JCG's purpose was to examine the marketing and support systems for grains in the two countries and to

recommend solutions to the long-term problems between the two countries in bilateral trade and in third-country markets. The JCG released its final report on January 22, 1996. The report included recommendations for policy coordination, cross-border trade, grading and regulation, infrastructure, domestic programs, export programs and institutions, and trade agreements. Finally, the MOU contained a “peace clause” ensuring that neither country would initiate action against the other for a 12-month period. Under this clause, the United States withdrew its notification to 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 Canadian grain exports to the United States from September 12, 1995 to September 11, 1996, and that it intended to consult with the Canadian government to discuss potential problems before these imports again reached disruptive levels. 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 year following the TRQ’s expiration. The United States is still monitoring imports of Canadian wheat.

Mexico’s Countervailing Duty Investigation 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 to subsidize 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 price of 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 the Export Enhancement Program (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, was eliminated on July 31, 1995.

Karnal Bunt On March 8, 1996, USDA’s Agricultural Research Service announced the discovery of Karnal bunt fungus in durum wheat seed in Arizona. The fungus was subsequently found in parts of New Mexico, Texas, and California. Karnal bunt is a fungal disease that 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 spread by airborne spores that can also be carried on plants, soil, farm equipment, and vehicles. USDA imposed a Federal quarantine on areas where Karnal bunt was detected. An eradication program was established to contain the disease by destroying infected wheat, and farmers were compensated for certain financial losses resulting from the disease.

Initially, Canada banned all imports and transshipments of U.S. durum wheat and all grain imports from the four quarantine States in order to ensure the integrity of the Canadian grain system. Although Canada imports only a small amount of wheat from the United States, approximately 1 million tons annually pass through Canadian ports of the St. Lawrence Seaway system on their way to third-country markets. Following bilateral negotiations with the United States, Canada agreed to permit once again in-transit shipments of U.S. wheat through the Seaway, beginning in April 1996. Such in-transit shipments do not stop at Canadian ports. Canada also allowed non-durum U.S. wheat to be transshipped 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 parts of northwestern Mexico since the late 1970's, long before the implementation of NAFTA. In 1983, the United States banned Mexican wheat imports to prevent the introduction of the fungus. Article 722 of NAFTA established a Committee on Sanitary and Phytosanitary Measures. At the committee's June 1996 meeting, Mexico sought U.S. recognition that the Mexicali Valley region is free of Karnal bunt. Eventually, a protocol was established allowing some Mexican wheat to enter the United States.

After regulations related to Karnal bunt were issued in the four U.S. States, Mexico announced that 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 to be 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 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 imports from any foreign country that requires EUC's for the importation 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 requirement as long as Canada also maintains its EUC requirement.

The Canada-U.S. Joint Commission on Grains examined the EUC requirements of both countries. The commission found that the requirements play a limited functional role, raise costs, and are a visible trade irritant. As a result, it recommended that both countries eliminate their EUC's. To date, there has been no satisfactory replacement of the EUC's to allay the concerns of both countries.

Canadian Acquisition of the Illinois Central Railroad The Canadian National Railway (CNR) recently acquired the Illinois Central Railroad (subject to approval by the U.S. Surface Transportation Board). Along with its purchase, the CNR will inherit a marketing alliance with the Kansas City Southern Railway, creating a highly integrated rail network stretching across Canada and through the U.S. Midwest to the Gulf of Mexico. At today's exchange rates and rail costs (not to mention the additional costs of maintaining the identity of Canadian wheat in order to market it as a distinct product), the export of Canadian wheat through U.S. Gulf ports is probably not a viable option.

Impact of NAFTA on Wheat Trade

Policy changes, including those associated with NAFTA, led to record wheat imports by Mexico in 1998, even though the tariff reduction was not large. The indirect effect of NAFTA on Mexico's wheat area may contribute significantly to increasing imports. U.S. wheat exports to Mexico have

risen from 967,000 tons in 1993 to 1.6 million tons in 1998. The value of U.S. wheat exports to Mexico jumped from \$143 million in 1993 to \$344 million in 1996, as U.S. prices strengthened due to tight supplies and strong demand. With lower prices in 1997 and 1998, the value of wheat shipments declined to \$150 million in 1998.

Tariff reductions under CFTA and NAFTA contributed to increased U.S. wheat imports from Canada above what would have occurred without these agreements. However, the sharp rise in U.S. wheat imports from Canada in 1994 was mainly due to weather-related events in both the United States and Canada during 1993 and not because of NAFTA. Instead, NAFTA has facilitated a long-term growth in imports. Canadian grain formerly moved in an east-west direction because of tariffs, quotas, and transportation subsidies. The elimination of these factors created greater movement into U.S. markets, in keeping with the general expectations of location economics.

Although U.S. wheat exports to Canada in the form of grain have been insignificant despite CFTA/NAFTA tariff reductions, wheat product exports have continued to grow. Tariff reductions helped increase U.S. wheat product exports to Canada. Canada's import licenses were removed for U.S. wheat and wheat products in 1991 under the CFTA Article 705 calculations.

Confronting uneven State enforcement of U.S. trade regulations and unsymmetrical wheat trade regulations, the United States and Canada negotiated an agreement in 1998 that should improve U.S. access to Canadian markets and allow for the careful monitoring of wheat trade.

Rice

Policy Changes Resulting from NAFTA

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

Mexico Before NAFTA, Mexico levied tariffs of 10 percent on rough and broken rice and 20 percent on milled and brown rice. In 1990, the milled and brown rice tariff was raised from 10 to 20 percent in response to Mexican millers who wanted to import rough rice in order to maintain a high mill utilization rate. Under NAFTA, these rates are to be gradually lowered to zero by 2003. The first cut took place in 1994, which dropped the respective tariffs to 18 and 9 percent. By 1998, these duties were 10 and 5 percent, respectively.

Mexico banned rice imports from Asian sources for phytosanitary reasons in September 1993. 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 Under CFTA and NAFTA, Canadian tariffs on imported U.S. milled or semi-milled rice were steadily reduced beginning in 1989 and reached zero in 1998. In 1995, Canada's tariff on U.S. broken rice and whole or semi-milled rice was \$1.10 per ton, compared with \$5.51 per ton for countries receiving MFN status. There is no tariff on imported brown or rough rice. Canada produces no rice domestically, and Mexico does not export rice to Canada.

Rice Trade Since NAFTA

As of 1998, U.S. rice exports to Canada and Mexico have increased 37 percent in volume and 48 percent in value under NAFTA, even though U.S. rice trade has shown no long-term growth. Since 1994, exports to Mexico have constituted more than two-thirds of U.S. rice exports to NAFTA members. Rice trade with Mexico has continued the general increase that was evident before 1994. In 1998, the United States exported 396,000 tons of rice to Mexico, which until recently, was the largest export market for U.S. rice. In 1998, however, Brazil overtook Mexico due to an extremely poor Brazilian crop that necessitated massive imports. In 1994, the United States exported 254,000 tons to Mexico, up from 178,000 tons in 1992. On a milled-equivalent basis, over 80 percent of U.S. rice sales to Mexico are rough rice.

The United States currently possesses a near monopoly on rice trade with Mexico, in large part due to a Mexican ban on the importation of Asian rice enacted in 1993. Between 1990 and 1993, Mexico imported substantial quantities of Asian rice, but Mexico's crop was diminished by infestations that are believed to have come from imported Asian rice. In response, the Mexican government banned the importation of all Asian rice. In December 1996, Mexico dropped this

absolute ban as part of its URAA obligations. Asian rice access to Mexico is now subject to the presentation of a detailed pest-risk analysis. No such documentation has ever been presented by an Asian government. The diseases responsible for damaging Mexico's rice crop are not known to be active in the United States. Mexico has recently purchased rice from Latin America, a result of lower prices.

Per capita rice consumption in Mexico has remained about 12 pounds per annum for the past 25 years, one of the smallest levels in Latin America and well below the U.S. average of over 25 pounds. This difference implies substantial room for growth in the Mexican rice market. Rice has generally been the most expensive food grain in Mexico, with consumer prices increasing faster than those for other staple foods.

Canada's rice imports have grown considerably since 1989 after being fairly stagnant during the 1980's. Both total rice imports and imports of U.S. rice have steadily increased this decade. U.S. rice exports to Canada totaled 170,000 tons in 1998, up from 140,000 tons in 1994. Canada primarily imports high-quality long-grain milled rice, as well as smaller amounts of brown, rough, and aromatic rice. The United States is the major supplier of rice to Canada, accounting for 70-80 percent of annual imports. Thailand supplies most of the rest. Canada also imports small amounts of high-priced basmati rice from India and Pakistan and very small quantities of high-quality japonica from Italy. Imports from these non-U.S. sources have increased this decade.

Since Canada has virtually no domestic commercial rice production, the expansion of its imports can be traced primarily to population growth and the ethnic composition of recent immigrant flows. Although growth in per capita use has recently slowed, per capita consumption is currently almost 17 pounds, nearly twice the level 20 years ago. Lower tariffs on rice from the United States under CFTA and from other countries under URAA have slightly reduced the price of rice in Canada, perhaps accounting for a very small share of the increase in rice consumption since 1989. However, the tariff on U.S. rice was not very high when CFTA went into effect--less than 2 percent of the price of imported U.S. rice. Moreover, rice is an inexpensive food in Canada.

Trade Issues

On December 12, 1996, the Mexican government issued new import regulations for rice of Asian origin to comply with URAA. The new regulations replaced a blanket ban on imports from Asian sources with one that specifies disease-free requirements. The new norms have not yet directly opened the market to Asian rice, and extensive quarantines are required for rice from some countries. However, the ruling potentially paves the way for disease-free Asian varieties to enter Mexico. Asian access would be subject to the presentation of a detailed pest-risk analysis indicating that the applicant country is free of certain diseases. Although Thailand has long pressured Mexico on this point, there is no indication that any Asian country has submitted the required documentation.

In November 1998, Mexican authorities detained a number of railcars containing U.S. paddy rice destined for Mexican mills, citing phytosanitary concerns. In early December, the Mexican government released the railcars.

Impacts of NAFTA on U.S. Rice Exports

Mexican imports of U.S. rice are slightly higher, about 1 percent or less, than what would have occurred without NAFTA. Because Mexico's phytosanitary requirements effectively ban the importation of Asian rice, NAFTA has had only a minor positive effect on U.S. rice exports to Mexico. However, without these strict phytosanitary standards, the tariff advantage enjoyed by the United States under NAFTA would be extremely important. In the absence of the current ban and NAFTA, Thailand and Vietnam could export milled rice to Mexico at prices below the U.S. level. Even with NAFTA, Thailand and Vietnam would still enjoy a price advantage over U.S. milled rice, although improvements in the U.S.-Mexican transportation system would increase the competitiveness of U.S. rice exporters. Moreover, Mexican consumers seem to prefer the high quality and consistency of U.S. milled rice over low-quality Asian or even high-quality Thai rice.

With NAFTA, the United States would still be competitive in the rough rice market without the ban on Asian rice. Several factors are responsible. First, neither Thailand nor Vietnam export rough rice, preferring to gain the value added from milling. In fact, no Asian rice-exporting country allows rough rice shipments. The major South American exporters do ship some rough rice, but shipments are currently quite small. Second, Mexico places a lower tariff on rough rice imports, and Mexican millers prefer to import rough rice in order to maintain a high degree of mill utilization and to avoid competition with foreign milled rice.

However, with the preferential tariff for rough rice scheduled to be eliminated in 2003, it is not obvious whether Mexico will continue to import primarily U.S. rough rice or shift to importing mostly milled rice, and if so, from which source. Although the United States would retain its transportation advantage, competition from South American exporters--specifically Argentina and Uruguay--in the milled or rough rice market is possible, especially should a Free Trade Agreement of the Americas (FTAA) that encompasses all of Latin America be secured.

NAFTA's impact on Canadian rice imports is also small. Continued tariff reductions under the accord have helped the United States remain the major rice exporter to Canada, and perhaps NAFTA has expanded U.S. sales to Canada by a very small amount. Although NAFTA gives the United States a price advantage over other exporters, most Asian rice exporting countries--except Thailand and, with respect to basmati rice, India and Pakistan--currently ship rice of rather low quality that is not favored in high-income countries. Rice shipped from Myanmar and Vietnam, as well as non-basmati rice from Pakistan and India, cannot currently compete with U.S. rice in high-quality markets like Canada, with or without NAFTA. Since the United States is already the principal supplier of high-quality long-grain rice, only a small share of expanding sales can be attributed to NAFTA.

However, Asian rice exporters do possess a cost advantage over U.S. producers. If any of these exporters should significantly improve the quality of their rice (i.e., product consistency, percent foreign matter, appearance, milling quality, percent broken) or upgrade their drying and transporting facilities, milling and marketing structures, and packaging capabilities, then NAFTA would become more important to maintaining U.S. market position. Thailand already exports substantial quantities of high-quality long grain rice, as well as high-priced fragrant rice. U.S.

prices are generally above prices for Thai rice of comparable quality, limiting the ability of the United States to directly compete with Thailand in many markets. Packaging, marketing, quality, and lower transportation costs are likely more important to U.S. rice sales to Canada than tariff reductions under NAFTA.

Oilseeds and Products

Policy Changes Resulting from NAFTA

United States Prior to NAFTA, the United States did not levy tariffs on soybean and sunflower seed imports. But it did impose tariffs of 22.5 percent on soybean oil and 0.3 cents per pound on soybean meal. Under NAFTA, the tariff on soybean oil will be phased out over 10 years, and the tariff on soybean meal was eliminated on January 1, 1994. Before CFTA, the United States also imposed tariffs of 0.4 cents per bushel on rapeseed, 22 cents per bushel on flaxseed, 0.12 cents per pound on rapeseed meal, and 7.5 percent on canola oil. These tariffs were eliminated for Canada on January 1, 1989 under CFTA and for Mexico on January 1, 1994 under NAFTA.

Mexico Previously, Mexico imposed a seasonal tariff of 15 percent on soybeans. Under NAFTA, Mexico immediately reduced this tariff to 10 percent and shortened the dutiable season from August 1-January 31 to October 1-December 31. Mexico will phase out this tariff by 2003. Mexico had tariffs of 15 percent on soybean meal, 10 percent on crude soybean oil, and 20 percent on refined soybean oil, as well as similar tariffs on minor oilseed meals and oils. These restrictions will also be phased out over 10 years.

Canada Prior to CFTA, Canada lacked tariffs on soybeans, soybean meal, rapeseed, and other meals. However, there were tariffs of 7.5 percent on soybean oil and 10 percent on other vegetable oils. Under CFTA and NAFTA, Canada eliminated its tariffs on selected imports over a 10-year period that concluded January 1, 1998. Under NAFTA, Canada immediately eliminated its tariffs on soybean oil and other oil imports from Mexico, while maintaining the successive tariff elimination with the United States established by CFTA.

Trade Since NAFTA

Because of lower prices, U.S. exports of oilseeds and products to NAFTA partners declined 8 percent in value between 1997 and 1998, even though volume increased 2 percent. Even so, the 1998 value (\$1.6 billion) was 58 percent higher than the 1993 value. U.S. oilseed and product imports from NAFTA countries increased from \$135 million to \$277 million between 1993 and 1998.

Since NAFTA, U.S. oilseed exports to Mexico have increased, with soybeans comprising about 95 percent of that total. Since 1993, U.S. oilseed exports to Mexico rose from 2.0 million metric tons in 1993 to 3.3 million in 1998. The value of these exports rose 74 percent to \$821 million over the same period. Mexico's share of U.S. soybean exports increased from 9 percent in 1993 to 15 percent by 1998. U.S. oilseed imports from Mexico are negligible and consist primarily of sesame

seed.

Mexican imports of U.S. oilseeds dropped 8 percent in volume in 1995 in the wake of the peso crisis. The recession that followed in Mexico caused difficulties for the poultry, hog, and dairy sectors. The sharpest decline in imports occurred during the first half 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 Mexican 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, revitalized consumer demand for meats raised Mexican imports of U.S. soybeans. In 1996, Mexican oilseed imports from the United States swelled 29 percent from the devaluation-depressed level of 1995, while higher prices raised the value of imports 54 percent. Growth in U.S. oilseed exports to Mexico moderated in 1997, rising 12 percent from the previous year. While U.S. export volume increased 6 percent in 1998, greater world oilseed supplies pressured prices and cut the export value 10 percent. Soybeans accounted for all the growth in Mexican oilseed imports from the United States. Mexico has also imported a steadily increasing volume of Canadian canola seed.

U.S. oilseed meal exports to Mexico rose 12 percent from 1993 to 1996 to 391,000 metric tons. Between 1995 and 1996, Mexico's imports of U.S. protein meals dropped 12 percent, although the value of these imports rose 6 percent. Despite the tariff phaseout, new crushing facilities in Mexico have reduced Mexican dependence on soybean meal imports. Consequently, U.S. soybean meal exports to Mexico were halved in 1997 and dropped again in 1998. However, U.S. soybean meal still accounts for the bulk of Mexican protein meal imports.

U.S. vegetable oil exports to Mexico have doubled under NAFTA. Mexican imports of U.S. vegetable oils rose 65 percent to 353,000 tons in 1995. Despite excellent crush margins, small Mexican processors were hurt by the peso devaluation, short domestic oilseed supplies, and larger imports of U.S. sunflower and soybean oils. In addition, consumption of meat declined more than vegetable oil use, limiting the demand for protein meals for animal feed. Thus, companies that rely on domestic processors to fill their vegetable oil needs were encouraged to purchase directly from the United States. Sunflower oil benefited greatly from prices that were competitive with vegetable oils during 1995.

Although Mexican imports of U.S. soybeans increased sharply in 1996, imports of vegetable oils declined 14 percent in quantity and 9 percent in value. As the peso began to recover, Mexico's small domestic oil processing industry also recuperated, making domestic output more competitive with imported oils. U.S. vegetable oil exports have gained an increasing share of the Mexican import market, while greater canola seed imports have supplanted imports of canola oil from Canada. Increasing consumption, declining tariffs, and larger U.S. vegetable oil supplies spurred annual growth in Mexican imports of 23 percent in 1997 and 18 percent in 1998.

Although generally not attributable to changes in tariff structure, U.S. oilseed and product exports

to Canada increased from \$369 million in 1993 to \$465 million in 1998. However, U.S.-Canadian vegetable oil commerce has benefited from free trade. U.S. vegetable oil exports to Canada increased from 67,000 metric tons in 1990 to 225,000 tons in 1998. Canada's share of U.S. exports of vegetable oils rose to 11 percent in 1997, compared with 6 percent in 1990. This share fell in 1998 as U.S. exports to other countries soared. Similarly, Canadian shipments of vegetable oil (primarily canola) to the United States rose from 154,000 tons in 1990 to 599,000 tons (valued at \$430 million) in 1998.

Canada is among the largest markets for U.S. soybean meal, representing 10-15 percent of total U.S. exports with a 1998 value of \$165 million. However, U.S. soybean exports to Canada are smaller and fluctuate depending on Canada's domestic harvest and crush margins. In 1994, record Canadian soybean and rapeseed crops reduced U.S. soybean exports to Canada by nearly 90 percent from 1993. In 1995, U.S. soybean meal exports to Canada peaked at 798,000 tons (24 percent above the 1993 volume) in response to record U.S. meal and Canadian poultry production, as well as the lowest U.S. soybean meal prices in a decade. But U.S. soybean meal exports to Canada in 1996-98 dropped as improved crushing margins encouraged greater soybean imports. Canada's share of U.S. soybean meal exports slipped in 1997 and 1998 as exports to other destinations surged.

The United States is the largest importer of Canadian protein meals, oilseeds, and vegetable oils. U.S. imports of oilseed meals from Canada have nearly quadrupled since 1990, with the United States accounting for an overwhelming share of Canada's total meal exports. Canola and canola products constitute most of U.S. oilseed and product imports from Canada. New U.S. crushing facilities caused canola imports from Canada to more than double between 1993 and 1994. But in 1995, increased U.S. canola production, along with the removal of the Canadian WGTA transportation subsidy and expanded Canadian crushing capacity, contributed to a 50-percent decline in U.S. canola imports. Sharp increases in global vegetable oil prices led to large supplies of Canadian canola meal in 1995 and extremely low meal prices.

The expansion of Canada's canola crushing capacity has made more Canadian canola meal and oil available for export. Despite a sharp reduction in Canadian canola production in 1996, U.S. seed, meal, and oil imports have continued to grow. High prices for protein meal in 1996-97 caused U.S. canola meal imports to surge to nearly 1 million metric tons. Not even the record U.S. canola acreage during 1996-98 could ease the tight U.S. vegetable oil market, which further encouraged seed and oil imports from Canada. Depreciation of the Canadian dollar in 1998 also enabled U.S. imports at higher volumes for the same U.S. dollar value. This factor, coupled with much lower prices for protein meals, cut the value of U.S. oilseed meal imports from Canada in 1998 by 7 percent.

Trade Issues

There have been no major trade issues over oilseeds or products.

Impacts of NAFTA on Oilseed Trade

The reduction of soybean tariffs under NAFTA increased U.S. soybean exports to Mexico somewhat over what would have occurred in absence of the agreement. Mexican imports of other oilseeds are expected to decline slightly because of the relatively lower protection of soybeans under NAFTA. Mexican oilseed production has plummeted under import pressure, although chronic pests and reduced government farm support have also eroded the incentives for domestic production. NAFTA is estimated to have had little effect on the volume of U.S. soybean meal exports to Mexico, but the tariff reduction for soybean oil is estimated to have increased U.S. soybean oil exports to Mexico by 5-10 percent.

Under NAFTA, Mexico has increased its share of edible oil from crushed imported oilseeds. This trend was boosted by slightly greater tariff reductions for soybeans than for competing oils and meals. The majority of Mexican oil consumption consists of oil crushed from imported oilseeds rather than imported oils.

Overall, NAFTA does not appear to have had a major impact on U.S.-Canadian oilseed trade, as this trade was quite liberal even before CFTA. However, the bilateral trade in vegetable oils has been affected. The reduction of vegetable oil tariffs increased U.S. vegetable oil exports to Canada, and NAFTA is expected to have had a slight positive effect on the volume of U.S. soybean meal exports to Canada. However, this depends upon the increased volume of livestock 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 slightly increased U.S. imports of Canadian vegetable oils. The agreement has had little effect on the volume 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 URAA, the United States restricted peanut imports using quotas established under Section 22 of the Agricultural Marketing Act of 1932. Under NAFTA, the United States instituted a TRQ for shelled and in-shell peanuts from Mexico. 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 peanuts. 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. To qualify for NAFTA benefits, peanut products imported from Mexico must be made from Mexican-grown peanuts.

U.S. imports of Canadian peanut butter are governed by URAA. Under URAA 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 14,500 metric tons. There is no constraint on peanut butter imports from Mexico, other than that peanut products must contain 100 percent Mexican-grown peanuts.

Mexico Mexico had no quantitative restrictions on peanuts prior to NAFTA but maintained a 20-percent tariff on peanut butter. Under NAFTA, this tariff will be phased out by 2003.

Canada Canada has no restrictions or tariffs on imports of peanuts. However, prior to CFTA, Canada imposed tariffs of \$44.10 per metric ton on peanut butter and 7.5 percent on peanut oil. CFTA and NAFTA eliminated these tariffs over a 10-year period that ended on January 1, 1998. Under NAFTA, Canada immediately eliminated its tariffs on Mexican peanut oil and peanut butter, while maintaining its timetable of 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 each year from 1994 to 1997. Although export growth in 1996 and 1997 was slower than in 1994 and 1995, sales to Canada and Mexico totaled \$374 million during 1994-97, 61 percent higher than in 1990-93. In 1998, these exports equaled \$96 million, 13 percent below 1997 and the first decline since NAFTA began.

Exports to Mexico represent 20-25 percent of U.S. exports of peanuts and peanut products to NAFTA partners and are mainly peanuts rather than products. After increasing dramatically in 1994, sales stabilized in 1995, and then rose in 1996 before dropping slightly in 1997 and 1998. However, U.S. exports to Mexico in 1997 and 1998 were more than double the 1993 level. U.S. imports from Mexico grew even faster. In 1993, the United States imported only about 775 metric tons of shelled peanuts from all origins. Mexico shipped 1,916 metric tons of shelled peanuts to the United States in 1994 and 4,260 metric tons by 1998. Thus, while U.S. peanut exports to Mexico have generally risen, net exports have declined over the last few years.

Shelled and in-shell peanuts represent the majority of U.S. peanut exports to Canada, which produces no peanuts. These exports have varied since NAFTA began, but they were almost 35 percent higher during 1994-97 than in 1990-93. In 1998, Canada imported 72,000 metric tons of peanuts from the United States.

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 URAA TRQ.

Impact of NAFTA on Peanut Trade

Although NAFTA has directly affected U.S.-Mexican peanut trade, other factors, such as the peso devaluation and the loss of credit access by Mexican importers, may have been more important. U.S. peanut exports to Mexico have increased, but Mexico had no restrictions on peanut imports prior to NAFTA. Thus, the increase cannot be directly attributed to the agreement. Instead, U.S. peanut policies during the period, which mandated surplus production, caused U.S. exports to reach unusually high levels. Much of the increase in U.S. peanut exports to Mexico is likely attributable to those policies.

Undoubtedly, NAFTA has raised U.S. imports of peanuts from Mexico to the TRQ level. In 1998, U.S. peanut imports from Mexico were four times the level of U.S. imports from all sources in 1993. All of this growth took place during the first 2 years of the agreement, when Mexican exports expanded to fill 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. However, in July 1998, Mexico began to ship peanut butter and peanut paste to the United States. There are no quantitative limits on these imports, except that the product must be manufactured from Mexican-grown peanuts. During 1998, Mexico shipped 658 metric tons of peanut butter and peanut paste to the United States, representing 3 percent of total U.S. imports of such products.

NAFTA has not affected U.S.-Canadian peanut trade. The U.S. peanut program allows the export of "additional" peanuts but requires exported peanut products to be manufactured from quota peanuts. Canada produces no peanuts and only a small quantity of peanut butter.

OTHER CROPS

Dry Beans

Policy Changes Resulting from NAFTA

United States Prior to the Canada-U.S. Free Trade Agreement (CFTA), the United States maintained duties ranging from 1.7 to 3.3 cents per kilogram on imported dry beans. Under CFTA, which was subsumed into NAFTA, duties on imports from Canada were scheduled to be reduced over a 10-year period, but these reductions were accelerated and duties have since 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 these licenses were eliminated and the United States was granted a duty-free tariff-rate quota (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*. From 1994 to 1999, the over-quota tariff will decline a total of 24 percent. Then, it will be phased out in equal increments from 2000 to 2008. Concurrently, the quotas will expand 3 percent each year during the 15-year transition period. In 1998, the over-quota tariff was \$384 per metric ton, but not less than 111.2 percent *ad valorem*.

Canada Prior to CFTA, Canada maintained duties of 2.21 or 3.31 Canadian cents per kilogram on imported dry beans. Under CFTA, duties on imports from the United States were scheduled to be phased out over a 10-year period, but this process has since been accelerated to completion.

Dry Bean Trade Since NAFTA

The United States is the world's third leading exporter of dry beans. In 1998, exports of such beans (excluding garbanzo beans, which are sometimes grouped with dry peas) totaled \$277 million, while imports were just \$27 million. Canada is a minor market for U.S. dry beans, accounting for 2-3 percent of U.S. export value on average. Although the Canadian dry bean crop is much smaller than that of the United States, Canada is a strong competitor in world markets, traditionally exporting well over half of its annual dry bean production.

While Canada is a minor market for U.S. dry beans, the Mexican market historically has been quite lucrative, although highly variable. During 1990-97, Mexico accounted for 17 percent of the value of U.S. dry bean exports. Mexico's share has ranged from just 5 percent in 1995 to 40 percent in 1998. U.S. exports fell short of the TRQ in 1994 and 1995, but they have exceeded the TRQ each year since due to a series of weather reversals (freezes and drought) that limited Mexico's dry bean output.

Dry beans are an important part of the Mexican diet, with per capita consumption averaging 31 pounds--fifth highest in the world. In contrast, per capita dry bean use is 7.6 pounds in the United

States, 3 pounds in Canada, and nearly 9 pounds for the entire world. Because dry beans are a staple food in Mexico, imports increase during years of reduced domestic production.

Most dry bean acreage in Mexico is not irrigated and thus is susceptible to drought. When a drought-related shortfall in production became apparent in early 1998, the Mexican government authorized auctions of duty-free import permits. Two auctions were held by the Secretariat of Commerce and Industrial Promotion (SECOFI) on consecutive days in January 1998. The first auction, on January 29, covered the entire U.S. quota of 56,276 metric tons. Canada's smaller quota was also filled. The next day, a supplemental auction of duty-free import permits covered an additional 42,036 metric tons of beans. This auction was open to all interested countries. Quota amounts were awarded, with bidders reportedly paying \$71 (U.S.) per metric ton for the quota certificates. U.S. dry bean exports to Mexico in 1998 were the largest since 1990.

Imports account for less than 5 percent of U.S. dry bean consumption, excluding garbanzo beans. About one-third of the value of U.S. dry bean imports comes from Canada. Another 13 percent comes from Mexico. Imports from Canada averaged \$6 million during 1995-98, 57 percent higher than in 1994. This trend partially reflects a shift of production (mostly navy beans) from Ontario to newer areas such as Manitoba. These newer areas have few handling facilities, so producers export the beans to U.S. facilities for processing.

In 1999, Mexico did not auction dry bean import permits in January for the calendar year. This halted U.S. dry bean exports for the first part of the year. An auction was finally held on August 30 to allocate import certificates for 48,000 metric tons.

Impacts of NAFTA on Dry Bean Trade

NAFTA has had little direct effect on dry bean trade. When production shortfalls made it necessary to import dry beans during the past several years, the Mexican government issued import permits well in excess of the TRQ. This type of action is consistent with Mexico's historical import patterns. Although increased exports of dry beans to Mexico helped support dry bean prices in the United States, these exports were not the direct result of NAFTA.

However, NAFTA has facilitated and encouraged communications between member nations, which has helped to resolve disputes and to address industry concerns. An example is the negotiated changes to Mexico's dry bean auction system. In the past, the auction date, delivery periods, and definition of qualified bidders could change considerably from one year to the next, creating considerable uncertainty. Because Mexico is an important market for U.S. dried beans, these uncertainties affected the planting decisions of U.S. producers and the market prices that they would receive.

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-a-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 were eliminated after 5 years on 95-99 percent of Mexico's textile goods that meet NAFTA rules of origin. All duties between the United States and Canada on qualifying yarn and thread, as well as all fabric and apparel, were eliminated January 1, 1998, under NAFTA. Quotas were eliminated for Mexican yarn and for fabric and apparel produced from yarn from a NAFTA country.

Mexico Mexico's pre-NAFTA tariff of 10 percent on cotton imports is being phased out over 10 years. Mexican duties have been eliminated, after a 5-year transition period, on 89-97 percent of U.S. textile exports that satisfy NAFTA rules of origin. Import duties were eliminated immediately upon NAFTA's implementation for key products of interest to U.S. producers.

Canada All duties between the United States and Canada on qualifying yarn and thread, as well as all fabric and apparel, went to zero on January 1, 1998, under NAFTA. U.S.-Canadian textile trade was not affected by Multi-Fiber Arrangement quotas, so no changes were necessary. Similarly, Canada had no tariff on imported cotton before CFTA.

Cotton Trade Since NAFTA

Both U.S. cotton exports to Canada and U.S.-Canadian textile trade have grown steadily under NAFTA, 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. Trade with Mexico in cotton and textiles has fluctuated. Mexican imports fell sharply in 1995 after the peso crisis, but rebounded and more than doubled by 1998.

Traditionally, Mexico has been an important producer and exporter of cotton. In 1992, however, cotton producers shifted to corn and dry beans in response to high government support prices and favorable credit policy, leaving cotton area fallow as world cotton prices plummeted to near-record lows. In 1993, Mexican cotton area was one of the lowest on record, which led to record-high raw cotton imports, virtually all from the United States.

As world cotton prices recovered, the Mexican government reduced its price support for corn. Accordingly, Mexico's cotton area began to increase in 1994. Mexican cotton producers also benefited from a production subsidy that began that year. Mexico's cotton area expanded even further in 1995, as world cotton prices climbed more than 20 percent in inflation-adjusted terms and substantially more in peso terms due to the devaluation. In 1995 and 1996, area rebounded to above its average for the 1980's.

Despite higher domestic production, Mexico's cotton imports increased due to a profound transformation of the country'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 with Mexican cotton. This is due to a number of factors, including 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 a result, while Mexican cotton production and, to a lesser extent, Mexican cotton exports are approaching their average levels from the 1980's, imports and consumption have increased an estimated 1.4 million bales. The United States is virtually the sole supplier of these imports.

Cotton trade in the form of textiles between the United States and Mexico has also grown significantly during the 1990's. Since Mexico's devaluation, however, the trade balance has swung into deficit for the United States. During the late 1980's, Mexico started to liberalize its textile and cotton industries, as it--along with the countries of the Caribbean Basin Initiative (CBI)--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 have continued to grow. The U.S. cotton textile trade deficit with Central America and the Caribbean has grown to nearly 400,000 bales, compared with an average of 228,000 for 1992 and 1993.

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. Overall, the United States ran a deficit in cotton products of about 50,000 bales. During 1994, growing Mexican purchasing power briefly caused a U.S. surplus of about 60,000 bales. But by 1998, the U.S. deficit had expanded to 488,000 bales.

Canada's consumption and imports of cotton have risen sharply under NAFTA. The Canadian textile industry has benefited both from NAFTA and from problems facing textile exporters in several Asian countries. The United States is Canada's principal export market for textiles and one of its largest sources of imports. During the 1990's, the United States has enjoyed a slowly growing surplus of about 225,000 bales in its trade of cotton textile products with Canada. Between 1993 and 1998, U.S. exports of raw cotton to Canada increased from 166,000 bales to 354,000 bales.

Trade Issues

There have been no significant trade disputes among the NAFTA countries concerning cotton.

Mexican cotton producers were concerned about an influx of imports from the United States under Step 2 of the U.S. Cotton Marketing Loan Program. The surge in imports proved temporary when the Step 2 funds were exhausted in December 1998. Some of the U.S. cotton imported under this program is expected to be transshipped to other importers rather than remain in Mexico for consumption.

Impacts of NAFTA on Cotton Trade

NAFTA's direct impact on cotton trade has been smaller than the influence of other factors, such as Mexican agricultural policies that were implemented before NAFTA, the sudden devaluation of the peso in December 1994, and developments in the Asian textile industry. North American textile producers have benefited from a general slowdown in sales by traditional Asian exporters. In South Korea, rising wages have crimped textile exports during much of the 1990's. China--for several years the largest source of U.S. textile imports--has seen its exports reduced due to turmoil in its cotton industry, credit problems in state mills, a rising real exchange rate, and slow quota growth. However, NAFTA may have indirectly stimulated Mexican imports of raw cotton by accelerating investment in Mexican spinning capacity. As noted earlier, much of this capacity is oriented towards U.S. cotton.

NAFTA has had little impact on U.S. imports of raw cotton from Mexico. While Mexico's NAFTA quota is 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 favor importing into the United States. During 1996, the United States imported not only 47,000 bales of cotton from Mexico but also 754,000 bales from elsewhere. In 1998, imports from Mexico reached less than 250 bales, with 34,000 imported from elsewhere.

U.S.-Mexican textile trade was probably affected more by exchange rates than by NAFTA. While the agreement greatly improved Mexican access to the U.S. market, countries with the same access as pre-NAFTA Mexico have also continued to increase their exports to the United States since NAFTA's implementation.

In the absence of NAFTA, U.S. obligations under the Uruguay Round agreement still would have broadened Mexican access to U.S. markets. However, the effect of these obligations alone would have been much smaller than the net effect of NAFTA and the Uruguay Round agreement. The latter accord eliminates the quotas from the Multi-Fiber Arrangement, but it permits importing countries to maintain most critical import restrictions until 2005, much longer than NAFTA. Moreover, the formal commitment to trade liberalization represented by NAFTA is likely to provide greater assurance for investment in textile capacity, thus increasing the volume of trade in cotton textile products among the three signatory countries.

Sugar and Sweeteners

Policy Changes Resulting from NAFTA

United States Prior to CFTA, Mexico and Canada each had a share of the U.S. sugar import quota, which began in 1982. Under this quota, Canada paid the “low” duty of 0.66 cents a pound on refined beet sugar, and a similar duty was waived for Mexico under the Generalized System of Preferences. Under 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 declined to zero on January 1, 1998.

In 1990, the United States unilaterally converted its absolute sugar import quota to a TRQ system, after a GATT panel ruled against the absolute quota in a case brought by Australia. A second-tier tariff of 16 cents a pound was established to apply to quantities above the TRQ’s first level. The United States interpreted CFTA to mean that the second-tier tariff could not be applied against Canada. Thus, 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 did not seriously disrupt the U.S. sugar program.

When the Uruguay Round Agreement on Agriculture (URAA) was implemented in 1995, Canada became subject to the most-favored-nation (MFN) over-quota tariff of approximately 16 cents a pound. The CFTA tariff applies to within-quota shipments. As a result of an agreement reached with Canada, 10,300 metric tons of refined sugar and 59,250 metric tons of the TRQ for certain sugar-containing products maintained under “Additional U.S. Note 8 and Chapter 17 to the Harmonized Tariff Schedule of the United States” are allocated to Canada. Because Canada does not produce raw cane sugar, it is not given a share of the larger raw sugar TRQ.

Mexico NAFTA contains special, reciprocal provisions covering U.S.-Mexican sugar trade. Thus, the following 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,” as projected production minus projected domestic consumption. A side agreement stipulates that, for the purposes of the formula, high fructose corn syrup (HFCS) should be included on the consumption side only. Thus, projected Mexican sugar production would have to exceed Mexican consumption of both sugar and HFCS for Mexico to be considered a net surplus producer.

From 1994 through 1999, Mexico was entitled to duty-free access for sugar exports to the United States in the amount of its projected net surplus production, up to a maximum of 25,000 metric tons, raw value. If Mexico was not a net surplus producer, it still enjoyed duty-free access for 7,258 tons--the “minimum boatload” amount authorized under the U.S. TRQ. From 2000 through 2007, 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 equal to the “minimum boatload.”

By the end of 1999, Mexico was to have installed a TRQ system, with a second-tier tariff for other countries that is equal to the U.S. second-tier tariff. Sugar tariffs between the United States and Mexico are scheduled to decline 15 percent over the first 6 years, and then to zero by 2008.

Barriers to sugar-containing products have been converted to TRQ's and are declining to zero over 10 years. U.S. refiners that ship sugar to Mexico under the U.S. Refined Sugar Re-Export Program receive MFN treatment, but NAFTA provides no 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 made from raw sugar produced in the other country.

Canada As a result of CFTA, the Canadian duty on sugar imports from the United States was 0.11 cents a pound, refined basis, in 1997, and became 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 for sugar. Since 1994, Mexico's annual share of this TRQ has been 7,258 metric tons, raw value, and Mexico has filled the quota each year. In September 1996, the United States determined that, under NAFTA, Mexico was projected to be a net surplus producer of sugar in fiscal year 1997 (October 1996-September 1997) and thus gave Mexico a duty-free quota of 25,000 metric tons, raw value, that could be shipped as either raw or refined sugar.

U.S. sugar imports from Canada were under quota from 1982 to 1990, ranging from 10,000 to 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 enjoyed low-duty access to part of the U.S. TRQ for refined sugar. Globally, this TRQ totals 22,000 metric tons. Additional shipments to the United States are subject to the second-tier (prohibitive) MFN duty.

U.S. sugar exports to Canada and Mexico have largely taken place under the U.S. Refined Sugar Re-Export Program. This is raw sugar that has been imported from another country, refined in the United States, and re-exported in an equivalent amount. Prior to 1995, U.S. sugar exports to Canada averaged about 100,000 tons a year. These exports have declined to almost zero since the Canadian government imposed anti-dumping duties in late 1995.

Mexico was a net importer of sugar in the early 1990's. The United States exported 219,000 metric tons of sugar to Mexico in 1991 and 97,000 metric tons in 1992. Since 1993, Mexico has become largely self-sufficient in sugar, and U.S. exports there fell to 27,347 metric tons in 1996 and 27,882 metric tons in 1997.

Trade Issues

Canadian Anti-Dumping Investigation of Sugar Imports On November 6, 1995, the Canadian

International Trade Tribunal ruled that sugar imports from the United States, certain EU countries, 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, the United States and Canada held consultations regarding a Canadian claim that continued use of the U.S. Sugar-Containing Products Re-Export Program by U.S. exporters to Canada was a violation of Article 303 of NAFTA. Under this program, U.S. producers may obtain sugar at the (lower) world price if they can demonstrate the re-export of a like amount of sugar in products within 2 years. Canada claims that this program amounts to a duty drawback or deferral and is prohibited under NAFTA.

The United States and Canada reached an agreement on September 8, 1997, in which Canada would not challenge the use of the program. The United States agreed to allocate to Canada its historical share of refined sugar and sugar-containing products in two TRQ's, but overall Canadian access to U.S. TRQ's remains unchanged (see above).

Under the agreement, the United States allocates 10,300 metric tons of the in-quota quantity of the U.S. TRQ for refined sugar (raw value) that is a product of Canada, beginning in fiscal 1998. In addition, the United States allocates 59,250 metric tons of the in-quota quantity of its TRQ for sugar-containing products that are the product of Canada. This allocation is measured in the commercial weight of the products. Typically, these products are dry crystal mixes, cake decorations, and confections. The total TRQ for this category is 64,709 metric tons.

Canada will also be permitted to compete for any quantity of the refined sugar TRQ that is not allocated among supplying countries and is not reserved for specialty sugar. The competition can occur regardless of whether Canada's allocated share for that period has been filled. The settlement also allows the United States to transfer any unused quantity of Canada's allocation for sugar-containing products to the portion of that TRQ that is not allocated among supplying countries, if Canada informs the United States that it cannot fill its share.

Mexican Retaliation for Broomcorn TRQ Affects HFCS 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 were certain U.S. corn sweeteners: HFCS-42 (tariff line items 1702.40.01 and 1702.40.99), HFCS-55 (1702.60.01), and crystalline fructose (1792.50.01). Mexican 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. In December 1998, the United States dropped a safeguard measure meant to protect the U.S. broomcorn broom industry from Mexican imports. As a result, Mexico dropped its retaliatory duties that had been put in place on U.S. HFCS imports as well as other U.S. agricultural imports. As a result, the 12.5 percent *ad-valorem* duty was reduced to the NAFTA-specified rate of 6 percent.

Mexican Anti-Dumping Investigation of U.S. HFCS In January 1997, Mexico's National Chamber

of Sugar and Alcohol Industries, the association of Mexico's sugar producers, filed a petition in which it accused U.S. corn wet millers of exporting HFCS to Mexico at less than fair value. SECOFI initiated an anti-dumping investigation in February. In June, SECOFI responded by imposing temporary tariffs on two grades of U.S. HFCS. The temporary tariffs, ranging from \$66.57 to \$175.50 per metric ton, applied to shipments from Cargill Inc., A. E. Staley Manufacturing Co., CPC International Inc., and Archer Daniels Midland Co. After further investigation, SECOFI made the duties permanent in January 1998 at a level between \$63.75 and \$100.60 a ton for HFCS-42 and between \$55.37 and \$175.50 a ton for HFCS-55.

During 1998, SECOFI investigated a charge made by the Mexican sugar industry that HFCS-90 was being imported to avoid the anti-dumping duties that had been imposed on HFCS-55. After a 7-month investigation, SECOFI determined that this was the case and imposed compensatory duties, effective September 8, 1998, on certain HFCS imports from the United States (tariff line items 1702.50.01, 1702.60.01, 1702.60.02, and 1702.60.99). Imports from A.E. Staley Manufacturing Co. are charged \$90.26 a metric ton, and imports from Archer Daniels Midland Co. are charged \$55.37 a metric ton.

In February 1998, the U.S. Corn Refiners' Association (CRA) asked for review proceedings of Mexico's anti-dumping actions under Chapter 19 of NAFTA. By late 1998, the five members had been named to the NAFTA panel. After the fifth panelist named by Mexico is accepted by the United States, the panel will review the legal briefs filed by CRA and SECOFI.

Parallel to actions undertaken under NAFTA, the Office of the U.S. Trade Representative (USTR) announced its intention on May 8, 1998, to invoke a WTO dispute proceeding to challenge Mexico's actions. USTR has made two formal requests for the formation of a WTO panel. The first was blocked by Mexico. The second was made on November 25, 1998, and could not be blocked by Mexico. The USTR argued that Mexico's antidumping measure on U.S. exports of HFCS is not consistent with the WTO Antidumping Agreement. The WTO Agreement requires that injury to an entire industry be examined and not just part of it. The USTR argued that the Mexican government did not properly establish injury to its entire domestic sweetener industry as a result of the alleged dumping.

The WTO made public its final report on January 27, 2000. The WTO agreed with the U.S. position that Mexico did not properly establish injury. The WTO further found that Mexico had not properly determined that there was a likelihood that HFCS imports from the United States were likely to increase, as would be required to establish the threat of injury when there is not current injury. Mexico has the right to appeal the ruling to the WTO Appellate Body.

In May 1998, USTR initiated an investigation under section 302 of the Trade Act of 1974, as amended (the Trade Act), in response to a petition by the CRA, alleging that the Mexican government had denied fair and equitable market opportunities to U.S. HFCS exporters. The CRA argued that the Mexican government had encouraged and supported an agreement between representatives of the Mexican sugar industry and Mexican soft drink bottling industry to limit purchases of HFCS by the soft drink bottling industry. On May 15, 1999, USTR concluded its formal investigation phase without determining legally that the Mexican government's alleged

practices were actionable under section 301 of the Trade Act. However, USTR noted that its investigation had raised enough questions about the actions of the Mexican government to warrant further examination and continued consultation on issues related to trade in HFCS.

Mexican Challenge to Validity of HFCS Side Letter The Mexican government has disputed the validity of a Side Letter pertaining to HFCS that the U.S. Government maintains is part of NAFTA. Mexican officials claim that there are several versions of the Side Letter, none of which has been approved as part of NAFTA by its legislature. Moreover, Mexico maintains that its version of the Side Letter does not count HFCS consumption in the formula that defines net surplus exporter status and does not limit exports to 250,000 metric tons per annum during 2001-07. Under its interpretation, Mexico is entitled to export its total net surplus production to the United States on a duty-free basis beginning in October 2000.

On March 12, 1998, SECOFI asked for NAFTA consultations on the validity of the Side Letter. Because no agreement was forthcoming, Mexico formally requested on November 15, 1998 that a NAFTA Commission meet to resolve the issue. Under NAFTA, the Commission has several options to resolve the issue, none of which are binding unless agreed to by both parties. If the Commission cannot resolve the dispute within 30 days after it has convened (or another time period agreed to by both parties), either party may request the establishment of an arbitration panel to adjudicate the issue.

Impacts of NAFTA on Sugar Trade

U.S. sugar trade is largely governed by a TRQ system whose origins predate NAFTA. However, the United States interpreted CFTA as meaning that Canadian sugar in excess of the TRQ's first-tier quantity could enter under the low CFTA tariff rather than the TRQ's prohibitive second-tier tariff. As a result, Canadian sugar exports to the United States rose to about 40,000 tons a year during 1990-94. Almost all of this sugar came from a single beet sugar factory in Manitoba, one of two such facilities in Canada. During this period, the price of refined sugar in the United States was 25 to 50 percent higher than in Canada.

NAFTA granted no further concessions to Canada on sugar. Instead, U.S.-Canadian sugar trade has been strongly affected by URAA 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. Canadian sugar exporters must pay higher duty rates on over-quota shipments to the United States. The Manitoba beet sugar factory mentioned above was closed in early 1997, with the loss of the U.S. market cited as the cause of the closure.

With regard to U.S.-Mexican sugar trade, the most direct effect of NAFTA has come from one key provision. During 1994-99, if Mexico was projected to be a net surplus producer, it received 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 NAFTA, Mexico filled its original allocation of 7,258 tons, which would have been allocated regardless of NAFTA. Having been projected to be a net surplus producer for 1996/97, Mexico was permitted to ship 25,000 tons of sugar duty-free to the United States,

17,742 tons more than its original allocation.

During the first 14 years of NAFTA, the United States enjoys duty-free access to the Mexican market for 7,258 tons of U.S.-origin sugar. Additional U.S. exports are subject to an over-quota tariff, which is not scheduled to be eliminated until 2008. This restriction may limit 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. Accordingly, U.S. exports to Mexico have been very small.

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 during March 1 to July 14 and September 1 to November 14 and 3.3 cents per kilogram for July 15 to August 31 and November 15 to the last day of February. Under NAFTA, the tariffs for Mexican tomatoes during July 15 to August 31 and September 1 to November 14 were phased out over 5 years beginning in 1994. The tariffs for March 1 to July 14 and November 15 to the last day of February are being phased out over 10 years. During this transition, a tariff-rate quota (TRQ) will be in effect for each period.

In the first year of NAFTA (1994), the quota for March 1 to July 14 was 165,000 metric tons, and the quota for November 15 to the last day of February was 172,300 metric tons. These quotas increase at a compound annual rate of 3 percent during the 10-year transition. Over-quota imports are charged the lower of the most-favored-nation (MFN) tariff in effect before NAFTA and the MFN rate in effect at the time of the over-quota trade.

Cherry tomatoes receive separate tariff treatment under NAFTA. The tariff for cherry tomatoes for December 1 to April 30 was eliminated immediately upon NAFTA's implementation. The base tariff on cherry tomatoes from May 1 to November 30 is 3.3 cents per kilogram. This was phased out over 5 years. There is no TRQ for cherry tomatoes.

Under the Canada-U.S. Free Trade Agreement (CFTA), which was subsumed into NAFTA, the U.S. tariff on Canadian tomatoes was reduced over 10 years beginning in 1989, until it fell to zero in 1998. NAFTA 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 Agreement on Agriculture (URAA), which requires a decrease in tariffs of at least 15 percent, to be phased in over 6 years beginning in 1995. Tariffs for March 1 to July 14 and August 1 to November 14 decrease from 4.6 to 3.9 cents per kilogram. Tariffs for the periods of July 15 to August 31 and November 15 to the end of February decline from 3.3 to 2.8 cents per kilogram.

Mexico Prior to NAFTA, Mexico imposed a tariff of 10 percent on fresh tomato imports. Under NAFTA, Mexico matches U.S. tariffs and transition periods for tomatoes. During the transition, the duty assessed on U.S. imports may not exceed Mexico's pre-NAFTA duty.

Canada Prior to CFTA, the seasonal Canadian tariff on imported tomatoes was 5.51 cents per kilogram, but not less than 15 percent *ad valorem*. Under CFTA and NAFTA, the Canadian tariff decreased 10 percent per year until it fell to zero in 1998. The seasonal tariff could be divided into two separate periods, which could not 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

Imports constitute a large proportion of U.S. domestic tomato consumption, and Mexico is the main source. In 1998, fresh tomato imports were valued at \$567 million, 22 percent of total fruit and vegetable imports from Mexico. Excluding 1992, which was a poor production year for Mexico, imports averaged 21 percent of U.S. tomato consumption during 1990-93. Mexican tomatoes accounted for 97 percent of these imports. From 1994 to 1998, Mexico's share of U.S. tomato imports averaged 92 percent. During the winter months, this share is even higher.

During the winter season, Florida tomato marketing is governed by Federal Marketing Order Number 966, which mandates minimum size and grade standards. Section 8(e), an amendment to the Agricultural Marketing Agreement Act of 1937, provides that if a commodity is listed in the section and regulated by a Federal marketing order that imposes regulations regarding grade, size, quality, or maturity, the same or comparable requirements may be imposed on imports of that commodity. Thus, any changes in Florida regulations affect Mexican exporters. Winter tomatoes from Mexico, but not roma, cherry, or greenhouse tomatoes, are inspected at the border by USDA's Agricultural Marketing Service for quality, condition, and size. All loads are inspected, and on average, about 1 percent of the containers in each load is inspected. Less than one-half percent of the inspected shipments fail to meet the standards.

In 1994, U.S. imports of Mexican tomatoes totaled 376,032 metric tons, down 6 percent from the previous year. The quota for March 1 to July 14 was only 86 percent filled. U.S. imports of Mexican tomatoes climbed 58 percent in 1995 and another 16 percent in 1996 to 685,678 metric tons. In 1997, imports fell 4 percent to 660,609 metric tons. In 1998, tomato imports rebounded to a record 734,053 metric tons, up 11 percent from 1997 and 83 percent from 1993. The winter and spring quotas have been filled every year since 1995.

Import data by varieties in 1998 show that 7 percent of tomato imports were cherry tomatoes, 36 percent were roma, and 57 percent other tomatoes. Between 1995 and 1998, total tomato imports increased 45 percent, cherry tomato imports rose 46 percent, roma tomato imports grew 92 percent, and other tomato imports grew 24 percent. Data by varieties are not available for years before 1995.

Both short- and long-run factors explain the increase in U.S. tomato imports. Much of the increase can be attributed to factors unrelated to NAFTA. The Mexican economic crisis had several important short-run impacts on Mexican producers. First, the crisis greatly contracted the domestic market. Second, the devaluation of the peso made Mexican exports more competitive in the U.S. market. From 1994 to 1995, the average input costs of Mexican fresh tomatoes increased 64 percent in terms of pesos but fell 28 percent in terms of U.S. dollars. Since producers in Sinaloa, the main production area, are able to ship to either the domestic or the export market, these factors made the United States a much more attractive and critical market.

Weather also had a short-run effect on tomato trade during the first 5 years of NAFTA. At the beginning of the 1994/95 season, Tropical Storm Gordon damaged crops in Florida. In the same season, Sinaloa experienced unusually favorable weather conditions, and production exceeded expectations by 15 to 20 percent. The start of Florida's 1995/96 season was delayed by cold and rainy weather. Moreover, 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 4 to 5 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, vine-ripe tomatoes from Sinaloa compete with 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. A vine-ripe, ESL tomato lasts a week longer in storage than a mature green tomato, thereby reducing waste and marketing costs. A vine-ripe tomato is bright red and firm, which are considered important attributes to consumers. Supermarkets desire a larger supply of vine-ripe tomatoes, while the food service 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 free-on-board (fob) prices for Mexican and Florida tomatoes indicates that consumers are willing to pay more for ESL tomatoes, 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. Increased demand in 1994 may have been due partly to lower 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. In 1997, Mexico had production problems related to weather, and U.S. exports to Mexico increased to 17,597 metric tons, just less than in 1993. In 1998, exports fell to 4,789 metric tons.

Canada is the major market for U.S. tomato exports, accounting for 91 percent of such exports from 1994 to 1998. U.S. tomato exports to Canada were 120,284 metric tons in 1998, down 13 percent from 1993. Between 1993 and 1997, these exports declined 4 percent. The larger decline in 1998 can be attributed to lower production in California in that year.

Canadian tomatoes accounted for 8 percent of total U.S. tomato imports in 1998, up from 2 percent in 1994. In 1994, the United States imported 7,673 metric tons of tomatoes from Canada, up 62 percent from 1993. In 1998, U.S. tomato imports from Canada equaled 61,729 metric tons, up 704 percent from 1994, and 9 percent of the total value of fruit and vegetable imports from Canada. Most of these imported tomatoes are thought to be greenhouse or hydroponic tomatoes. The Canadian greenhouse and hydroponic tomato industry has found a large niche market in the United States. In 1998, less than 2 percent of imports from Canada were cherry or roma tomatoes.

Trade Issues

In April 1995, Florida winter vegetable growers petitioned the U.S. International Trade Commission (ITC) to seek economic relief under U.S. safeguard provisions 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 implemented additional inspections of all foreign produce entering the State, looking for sanitary and phytosanitary violations and improper labeling on shipping containers. Florida required an additional inspection, at cost, of all produce entering the State by truck. Florida rescinded these requirements in April 1996, and additional inspectors were added at major points of entry.

In March 1996, growers from Florida and several other States, along with the Florida Department of Agriculture, petitioned ITC again for economic relief against import surges of fresh tomatoes and bell peppers. Tomatoes and bell peppers account for the majority of the Florida winter vegetable market in value. On July 2, ITC found that imported fresh tomatoes and bell peppers were not a substantial cause of serious injury or threat of serious injury to the U.S. industries.

In April 1996, the Florida tomato industry charged Mexico with dumping tomatoes in the U.S. market at prices below fair market value, thus materially injuring the domestic industry. In response, the U.S. Department of Commerce initiated an anti-dumping investigation. On October 28, 1996, Commerce announced a suspension agreement with principal Mexican producer/exporters to settle the dispute, and on November 1, 1996, Commerce suspended the anti-dumping investigation. Commerce had made a preliminary determination that fresh tomatoes from Mexico were likely to sell in the United States at less than “fair value.” As long as the suspension agreement is honored, the dumping investigation remains suspended.

The original 5-year suspension agreement, which was revised in 1998, establishes a reference price, or minimum price, covering most fresh Mexican tomatoes exported to the United States. After rebates, discounts, and so on, the net price of Mexican tomatoes is not allowed to 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. Greenhouse cocktail tomatoes are exempt from the agreement since they are viewed as a separate market from field-grown tomatoes. In the suspension agreement, cocktail tomatoes are defined as greenhouse tomatoes, generally larger than cherry tomatoes but smaller than roma or common round tomatoes, that are harvested and packaged on the vine for retail sale.

The agreement required that producer/exporters representing at least 85 percent of traded tomato volume be signatories. The agreement does not cover non-signatories. U.S. Customs examines tomato shipments from non-signatories to ensure that product from signatories is not included. Through 1998, there has been strong compliance with the agreement, and the price has never fallen to the reference price level for more than a few days at a time. In early 1999, tomato prices were low and Mexican producers had to restrict exports to prevent prices from going under the reference price.

Once the suspension agreement took effect, the Florida Tomato Growers Exchange, an agricultural marketing cooperative that handles over 90 percent of the fresh tomatoes sold in Florida, established an agreed-upon floor price of \$5 per 25-pound carton, with an additional 85-cent handling charge per carton. This floor price remained the same through 1998. The Exchange indicates that it will impose a fine of \$1 per carton on members who sell tomatoes for less than this price. Under the Capper-Volstead Act of 1922, farmers have the right to form cooperatives that are largely exempt from U.S. antitrust statutes.

In 1997, the California Tomato Growers Exchange set a floor price of \$3.50 per box of product from that State during its season, with an additional handling charge of 60 cents per box, yielding an effective price of \$4.10 per box. For the 1998 season, the floor price remained unchanged. The handling charge for round tomatoes also remained unchanged, but the handling charge for roma tomatoes increased to 90 cents. In 1999, the California tomato growers exchange did not establish a floor price.

On August 6, 1998, the U.S. Department of Commerce and fresh-market tomato growers and exporters from Mexico agreed to amend the suspension agreement to include more Mexican growers, especially those in Baja California. Growers in Baja California produce for the summer season and compete with growers in California, where summer production costs are lower than winter production costs in Florida. The growers in Baja California were unhappy with the original floor price because it was too high for them to effectively compete with California growers.

In response, the floor price provision has been modified by specifying two time periods, each with its own floor price. This change acknowledges the differences between the shipping season in Florida and Sinaloa and the shipping season in California and Baja California. From October 23 to June 30 (the Florida/Sinaloa season), the minimum price for Mexican fresh-market tomatoes is raised 10 cents to \$5.27 per 25-pound box. From July 1 to October 22 (the California/Baja California season), this minimum price decreases to \$4.30, a 17-percent decline.

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 as the general price level for tomatoes increased. In 1993, the weighted average *ad valorem* tariff was 4 percent during the winter season and 5.3 percent during the rest of the year. Tariff changes have been relatively small to date, but many other factors have had a greater impact on tomato trade.

Between 1993 and 1998, U.S. imports of fresh Mexican tomatoes increased 83 percent. Holding other factors constant, NAFTA tariff changes would have increased U.S. tomato imports from Mexico by some 8-15 percent above what would have been imported without the agreement. Had only the URAA tariff changes been implemented, U.S. imports of fresh tomatoes from Mexico would have increased only by about 2 percent. Tomato imports from Mexico declined during the first year of NAFTA, and when imports increased in 1995 and 1996, the higher, over-quota tariffs seemed to do little to slow imports. Much of the change in imports has been due to other factors,

such as the peso devaluation, good weather in Mexico and poor weather in Florida, and technological change in Mexico.

U.S. tomato exports to Canada decreased 13 percent from 1993 to 1998. Considering only the NAFTA tariff changes, U.S. tomato exports to Canada would have been roughly 14-18 percent higher than what they would have been without the agreement. With just URAA tariff changes, these exports would have increased 6 percent. Clearly, other factors besides tariff changes are influencing U.S.-Canadian tomato trade. Weather conditions in the United States, California shipper promotional programs, and the rapidly developing greenhouse industry in Canada are noteworthy factors.

Processed Tomatoes

Policy Changes Resulting From NAFTA

United States Prior to CFTA, U.S. duties on processed tomato products ranged from 7.5 percent (for ketchup) to 14.7 percent (for tomatoes, whole or in pieces, and preserved otherwise than by vinegar or acetic acid). The pre-CFTA tariff for tomato juice was 0.3 cents per liter, and the pre-CFTA tariff for other tomato products (purees, pastes, and sauces) was 13.6 percent.

URAA reduced these duties by 15 percent over 6 years, beginning in 1995. With the implementation of NAFTA, the U.S. tariff on tomato juice and ketchup from Mexico was immediately set to zero. In addition, there was an immediate decrease to a new tariff base of 11.5 percent for tomato purees, pastes, and sauces. Under NAFTA, U.S. duties on processed tomato products from Mexico are scheduled to be phased out over a 10-year period. In 1998, U.S. tariffs on Mexican tomato products were as follows:

- Tomatoes, whole or in pieces, 7.3 percent.
- Ketchup and juice, no duty.
- Paste, puree, miscellaneous sauces (HS chapter 20), 5.7 percent.
- Sauces described in HS chapter 21, 6.8 percent.

Under CFTA, the duty on Canadian processed tomatoes decreased 10 percent per year, starting in 1989, until all tariffs reached zero in 1998. Thus, Canadian tomato products now enter duty free.

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

Canada In 1989, Canada instituted a 10-year phaseout of its 13.6-percent tariff on U.S. processed tomatoes. For tomato ketchup and other sauces, Canada phased out the pre-CFTA tariff of 15 percent on U.S. product over 10 years, until it reached zero in 1998.

Processed Tomato Trade Since NAFTA

The United States is a net exporter of processed tomato products. In 1998, exports totaled \$237 million, while imports were \$108 million. The United States is also the largest producer of tomatoes for processing in the world and one of the top five exporting nations. Imports accounted for nearly 5 percent of U.S. tomato product consumption in 1998, while exports absorbed about 7 percent of processing tomato supply. U.S. per capita use of processed tomato products (on a fresh-weight basis) was about 76 pounds in 1998. This figure reflects little change since 1993.

U.S.-Canadian trade in processed tomato products is substantial, but U.S.-Mexican trade is much less significant. This can be partly explained by the basic similarity of the U.S. and Canadian diets. U.S. processed tomato exports to Canada totaled \$119 million in 1998. This equals 50 percent of all U.S. processed tomato exports. Tomato sauces accounted for about half of the exports to Canada, with tomato paste accounting for 28 percent.

U.S. exports of processed tomato products to Mexico totaled \$14 million in 1998, with sauces and paste together accounting for about half of the total. Exports to Mexico make up 6 percent of total U.S. exports of processed tomato products. Soon after NAFTA's implementation, U.S. exports to Mexico were hindered by the sudden peso devaluation and the accompanying economic downturn in 1995. Since then, U.S. ketchup exports to Mexico have more than doubled, in part due to Mexico's growing fast food industry.

U.S. imports of processed tomato products totaled \$108 million in 1998, with \$29 million (27 percent) arriving from Canada. Ketchup accounts for about 64 percent of those imports from Canada. About 70 percent of U.S. tomato product imports from Mexico are in the form of bulk tomato paste, most of which enters during the spring to supplement the needs of tomato product manufacturers. Bulk tomato paste is the basic ingredient in tomato-based sauces and tomato juice. The volume of paste imports from Mexico rose 45 percent in 1998 and was expected to rise again in 1999 due to the smaller 1998 U.S. crop and reduced stocks. U.S. wholesale prices for bulk tomato paste and other tomato products increased substantially in the fall of 1998 from the very low levels of the previous year. This was expected to result in increased imports and larger U.S. production in 1999.

Trade Issues

There have been no trade disputes involving processed tomatoes.

Impacts of NAFTA on Processed Tomato Trade

From 1993 to 1998, U.S. processed tomato imports from Mexico declined 44 percent in volume. Tomato paste is the primary tomato product imported from Mexico, and the United States has had excess supplies the past few years, so imports have declined. Ignoring other changes that have taken place since 1993, tariff changes from NAFTA and URAA would be expected to increase U.S. tomato imports from Mexico by 10 percent above what would have occurred otherwise. Had only the URAA tariff changes been implemented, the increase would have been 2 percent. Clearly other factors besides tariff reductions have had an important impact on U.S.-Mexican trade in processed tomatoes.

With the exception of sauces, U.S. exports of processed tomato products to Canada have not risen substantially since 1993. Although export volume expanded 13 percent between 1993 and 1998, export value increased only 4 percent, due in part to declining prices caused by large U.S. supplies.

Tomato paste and canned whole tomato export volumes have changed little since 1993. However, reduced tariffs probably contributed to the 72-percent increase in the volume of U.S. tomato sauce exports to Canada between 1993 and 1998. Without considering other factors, NAFTA and URAA tariff changes alone would have produced a 34-percent increase in these exports. Had only URAA been implemented, the increase attributable to tariff changes would have been 10 percent.

Although small, U.S. ketchup exports to Canada have jumped by a factor of 4 since 1993. Given the combination of tariff-free trade and very low U.S. wholesale prices in early 1998, the value of tomato product exports to Canada increased 10 percent from the previous year during the first three quarters of calendar year 1998.

Rising U.S. ketchup imports from Canada are the most notable change in tomato product trade since NAFTA took effect. These imports jumped from 182 metric tons in 1993 to 36,971 metric tons in 1998. Ketchup accounted for 24 percent of U.S. tomato product imports in 1998, up from less than 1 percent in 1990. However, much of this increase may be due to the changing business strategies of a major manufacturer. This behavior was likely influenced by the weak Canadian dollar and NAFTA's elimination of ketchup duties between the United States and Canada.

Bell Peppers

Policy Changes Resulting from NAFTA

United States Before CFTA, the general U.S. tariff on bell peppers was 5.5 cents per kilogram. Under URAA, the United States is lowering the tariff to 4.7 cents per kilogram over 6 years, beginning in 1995. Under NAFTA, the United States phased out the June-October bell pepper tariff over 5 years and is phasing out the November-May tariff over 10 years. Under CFTA, the U.S. tariff on Canadian bell peppers was eliminated in 1998, following a 10-year transition period.

Mexico Prior to NAFTA, Mexico imposed a duty of 10 percent on bell peppers. With NAFTA, Mexico gradually eliminated this tariff over 5 years.

Canada Prior to CFTA, the seasonal tariff on bell peppers was 4.41 cents per kilogram but not less than 10 percent. With CFTA, the tariff declined 10 percent a year until it fell to zero in 1998. The seasonal tariff could not 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 account for about 25 percent of U.S. consumption, while about 7 percent of U.S. production is exported. About 78 percent of U.S. bell pepper imports come from Mexico and 8 percent from Canada. In 1998, bell pepper imports from Mexico accounted for 7 percent of the value of fruit and vegetable imports from Mexico. Imports from Canada are expected to continue rising, due mostly to the popularity of greenhouse-grown product.

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 28-38 percent of the U.S. market. In 1994, the United States imported 96,713 metric tons of bell peppers from Mexico, down 4 percent from the previous year. In 1995, these imports increased 20 percent to 116,173 metric tons. The increase was due in part to the peso devaluation. In addition, Florida production dropped 20 percent that year. In 1998, U.S. imports of Mexican bell peppers climbed to a record 155,809 metric tons, up an estimated 53 percent from 1993 and 61 percent from the 1994 low. During the 1990's, U.S. per capita use of bell peppers has increased 42 percent to 6.4 pounds in 1998.

U.S. imports of Canadian bell peppers totaled 15,552 metric tons in 1998, up 305 percent from 1994 and 51 percent above a year earlier. Around one-fourth of these imports now come from greenhouse/hydroponic facilities. These peppers are priced at about twice the value of field-grown varieties. In 1998, Canadian bell peppers accounted for 3 percent of the value of all U.S. fruit and vegetable imports from Canada.

U.S. export data for fresh peppers include all types of peppers (e.g., bell, pimiento, and chile

peppers), but most of the trade is bell peppers. Canada is the primary destination for U.S. fresh pepper exports, accounting for 97 percent of export volume in 1998. During 1994-98, exports ranged from 47,964 to 59,671 metric tons. As Canadian shipments to the United States surged in 1998, U.S. exports to Canada dropped 5 percent from the previous year.

Trade Issues

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

Impacts of NAFTA on Bell Pepper Trade

U.S. imports of Mexican bell peppers increased 53 percent between 1993 and 1998. Before NAFTA, the average *ad valorem* U.S. tariff on Mexican bell peppers was 7.43 percent. Under NAFTA, the winter tariff is being phased out over 10 years, with an annual tariff reduction of less than 1 percent. It appears unlikely that this gradual trade liberalization is the most important factor affecting U.S. bell pepper trade. Increased U.S. consumer demand, the peso devaluation, and adverse weather in some periods more likely explain the growth in U.S. bell pepper imports from Mexico.

Cucumbers

Policy Changes Resulting from NAFTA

United States The general U.S. tariff on cucumbers varies by season. Before CFTA, the highest rate was 6.6 cents per kilogram. This duty was in effect March 1 to May 31, June 1 to June 30, September 1 to September 30, and October 1 to 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 July and August.

NAFTA eliminated the duties for the two lowest tariff seasons: December to February and July to August. The December-February period is a time of low Florida production, and the July-August period is one of low imports from Mexico. For the higher tariff periods, the duties are being gradually eliminated. The March-May and October-November tariffs are being phased out over 15 years, and the June-September tariffs were gradually eliminated over 5 years. CFTA reduced U.S. tariffs on Canadian cucumbers by 10 percent a year, until the tariffs fell to zero in 1998. Until 2008, NAFTA provides for a snapback to MFN tariff levels, under certain price and acreage conditions.

Under URAA, the United States is gradually reducing the MFN tariff for July 1 to August 31 from 3.3 cents to 1.5 cents per kilogram. For December 1 to the end of February, the tariff is being

lowered from 4.9 to 4.2 cents per kilogram. During the rest of the year, the tariff is being reduced from 6.6 cents to 5.6 cents per kilogram. These changes are being phased in over 6 years, beginning in 1995.

Mexico Prior to NAFTA, Mexico's tariff on imported cucumbers was 10 percent. Under NAFTA, Mexico is matching the U.S. seasonal tariffs and phaseout schedule, except that Mexico's transition period lasts 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 declined 10 percent a year, until it fell to zero in 1998. The seasonal tariff could not be used for more than 30 weeks during any 12-month period ending March 31. Snapback provisions remain in place under certain price and acreage conditions.

Cucumber Trade Since NAFTA

Thanks to salad bars and increased interest in health and nutrition, U.S. per capita use of cucumbers has increased 30 percent during the 1990's to 6.1 pounds. Imports are important in the U.S. fresh cucumber market. About 38 percent of domestic use is imported, almost all from Mexico (94 percent in 1998). During the winter vegetable seasons of 1989/90 to 1992/93, Mexico accounted for 40-47 percent of the U.S. market. This large reliance on imports is partially due to low domestic production in the winter months. Cucumbers suffer injury at temperatures below 50 degrees--a common occurrence in Florida during the winter. In 1998, cucumber imports from Mexico were valued at \$143 million, 5 percent of total U.S. fruit and vegetable imports from Mexico. Canada supplied 4 percent of U.S. imports in 1998, up from 2 percent in 1993. It is estimated that at least half of the cucumbers imported from Canada are produced in greenhouses.

Only about 4 percent of U.S. fresh cucumber supply is exported. In 1998, Canada purchased 98 percent of U.S. cucumber exports, while Mexico and Taiwan bought less than 2 percent. U.S. cucumber exports to Canada declined continuously during 1993-98.

In December, January, and February, almost all cucumbers in the U.S. market are 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, U.S. cucumber imports from Mexico increased only 5 percent. Since Mexican cucumbers already dominated the midwinter market, it was unlikely that cucumber imports would increase more than imports of other winter vegetables.

In 1996, the United States imported 293,753 metric tons of Mexican cucumbers. Florida cucumber production that year was 23 percent lower than in 1993. Consistent with other winter vegetables, imports of cucumbers in 1997 were down 1 percent from the previous year. In 1998, imports of Mexican cucumbers rose to a record 307,401 metric tons, up 7 percent from the previous year and 50 percent from 1993. U.S. cucumber exports to Mexico are small and variable.

Trade Issues

There have been no trade disputes involving cucumbers.

Impacts of NAFTA on Cucumber Trade

Between 1993 and 1998, U.S. imports of Mexican cucumbers increased 50 percent. The average pre-NAFTA *ad valorem* equivalent tariff on Mexican cucumbers was almost 20 percent. Holding other factors constant, tariff changes under NAFTA and URAA would have increased U.S. imports of Mexican cucumbers by about 3 percent above what would have occurred otherwise. Had only the URAA tariff changes been implemented, this 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 changes in U.S.-Mexican cucumber trade.

U.S. cucumber exports to Canada decreased 36 percent from 1993 to 1998. Factors besides declining tariffs, such as adverse weather conditions in the United States and the growth of greenhouse production in Canada, are influencing cucumber trade with Canada.

Squash

Policy Changes Resulting from NAFTA

United States Before CFTA, the general U.S. tariff on squash was 2.4 cents per kilogram. In accordance with URAA, the United States is lowering its tariff on squash to 1.5 cents per kilogram by 2001. Under NAFTA, the tariff for July-September was phased out over 5 years, and the tariff for October-June is being gradually eliminated over 10 years. In addition, the United States has established a TRQ of 120,800 metric tons for the more sensitive period of October-June, with an over-quota tariff equal to the lower of the pre-NAFTA MFN tariff of 2.4 cents per kilogram and the current tariff rate. The volume of the TRQ increases at an annual compound rate of 3 percent over the 10-year transition period. Under CFTA and NAFTA, the U.S. tariff on Canadian imports was reduced 10 percent per year until 1998, when the tariff reached zero. A snapback provision is included until 2008 under certain price and acreage conditions.

Mexico With NAFTA, Mexico immediately eliminated its 10-percent duty on U.S. squash.

Canada Prior to CFTA, Canada levied an *ad valorem* tariff of 5 percent on squash. Under CFTA, the tariff declined 10 percent a year, until it fell to zero in 1998.

Squash Trade Since NAFTA

The United States receives practically all of its fresh squash imports (98 percent in 1998) from Mexico. A minor amount, less than 2 percent in 1998, comes from Canada during the summer months. About 80 percent of U.S. squash imports arrive between November and April. This squash 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 1998, the United States imported \$111 million of Mexican squash, 4 percent of total fruit and vegetable imports from Mexico.

USDA does not collect national production data for squash. State information indicates that Florida was the leading producer in 1996/97 with about 46,160 metric tons, followed by California with 57,153 metric tons. Florida production fell 40 percent from 1991/92-1993/94 to 1994/95-1996/97. Estimates based on the limited available data suggest that 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 during the 1980's.

U.S. squash imports from Mexico have been increasing slowly over many years. In the first year of NAFTA, these imports totaled 99,257 metric tons, 11 percent above the previous year. In 1995, U.S. imports of Mexican squash increased 14 percent, but only 87 percent of the quota was filled. The quota has been filled in each year from 1996 to 1998. Imports for 1996 were 135,439 metric tons, 20 percent above 1995. The 1996 quota was filled on May 6, 1996. In 1997, imports declined less than 1 percent from the previous year. In 1998, imports totaled 163,548 metric tons, up 21 percent from the previous year and 83 percent from 1993. U.S. squash exports to Canada are not reported as a separate category.

Trade Issues

There have been no trade disputes involving squash.

Impacts of NAFTA on Squash Trade

Between 1993 and 1998, the volume of U.S. imports of Mexican squash increased 83 percent. Before NAFTA, the United States imposed an average *ad valorem* equivalent tariff on Mexican squash of 5.21 percent. Ignoring other developments since 1993, NAFTA and URAA tariff changes alone would have increased imports from Mexico by only 1 percent. Had only the URAA tariff changes been implemented, the change in imports due to tariff changes would have been even smaller.

Tariff changes under NAFTA and URAA alone would have increased U.S. squash exports to Canada by 5 percent above what would have occurred otherwise. Had only URAA been implemented, tariff changes would have caused a similar increase.

Eggplant

Policy Changes Resulting from NAFTA

United States Before CFTA, the general U.S. tariff on eggplant was 2.4 cents per kilogram for December to March and 3.3 cents per kilogram for April to November. Under URAA, U.S. tariffs on eggplant will gradually fall to 1.9 cents per kilogram for December-March and to 2.6 cents per kilogram during the rest of the year. These reductions are being phased in over 6 years, beginning in 1995.

Under NAFTA, the tariffs for December-March and July-September were immediately eliminated. Tariffs for the two remaining periods, April-June and October-November, are being phased out over 10 years. In addition, a TRQ of 3,700 metric tons was established for April-June. The quota volume increases at a compound annual rate of 3 percent over the 10-year transition period. Over-quota volume is charged the lower of the pre-NAFTA rate and the 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 to the U.S. fresh eggplant market. Annual per capita eggplant consumption in the United States has remained constant during the 1990's, at about four-tenths of a pound. During the 1990's, an average of 46 percent of domestic use was imported. About 98 percent of these imports came from Mexico. However, Mexico's share of the total U.S. eggplant imports has eroded slightly, falling from 99 percent to 95 percent between 1993 and 1998. During the winter vegetable seasons of 1989/90 to 1992/93, Mexico accounted for 42 to 52 percent of the U.S. market. Between the 1991/92-1993/94 and 1994/95-1995/96 seasons, Florida production fell 20 percent. In 1998, U.S. imports of Mexican eggplant were valued at \$29 million, 1 percent of total fruit and vegetable imports from Mexico.

U.S. imports of Mexican eggplant increased 17 percent in 1994, 15 percent in 1995, and 24 percent in 1996, but fell 4 percent in 1997. In 1998, these imports reached a record 36,260 metric tons, up 26 percent from the previous year and 102 percent from 1993. Since the implementation of NAFTA, the eggplant quota has been completely filled every year. 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 Issues

There have been no trade disputes involving eggplant.

Impacts of NAFTA on Eggplant Trade

Eggplant imports from Mexico increased 102 percent between 1993 and 1998. Before NAFTA, the average *ad valorem* equivalent U.S. tariff on Mexican eggplant was 5.69 percent. NAFTA and URAA tariff changes alone would have increased U.S. imports of Mexican eggplant by 4 percent. Had only URAA been implemented, tariff changes would have increased these imports by less than 1 percent. The peso devaluation partially explains the changes in U.S.-Mexican eggplant trade.

Although Canadian tariffs on eggplant were already zero before NAFTA, reducing tariffs on Mexican eggplant lowers the overall price of eggplant and thus increases U.S. exports to Canada. With the existing tariff changes under NAFTA and URAA, U.S. eggplant exports to Canada were expected to increase 3 percent. Had only the URAA tariff changes been implemented, these exports would have increased less than 1 percent.

Snap Beans

Policy Changes Resulting from NAFTA

United States Before CFTA, the general U.S. tariff on snap beans (not reduced in size) was 7.7 cents per kilogram. In 1995, the United States began to phase in a 6-year tariff reduction to 4.9 cents per kilogram in accordance with URAA. Under NAFTA, the tariff for June 1 to October 31 was phased out over 5 years, and the tariff for November 1 to May 31 is being phased out over 10 years. Under CFTA and NAFTA, the U.S. tariff on Canadian snap beans was reduced 10 percent a year, until it fell to zero in 1998. A snapback provision is included until 2008.

Mexico Before NAFTA, Mexico levied a tariff of 10 percent on imported fresh snap beans. This tariff was eliminated with NAFTA.

Canada Before CFTA, the seasonal tariff on snap beans was 4.41 Canadian cents per kilogram, but not less than 10 percent. Under CFTA and NAFTA, this tariff declined 10 percent a year, until it reached zero in 1998. The seasonal tariff, which could be divided into two separate periods, could not be in effect for more than 14 weeks during any 12-month period ending March 31.

Snap Bean Trade Since NAFTA

During the 1990's, U.S. per capita consumption of snap beans increased 55 percent, to 1.7 pounds in 1998. The United States has been a net exporter of fresh-market snap beans in the 1990's, with 9 percent of domestic use imported and 12 percent exported. More than three-fourths of imports enter during December to April, supplementing production in Florida. In 1998, 92 percent of U.S. fresh snap bean imports came from Mexico, while Canada provided about 6 percent. U.S. imports of Mexican snap beans were valued at \$18 million, less than 1 percent of total fruit and vegetable imports from Mexico.

In 1994, the United States imported 9,623 metric tons of fresh snap beans from Mexico, down 10

percent from 1993. From 1994, imports grew steadily to a high of 19,013 metric tons in 1997. In 1998, imports equaled 17,810 metric tons, down 6 percent from the previous year. Of all winter vegetables, Mexico's share of the U.S. market has been the smallest for snap beans--only 14-20 percent during the 1989/90 to 1992/93 winter vegetable seasons. The peso devaluation made it easier for hand-picked Mexican snap beans to compete with machine-harvested Florida snap beans.

In 1998, 54 percent of U.S. fresh-market snap bean exports went to Canada, down from 95 percent in 1993. U.S.-Canadian snap bean trade is variable, with U.S. exports ranging from 14,948 metric tons in 1994 to 18,447 metric tons in 1998. These exports averaged 17,879 metric tons in 1992-93.

Trade Issues

There have been no trade disputes involving snap beans.

Impacts of NAFTA on Snap Bean Trade

Between 1993 and 1998, U.S. snap bean imports from Mexico increased 66 percent. The majority of this increase occurred in 1995. Prior to NAFTA, the average *ad valorem* equivalent U.S. tariff on Mexican snap beans was 8.04 percent. Considering only NAFTA and URAA tariff changes, U.S. snap bean imports from Mexico would have been expected to increase 6 percent from what would have occurred otherwise. Had only URAA been implemented, tariff reductions would have caused these imports to increase 3 percent. Other factors such as weather and the peso devaluation account for the majority of the change in trade.

U.S. snap bean exports to Canada increased 4 percent between 1993 and 1998. The impact of CFTA/NAFTA and URAA tariff changes is also estimated to be 4 percent. If only URAA had been implemented, a 1-percent increase would have resulted.

Fresh and Processed Potatoes

Policy Changes Resulting from NAFTA

United States Before CFTA, the United States imposed tariffs of 0.77 cents per kilogram 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 URAA, the United States agreed to gradual tariff reductions over 6 years beginning in 1995. At the end of this transition period, the tariffs will fall to 0.50 cents per kilogram for fresh and seed potatoes, 14 percent for frozen potatoes, 6.4 percent for frozen french fries (yellow), 8 percent for other frozen french fries, and 6.4 percent for potato chips and other prepared potatoes.

Under NAFTA, the United States has eliminated its tariffs for Canada and Mexico on fresh yellow (Solano) potatoes, seed potatoes, potato chips and other prepared potatoes, and yellow frozen

french fries. After a 5-year transition period, the United States also eliminated its tariffs on frozen potatoes, other fresh potatoes, and other frozen french fries.

As part of CFTA, the United States agreed to many of these tariff reductions with respect to Canadian potatoes. This agreement provided for a 10-year transition period in which the United States gradually eliminated its tariffs on fresh potatoes and frozen french fries from Canada. Under NAFTA, the United States may implement a “snapback” provision, only on fresh potatoes, given certain conditions and re-institute MFN tariff levels until 2008.

Mexico Prior to NAFTA, Mexico imposed tariffs of 15 percent on frozen potatoes and 20 percent on dried potatoes, frozen french fries, and other prepared potatoes. Mexico also required import licenses for fresh potatoes from Canada and the United States. Under NAFTA, all tariffs on processed potatoes from the United States and Canada are to be phased out over 10 years. In addition, Mexico eliminated its import license requirements for Canadian and U.S. fresh potatoes and instituted a TRQ in their place. With a phytosanitary permit, fresh potatoes may be shipped to Mexico’s northern border states for processing. No fresh potatoes destined for the fresh market are allowed into Mexico.

Under the TRQ for fresh potatoes, the United States initially received a duty-free quota of 15,000 metric tons. This amount increases at an annual compounded rate of 3 percent during the 10-year transition period. Initially, over-quota imports were assessed a tariff of \$354 per metric ton, but not less than 272 percent. Over the first 6 years of the agreement, Mexico is to eliminate 24 percent of this over-quota tariff. The remainder is to be phased out during the last 4 years of the reduction period.

Mexico’s processed potato industry is also protected by TRQ’s, but the over-quota tariff is the MFN rate of 20 percent. In 1994, the TRQ for processed potatoes 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. These quotas grow at a compound annual rate of 3 percent.

Canada Prior to CFTA, the general Canadian 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. Canada phased out its tariffs on potatoes and potato products from the United States over 10 years in equal reductions, until they reached zero on January 1, 1998.

Potato Trade Since NAFTA

U.S. fresh potato exports to Mexico grew from 4,910 metric tons in 1989 to 17,409 metric tons in 1993. Under NAFTA, these exports fell slightly in volume in 1994 and 1995, but they rose to 31,823 metric tons in 1998. U.S. exports have exceeded the Mexican TRQ in each year since NAFTA’s implementation. The United States imports virtually no fresh potatoes from Mexico (none since 1993).

During the 4 years prior to NAFTA, the United States imported an average of 1,528 metric tons of

potato chips from Mexico. Since then, the United States has only imported a small amount of chips from Mexico in 2 years: 1994 (448 metric tons) and 1997 (0.34 metric tons).

Since 1990, U.S. fresh and seed potato exports to Canada have realized an upward trend. During 1994-98, these exports averaged 244,312 tons per year.

U.S. exports of frozen french fries to Canada averaged 18,692 metric tons during 1996-98. These exports have increased since December 1995, when Canada relaxed its strict packaging and labeling rules for U.S. frozen french fries sold to the Canadian food service sector. During 1994-98, U.S. potato chip exports to Canada averaged 12,934 metric tons per annum.

U.S. fresh and seed potato imports from Canada have varied substantially since 1990, ranging from 181,990 metric tons in 1992 to 489,961 metric tons in 1998. The average for 1994-98 was 375,442 metric tons, 34 percent above the 1989-93 average. Traditionally, a large share of the imported fresh potatoes from Canada have come from Prince Edward Island. These potatoes have been distributed primarily along the east coast of the United States. Competition has been significant in recent years, mostly due to the weak Canadian dollar. Increased fresh and seed potato imports from Canada are due to several large Canadian crops, the weak Canadian dollar, and relatively strong demand and prices in the United States.

U.S. french fry imports from Canada have increased steadily since NAFTA's implementation. These imports increased from 126,003 metric tons in 1993 to 364,881 metric tons in 1998. Most come from eastern Canada, where processors have benefited from the favorable exchange rate, as well as lower transportation costs in shipping to the markets of the U.S. east coast, relative to competitors in the Pacific Northwest. These imports are likely to grow more in the future, as the Canadian processing industry continues to expand not only in the eastern provinces but in midwestern Canada as well.

Trade Issues

Canadian Potato Exports The surge of Canadian potatoes into U.S. markets during the 1995/96 marketing season led to an evaluation of U.S.-Canadian potato trade by the U.S. government. Historically, there have been two main issues: the perceived negative effects of Canadian exports on U.S. fresh potato prices, and unfair trade practices. Producers in Maine have expressed concerns about the quality of imports and have perceived that Canadian growers enjoy an unfair advantage due to government subsidies. Another concern of 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 the Canadian government grants an easement. It is difficult to determine the effect (if any) of these restrictions on U.S. potato exports to Canada. At least one major Canadian processor received a bulk easement to import some potatoes from Maine during the 1996/97 season. In 1997, the U.S. Trade Representative requested 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, ITC released its report, which identified several Canadian barriers affecting U.S. potato exports, but did not quantify any impacts.

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. This duty expires in 2000.

Mexican Phytosanitary Rules for Potatoes U.S. seed potatoes are not allowed into Mexico and Mexican seed potatoes are not allowed in the United States. Mexico allows the importation of fresh potatoes from the United States, but only if the potatoes are accompanied with an import permit and if they are shipped into the northern border states of Mexico for processing. USDA's Animal and Plant Health Inspection Service is currently working with Mexico to develop phytosanitary guidelines to expand trade in seed potatoes and fresh potatoes.

Impacts of NAFTA on Potato Trade

It is difficult to separate the effects of tariff changes on trade from the influence of other market forces. Other factors that have affected U.S.-Canadian potato trade include the relative size of the potato crops 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, the general U.S. tariff on frozen broccoli and cauliflower was 17.5 percent. Under URAA, the United States is decreasing its tariff from 17.5 percent to 14 percent over a 6-year period that began in 1995. Under NAFTA, the base tariff on frozen broccoli and cauliflower imports from Mexico was decreased immediately to 15 percent and is being phased out over 10 years. Under CFTA and NAFTA, the United States phased out its tariff on Canadian frozen broccoli and cauliflower during a 10-year period that ended in 1998. The agreement includes a snapback to MFN tariff levels until 2008 under certain price and acreage conditions.

Mexico Before NAFTA, Mexico levied a tariff of 15 percent on frozen broccoli and cauliflower from the United States. With NAFTA, these tariffs are being phased out over 10 years.

Canada Prior to CFTA, Canada imposed a tariff of 20 percent on frozen broccoli and cauliflower from the United States. Under CFTA and NAFTA, this tariff declined 10 percent a year, until it fell to zero in 1998.

Frozen Broccoli and Cauliflower Trade Since NAFTA

When NAFTA was implemented, Mexico was already the dominant player in the U.S. market for frozen broccoli and cauliflower. Between 1990 and 1993, Mexico supplied 91 percent of U.S. frozen broccoli imports and 94 percent of its frozen cauliflower imports.

U.S. imports of frozen broccoli and cauliflower from Mexico have grown steadily since the late

1970's. In 1978, U.S. imports of frozen broccoli from Mexico equaled 7 percent of U.S. frozen broccoli production. These imports amounted to 285 percent of U.S. production in 1993 and 292 percent in 1998.

However, Mexico's share of U.S. frozen broccoli imports has declined somewhat during the 1990's, from 89 percent in 1993 to 82 percent in 1998. Meanwhile, Mexico's share of U.S. frozen cauliflower imports has remained fairly constant, dropping slightly from 90 percent to 88 percent over the same period. Guatemala is the second largest source of U.S. frozen broccoli and cauliflower imports. In 1998, imports of Mexican frozen broccoli and cauliflower were valued at about \$100 million, 4 percent of total fruit and vegetable imports from Mexico.

In 1994, the United States imported 126,966 metric tons of frozen broccoli from Mexico, down 5 percent from 1993. These imports increased 23 percent in 1995 but were still slightly below the pre-NAFTA peak of 1992. In 1996, U.S. imports of frozen broccoli from Mexico equaled 158,779 metric tons, 2 percent above the 1992 level and the highest since NAFTA's implementation. These imports declined to 124,723 metric tons in 1998, down 18 percent from 1996. Poor weather conditions and pest problems have reduced Mexican production.

Mexican exports of frozen cauliflower to the United States reached 26,620 metric tons in 1994. Since then, exports have not regained this level, apparently due to production problems. In 1997, exports were 19,173 metric tons, the highest since 1994. In 1998, these exports fell to 16,548 metric tons, down 38 percent from 1994.

Trade Issues

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

Impacts of NAFTA on Frozen Broccoli and Cauliflower Trade

Between 1993 and 1998, U.S. imports of frozen broccoli from Mexico declined 3 percent, and U.S. imports of frozen cauliflower from Mexico dropped 24 percent. Considering only the impact of NAFTA and URAA tariff changes, U.S. imports of frozen broccoli and frozen cauliflower from Mexico would have been expected to increase 6 percent and 3 percent respectively. Had only URAA been implemented, tariff changes would have accounted for a 1-percent increase in frozen broccoli imports from Mexico and an increase of less than 1 percent in frozen cauliflower imports from Mexico.

Production problems have had a greater impact on the frozen broccoli and cauliflower trade than tariff changes. Changes in consumer demand may also have been important. During the 1990's, per capita consumption of frozen broccoli has increased only 9 percent, versus 57 percent during the 1980's. Per capita consumption of fresh broccoli has increased 50 percent during the 1990's. Accordingly, U.S. imports of fresh Mexican broccoli increased 170 percent between 1993 and 1998. U.S. consumption of frozen cauliflower declined 38 percent from 1990 to 1998, while consumption of fresh cauliflower declined 64 percent.

CITRUS AND PRODUCTS

Fresh Citrus

Policy Changes Resulting from NAFTA

United States Before the Canada-U.S. Free Trade Agreement (CFTA), 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.

In accordance with the Uruguay Round Agreement on Agriculture (URAA), the United States is decreasing its tariff on fresh oranges and grapefruit by 15 percent and its tariff on fresh limes by 20 percent. These reductions are taking place during a 6-year transition period that began in 1995. The tariff will fall to 1.9 cents per kilogram for fresh oranges and 1.8 cents per kilogram for limes. In addition, the United States is reducing its seasonal tariffs for grapefruit. For August 1 to September 30, the tariff will fall to 1.9 cents per kilogram; for October, it will fall to 1.5 cents per kilogram; and for November 1 to July 31, it will fall 2.5 cents per kilogram.

Under CFTA, which was subsumed into NAFTA, the United States reduced its tariffs on fresh oranges and fresh grapefruit from Canada by 10 percent over 10 years, until the tariffs reached zero in 1998. Under NAFTA, the United States immediately eliminated its tariff on Mexican oranges during the June-November period, and it also eliminated the December-May tariff after a 5-year transition period. For Mexican grapefruit, the United States eliminated the August-September tariff, and it is phasing out the other tariffs over 10 years.

Mexico Mexico levied a 20-percent tariff on fresh oranges, grapefruit, and limes prior to NAFTA. Oranges, tangerines, and limes from the United States now enter Mexico duty-free, and Mexico imposes a seasonal tariff on grapefruit similar to that of the United States.

Canada Before 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. Almost all U.S. lime imports originate in Mexico. Historically, U.S. exports of fresh citrus to Mexico have been quite small and variable. During the 1990's, Mexico has accounted for less than 1 percent of total U.S. citrus exports.

In 1998, the United States shipped 6,974 metric tons of fresh oranges and tangerines to Mexico, up 1,337 percent from very low levels in 1993. Exports of oranges and tangerines to Mexico equaled \$3 million, about 1 percent of total fruit and vegetable exports to Mexico. In 1998, the United States exported 369 metric tons of grapefruit to Mexico, up 361 percent from 1993 and valued at \$122,991. U.S. grapefruit exports to Mexico have ranged from 77 metric tons in 1993 to 1,735

metric tons in 1995.

In the first years of NAFTA, Mexico allowed citrus imports only from producing areas in California that are not regulated for fruit fly. In January 1996, the United States and Mexico finalized a phytosanitary protocol to allow the export of citrus products from producing areas in Texas that are not regulated for fruit fly. The ban on Arizona citrus was lifted in 1997. Florida is still trying to gain export approval.

U.S. imports of fresh citrus from Mexico are mostly limes. In 1998, these imports were valued at \$43 million, about 2 percent of total fruit and vegetable imports from Mexico. Fresh citrus imports from Mexico totaled 171,630 metric tons in 1998, up 56 percent from 1993. Imports of fresh limes, grapefruit, and oranges must meet U.S. marketing order minimum requirements.

During the 1993/94 and 1994/95 growing seasons, U.S. lime production accounted for only 3 percent of domestic consumption. Mexico is the main supplier of limes to the U.S. market, accounting for 99 percent of total U.S. lime imports in 1998. While U.S. lime consumption has nearly doubled from the 1980's to the 1990's, domestic lime production has decreased. Lime-bearing acreage in Florida began declining from a high of 7,300 acres in 1982/83. After Hurricane Andrew in August 1992, this acreage fell to 1,900 in 1993. Replanting has slowed substantially after a high rate of activity immediately following the hurricane. Production, however, has slowly been increasing. In the 1997/98 growing season, domestic production accounted for 8 percent of consumption.

Lime imports from Mexico have grown steadily. These imports first exceeded U.S. production in 1991. Part of the increase in U.S. lime imports from Mexico is due to 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 1990-91 average. Imports of Mexican limes have continued to increase under NAFTA. Between 1993 and 1998, they increased 55 percent. In 1998, these imports were valued at \$38 million--1 percent of the value of all fruits and vegetables imported from Mexico.

Except for limes, Mexican fresh citrus from all areas other than Sonora must be treated for fruit flies before shipment to the United States. Methyl bromide is the primary treatment. Citrus from the fruit-fly-free areas of Sonora requires only a certificate from the Mexican government noting 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 treating fresh citrus in a hot air chamber before shipment to the United States. Mexico has proposed a systems approach that includes trapping pests as an alternative to spraying. This proposal is under review. Limes are somewhat resistant to fruit flies, 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 in the 1990's. U.S. orange and grapefruit exports to Canada are relatively stable. From 1994 to 1998, these orange exports averaged 199,293 metric tons, up from 174,042 metric tons during 1990-93. U.S. grapefruit exports to Canada have averaged 58,662 metric tons under NAFTA, compared

with 68,536 metric tons during 1990-93. 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. However, Florida has been unable to gain export approval for grapefruit under Mexico's phytosanitary standards.

Impacts of NAFTA on Fresh Citrus Trade

NAFTA has helped facilitate the resolution of concerns regarding phytosanitary barriers. Elimination of these barriers probably will have a greater impact on U.S. exports of fresh oranges and grapefruit than tariff reductions, since the barriers limit U.S. exports from Florida, a major citrus producer.

Lime imports continue to increase, following a trend that was well established before NAFTA. Ignoring other changes that have occurred since 1993, tariff changes under NAFTA and URAA are estimated to have boosted U.S. lime imports from Mexico by 2 percent above what would have been otherwise. Had only URAA been implemented, tariff changes would only account for an increase of less than 1 percent. The long-term decline in the Florida industry, accelerated by Hurricane Andrew, has had a greater impact on U.S. lime trade than NAFTA's tariff reductions.

Orange Juice

Policy Changes Resulting from NAFTA

United States Before CFTA, the MFN tariff on frozen concentrated orange juice (FCOJ) was 35 cents per single-strength equivalent (SSE) gallon. With URAA, the United States is decreasing its general tariff on orange juice by 15 percent over 6 years, beginning in 1995.

Under NAFTA, all U.S. tariffs on Mexican orange juice are to be phased out over a 15-year transition period. Under the U.S. tariff-rate quota (TRQ), 40 million SSE gallons of FCOJ and 4 million SSE gallons of single-strength orange juice (SSOJ) may enter the United States from Mexico each year, subject to the reduced tariff rate of half the MFN rate, which equaled 17.5 cents per SSE gallon in 1994. Mexican exports in excess of these quotas are subject to an over-quota tariff. During the first 5 years of the transition, the over-quota tariff declined 15 percent from the 1993 MFN level. Over the second 5 years, the tariff is constant. 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 entirely of fruit produced in the NAFTA countries.

A snapback provision was included to protect U.S. producers from sudden surges in imports from Mexico. If these imports exceed a certain volume and if the domestic price falls below a certain level, the MFN tariff rate is automatically re-instated. For 1994-2002, the volume threshold for

snapback is 70 million SSE gallons. For 2003-07, it is 90 million SSE gallons.

The definition of the price threshold is far more complex. If for 5 consecutive days, the daily closing price of FCOJ on the New York futures market falls below the most recent 5-year average of the market's monthly closing price of FCOJ for the month in question, the price threshold is triggered. This calculation, however, excludes the highest and lowest monthly closing averages for the 5-year period. The price trigger was met several times in 1998. However, the volume threshold has never been met, and the snapback provision has not been put into effect.

URAA tariff reductions beginning in 1995 resulted in minor adjustments to the NAFTA tariff schedule, which is based on the MFN rate. In the original 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 URAA MFN tariff rate of 29.71 cents. The snapback tariff rate is equal to the MFN rate, so it too must decline in accord with the URAA tariff rate.

Under CFTA and NAFTA, the U.S. tariff for Canadian orange juice fell to zero in 1998.

Mexico Before NAFTA, Mexico levied a tariff of 20 percent on imported orange juice. Under NAFTA, Mexico is matching U.S. changes in tariff lines and duties over the same 15-year transition period. However, the Mexican tariff on U.S. orange juice is not allowed to exceed the pre-NAFTA duty of 20 percent. Mexico also has instituted a TRQ of 194,100 SSE gallons.

Canada Before CFTA, bulk FCOJ entered Canada duty-free, but retail-ready orange juice was subject to a tariff of 3 percent. Under CFTA and NAFTA, the tariff for U.S. orange juice was reduced 10 percent per year, until it reached zero in 1998.

Orange Juice Trade Since NAFTA

The United States is a net importer of orange juice. In 1998, the United States imported an estimated \$65 million of orange juice from Mexico, 2 percent of total fruit and vegetable imports from that country. Most of the U.S. supply is from Florida. After severe freezes in the 1980's, Florida's production plummeted 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 1996/97 to 1997/98, the share of imports fell to 18 percent.

The freezes that damaged Florida's citrus industry also affected the Mexican citrus industry. Mexican producers, like Florida producers, expanded production to warmer areas further south during the rebuilding process. As prices were high following the freezes, Mexico invested heavily in the citrus industry. Between 1980 and 1995, the country's orange production area increased from 350,000 to 765,700 acres. However, much of the new production area is in small holdings, and yields are often much lower than in the older production regions. High production costs and interest rates have slowed the planting of orange acreage. Some growers have found it advantageous to plant other crops, such as limes, in place of oranges.

Mexican processing facilities also increased in number during the 1980's, although most Mexicans consume fresh oranges or prepare juice from fresh oranges at home rather than buying prepared orange juice. The Mexican FCOJ market is a residual market, and almost all juice is exported. While processors buy most of their oranges on the market, some are now beginning to plant orange groves to ensure adequate supply. 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.

However, as Florida's citrus industry recovered from the freeze and world prices declined, Mexican opportunities in the U.S. market also declined. In 1989-91, Mexican exports to the United States averaged 52 million SSE gallons. In 1992-93, they averaged only 14 million. During the first 5 years of NAFTA (1994-98), these exports averaged 56 million SSE gallons--8 percent above the 1989-91 level.

In 1994, Mexico exported 46 million SSE gallons of orange juice to the United States, 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 increased to 68 million SSE gallons, virtually filling both the FCOJ and SSOJ quotas (97 and 95 percent filled). Thus, Mexican exports came fairly close to the 70 million SSE gallons that would have triggered the snapback provision.

In 1996, Mexico exported 49 million SSE gallons to the United States, which almost filled the two quotas. In 1997, it exported 40 million SSE gallons. This amount nearly filled the FCOJ quota but only filled 56 percent of the SSOJ quota. In 1998, Mexican exports reached 67 million SSE gallons (valued at \$4 million), as Mexico's share of the U.S. market grew at Brazil's expense. In that year, Mexico filled 99.6 percent of its FCOJ quota but only 60 percent of its SSOJ quota.

U.S. exports of orange juice to Mexico are very small. They equaled only 537,030 SSE gallons in 1994 and about 1.5 million SSE gallons in 1998. Moreover, these exports are highly variable, most probably due to the alternating fruit-bearing pattern in the Mexican orange industry. U.S. orange juice exports to Mexico have exceeded the Mexican TRQ in each year since NAFTA's implementation.

During the first 5 years of NAFTA, U.S. orange juice exports to Canada ranged from 26 million SSE gallons in 1994 to 45 million SSE gallons in 1998. Since NAFTA, Canada has been the destination for 27 percent of U.S. orange juice exports, down from 42 percent in 1990-93, as the United States turned to other markets. 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 grew 224 percent between 1993 and 1998. However,

imports in 1993 were at their second lowest level during the 1990's. Without accounting for other factors, tariff changes under NAFTA and URAA are estimated to have increased these imports by 2 percent above what would have occurred in absence of these changes. Had only the URAA tariff changes been implemented, the resulting increase in imports would have been less than 1 percent. So far, NAFTA has had little impact on the FCOJ industry, although the potential for increased trade always remains if production problems arise in the United States or elsewhere.

FRESH FRUIT

Apples

Policy Changes Resulting from NAFTA

United States Prior to NAFTA, all apples entered the United States duty-free. There has been no change in this policy.

Mexico Before NAFTA, Mexico imposed a tariff of 20 percent on fresh apples. Import licenses were eliminated in 1991. As part of NAFTA, Mexico established a tariff-rate quota (TRQ) for U.S. apples. The TRQ was initially set at 55,000 metric tons, somewhat below pre-NAFTA levels, but it will increase at a compounded annual rate of 3 percent. The within-quota tariff is being phased out over 10 years. Over-quota apples enter at the lower of Mexico's MFN duty in 1993 (20 percent) or the MFN rate in effect when the over-quota apples are imported.

Phytosanitary certificates are required to export U.S. apples to Mexico due to concerns primarily regarding apple maggot. Most countries accept U.S. systems approaches for pest management as adequate protection against the threat of apple maggot. However, Mexico requires cold treatment for its imported fruit. At the beginning of the shipping season, Mexican inspectors examine the storage/treatment facilities to ensure that temperature probes are approved and properly calibrated. After the cold treatment is over, treatment records are reviewed. Apples destined for Mexico are treated at either 32 degrees Fahrenheit for 40 days or 37.9 degrees Fahrenheit for 90 days.

Due to this requirement, most U.S. apples exported to Mexico are marketed later in the season, when much of the Mexican harvest has already been sold. The 40-day treatment carries a greater risk of damage to the fruit, but it is attractive from a marketing perspective. Exports to Mexico must also be free of plant debris and soil. There is a maximum average tolerance of two leaves per box, which is more problematic for Golden Delicious apples than for Red Delicious apples. This requirement is unique to Mexico.

Currently, apple exports to Mexico are limited to apples from the States of Washington, Oregon, California, Idaho, Colorado, Utah, Michigan, New York, Pennsylvania, Virginia, and West Virginia, with the exception of any area regulated for fruit flies of quarantine importance. Within these areas, only storage/treatment facilities that have been inspected and cleared by Mexican phytosanitary officials may take part in the export program, which is expensive to producers. To date, only producers in Washington, Oregon, and Idaho have participated. Producers in these States are able to spread the costs of inspection over a large volume of apples. The Northwest apple industry is charged for the cost of the Mexican inspectors, who are in residence during the entire shipping season to monitor the program. The industry collects money from shippers throughout the season to pay for the phytosanitary requirements.

In November 1998, Mexico agreed to end its supervision of this inspection program. The State of

Washington's Department of Agriculture and USDA's Animal and Plant Health Inspection Service (APHIS) will supervise the program, beginning with the 2001 harvest.

Canada Prior to the Canada-U.S. Free Trade Agreement (CFTA), Canada had no tariffs on U.S. apples, and this policy remains unchanged under NAFTA. 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 25 kilograms are prohibited, unless the Canadian government grants an easement. In October 1997, the Canadian Food Inspection Agency initiated a 2-year trial allowing interprovincial shipments and imports of bulk fresh apples in bins with a net weight of up to 200 kilograms. In addition, the Agency removed all weight restrictions for apples destined for processing. No adverse consequences have been reported through 1998. A final decision whether to change the Fresh Fruit and Vegetable Regulation will be made by March 2000.

Apple Trade Since NAFTA

The United States is a net exporter of apples. In 1998, Mexico accounted for 12 percent of U.S. apple exports, and Canada accounted for 16 percent. While Canada's share has been fairly constant under NAFTA, Mexico's share has fallen from a high of 21 percent in 1994. In 1998, the United States exported \$39 million of apples to Mexico, 7 percent of total fruit and vegetable exports to that country. In the same year, U.S. apple exports to Canada equaled \$67 million, 3 percent of U.S. fruit and vegetable exports to Canada.

Mexico is a major market for U.S. apples, ranking only behind Taiwan and Canada during the 1997/98 season (August-July). Mexico's removal of its import licensing requirement in 1991 was the first step towards increasing U.S. apple exports. As a result, U.S. apple exports to Mexico grew dramatically, from 12,027 metric tons in 1990 to 108,380 metric tons in 1993. In 1994, these exports rose 29 percent to a record 153,003 metric tons. U.S. apple prices were quite low in 1994 due to a record crop, which helped boost Mexican demand.

In 1995, U.S. apple exports to Mexico fell to 74,370 metric tons, as Mexican demand collapsed amidst various economic problems. Exports increased somewhat in 1996 and 1997, as economic conditions improved. However, U.S. apple exports to Mexico totaled only 87,837 metric tons in 1997, still below 1993 levels. Mexico imposed anti-dumping duties in September 1997, which reduced exports in the fall of that year. In March 1998, Mexico replaced these duties with a minimum price floor. U.S. apple exports to Mexico dropped another 22 percent in 1998, to 68,918 metric tons.

During 1993, U.S. apple exports to Canada totaled 80,868 metric tons. During 1994-98, these exports were relatively constant, averaging 86,205 metric tons per year. Canada's anti-dumping duty may dampen the variability of this trade by limiting U.S. exports during periods of lower U.S. apple prices.

U.S. apple imports from Canada have varied widely, ranging from 37,193 to 78,661 metric tons annually. The United States imports few apples from Mexico.

Trade Issues

Canadian Anti-Dumping Investigation 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 duties on Red and Golden Delicious apples from the United States. 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 the Golden Delicious industry, so the anti-dumping duty on Golden Delicious apples was dropped.

The anti-dumping duty on Red Delicious apples was to be in effect until 2000. Since February 1995, whenever U.S. free-on-board (fob) export prices to Canada fall below U.S. \$12.99 per 42-pound box, Revenue Canada applies an anti-dumping duty to raise the price to that level. There is no duty during the months of July, August, and September. This practice reduces U.S. marketing opportunities for smaller apples and apples of lower grade.

Mexican Anti-Dumping Investigation On March 6, 1997, Mexico initiated an anti-dumping investigation against U.S. apples. The Secretariat of Commerce and Industrial Promotion (SECOFI) made a preliminary determination of dumping and imposed a preliminary, compensatory import duty of 101.1 percent on Red and Golden Delicious apples, effective September 1, 1997. On March 19, 1998, the U.S. apple industry and SECOFI signed an agreement suspending this duty and the U.S. industry agreed to comply with a minimum-price scheme. This minimum price is based on the 3-year weighted average of the Washington Growers Clearing House Association's fob price for those two varieties. From March 20, 1998 through October 31, 1999, the minimum fob price is \$13.72 per standard 42-pound carton and 32.67 cents per pound for bagged or bulk apples. Beginning in 1999, the minimum price will be adjusted every November 1, using the average of the preceding 3 crop years.

In 1998, the U.S. apple industry was faced with the largest apple harvest in history, weak demand in traditional Asian markets due to economic crises there, and extremely low prices for processed apples. These factors lowered the price of U.S. fresh apples to the extent that the minimum price excluded exports of some sizes and grades of Red and Golden Delicious apples. Other varieties of apples are not regulated and may become more important in the Mexican market. Canadian apples have become more prominent in Mexican markets.

Allegation of Non-Compliance with U.S. Labor Law Mexican unions, along with the International Brotherhood of Teamsters, the United Farm Workers of America, and the International Labor Rights Fund, have filed a complaint against the U.S. apple industry, mainly in Washington State. The complaint alleges that the Washington apple industry does not comply with U.S. labor laws. Of the 20 complaints filed with NAFTA oversight commissions, this marks the first time that Mexico has used NAFTA's provisions related to labor rights to allege violations of U.S. labor law.

The Teamsters and United Farm Workers are currently cooperating in efforts to unionize

Washington fruit warehouse and field workers. Many laborers in the Washington apple industry are Mexican or of Mexican descent.

The first hearing took place in Mexico City on December 2, 1998, before the Mexican National Administrative Office of the Labor Secretariat. This hearing was the first in a 10-step process that could continue for several years. Ultimately, the process may involve ministerial meetings between Mexico and the United States. If a ruling goes against the United States, the U.S. government could be fined and the U.S. apple industry could lose NAFTA tariff concessions.

Discontent with the Mexican Inspection Process Washington State shippers were unhappy with the cost of the phytosanitary inspection process. In 1998, they refused to sign the financial plan that authorizes payment for the Mexican inspectors in Washington State. There were no apple shipments to Mexico from October 1 until early November, when Mexico agreed to end its supervision of the phytosanitary program. The program will now be supervised by the State of Washington's Department of Agriculture and representatives from APHIS, beginning with the 2001 harvest.

Impacts of NAFTA on Apple Trade

Between 1993 and 1998, U.S. apple exports to Mexico decreased 36 percent, despite record exports in 1994. The decline is linked to the economic crisis in Mexico, the anti-dumping duties, and the minimum price arrangement described above. Considering just the tariff changes associated with NAFTA, U.S. apple exports to Mexico were expected to increase 51 percent. Had only the tariff changes of the Uruguay Round Agreement on Agriculture (URAA) been implemented, these exports were expected to have increased 8 percent.

U.S. apple exports to Mexico increased dramatically after licensing requirements were lifted in 1991. Resolving phytosanitary restrictions ought to further boost trade. Mexico's 101.1-percent compensatory import duty was in effect from September 1, 1997 to March 19, 1998. During this period, U.S. apple exports to Mexico fell 70 percent from the same period in the previous season. Following the elimination of the compensatory import duty and the establishment of the floor price, U.S. apple exports to Mexico returned to more normal levels. For the rest of the season (April through July 1998), those exports were down 7 percent for the same period during the previous season but up 4 percent from the average for the previous three seasons. Total trade for the 1997/98 season dropped 31 percent from the previous season.

Pears

Policy Changes Resulting from NAFTA

United States The United States does not impose a tariff on fresh pears during April, May, and June. Prior to URAA, the general U.S. tariff for other months was 1.1 cents per kilogram. Under URAA, this tariff is to be reduced to 0.3 cents per kilogram over a 6-year period, beginning in 1995.

Under NAFTA, the United States immediately eliminated its import tariff on fresh Mexican pears on January 1, 1994. With CFTA and NAFTA, the U.S. tariff on Canadian pears declined 10 percent per year until 1998, when it fell to zero. Under certain price and acreage conditions, the United States and Canada may implement a snapback to MFN tariff rates. This authorization expires in 2008.

Mexico Prior to NAFTA, Mexico levied an import tariff of 20 percent on U.S. pears. Under NAFTA, this tariff was immediately cut to 15 percent upon the agreement's implementation. The remainder of the tariff has since been phased out, after a 5-year transition period.

For U.S. pears to enter Mexico, a USDA phytosanitary export certificate must be obtained from APHIS. Before issuing this certificate, APHIS must confirm that oriental fruit moth and plum curculio are not present. In addition, it must ensure that the pears come from the States of Washington, Oregon, or California and are not produced in areas regulated (quarantined) for fruit flies of quarantine importance. Shipments must be substantially free of leaves (a limit of two leaves per box) and debris. Unlike apples, pears exported to Mexico from the United States are not required to be examined by Mexican inspectors in the United States.

Canada Before CFTA, Canada levied a seasonal tariff on fresh pear imports of 3.31 cents per kilogram, but not less than 12.5 percent *ad valorem*. This tariff was imposed during the marketing season, but it could not be in effect for more than 24 weeks during any 12-month period ending March 31. For the purposes of the tariff, Canada was divided into three regions, and the timing of the tariff differed according to region. With CFTA and NAFTA, the tariff declined 10 percent per year until it fell to zero in 1998.

Pear Trade Since NAFTA

The United States is a net exporter of pears. In 1998, Canada purchased 30 percent of U.S. pear exports, and Mexico bought 35 percent. In that year, the United States exported \$27 million of pears to Mexico, 5 percent of total U.S. 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, these exports expanded from 20,784 to 38,653 metric tons. In 1994, they increased 68 percent to a record 65,112 metric tons. U.S. pear production for the fresh market reached record levels that year, and U.S. prices were very low, which probably contributed to strong Mexican

demand.

In 1995, U.S. pear exports to Mexico dropped 61 percent, largely due to the recession that followed the peso crisis. Despite strong economic growth in Mexico since then, the United States exported only 50,549 metric tons of pears to Mexico in 1998, 22 percent less than the 1994 record. Mexican pear exports to the United States are very small.

U.S. exports of pears to Canada averaged 44,227 metric tons a year during 1994-98. U.S. imports of Canadian pears are small in comparison. Between 1994 and 1998, they ranged from 68 to 837 metric tons.

Trade Issues

There have been no trade disputes involving fresh pears.

Impacts of NAFTA on Pear Trade

Overall, U.S. pear exports to Mexico increased 31 percent between 1993 and 1998, but trade was quite variable. The Mexican tariff on pears decreased from 20 to 15 percent in 1994, and U.S. pear exports to Mexico increased 68 percent that year. Tariff changes are likely to be more important for pears than for apples, due to the relative sizes of the respective tariffs. However, low prices in the United States may also have contributed to the high volume of pear exports in 1994. Mexico's recession following the peso crisis greatly affected U.S. pear exports to Mexico, which declined 61 percent in 1995. Even in 1998, trade was still 22 percent lower than the record 1994 level.

Peaches

Policy Changes Resulting from NAFTA

United States Peaches enter duty-free from December through May. At other times, imports are subject to a tariff. Before URAA, the general tariff was 0.4 cents per kilogram. URAA mandates that this tariff be reduced by half over a period of 6 years, beginning in 1995.

Under NAFTA, the United States eliminated its duty on Mexican peaches. With CFTA and NAFTA, the tariff on fresh peaches from Canada declined 10 percent a year until it fell to zero in 1998. The United States and Canada each have a snapback to MFN tariff levels until 2008.

Mexico Before NAFTA, Mexico charged a tariff of 20 percent on fresh peaches from the United States. Under NAFTA, Mexico immediately cut this tariff to 15 percent. The remainder of the tariff has since been phased out, following a 5-year transition period.

Canada Prior to 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 applied during a specified

period, which could not exceed 14 weeks in any 12-month period ending March 31. With CFTA and NAFTA, this tariff declined by 10 percent a year until it fell to zero in 1998. Canada is entitled to invoke a snapback duty under special circumstances regarding import prices and Canadian peach production areas.

Peach Trade Since NAFTA

In 1998, the United States exported \$8 million of peaches and nectarines to Mexico, 1 percent of total U.S. fruit and vegetable exports to Mexico. In 1998, U.S. peach exports to Mexico reached 15,290 metric tons, just 6 percent shy of the 1994 record and up 143 percent from 1993. These exports included fresh peaches destined for the fresh market and fresh cling peaches intended for immediate processing.

Between 1993 and 1998, the volume of fresh peaches for the fresh market declined 22 percent, while the volume of fresh peaches for processing increased 784 percent. During the first 5 years of NAFTA, the share of peaches destined for Mexico's fresh market plummeted from 79 percent of total fresh peach exports to 25 percent. Much of the decline can be attributed to Mexico's methyl bromide fumigation requirement. In 1991, the United States exported a then record 14,587 metric tons of peaches and nectarines to Mexico. In 1992, Mexico required methyl bromide fumigation of imported peaches. In that year, U.S. fresh peach exports to Mexico fell 50 percent.

In 1994, the first year of decreased tariffs under NAFTA, U.S. exports for the fresh peach market were 9,134 metric tons, up 83 percent from the previous year's low level of 4,987 metric tons. In 1998, U.S. fresh peach exports to Mexico totaled 3,868 metric tons, down 73 percent from the 1991 record and 22 percent from 1993.

Methyl bromide fumigation has had a serious and lasting impact on U.S. peach and nectarine exports to Mexico. The fumigation not only adds to the cost of the product, but it also reduces the quality of the fruit. In 1995, Mexico required that Mexican representatives be in residence in the United States to monitor the fumigation process, which further increased costs. In 1998, all U.S. peach exports to Mexico came from California. Producers in other States are eligible for the export program, but it is not profitable enough for them to participate. Not all producers have access to methyl bromide fumigation facilities. An area must have sufficient volume to justify the cost of having Mexican representatives in residence to monitor the fumigation process.

In 1997, a systems approach was briefly adopted in California. This approach would have eliminated the need for methyl bromide fumigation for fresh peach exports. Mexico rejected the program after USDA discovered an oriental fruit moth worm in a California packing house.

While fresh peaches destined for the fresh market in Mexico have decreased, fresh peach exports destined for the processed market have increased dramatically. These exports have grown from 1,293 metric tons in 1993 to 11,421 metric tons in 1998. In 1987, the U.S. cling peach industry began to export fresh peaches to Mexico City for processing there. Cling peaches are used almost exclusively for canned peaches. In 1992, the industry began shipping to a new canning facility located near the U.S.-Mexico border. U.S. exports to Mexico of fresh peaches destined for

canning have increased every year since 1993, with the exception of 1996. Even in 1995, when most exports to Mexico were affected by declining consumer demand, exports of fresh peaches for canning continued to rise. The decline in 1996 was due in part to very low prices in Mexico for processed peaches.

When the methyl bromide requirement was instituted for fresh peaches destined for the Mexican fresh market, fresh peaches for processing had to meet the same standard. Later, the requirement was dropped for fresh peaches bound for processing to harmonize with the Mexican requirement for domestic processing peaches. Instead of fumigation, U.S. fresh peaches for processing are inspected in Mexico for oriental fruit moth worm and then forwarded to the processing plant. If worms are found, the whole shipment is rejected. In 1998, the California season was several weeks longer than average, and spraying programs tailored to the average season failed to kill worms at the very end of the season. A number of truckloads of fresh peaches were rejected at the border after worms were found. The U.S. industry is attempting to alter its work plan so that if this problem recurs, rejected loads can be fumigated with methyl bromide and then shipped to the processing plant.

Mexico exports few peaches to the United States, and these take place almost exclusively during April. Currently, exports are limited to those from the fruit-fly-free zone in Sonora. These exports are highly variable. During 1990-93, they ranged from 37 to 197 metric tons. During the first 5 years of NAFTA, U.S. peach imports from Mexico averaged 128 metric tons, ranging from zero in 1994 to 283 in 1998.

U.S. peach exports to Canada averaged 44,769 metric tons during 1994-98. Through 1998, U.S. exports to the Canadian province of British Columbia had to be fumigated with methyl bromide, but no Canadian inspectors reside in the United States to monitor the inspection process. For the 1999 season, a pilot program was developed for shipping peaches and other stone fruit to British Columbia under a systems approach that does not require fumigation. Imports from Canada have been more variable, ranging from 187 metric tons in 1994 to 456 metric tons in 1996.

Trade Issues

Aside from the phytosanitary problems discussed above, there have been no trade disputes involving peaches.

Impacts of NAFTA on Peach Trade

U.S. peach exports to Mexico increased 143 percent between 1993 and 1998 but declined 6 percent from 1994 to 1998. Considering only peaches destined for the fresh market, exports to Mexico fell 22 percent between 1993 and 1998. Peach exports destined for processing increased 784 percent from 1993 to 1998. The opening of a canned peach processing plant near the U.S.-Mexico border and changes in phytosanitary requirements appear to be more important than tariff reductions in explaining U.S.-Mexican trade in fresh peaches.

Avocados

Policy Changes Resulting from NAFTA

United States Before NAFTA, the United States levied a general tariff of 13.2 cents per kilogram on avocados. With URAA, this tariff is being reduced to 11.22 cents per kilogram over a 6-year period that began in 1995. With NAFTA, the United States is reducing its tariff on Mexican and Canadian avocados over 10 years.

Mexico Mexico's tariff on avocado imports is 20 percent. Under NAFTA, this tariff is being phased out over 10 years.

Canada Before CFTA, Canada did not impose a tariff on avocado imports. There have been no changes in this policy.

Avocado Trade Since NAFTA

On January 31, 1997, APHIS approved a rule allowing the importation of Hass avocados from the Mexican state of Michoacan into the District of Columbia and 19 States: Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, Virginia, Ohio, Michigan, Wisconsin, Illinois, Indiana, and Kentucky. Since July 1993, Mexico has been allowed to ship fresh avocados to Alaska. From 1914 to 1993, fresh avocados from Mexico were not allowed into the United States due to phytosanitary concerns. Now, imports from certain growers are allowed into these States from November through February, when cold weather in the destinations would likely kill any pests that slipped through pest control safeguards. This time period precedes the peak harvest of California Hass avocados. The first imports began in November 1997.

Trade Issues

Under the APHIS systems approach, Mexican avocado imports must meet stringent pest-control requirements in production, packing, and transportation to minimize the risk of introducing pests to the United States that could threaten the health of U.S. avocado groves. Mexican producers apply a country-of-origin sticker to each avocado, indicating the phytosanitary number of the packinghouse. Avocados entering the United States are shipped in sealed refrigerated vehicles. In the first year of the program, no pests of concern were found in groves approved for the export program. There were some compliance problems in 1998 when Mexican avocados shipped to authorized States were later shipped outside the restricted area, but the volume of Mexican avocados out of compliance was estimated to be less than 1 percent of Mexican imports for the 1998/99 import season. Firms found guilty of violating the rule were to be fined.

Impacts of NAFTA on Avocado Trade

In 1998, the United States imported \$11 million of fresh avocados from Mexico, less than 1

percent of total U.S. fruit and vegetable imports from that country. In the first year of the export program (November 1997 through February 1998), Mexico exported 6,031 metric tons to the United States. This represented about 20 percent of the volume of Hass avocados shipped from California during the same period. During the 1997/98 season, Mexican avocados accounted for 13 percent of imports in November and up to 89 percent in February. The Mexican government indicated that Mexican shippers planned to export 10,000 to 12,000 metric tons of avocados to the United States during the 1998/99 season, double the volume of the first season. U.S. avocado imports from Mexico in November 1998 climbed to 2,187 metric tons, up 120 percent from November 1997. Imports in December 1998 were up 30 percent from the previous December.

Grapes

Policy Changes Resulting from NAFTA

United States The MFN tariff on grapes is zero during April, May, and June. The tariff for July 1 to February 14 is \$2.12 per cubic meter, and the tariff for February 15 to March 31 is \$1.31 per cubic meter. Under URAA, the United States agreed to reduce the tariff for February 15 to March 31 to \$1.13 per cubic meter and the tariff for July 1 to February 14 to \$1.80 per cubic meter. These changes are to be phased in over 6 years, beginning in 1995. With CFTA and NAFTA, the U.S. tariff for Canadian grapes was reduced 10 percent a year until it fell to zero in 1998. Under certain conditions, there is a snapback to MFN tariff levels until 2008. Upon NAFTA's implementation, the United States eliminated all of its tariffs on Mexican grapes.

Mexico Before NAFTA, Mexico levied a tariff of 20 percent on imported grapes and required import licenses on fresh table grapes. Under NAFTA, Mexico eliminated the import licenses and replaced them with tariffs. The tariff for October 15 to May 31 was eliminated immediately upon NAFTA's implementation. The 20-percent tariff for the rest of the year will be reduced to zero over a 10-year period that began in 1994, with equal declines each year. Currently, imports from the United States must originate in areas of California without fruit-fly quarantine.

Canada Before CFTA, Canada imposed a seasonal tariff of 2.21 cents per kilogram on grapes. This tariff was limited to 15 weeks during any 12-month period ending March 31. With CFTA, the tariff declined 10 percent a year until it fell 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 during the U.S. off-season. Mexico is the second largest source of imports and generally ships grapes to the United States during May and June, with smaller amounts in early July. Imports from April 20 through August 15 must meet the standards of a California grape marketing order that establishes minimum maturity requirements. The California grape industry ships fresh table grapes from June through January, although volume in June is very small. In 1998, the United States imported \$144 million of Mexican grapes, 6 percent of total U.S. fruit and vegetable imports from Mexico. Canada was the largest export market for U.S. grapes in 1998, Hong Kong was second, and

Mexico was third. In 1998, U.S. grape exports to Mexico were valued at \$22 million, 4 percent of total U.S. fruit and vegetable exports to Mexico.

In 1994, U.S. grape imports from Mexico equaled 41,074 metric tons, just slightly less than in 1993. Imports nearly doubled to 80,492 metric tons in 1995, even though the United States had produced its largest table grape crop since 1988. Mexico produced a very large crop in 1995. Imports in 1996 fell to 60,032 metric tons. U.S. grape imports from Mexico rose 26 percent in 1997 and another 33 percent in 1998, reaching 101,044 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 to phytosanitary standards. In 1994, U.S. grape exports to Mexico soared to 24,379 metric tons. But in 1995 and 1996, these exports dropped to half their 1994 level due to reduced consumer buying power in Mexico. Exports increased to 23,875 metric tons in 1997 and 24,051 metric tons in 1998, almost matching the 1994 record.

U.S. grape exports to Canada have generally decreased since 1990. In 1998, these exports equaled 81,503 metric tons, their lowest since 1989. U.S. imports of Canadian grapes are small and erratic, but they grew to 4,152 metric tons in 1998, up 472 percent from 1994. Most imports from Canada enter in September.

Trade Issues

The only trade issue with grapes was a 1997 Mexican grape labeling rule that required, in addition to domestic Mexican labeling, a country-of-origin label in Spanish for imported grapes. Initially, Mexico required the U.S. shipper to apply the label, an idea strongly resisted by California shippers. Eventually, the rule was revised to allow either the U.S. shipper or the Mexican importer to apply the label. The grape industries in California and Sonora worked together to get this rule revised.

Impacts of NAFTA on Grape Trade

Before NAFTA, Mexican grapes entered the United States duty-free from April through June. The agreement eliminated all tariffs during the rest of the year. During 1989-93, Mexican grape exports to the United States in July-March averaged only 5 percent of annual exports. During the first 5 years after NAFTA's implementation, that trade constituted 17 percent of the total.

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 on U.S. exports in the fall helps the U.S. industry, but the tariff reductions for the rest of the year are still very small and have had only minor impacts.

Cantaloupe

Policy Changes Resulting from NAFTA

United States Prior to URAA, the United States levied a general tariff on cantaloupe of 20 percent from August 1 through September 15 and 35 percent during the rest of the year. From the mid-1980's through 1992, the United States frequently exempted fresh cantaloupe from the general tariff during January 1 to May 15. Starting in 1995, URAA-mandated tariff reductions began to phase in. Over 6 years, the general U.S. tariff on cantaloupe will fall to 12.8 percent for August 1 to September 15 and to 29.8 percent during the rest of the year.

Under CFTA and NAFTA, the United States gradually reduced its tariff on Canadian cantaloupe by 10 percent a year, until the tariff reached zero in 1998. NAFTA includes a snapback to MFN tariff levels until 2008.

Under NAFTA, the tariff on Mexican cantaloupes from August 1 to September 15 is being phased out over 10 years. The tariffs for May 16 to July 31 and September 16 to November 30 are being gradually eliminated over 15 years. The tariff for December through May 15 was eliminated in 1994.

Mexico Before NAFTA, Mexico levied a 20-percent tariff on cantaloupe imports. Under NAFTA, Mexico is matching the U.S. tariff line changes and phase-out periods.

Canada Canada had no tariff on cantaloupe before CFTA, and this policy is unchanged.

Cantaloupe Trade Since NAFTA

The United States is a net importer of cantaloupe. During the 1990's, 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, some of which is linked to the popularity of fruit and salad bars. Per capita use of cantaloupes reached 11.8 pounds per person in 1998, 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 has kept pace with population growth during the 1980's and 1990's, imports increased 156 percent.

Almost all cantaloupe imports enter the United States between November and June. During this period, Mexico is a major supplier, accounting for 36 percent of U.S. cantaloupe imports in 1998. The nations of the Caribbean Basin Initiative (CBI) accounted for the remaining 64 percent. Cantaloupe from CBI countries enters the United States duty-free. In 1998, Mexico was the only source of U.S. cantaloupe imports between August 1 and September 15.

Cantaloupe imports from Mexico have risen steadily under NAFTA, but Mexico is just beginning to export the volume common during the early 1990's. In 1992 and 1993, some cantaloupe-producing areas in Mexico suffered adverse weather conditions, and it has taken several years for

the industry to reorganize. The United States imported 68,275 metric tons of Mexican cantaloupe in 1993 and 154,175 metric tons in 1998. This latter amount is still below the 1991 peak of 163,641 metric tons. In 1998, the United States imported \$57 million of Mexican cantaloupe, 2 percent of total U.S. fruit and vegetable imports from that country.

During the 1990's, the United States exported about 4 percent of its cantaloupe production. In 1998, 98 percent of U.S. cantaloupe exports went to Canada. These exports have grown steadily since 1994. In 1998 63,730 metric tons of U.S. cantaloupe were exported to Canada.

Trade Issues

There have been no trade disputes involving cantaloupes.

Impacts of NAFTA on Cantaloupe Trade

U.S. tariffs on cantaloupes during May 16 to July 31 and September 16 to November 30 are being phased out over 15 years. This is the longest transition period specified by NAFTA. Between 1993 and 1998, Mexican cantaloupe exports to the United States increased 126 percent, but exports were very low in 1993. NAFTA and URAA tariff changes alone were expected to increase these exports by 17-25 percent. Had only URAA been implemented, these exports were predicted to increase by 5 percent. The large increase in Mexican export volume is primarily due to the recovery of the Mexican cantaloupe industry.

From 1993 to 1998, U.S. cantaloupe exports to Canada increased 27 percent. Holding other factors constant, NAFTA and URAA tariff changes were expected to increase these exports 4 to 7 percent. Had only the URAA tariff changes been implemented, these exports would have increased 1 percent.

Watermelon

Policy Changes Resulting from NAFTA

United States Before CFTA, the United States levied a general tariff on watermelons of 20 percent. Under URAA, the United States pledged to decrease the tariff for December 1 to March 31 to 9 percent and the tariff for the rest of the year to 17 percent. These reductions began in 1995 and will be completed after a 6-year transition period.

Under NAFTA, the tariff for the main U.S. production period (May 1 to September 30) is being phased out over 10 years. The tariff for the rest of the year was eliminated immediately upon NAFTA's implementation. For the May-September period, the United States introduced a TRQ of 54,400 metric tons. The quota grows at a compounded annual rate of 3 percent over the transition period. Over-quota imports from Mexico are subject to the lower of the MFN rate in place on July 1, 1991, or the current MFN rate. Under CFTA and NAFTA, the U.S. tariff on Canadian watermelon was reduced 10 percent per annum until it was eliminated in 1998. A snapback

provision to MFN tariff levels applies until 2008.

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

Canada Canada had no tariff on watermelon before CFTA. This policy is unchanged.

Watermelon Trade Since NAFTA

Since NAFTA's implementation in 1994, Mexico has accounted for about 91 percent of U.S. watermelon imports. Imported watermelon dominates the U.S. market from October through April, but imports from Mexico are largest during April and May when the U.S. season is just getting underway. In 1998, the United States imported \$47 million of Mexican watermelon, 2 percent of total U.S. fruit and vegetable imports from Mexico.

Mexican watermelon production suffered a decline in the early 1990's, with exports to the United States reaching a low of 81,763 metric tons in 1992. Over the next 5 years, exports increased steadily, reaching 209,372 metric tons in 1997. In 1998, exports declined slightly to 204,166 metric tons. The U.S. quota for Mexican watermelons was filled only in 1997. In other years, the quota ranged from 31 percent full in 1996 to 86 percent full in 1998. Canada accounts for a very small portion of U.S. watermelon imports.

The catalyst for this import growth is stronger demand in the U.S. market. During 1994-98, U.S. per capita watermelon consumption averaged 13 percent higher than during 1989-93. This increase partially reflects strong industry promotion, but it may also be due to greater availability of new seedless watermelon varieties, which appear to be popular with consumers.

Since NAFTA's implementation, 97 percent of all U.S. watermelon exports have gone to Canada. During 1994-98, U.S. watermelon exports to Canada averaged 109,584 metric tons. Very little U.S. watermelon is exported to Mexico, generally less than 1 percent of the U.S. crop.

Trade Issues

There have been no trade disputes involving watermelons.

Impacts of NAFTA on Watermelon Trade

Between 1993 and 1998, U.S. imports of Mexican watermelon increased 142 percent, but in 1993, the United States imported an unusually small volume of watermelons. There are no discernible impacts on producers due to NAFTA, since most import volume occurs during the U.S. off-season. Consumers gain from cheaper watermelons.