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**FREE TRADE AGREEMENTS AND
THE DOHA ROUND OF WTO NEGOTIATIONS—
IMPLICATIONS FOR THE U.S. DAIRY INDUSTRY**

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FREE TRADE AGREEMENTS AND THE DOHA ROUND OF WTO NEGOTIATIONS— IMPLICATIONS FOR THE U.S. DAIRY INDUSTRY

W.D. Dobson*

EXECUTIVE SUMMARY

Introduction

- This Discussion Paper updates findings on impacts on the U.S. dairy industry of international trade talks and agreements relating to (a) bilateral and regional free trade agreements (FTAs) and (b) the Doha Round of World Trade Organization (WTO) negotiations.
- Emphasis focuses on identifying what the trade talks and agreements mean for foreign access to U.S. dairy markets and U.S. farm milk prices.

Bilateral and Regional Free Trade Agreements (FTAs)

- The U.S. and many other countries have expanded use of bilateral and regional FTAs.
- The U.S. pursued bilateral and regional FTAs more vigorously in the aftermath of a rancorous disagreement involving ministers of developing and developed countries during the 2003 Cancun Ministerial meetings for the Doha Round of WTO negotiations. The U.S. pursued FTAs partly to bring the disagreeing parties back to the WTO negotiating table.
- The U.S. has completed bilateral or regional FTAs with nine countries. Negotiations for the Dominican Republic-Central America Free Trade Agreement have been completed but the agreement has not yet been approved by the U.S. Congress. Negotiations with 44 other countries are in process. The U.S. has announced an intention to negotiate with seven additional countries.

Impact of Selected FTAs on the U.S. Dairy Industry

- **The North American Free Trade Agreement (NAFTA)**, which became effective in 1994, eliminated Mexico's tariffs on cheese imported from the U.S. in 2003. Mexico's tariffs on nonfat dry milk (NDM) imported from the U.S. are scheduled to go to zero in 2008. However, Mexico may request that tariffs on imports of U.S. NDM be extended for additional years.
- The NAFTA represents a plus for the U.S. dairy industry. Early estimates are that U.S. farm milk prices increased by \$0.01 to \$0.03 per hundredweight as a result of the NAFTA.
- **The U.S.-Australia FTA** became effective on January 1, 2005. Under this FTA, Australia will receive two types of duty-free or expanded access to U.S. dairy markets:

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Type 1: Country-specific tariff rate quotas (TRQs) established under the Uruguay Round WTO agreement receive duty-free tariff treatment.

Type 2: Additional access to the U.S. dairy market via new duty-free TRQs totaling 27,350 metric tons that will expand by 3 to 6 percent per year.

- Analysts with the Office of the U.S. Trade Representative estimate that the first-year TRQ increases for Australia will allow additional imports valued at \$41 million. This is less than 0.25 percent of the value of U.S. dairy output, and an amount that represents about 2 percent of the value of all U.S. dairy imports.
- **The Pending U.S.-Dominican Republic-Central America FTA (DR-CAFTA)** will provide for a gradual opening of dairy markets in the U.S. and DR-CAFTA countries to exports from trading partners over a 20-year period. This will be accomplished through use of reciprocal duty-free TRQs.
- The access to the U.S. dairy market provided by the DR-CAFTA will be small in the beginning years of the agreement. For example, the year one TRQ access to the U.S. cheese market will be equivalent to only 1.3 percent of total 2004 U.S. cheese imports and 0.1 percent of U.S. cheese consumption.
- Under the DR-CAFTA, Central American dairy firms—especially Costa Rican and Nicaraguan firms—will target U.S. customers with Central American roots. This is a sizable group, representing about 1 percent of the U.S. population.
- **The U.S.-Chile FTA** became effective on January 1, 2004. The U.S. entered into this agreement partly for defensive reasons since Chile had entered into FTAs with 16 other countries prior to this agreement. Before the agreement, U.S. dairy and other firms found themselves at a disadvantage in Chile compared to firms from other countries that had negotiated FTAs with Chile.
- The pasture-based dairy industries of Argentina and Uruguay will continue to have advantages for serving Chilean dairy markets despite the lower tariffs secured by the U.S. for exports of dairy products to Chile under this FTA.
- Chilean dairy exports to the U.S. may increase modestly from the \$4 million per year average figure recorded during 1999–2001, which was equivalent to about 0.3 percent of all U.S. dairy imports.

Update on the Doha Round of WTO Negotiations

- The Doha Round of WTO negotiations got off to a rocky start and nearly stalled during the Cancun Ministerial meetings in September 2003.
- However, a framework for modalities for further agricultural trade negotiations was reached on August 1, 2004. This framework includes measures relating to export subsidies, market access, and domestic support.
- **Agricultural export subsidies.** The framework for modalities calls for an end to agricultural export subsidies by a date to be negotiated. This will spell an eventual end for the U.S. Dairy Export Incentive Program. The big uncertainty relates to when agricultural export subsidies will actually end. The end could come as late as 2015 to 2017.

- Major progress was made in defining exactly what constitutes an export subsidy as a result of the U.S.-New Zealand challenge to Canada's dairy export subsidy programs. U.S. dairy groups planning to implement a producer-financed dairy export subsidy program will find guidance regarding what is WTO legal in the WTO documents relating to the challenge to Canada's dairy export subsidies.
- **Measures to Increase Market Access.** The market access provisions of the Doha Round's framework for modalities for agriculture suffer from a lack of specificity.
- In principle, there will be greater increases in market access and deeper cuts in higher tariffs than were made under the Uruguay Round. However, the uncertainty injected into subsequent negotiations by inclusion of special provisions for sensitive products and least developed countries makes the framework for modalities on market access mostly "a framework for negotiating some more."
- When the Doha Round WTO agreement becomes effective, expect an increase in U.S. cheese imports from average imports recorded for 2002–2004. U.S. cheese imports rose by about 51 percent in tonnage terms from 1992–1994 to 2002–2004. However, U.S. cheese imports remained at a relatively modest 5.2 percent of U.S. consumption in the latter period.
- **Measures to Reduce Trade-Distorting Domestic Support.** Trade-distorting domestic support is expected to be reduced more under the Doha Round than was the case under the Uruguay Round. Key provisions for reducing domestic support under the framework for modalities of the Doha Round include the following:
 - Big subsidizers will make the biggest cuts.
 - Blue box (trade-distorting domestic subsidies) cannot exceed 5 percent of the value of a country's agricultural production during a base period to be negotiated.
 - The non-trade distorting Green box subsidies will remain largely untouched.
 - The *de minimis* loophole used for computing aggregate measures of support will be reduced in size.
- Given the issues still to be negotiated regarding trade-distorting domestic support, it is difficult to assess how much the U.S. dairy price support program will be affected by Doha Round measures to reduce domestic support. However, if aggregate measures of support calculations under the Doha Round are made in roughly the same way as under the Uruguay Round, U.S. dairy price support levels may be cut to achieve aggregate measures of support targets.
- The Doha Round of WTO negotiations is likely to produce outcomes that lie between those of a GATT/WTO 2005 scenario and a Free Trade scenario analyzed by UW-Madison Agricultural Economist, Thomas Cox. Negative price adjustments under both scenarios would be concentrated mainly in the EU, Japan, Canada, and Mexico. Price gains under both scenarios would occur mainly in Oceania and Argentina. U.S. farm milk prices would not change much under either scenario, suggesting that U.S. dairy farmers are not likely to regard the Doha Round WTO agreement as carrying much in the way of benefits for them.

FREE TRADE AGREEMENTS AND THE DOHA ROUND OF WTO NEGOTIATIONS— IMPLICATIONS FOR THE U.S. DAIRY INDUSTRY

W.D. Dobson

This Discussion Paper updates findings on impacts for the U.S. dairy industry of international trade talks and agreements relating to (a) bilateral and regional free trade agreements (FTAs), and (b) the Doha Round

of World Trade Organization (WTO) negotiations. Emphasis focuses on identifying what the trade talks and agreements mean for foreign access to U.S. dairy markets and U.S. farm milk prices.

BILATERAL AND REGIONAL TRADE AGREEMENTS

Multilateral trade agreements—those negotiated under the WTO—will continue to be the primary vehicles for bringing about agricultural trade liberalization. However, bilateral and regional trade agreements (FTAs) have assumed greater importance as mechanisms for opening international agricultural markets. The U.S. has entered into several FTAs in recent years and several more are in various stages of negotiation (see Table 1).

The U.S. is not alone in expanding use of FTAs. The WTO reports the following about increased use of regional trade agreements (RTAs) [30]:

Most WTO members are also party to one or more regional trade agreements . . . By the end of 2005, if RTAs reportedly planned or under negotiation are concluded, the total number of RTAs in force might well approach 300.

TABLE 1. Status of Free Trade Agreements with the United States*

Country or Region	Status
Israel	In effect since April 22, 1985
Mexico and Canada (NAFTA)	In effect since January 1, 1994
Jordan	In effect since December 17, 2001
Singapore	In effect since January 1, 2004
Chile	In effect since January 1, 2004
Australia	In effect since January 1, 2005
Morocco	President Bush signed Implementation Act on August 17, 2004
Bahrain	Agreement signed by officials of U.S. and Bahrain on September 14, 2004
Dominican Republic-Central America (DR-CAFTA)	Negotiations completed on August 5, 2004. Agreement not yet approved by legislatures of signatory countries.
34 Western Hemisphere Countries (FTAA)	In negotiation, negotiations appear stalled
Panama, Colombia, Ecuador, Peru, Thailand	In negotiation
South African Customs Union: Botswana, Lesotho, Namibia, South Africa, and Swaziland	In negotiation
United Arab Emirates, Oman, Philippines, Indonesia, Malaysia, Brunei, and Cambodia	Intention to negotiate announced

*Sources: Council of Economic Advisors [5] and the Office of U.S. Trade Representative.

Why have bilateral and regional trade agreements assumed more importance in recent years? Numerous economic and geopolitical factors account for this development. But, from a U.S. perspective, a rancorous disagreement that took place between ministers representing developed and developing countries during the Cancun Ministerial meetings in 2003 for the Doha Round of the WTO negotiations elevated the importance of bilateral and regional trade agreements.

WTO trade ministers met in Cancun, Mexico in September 2003 to develop a blueprint for completing the Doha Round of trade negotiations. Agricultural issues turned out to be a major barrier to progress in the Doha Ministerial meetings. Led by ministers from Brazil, India, South Africa, and China, a group of 22 developing countries resisted proposed measures to safeguard intellectual property, reduce industrial tariffs, and other measures to reduce barriers to trade and foreign direct investment until the U.S. and EU agreed to substantial further agricultural trade liberalization. The U.S. came under scathing criticism for passing the 2002 Farm Act, which, the Group of 22 argued, represented a U-turn by the U.S. away from agricultural policy reform and agricultural trade liberalization.

U.S. negotiators found many demands of the developing countries—especially those relating to market access and trade-distorting domestic price supports—to be unacceptable. In addition, U.S. negotiators might have thought that the complaints from Brazil and India about U.S. agricultural protectionism were excessive in view of the agricultural tariff protection used by these countries. Brazil's tariffs on agricultural products average 37 percent and those for India average 112 percent, while those of the U.S. average 12 percent [3, p. 59].

Mr. Luiz Derbez, Mexico's Foreign Minister and Chairman of the Cancun Ministerial meetings, gave up hope of immediate progress and terminated the Cancun Ministerial meetings. It was speculated that Mr. Derbez' decision to pull the plug on the Cancun meetings was made with the approval of the then U.S. Trade Representative, Robert Zoellick. Zoellick likely believed that the hardball tactic of canceling the WTO Ministerial meeting and emphasizing bilateral trade negotiations would force balky nations back to the multilateral negotiating table.

While Zoellick may have thought that this hardball tactic would be useful for forcing foot-draggers back to the WTO negotiating table, he also pushed strongly and successfully for reopening WTO negotiations. Thus, in 2004, Zoellick's efforts and those of others restarted WTO negotiations, producing a framework for modalities agreement for agriculture, and an agreement for another Ministerial meeting in Hong Kong in December 2005. The Hong Kong Ministerial meeting presumably will provide a blueprint for completing the Doha Round.

Why were U.S. trade negotiators reluctant to move to a negotiating strategy that relied almost exclusively on bilateral and regional trade agreements for achieving trade objectives? Jagdish Bhagwati, a prominent Columbia University trade economist, gives the following explanation [3, p. 63]:

Most of them (FTAs) today exempt agriculture, and few exist between countries with competing farm sectors. Besides, production subsidies cannot be cut preferentially for favored nations. So the G-22, the EU, the United States, and Japan have only one real option: multilateralism.

In a discussion of western hemisphere trade issues, Mr. Allen Johnson, Chief Agricultural Trade Negotiator with the Office of the U.S. Trade Representative, described how the U.S. views the role of bilateral and regional trade agreements and the relationship of these negotiations to WTO negotiations, as follows [14]:

. . . U.S. bilateral and regional free-trade initiatives in the hemisphere, such as the U.S.-Chile Free Trade Agreement, Central American Free Trade Agreement (CAFTA), and Free Trade Area of the Americas (FTAA) negotiations, complement U.S. trade objectives in the WTO . . . These trade agreements not only provide counterweights to free trade agreements western hemisphere nations have signed with other countries and set high standards for subsequent trade agreements, but spur competitive liberalization and could foster important cooperation.

The Bhagwati-Johnson comments partially explain why the U.S. might choose to pursue bilateral, regional and WTO trade agreements simultaneously. However, Bhagwati's claim that few FTAs exist between countries with competing farm sectors is at variance with

the NAFTA, the U.S.-Australia FTA, and the proposed U.S.-DR-CAFTA. The U.S. and its trading partners for these agreements do have competing farm sectors. Yet the U.S. and other partners to the agreements have found it feasible to include substantive agricultural trade provisions in the agreements. Johnson's comment about the complementary relationship between FTA and WTO negotiations is noteworthy. As we will see, prominent bilateral and regional trade agreements entered into by the U.S. have linkages to WTO agreements.

NAFTA

The North American Free Trade Agreement, which became effective on January 1, 1994, is often held up as a success story that parties to the stalled FTAA might emulate. Mr. Peter Allgeier, then Deputy U.S. Trade Representative, described the NAFTA as follows [1, pp. 1–2]:

This comprehensive . . . free trade zone among the United States, Canada and Mexico has been a powerful force for increasing the international competitiveness of all three economies, for attracting enormous flows of inward investment and for contributing to the record productivity growth that we have experienced over the past decade. . . . (This is a) record that has convinced us that the people in the 34 nations of the FTAA can benefit from a similar free trade agreement across our hemisphere.

The NAFTA produced changes that gradually opened the large Mexican market to expanded U.S. dairy exports. Mexico represents a potentially large market for U.S. dairy products, since the country has a population of 105 million and sizable middle and upper classes with substantial purchasing power. Mexico is also unlikely to approach self sufficiency in milk production in the foreseeable future.

Canada's heavily protected dairy industry was affected little by the NAFTA. Border protection measures included in the U.S.-Canada FTA of 1989 for Canada's dairy industry were incorporated into the NAFTA. As a result, Canada's dairy product tariffs, which protect that country's milk quota system, continued to make it economically infeasible for most U.S. dairy products to be exported to Canada under the

For the U.S. dairy industry, the most important bilateral and regional trade agreements involving the U.S. are arguably the North American Free Trade Agreement (NAFTA), the U.S.-Australia Free Trade Agreement, the pending Dominican Republic-Central America Free Trade Agreement (DR-CAFTA), and the U.S.-Chile Free Trade Agreement. The impacts of these agreements on U.S. dairy trade are discussed in the following section of this paper.

NAFTA. Mexico and Canada also excluded their bilateral dairy trade from liberalization under the NAFTA.

Dairy Trade Provisions

Prior to the NAFTA, Mexico employed licenses and tariffs to limit access to Mexico's dairy markets. The market liberalization measures forged by the NAFTA had the greatest potential impact on NDM and cheese and only limited impact on other dairy products.

At times in the 1980s and early 1990s, Mexico was the world's largest importer of NDM. When the NAFTA became effective, Mexico converted its import licensing arrangement for milk powder into a tariff rate quota (TRQ) that operated as follows:

- The TRQ for milk powder imported from the U.S. was scheduled to remain in effect during a 15-year transition period.
- Initially, duty-free access to the Mexican market was provided for 41,200 metric tons of U.S. NDM and whole milk powder.
- For the first year of the agreement, U.S. exports of milk powder in excess of 41,200 metric tons were subject to a tariff of 128 percent or \$1,067 per metric ton, whichever was greater [20, p. 24]. During the first six years of the NAFTA, 24 percent of the tariff was eliminated and the remainder of the tariff was scheduled to be phased out during the rest of the 15-year transition period.
- For 2004, the TRQ for U.S. exports of milk powder to Mexico was 53,757 metric tons and

the over-quota tariff was 47 percent or \$392 per metric ton, whichever was greater [20, p. 24].

- By January 1, 2008, tariffs on U.S. exports of milk powder to Mexico are scheduled to be eliminated.

Under the NAFTA, Mexico converted its import licensing arrangement for cheese to tariffs.

- Imports of cheese from the U.S. that were subject to import licensing prior to the NAFTA initially were assessed a 20 percent tariff that was reduced to zero during a 10-year transition period.
- An exception applied to fresh cheeses, which were subject to a 40 percent tariff that was reduced to zero over a 10-year period.
- Thus, in 2003 Mexico's tariffs on cheeses imported from the U.S. declined to zero. This development has important competitive implications. U.S. cheese exports now enter Mexico duty-free, while cheese imports from third country suppliers face a tariff of about 20 percent [19, p. 2].

Mexico's tariffs on most other dairy items were phased out over a 10-year period. This phase out period applied to fluid milk, another item that is sold in quantity by U.S. firms, especially in the U.S.-Mexico border areas. However, imports of fluid milk from the U.S. for the Mexicali-Tijuana area are hampered by local trade regulations that require local supermarkets and specialty stores to sell all locally-produced milk before imports [20, p. 21]. Mexico initially received small TRQs from the U.S. for exports of NDM (422 tons) and cheese (5,550 tons) to the U.S. at the start of the NAFTA. Over-quota tariffs on Mexican exports of both products were to be phased out over a 10-year period.

In view of Mexico's limited competitive advantage in milk production, Mexico's exports of dairy products to the U.S. were expected to be small under the NAFTA. However, the NAFTA included provisions to prevent exports from other dairy exporting countries from entering the U.S. from a "side door" via Mexico. Thus, the NAFTA included rules of origin provisions to prevent dairy products made in other countries from entering either the U.S. or Mexico at preferential rates.

The treaty language specifies that only U.S. or Mexican milk or milk products can be used to make cream, butter, cheese, yogurt, ice cream, or milk-based drinks traded under NAFTA preferential rates.

Implications for the U.S. Dairy Industry

Since the beginning of the NAFTA, Mexico's dairy market has become more mature. As a result, competition for export sales to this market is keen, especially for bulk dairy products. In recent years, U.S. firms have become the dominant suppliers of Mexico's imports of fluid milk, yogurt, whey, and lactose. But, further expansion of U.S. exports of these products will be obtained mainly through expansion of the Mexican market through income growth, population growth, and development of new demand-expanding uses for these products.

Mexico's imports of NDM from the U.S. and other countries during the NAFTA period are puzzling. As noted in Table 2, Mexico's imports of NDM have been highly variable in absolute terms, but have declined as a percentage of consumption. Mexico's NDM imports in 1994 and 1995 were nearly 90 percent of domestic consumption. By the early 2000s, the country's NDM imports had fallen to 45–52 percent of consumption.

TABLE 2. Mexico's Imports of NDM as a Percentage of Consumption, 1994–2004*

Year	Consumption 1,000 Metric Tons	Imports	Imports as % of Consumption
1994	220	200	90.9
1995	205	180	87.8
1996	251	127	50.6
1997	250	133	53.2
1998	234	93	39.7
1999	256	123	48.0
2000	285	129	45.3
2001	286	141	49.3
2002	287	132	46.0
2003	335	173	51.6
2004(p)	330	170	51.5

*Source: USDA-FAS, "Dairy: World Markets and Trade" [21].
p = Preliminary

Mexico historically has imported large quantities of NDM for making reconstituted milk for distribution to the country's poor. Leche Industrializada CONASUPO (LICONSA), the parastatal responsible for this activity, in recent years has used more domestically-produced fluid milk for its distribution programs, thus reducing imports of NDM. Simultaneously the action has increased imports of fluid milk—especially in U.S.-Mexico border areas—and increased cheese imports as LICONSA's expanded use of domestically-produced fluid milk has channeled milk away from domestic fluid milk production and domestic cheese production.

In addition, U.S. exports of NDM made with Dairy Export Incentive Program payments (export subsidies) are limited by the Uruguay Round WTO agreement to about 68 thousand metric tons per year for all countries. Since Mexico can obtain subsidized exports of milk powder from firms in other countries—especially EU firms—the U.S. share of Mexico's imports of milk powder will be constrained by the WTO limits and contracts with customers in other countries. However, the WTO limit will cease to be a constraint if, as was the case in parts of 2004, U.S. NDM exports can be made without export subsidies. U.S. exports to NDM to Mexico also have been directly impacted by obligations that Mexico has under the Uruguay Round WTO agreement to allow limited quantities of NDM to enter Mexico duty free from other exporting countries. U.S. exports of NDM to Mexico that exceed the within-quota portion of the TRQ for the U.S. are not price competitive with foreign NDM that enters Mexico duty free.

Thus, for a number of reasons U.S. firms have made smaller exports of NDM to Mexico under the NAFTA than was the case, at times, prior to the agreement. In 1989, for example, U.S. firms exported 98 thousand metric tons of NDM to Mexico [22]. The most

exported since 1994 was 2004's 90 thousand metric tons, and NDM exports to Mexico were less than 2,000 metric tons in 1997.

Under terms of the NAFTA, the U.S. should be permitted to export unlimited quantities of NDM to Mexico duty-free beginning in 2008. However, the Mexican government might be pressured by the domestic industry to prevent the tariff on U.S. NDM from going to zero in 2008. NDM is a versatile product for Mexico's dairy industry, which is used for making a host of products including fluid milk, ice cream, and cheese. If additional quantities of inexpensive NDM become available from the U.S., Mexican firms that process NDM from domestic milk supplies would experience strong competitive pressures. Processors and producers who would be adversely affected by this development are likely to request an extension of time before the tariff on U.S. NDM would be eliminated. Thus, a situation paralleling the tariffs on Mexico's chicken imports could emerge. In the chicken import case, tariffs on U.S. exports of chicken meat to Mexico were scheduled to be eliminated in 2003. After hearing protests from Mexico's poultry industry and the Mexican government, the U.S. government agreed that scheduled reductions in Mexico's chicken meat tariffs to zero could be delayed for five years [16].

The bottom line is that the NAFTA has increased revenues for the U.S. dairy industry by small amounts. Early estimates suggested that average U.S. farm milk prices would rise by \$0.01 to \$0.03 per hundred-weight as a result of the NAFTA [7, p. 27]. In general, the U.S. agricultural sector gained from the NAFTA while Mexico's farm sector experienced aggregate losses. However, Mexico's overall trade balance with the U.S. went from a negative trade balance prior to the NAFTA to a positive trade balance of about \$41 billion in 2003, substantially because of trade-related gains in manufacturing [1, p. 1].

THE U.S.-AUSTRALIA FTA

This FTA became effective on January 1, 2005. Then U.S. Trade Representative Robert Zoellick described the agreement in these terms [17]:

The U.S.-Australia FTA is the first FTA between the United States and a developed country since the

U.S.-Canada Free Trade Agreement in 1988. More than 99 percent of U.S. manufactured goods to Australia have immediately become duty free. Manufactured goods account for 93 percent of U.S. exports to Australia.

Zoellick's comment underscores the benefits of the agreement for the U.S. manufacturing sector. Zoellick had less to say about the benefits of the agreement for the U.S. agricultural sector. R. Jurenas, an analyst with the U.S. Congressional Research Service, elaborates on this point, noting that [15, p. 1]:

... in value terms the Australian agricultural sector will gain more under the agreement than the U.S. agricultural sector does, largely because Australia's population is much smaller and Australia is a significant agricultural exporter.

Under the U.S.-Australia FTA, all U.S. exports of agricultural products enter Australia duty-free effective January 1, 2005. This was a minor concession on Australia's part since, prior to the FTA, the country had imposed TRQs only for cheese and unmanufactured tobacco. Exports of U.S. processed foods, soybeans, other oil seed products, fresh and processed fruits, vegetables, nuts, and alcoholic beverages are expected to increase the most as a result of the FTA.

Dairy Trade Provisions

The FTA expands Australia's access to the U.S. dairy market using a framework provided by the Uruguay Round WTO agreement. Under the Uruguay Round Agreement, the U.S. established TRQs on many dairy products imported from all sources. For some countries, including Australia, the U.S. allocated specific quantities for particular TRQs. Thus, under the Uruguay Round Agreement, Australia has a country-specific TRQ for cheddar cheese of 2,450 metric tons. Cheddar cheese entering the U.S. under this TRQ was subject to a 12 percent tariff. U.S. imports of cheddar cheese from Australia that exceeded the TRQ quantity were subject to the most favored nation tariff of \$1.23 per kg (\$0.56 per pound). As part of the Uruguay Round Agreement, Australia had been allocated the following country-specific annual import TRQs for selected dairy products [23]:

- 7,000 metric tons for cheese.
- 92 metric tons for condensed milk.
- 3,073 metric tons for other dairy products (excluding butter/butterfat).

U.S. dairy product imports not included in the TRQs were subject to tariffs ranging from zero to 17 percent. During 2001 through 2003, U.S. dairy imports from Australia averaged \$77.6 million annually and accounted for about 4 percent of U.S. dairy imports.

Under the U.S.-Australia FTA, Australia will receive two types of access to the U.S. dairy market for TRQ items. First, the country-specific dairy TRQs established under the Uruguay Round WTO Agreement will receive duty-free tariff treatment. Second, Australia will obtain additional access to the U.S. dairy market via the establishment of specific FTA duty-free TRQs that will expand over time as noted in Table 3.

Australia's dairy farmers appear to be pleased with the agreement. United Dairy Farmers of Victoria estimated that the average Australian dairy farmer would gain between AU\$2,000 and AU\$3,000 during the first year of the agreement [2]. Accordingly, the organization lobbied Australia's Parliament for approval of the agreement. Australia's dairy farmers noted with approval that the expansion of TRQs provided by the

TABLE 3. Duty-Free TRQs for Australian Dairy Products under the U.S.-Australia FTA*

Product Category	First Year Duty-Free TRQ metric tons	Yearly Expansion of TRQ %
American Cheese	500	3
Cheddar Cheese	750	3
European-Type Cheese	2,000	5
Goya Cheese	2,500	5
Swiss Cheese	500	5
Cheese, Other (NSPF)	3,500	5
Nonfat Dry Milk	100	3
Other Milk Powders	4,000	4
Condensed/Evaporated Milk	3,000	6
Butter/Butterfat	1,500	3
Creams/Ice Cream	7,500	6
Other Dairy Products	1,500	6
Total	27,350	

*Source: USDA-FAS, U.S.-Australia FTA Commodity Fact Sheet for Dairy [23].

FTA would provide an important outlet for the additional production that is expected to come on line from the country's milk producers.

Implications for the U.S. Dairy Industry

Analysts for the Office of the U.S. Trade Representative estimated that first-year quota increases for Australia will allow for additional imports valued at \$41 million. This is less than 0.25 percent of the value of U.S. dairy output, and an amount that represents about 2 percent of the value of all U.S. dairy imports [15, p. 4].

U.S. dairy groups and other agricultural groups had reservations about the agreement and generally lobbied for defeat of the agreement in the U.S. Congress. The National Milk Producers Federation (NMPF) opposed

the agreement because of the additional market access granted Australia's dairy sector and the loss of income to U.S. dairy producers. But, the NMPF acknowledged that the "negative impact could have been far worse" had the over-quota tariffs on dairy imports not been preserved [15, p. 4]. However, despite opposition from agricultural groups, the FTA received strong support in the U.S. Congress. The House of Representatives approved the agreement by a vote of 314 to 109 and the Senate by 80 to 16 [33].

These votes for the U.S.-Australia FTA suggest that trade agreements that carry large benefits for the manufacturing sector and other non agricultural sectors of the economy will garner substantial support from the Congress. However, U.S. agricultural groups were able to secure TRQs that limited access to the U.S. market for sensitive products.

THE U.S.-DOMINICAN REPUBLIC-CENTRAL AMERICA FREE TRADE AGREEMENT (PENDING)

The U.S. signed the Central America Free Trade Agreement (CAFTA) with Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua on May 28, 2004. The Dominican Republic joined the CAFTA nations on August 5, 2004 to form the DR-CAFTA. As of this writing (early April 2005), the U.S. Congress had not yet approved this agreement.

If approved by the U.S. Congress and the legislatures of the other signatory nations, the DR-CAFTA will provide freer access for U.S. firms to a market of 44 million consumers. The politically powerful U.S. sugar lobby has expressed strong opposition to the agreement. However, in a non-election year opposition from the sugar lobby is not likely to derail the agreement.

Dairy Trade Provisions

Before the DR-CAFTA, U.S. dairy exporters faced a range of different TRQs and import tariffs that restricted dairy exports [26]. Costa Rica and Guatemala, in particular, maintained high tariff protection for their domestic dairy industries. WTO-bound tariffs for the different countries ran as high as 100 percent.

Despite the relatively high border protection used by the DR-CAFTA countries, the U.S. made substan-

tial dairy exports to six countries in the early 2000s, as noted below [26]:

- From 2001 through 2003, U.S. firms shipped an average of 17,880 tons of dairy products valued at \$44.1 million to the six countries in the agreement.
- The Dominican Republic was the largest market for U.S. dairy products during 2001 through 2003, accounting for an average of 4,757 tons of product valued at \$12.4 million.
- The U.S. share of dairy exports to the six countries was 10 to 15 percent during 2001 through 2003.

When the DR-CAFTA becomes effective, the agreement will provide for a gradual opening of dairy markets of the U.S. and DR-CAFTA countries to exports from trading partners over a 20-year period. Opening of dairy markets in the signatory countries will be accomplished through use of reciprocal duty-free TRQs. Under the TRQs, the U.S. and CAFTA countries (but not the Dominican Republic) provide essentially equal amounts of gross access to their dairy markets. In first year of the DR-CAFTA, the reciprocal access will be as shown in Table 4.

TABLE 4. Reciprocal Quota Access to Dairy Markets in the First Year of the DR-CAFTA Agreement*

Country & Reciprocal Agreement	Products** (Metric tons)					Total
	Cheese	Milk Powder	Butter	Ice Cream	Other	
<i>U.S. Quota Access to DR-CAFTA</i>						
Costa Rica	410	200	150	150	140	1,050
El Salvador	410	300	100	120	140	1,070
Guatemala	450	400	100	160	182	1,292
Honduras	410	300	100	100	140	1,050
Nicaragua	575	650	150	75	50	1,500
Dom. Republic	414	2,970	220	165	330	4,099
Total	2,669	4,820	820	770	982	10,061
<i>DR-CAFTA Quota Access to U.S. Market</i>						
Costa Rica	300	50	50	100	550	1,050
El Salvador	450	n.a.	60	80	480	1,070
Guatemala	500	n.a.	n.a.	200	550	1,250
Honduras	350	n.a.	100	50	550	1,050
Nicaragua	875	n.a.	n.a.	275	350	1,500
Dom. Republic	413	n.a.	n.a.	165	330	908
Total	2,888	50	210	870	2,810	6,828

*Source: USDA-FAS, Commodity Fact Sheet for Dairy for DR-CAFTA [26].

**Other dairy products consist mainly of fluid milk and sour cream for the DR-CAFTA Quota Access to U.S. Market category

In the five Central American countries the duty-free TRQs will expand at an annual compound rate of 5 percent per year. In the Dominican Republic, the TRQs will grow at a simple rate of 10 percent annually.

When the DR-CAFTA becomes effective, within-quota tariffs on dairy imports will be eliminated immediately. However, over quota tariffs on dairy TRQs remain at base levels for years 1 through 10 of the agreement. Beginning in the 11th year, over-quota tariffs are reduced in 10 equal stages until all tariffs are eliminated in the 20th year. Thus, under the DR-CAFTA, tariff reductions are back-loaded (occurring in years 11 to 20) to a greater extent than was the case in the NAFTA or the U.S.-Australia FTA. Safeguard measures are included in the agreement to permit tariffs to remain at higher levels if imports exceed quota levels by 30 percent or more.

Implications for the U.S. Dairy Industry

The access to the U.S. dairy market provided by the DR-CAFTA will be small in the beginning years of the agreement. For example, the year one TRQ access to the U.S. market for cheese would be only 1.3 percent of total 2004 U.S. cheese imports and 0.1 percent of U.S. cheese consumption. The comparable values for butter are 1 percent and 0.04 percent, respectively.

Moreover the safeguard provisions included in the agreement can be used to limit surges in imports of dairy products from Central American countries and the Dominican Republic. Hence, the impact of the agreement on U.S. dairy product prices and U.S. farm milk prices is expected to be small.

While maximum imports under the TRQs from DR-CAFTA countries are relatively small, certain

dairy companies in Central American countries can be expected to seek to fill the TRQs allocated to them and perhaps even make some over-quota exports.

How much the DR-CAFTA countries will try to export dairy products depends partly on internal conditions. Internal supply pressures vary from country to country in Central America. In Costa Rica, Dos Pinos Cooperative has about a 90 percent market share in the commercial segment of the domestic market and cannot expand sales much by increasing market share [8]. Accordingly, Dos Pinos is looking to exports and new product development to expand sales. Dos Pinos is a sophisticated competitor that likely will take advantage of opportunities presented by the DR-CAFTA. Dairy processors in Honduras and El Salvador can be expected to expand exports of morolique cheese (a dry, hard, salty cheese) to the U.S. under the agreement.

Nicaragua's dairy industry is under the greatest pressure to expand dairy exports. It has the largest dairy herd in Central America and limited opportunities to expand domestic dairy product sales. Nicaragua's current dairy exporting practices are complex and var-

ied. The country's dairy exports include small quantities of cheese carried into the U.S. by travelers (which in total are sizable); limited exports of morolique cheese to the U.S. made mostly through Miami, Florida, to firms that prior to the FTA lacked licenses to import cheeses at low tariff rates; legal and "illegal" exports of the hard cheese to El Salvador and Honduras; and (according to anecdotal accounts) large shipments of hard cheese to El Salvador and Honduras that are later transshipped to the U.S.[8]. Nicaragua has one of the largest TRQs (875 metric tons) for shipments of cheese to the U.S. under the DR-CAFTA. However, meeting FDA requirements has posed a challenge to Nicaraguan dairy exporting firms in the past and may constitute a continued constraint on that country's hard cheese exports to the U.S.

Central American dairy firms will likely target U.S. customers with Central American origins. This is a sizable market group. According to Casares, former residents of Nicaragua, Honduras, and El Salvador total 2.5 to 3.0 million people, or about 1 percent of the U.S. population [4].

THE U.S.-CHILE FREE TRADE AGREEMENT

The U.S.-Chile FTA became effective on January 1, 2004. This was the first FTA entered into by the U.S. with a South American country. Chile was not a surprising choice for the FTA since that country has successfully implemented free market policies that have made the country a model for its Latin American neighbors.

The FTA agreement has the potential to open the Chilean market with its 16 million consumers more fully to U.S. companies. Prior to negotiating the FTA with the U.S., Chile had entered into 16 FTAs with other countries [24]. Consequently, U.S. companies found themselves at a competitive disadvantage for exports to Chile compared to companies in other countries, in particular Canada and the EU. Companies from those countries had gained preferential access to the Chilean market as a result of FTAs that their governments had negotiated with Chile.

Under the U.S.-Chile FTA, more than three-quarters of U.S. farm products (by value) exported to Chile will be duty free within four years of the start of the FTA.

Tariffs on other U.S. farm product exports will be phased out over periods ranging from eight to twelve years. All commodities for which tariffs are subject to four, eight, and ten year phase-outs will have tariffs reduced to zero in equal increments over the transition period. The FTA provides for use of a host of other mechanisms, including TRQs, an agricultural safeguard provision to soften the impact of import surges, and nonlinear and linear phase-out periods for other products.

Dairy Trade Provisions

Before the U.S.-Chile FTA became effective, U.S. firms faced a 6 percent tariff on dairy exports to Chile. While this was a relatively small tariff, U.S. firms did operate at a disadvantage to dairy firms in Argentina and Uruguay. Firms from the latter two countries had location advantages and existing trade agreements with Chile that gave them advantages over U.S. companies.

U.S. dairy products gain preferential access under the FTA, as the 6 percent tariff on dairy products will be phased out over four to eight years, depending on the product. The schedule for the phase out of tariffs on U.S. dairy products is as follows [25]:

- Four-year phase out for cheese, butter, whey, and yogurt products.
- Eight-year phase out of tariffs for liquid milk and cream, condensed milk, evaporated milk, whole milk powder, and NDM.

The U.S. will employ TRQs to limit access to the U.S. market by Chilean firms. The quotas will be expanded by 7 percent per year until all quotas are eliminated after 12 years. Initially duty free access was provided for the following within quota dairy imports from Chile [25]:

- All cheeses (1,432 metric tons)
- Butter and butterfat (300 metric tons)
- All milk powders (828 metric tons)
- Condensed and evaporated milk (489 metric tons)
- Other dairy products (452 metric tons)

SUMMARY OBSERVATIONS OF U.S. FREE TRADE AGREEMENTS

A few summary observations can be drawn from the general discussion of FTAs and the implications of those agreements for the U.S. dairy industry:

- FTAs may result in a redirection rather than an expansion of trade. Thus, FTAs may be less effective for bringing about benefits from trade than multilateral agreements.
- Economies in trade negotiations presumably are important. It likely is less costly to negotiate a multilateral trade agreement under the 147-member WTO than numerous bilateral and regional trade agreements. However, continued rancorous disagreements in WTO negotiations could force the U.S. to rely still more on FTAs.
- Provisions negotiated under WTO agreements provide a useful underpinning for FTA provisions. In the absence of a recent WTO agreement, it would be more complex to negotiate FTAs.

Implications for the U.S. Dairy Industry

The U.S.-Chile FTA will have a limited impact on U.S. dairy product and farm milk prices. The pasture-based dairy industries of Argentina and Uruguay are likely to continue to have advantages for serving the Chilean market despite the more favorable tariff treatment that U.S. firms acquired under the FTA. Chilean dairy exports to the U.S. may increase modestly from the \$4 million per year average figure recorded during 1999–2001, which was equivalent to about 0.3 percent of all U.S. dairy imports.

The situation surrounding the U.S.-Chile FTA is unique. Chile is not a large potential market for U.S. products. But Chile became attractive as a target for a FTA with the U.S. partly because Chile had entered into such agreements with 16 other countries before the U.S. If the U.S. wanted a level playing field for U.S. firms in Chile, it needed to pursue the FTA. Thus, negotiation of the FTA with Chile might be considered a defensive measure on the part of the U.S.

- The U.S.-Chile FTA was negotiated by the U.S. partly as a defensive measure. Chile had negotiated 16 FTAs with other countries. The U.S. found it necessary to enter into a FTA with Chile to maintain a reasonably level playing field for U.S. firms in that country.
- FTAs negotiated by the U.S. have had a limited cumulative impact on the U.S. dairy industry. The NAFTA represents a modest plus, while the U.S.-Australia FTA will have a modest negative impact on the U.S. dairy industry. The DR-CAFTA and the U.S.-Chile FTA probably will have little positive or negative impact on the U.S. dairy industry over time.
- While the U.S.-Australia FTA was strongly opposed by many U.S. agricultural groups, this FTA received strong support from the U.S. Congress, in part because it had the backing of many powerful manufacturing and non-agricultural organizations in the U.S. This has

implications for the ability of dairy and other agricultural groups to prevent FTAs that carry large benefits for the non-agricultural sector from coming into being. However, dairy and

agricultural groups did succeed in getting TRQs incorporated into the U.S.-Australia FTA to prevent large increases in access to selected U.S. agricultural markets.

UPDATE ON THE DOHA ROUND OF WTO NEGOTIATIONS

The Doha Round of WTO negotiations got off to a rocky start and nearly stalled during the Cancun Ministerial meetings in 2003. However, a framework for modalities for further agricultural negotiations under the Doha Round was reached on August 1, 2004. This framework includes the three pillars for agricultural trade liberalization that were part of the Uruguay Round WTO agreement; namely provisions governing export subsidies, market access, and domestic support.

A noteworthy aspect of the framework for modalities is the special treatment afforded developing countries. All developing countries will benefit from the special treatment, allowing them more time to liberalize. The 50 poorest countries (LDCs) in the world do not have to undertake any commitments. The preferential treatment for developing countries (whose ministers have become strongly assertive in the Doha Round negotiations) will undoubtedly make it more feasible to reach a final modalities agreement for agriculture in the Doha Round.

Progress Toward Eliminating Export Subsidies

While establishing the framework for modalities made headlines, much remains to be negotiated, especially regarding market access and domestic support for agriculture. However, firm commitments were made to end agricultural export subsidies by a date to be negotiated. This segment of the framework for modalities will spell the eventual end of the U.S. Dairy Export Incentive Program and the large, trade-distorting EU dairy export subsidies. The big uncertainty regarding export subsidies relates to when those subsidies will actually end. U.S. negotiators proposed in 2002 that the export subsidies be terminated five years after agricultural trade liberalization measures became effective under the Doha Round. However, the French have proposed a phase-out period for dairy export sub-

sidies lasting until 2015 or 2017. Presumably, the U.S. and French positions will bracket the actual end date.

In recent years, important progress has been made in defining exactly what constitutes a dairy export subsidy. This is noteworthy since it will prevent disguised dairy export subsidy programs from emerging to replace those outlawed under the Doha Round WTO agreement. It also will identify dairy export subsidies that will be acceptable for use during the subsidy phase-out period. Much of the progress in defining dairy export subsidies arose as a result of U.S.-New Zealand challenges to Canada's dairy export subsidy programs under the WTO. The WTO panel decisions in connection with the Brazil-U.S. cotton dispute in 2004 and 2005 also have implications for U.S. dairy export subsidies.

Canada's Dairy Export Subsidy Program. The challenges to Canada's dairy export subsidy programs under WTO dispute settlement machinery, the appeals, and the ultimate resolution of the dispute can be briefly summarized as follows [11, 12, 13, 28]:

- In 1995, the Canadian government established a two-tier pricing system in which processors paid higher prices for milk used domestically and lower prices for milk used to produce products for export. As part of the two-tier program, Canada established special 5(d) and 5(e) classes that included the following products:
 - *Class 5(d)*: Specific negotiated exports, including cheese under quota destined for the U.S. and UK markets, evaporated milk, whole milk powder, and niche markets.
 - *Class 5(e)*: Surplus removal, including exports of surplus dairy products.

The Class 5(e) program drew sharp criticism from certain competing dairy exporters in other countries who claimed that it represented an

export subsidy. Canada argued that price discounts applied to milk used to produce export products were not export subsidies, and therefore not subject to limits agreed to by Canada in the Uruguay Round WTO agreement. The U.S. and New Zealand challenged Canada's export subsidy program under the WTO in October 1997.

- In October 1999, a WTO dispute settlement panel upheld the challenges brought by the U.S. and New Zealand and ruled that Canada had illegally exceeded the WTO dairy export subsidy limits. In December 1999, Canada agreed to implement changes in its dairy export program. In 2000, Canada's government and dairy industry worked to establish a replacement program that met WTO rules and satisfied needs of Canada's dairy industry.
- In August 2000, Canada's federal government eliminated the Optional Export Program and the special surplus removal milk class, 5(e). Exports under Class 5(d) were limited to quantities of subsidized dairy exports that Canada had agreed to under the Uruguay Round WTO agreement. As a replacement for terminated programs, Canada's provincial governments implemented new export programs with the involvement of the federal government, notably the Commercial Export Milk (CEM) program, which is analyzed later.
- In February 2001, the U.S. and New Zealand governments returned to the WTO dispute settlement process to ask a compliance panel to determine if Canada's new system complied with the 1999 ruling. Each country also asked for permission to levy \$35 million in retaliatory sanctions against Canada if that country was found to be in violation of the 1999 ruling.
- The compliance panel review ruled on April 12, 2001 that Canada still was not in compliance with WTO export subsidy limits on dairy products. Canada appealed the decision to the WTO Appellate body. In January 2002, the Appellate body ruled that the compliance panel used an incorrect standard to analyze whether Canada had made dairy export subsidy payments. The Appellate body ruled that the

determination of whether there was an export subsidy needed to be based on an average cost of milk production for Canada, not on Canada's domestic milk price. Because the Appellate body did not have suitable information, it was unable to make a final ruling regarding the consistency of Canada's dairy export program with WTO export subsidy limits.

- As a result, the U.S. and New Zealand governments asked the WTO to re-hear the case using milk cost of production figures. On June 24, 2002, the WTO compliance panel again ruled in favor of the U.S. and New Zealand, concluding that Canada was continuing to exceed WTO limits on subsidized dairy exports. On December 20, 2002, the WTO Appellate body issued its final ruling in favor of the U.S. and New Zealand challenge.
- In May 2003, the U.S., New Zealand, and Canada reached an agreement that settled the case. Canada agreed to eliminate its export subsidies. As part of the agreement, Canada eliminated its CEM program.

Of particular interest is the CEM program that Canada implemented in response to the panel and Appellate body reports. Sales of CEM were made by Canadian milk producers to Canadian milk processors for production of various dairy products for export. Canadian milk producers could sell any quantity of CEM to a processor on terms and conditions freely negotiated between the producer and the processor. Sales of CEM did not require a quota or any form of government permit from the Canadian government or its agencies. Revenues derived from sales of CEM were collected directly by producers without government involvement.

Canada's dairy industry and Canada's government argued that since the CEM program did not involve the government, payments made under that program should not be considered dairy export subsidies. The WTO panel concluded that the CEM program included "payments" to processors within the meaning of Article 9.1(c) of the Uruguay Round's Agreement on Agriculture, which defines such payments, in part, as follows [28, p. 22]:

. . . payments on the export of an agricultural product that are financed by virtue of governmental action, whether or not a charge on the public account is involved, including payments that are financed from the proceeds of a levy imposed on the agricultural product concerned or on an agricultural product from which the exported product is derived . . .

The WTO panel's conclusion regarding CEM payments, which was upheld on appeal, said that subsidy payments to processors were involved since sales of milk under the CEM program were made at prices below the industry average cost of production standard (average fixed plus variable costs for milk production across Canada) used in determining whether subsidy payments were involved in CEM sales.

The WTO panel concluded that a significant percentage of Canadian milk producers were able to recover both fixed and variable costs through production of in-quota sales of milk in the domestic market. As a result, the WTO panel concluded that such producers can afford to sell milk for sale as export products under the CEM program at marginal cost and need not cover total costs for such sales. Thus, the panel found that governmental action regulating the domestic market cross-subsidized many sales of milk—including milk destined for production of export products under the CEM program—that otherwise would not be made.

The WTO panel's findings—and the Appellate body's decision upholding the findings—with respect to the CEM program are significant since those findings indicate that domestic price support programs can indirectly cross-subsidize export sales. Hence, by permitting farmers to sell milk to processor-exporters at prices that cover their marginal production costs (but not total costs), programs such as the CEM can represent an export subsidy under the WTO. The interpretation of export subsidies appears to have important implications for other government programs that create surpluses that are sold commercially in export markets at less than producers' total cost of production.

Additional implications that flow from the WTO decisions on Canada's dairy export subsidy programs include the following:

- Absent a WTO challenge by the U.S. and New Zealand, Canada's dairy export subsidies would

have provided Canada with mechanisms for making essentially unlimited export subsidies for dairy products. Survival of Canada's systems would have invited imitation by other countries and undermined the effectiveness of Uruguay Round WTO Agreement limits on dairy export subsidies.

- Canada's dairy export subsidy programs were particularly beneficial to a "small country" exporter like Canada. If Canada's export subsidy programs had survived WTO challenges, Canada could have made essentially unlimited exports of subsidized dairy exports without sharply depressing world prices for dairy products. If similar systems were used by "large country" exporters such as the U.S. or EU, sales under those systems would depress prices in relatively thin world dairy markets and eliminate a portion of the economic benefits for U.S. or EU farmers.
- It apparently would not be feasible for the U.S. to employ a Class IV export class with the proceeds from the exports pooled under federal milk orders. (In the 1990s, a Class IV program was discussed in the U.S. as a possible program for disposing of U.S. dairy surpluses.) Such a program would likely be considered analogous to Canada's Class 5(e) program. Accordingly, the WTO panel decisions and rulings of the Appellate bodies suggest that sales under a Class IV program would have to be counted against the subsidized export sales limits agreed to by the U.S. under the Uruguay Round WTO agreement.
- The WTO decisions with respect to Canada's dairy export subsidies raise questions about whether producer-financed export programs for disposing of surplus NDM could be used by the U.S. dairy industry. The WTO decisions regarding Canada's CEM program indicate that government programs can produce indirect, partly-disguised export subsidies that are not WTO legal. While U.S. producer-financed export programs would not necessarily parallel the CEM program closely, the broadly inclusive definition of export subsidies that emerged in the Canadian case suggests that great care will be required to develop a producer-financed export program that

would not attract a WTO challenge. The WTO panel reports and Appellate body reports on the Canada case give groups planning to develop a producer-financed export program for disposing of surplus U.S. dairy products in excess of WTO limits guidance on what is acceptable under the WTO.

The Brazil-U.S. Cotton Dispute. The WTO dispute settlement panels' decisions in 2004 and 2005 relating to Brazil's challenges to the U.S. cotton price support and cotton export subsidy programs also have implications that extend to U.S. dairy export subsidy programs. Brazil's challenges to U.S. cotton programs indicate that the USDA's GSM 102 (short-term export credit guarantees), GSM 103 (intermediate-term export credit guarantees) and the Supplier Credit Guarantee Program (SCGP) constitute export subsidies that are inconsistent with the WTO's Agreement on Agriculture and Agreement on Subsidies and Countervailing Measures [18]. In brief, the GSM and SCGP programs help to guarantee that U.S. agricultural exporters get paid for exports.

In the Brazil-U.S. cotton case, the WTO dispute panel noted that programs that deliver the following benefits to exporters at less than full cost represent export subsidies [18, p. 7]:

(Programs that provide via) governments (or special institutions controlled by governments) of export credit guarantee or insurance programmes, of insurance or guarantee programmes against increases in the cost of exported products or of exchange risk programmes, at premium rates which are inadequate to cover the long-term operating costs and losses of the programmes.

The WTO cotton dispute panel found that U.S. cotton export credit guarantees were effectively export subsidies because the premiums and other outlays for the programs failed to cover long-run operating costs. In addition, the panels found that this applies not just to cotton, but to all commodities that benefit from U.S. commodity support programs and receive export credit guarantees. U.S. exporters of certain dairy products are eligible to use these programs.

While the U.S. appeals of the WTO panel decisions have not been completed as of this writing in early

April 2005, the findings regarding the cotton program are likely to further define and more tightly limit the use of export subsidies for dairy items and other export products. Moreover, even if there is no action to limit the use of GSM and SCGP programs for dairy exporters as a result of the Brazil-U.S. cotton dispute, these programs are likely to be curtailed in the Doha Round WTO agreement. Indeed, the framework for modalities under the Doha Round specifies that the following programs that provide benefits for agricultural exporters be eliminated by dates to be negotiated [18, p. 31]:

- Export credits, export credit guarantees or insurance programs with repayment periods beyond 180 days.
- Export credits, export credit guarantees or insurance programs with repayment periods of 180 days and below that are not in accordance with disciplines to be agreed. These disciplines will cover payments of interest, minimum interest rates, minimum premium requirements, and other elements that can constitute subsidies or otherwise distort trade.

There is little doubt that these targeted measures are designed to limit use of the USDA's GSM and SCGP programs.

Measures to Increase Market Access

The Doha Ministerial Declaration calls for "substantial improvements in market access." The framework for modalities states that tariff reductions will be made through a tiered formula that takes into account the different tariff structures of member countries. The following principles will guide the additional negotiations regarding tariffs [31]:

- Tariff reductions will be made from bound rates. Substantial overall tariff reductions will be achieved as a final result of negotiations.
- Each member—other than LDCs—will make a contribution. Operationally effective special and differential provisions for developing country members will be an integral part of all elements.
- Progress in tariff reductions will be achieved through deeper cuts in higher tariffs with

flexibility for sensitive products. Substantial improvements in market access will be achieved for all products.

Considerable uncertainty was injected into subsequent Doha Round negotiations by permitting member countries and especially LDCs to designate “sensitive products” for special treatment. The framework for modalities specifies that this designation is open to all member countries. The exceedingly general language permitting this designation is as follows [31]:

Without undermining the overall objective of the tiered approach, members may designate an appropriate number, to be negotiated, of tariff lines to be treated as sensitive, taking account of existing commitments for these products.

Developing countries received authorization to designate certain products as special products in the following language of the framework for modalities [31]:

Developing country members will have the flexibility to designate an appropriate number of products as special products, based on criteria of food security, livelihood security, and rural development needs. These products will be eligible for more flexible treatment. The criteria and treatment of these products will be further specified during the negotiation phase and will recognize the fundamental importance of special products to developing countries.

LDCs receive additional preferential considerations defined as follows [31]:

Least-Developed Countries will have full access to all special and differential treatment provisions (relating to tariff reductions and other market access provisions) . . . (and) are not required to undertake reduction commitments. Developed Members, and developing country members in a position to do so, should provide duty-free and quota-free access for products originating from least-developed countries.

In summary, the market access provisions of the framework for modalities for agriculture under the Doha Round suffer from a lack of specificity. In theory, there will be substantial increases in market access and

deeper cuts in higher tariffs than made under the Uruguay Round. However, the uncertainty injected into subsequent negotiations by inclusion of special provisions for sensitive products and preferential treatment for developing countries and LDCs makes the framework for modalities on market access mostly “a framework for negotiating some more.”

Hence, it is impossible to predict with accuracy how much the Doha Round will expand foreign access to the U.S. cheese market. However, expect some additional increase in U.S. cheese imports from the average imports recorded for 2002–2004. U.S. cheese imports rose by about 51 percent in tonnage terms from 1992–1994 (the three years immediately before the Uruguay Round WTO Agreement went into effect) to 2002–2004. However, U.S. cheese imports remained at a relatively modest 5.2 percent of U.S. consumption in the latter period.

Measures to Reduce Trade-Distorting Domestic Support

There is more specificity in the framework for modalities regarding domestic support for agriculture. Trade distorting domestic support is expected to be reduced more under the Doha Round Agreement than under the Uruguay Round. The provisions relating to domestic support under the framework for modalities can be briefly summarized as follows [9, p. 31]:

- Overall levels of the most trade-distorting domestic support will be substantially reduced.
- A down payment of 20% of this reduction will be made in year one of the implementation period.
- Big subsidizers will make the deepest cuts.
- Blue box (trade-distorting domestic subsidies) cannot exceed 5% of the value of a country’s agricultural production during a base period to be negotiated.
- The non-trade distorting Green box subsidies remain largely untouched. However, payments in the Green box will be reviewed to see that they have little or no trade-distorting effects or effects on production.
- The *de minimis* loophole will be reduced. This loophole—which has been used by the U.S. to

limit its reported Aggregate Measure of Support (AMS) payments under the Uruguay Round Agreement—will be reduced in size.

In the arcane terminology of the framework for modalities, the overall base level of all trade-distorting domestic support, as measured by the final bound total AMS plus permitted *de minimis* level, and the level agreed for Blue Box support will be reduced according to a tiered formula.

Iowa State University economists, Chad Hart and John Beghin, argue that both the U.S. and EU have flexible programs that can address the domestic support reductions envisioned under the Doha Round, as follows [10, p. 10]:

Both the United States and the European Union have significantly altered their agricultural support in the last few years. These changes have moved a great deal of their agricultural support to direct payments . . . The direct and countercyclical payments in the United States and the Single Farm Payments in the European Union all fit the description of direct payments. Given the current structure of the Green Box and the proposed new definition of the Blue Box, the U.S. direct payments and the EU Single Farm Payments would be filed as Green Box, and the U.S. countercyclical payments would go in the Blue Box. These moves would seem to give the United States and the European Union a great deal of flexibility in dealing with the proposed reductions.

The details regarding AMS for U.S. dairy farmers suggest a less sanguine future for the dairy price support program. Under current WTO rules, the dairy price support program is deemed to be the most trade distorting kind of domestic support program. The WTO's position is that price support programs represent a transfer from consumers to producers, whether or not the support prices are binding, and therefore

represent a producer subsidy. In other words, price support programs have a measurable AMS cost even when no treasury payments are actually made. To the extent that price supports are accompanied by restrictive TRQs, they also indirectly limit market access and raise domestic prices. The U.S. no longer has the authority to impose quotas in order to limit imports of products (and close substitutes for products) purchased under the dairy price support program. However, current TRQs for dairy products are based on quotas previously applied under the repealed Section 22 of the Agricultural Adjustment Act as amended (7 U.S.C. 624).

The current maximum AMS permitted the U.S. is \$19.1 billion. In 2001, the last year in which reporting was made, the U.S. reported an AMS (after *de minimis* exemption deductions) of \$14.4 billion, \$4.7 billion under the cap. The dairy price support program contributed about \$4.5 billion to the total AMS. This represents 25 percent of the AMS cap and 75 percent of that portion of the AMS associated with price support programs.

The dairy price support program benefits are calculated by multiplying total U.S. milk production by the difference between the U.S. farm milk price support level of \$9.90 per hundredweight and a base period world market reference price for milk used for manufacturing. The reference price is \$7.25 per hundredweight, resulting in a \$2.65 per hundredweight program "cost" irrespective of CCC net purchases.

The Doha Round agreement will significantly constrain farm price and income support programs and further limit exemptions. If AMS calculations under the Doha Round are computed in roughly the same way as under the Uruguay Round, then U.S. dairy price supports appear to be vulnerable. However, given the uncertainty surrounding exactly how AMS will be figured under the Doha Round, it is difficult to accurately forecast how much the U.S. dairy price support program will be affected.

CONCLUDING OBSERVATIONS

The uncertainties regarding what will actually emerge in the Doha Round for agriculture make it difficult to gauge the impact of the trade agreement on

U.S. dairy programs and dairy trade. As noted earlier, the detailed terms must be negotiated to provide full modalities for agriculture under the Doha Round.

However, a probable outcome of the Doha Round for U.S. farm milk prices can be bracketed using the Cox-Zhu model of the world dairy industry [32].

Cox analyzed two scenarios with the model that are of particular interest for purposes of this paper [6]:

- **GATT/WTO 2005:** This analysis extrapolates from 2000 to 2005 certain dairy market liberalization provisions of the Uruguay Round WTO Agreement relating to minimum access, tariff reductions, and reductions in export subsidies. In essence, this scenario would increase dairy market liberalization by an additional amount approximating the amount provided by the original Uruguay Round WTO Agreement.
- **Free Trade Scenario:** This scenario depicts what world dairy markets would be like in the absence of tariff and non-tariff barriers to trade.

It is reasonable to assume that the results produced by the final modalities for dairy under the Doha Round will lie somewhere between the two scenarios analyzed by Cox. This is so since the framework for modalities promises substantial increases in market access, reduced domestic support for dairy farmers, and an end to dairy export subsidies. Such changes would move dairy market liberalization beyond the GATT/WTO 2005 scenario but not all the way to free trade.

Results for GATT/WTO 2005: Cox characterized the GATT/WTO 2005 scenario as one that produces sizable losses for milk producers in Western Europe, modest price changes in Japan, Canada, and the U.S., and gains for low-cost exporters. While major market distortions remain after GATT/WTO 2005, the model indicates that the world would move about halfway

TABLE 5. Percentage Change in Farm Milk Prices Under Free Trade Scenario*

Region or Country	Change in Farm Milk Prices (%)
Western Europe	-26
Japan	-36
Canada	-32
U.S.	No Change
Mexico	-17
Australia	+ 23
New Zealand	+ 51
Argentina	+ 17

*Change from base period. Source: Cox [6].

to “free trade” by 2005. Farm milk prices fall 13 to 14 percent in Western Europe, increase by 8 to 9 percent in Oceania, and change relatively little in the U.S. under this scenario.

Results for Free Trade: Results under this scenario are more dramatic. Milk and dairy product production expand in low-cost producing areas. Dairy exports originating in these same areas increase and decline in high-cost countries. The changes in farm milk from certain base period figures are shown in Table 5.

While Cox’s work will not provide scenarios that precisely parallel the final modalities for agriculture under the Doha Round, his analysis does have important implications. Specifically, any substantial movement toward freer world markets for dairy products as a result of the Doha Round is not likely to have much impact on U.S. farm milk prices. This suggests that U.S. dairy farmers are not likely to see much benefit from the agreement.

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