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Summary

Uruguay Round Results Set Stage for Further Agricultural Trade Liberalization

The Uruguay Round of Multilateral Trade Negotiations continued the process of reducing trade barriers achieved in seven previous rounds of negotiations. Among the Uruguay Round's most significant accomplishments were the adoption of new rules governing agricultural trade policy, the establishment of disciplines on the use of sanitary and phytosanitary (SPS) measures, and agreement on a new process for settling trade disputes. The latest round also created the World Trade Organization (WTO) to replace the General Agreement on Tariffs and Trade (GATT) as an institutional framework for overseeing trade negotiations and adjudicating trade disputes. Agricultural trade concerns that have come to the fore since the Uruguay Round, including the use of genetically engineered products in agricultural trade, state trading, and a large number of potential new members, illustrate the wide range of issues a new round may face.

During the 3 years since initial implementation of the Uruguay Round agreements, the record with respect to agriculture is mixed. The Uruguay Round's overall impact on agricultural trade can be considered positive in moving toward several key goals, including reducing agricultural export subsidies, establishing new rules for agricultural import policy, and agreeing on disciplines for sanitary and phytosanitary trade measures. The Uruguay Round Agreement on Agriculture may also have contributed to a shift in domestic support of agriculture away from those practices with the largest potential to affect production, and therefore, to affect trade flows. However, significant reductions in most agricultural tariffs will have to await a future round of negotiations.

Prior to the Uruguay Round, trade in many agricultural products was unaffected by the tariff cuts that were made for industrial products in previous rounds. In the Uruguay Round, participating countries agreed to convert all nontariff agricultural trade barriers to tariffs (a process called "tariffication") and to reduce them. However, agricultural tariffs remain very high for some products in some countries, limiting the trade benefits to be derived from the new rules. To ensure that historical trade levels were maintained, and to create some new trade opportunities where trade had been largely precluded by policies, countries instituted tariff-rate quotas. A tariff-rate quota applies a lower tariff to imports below a certain quantitative limit (quota), and permits a higher tariff on imported goods after the quota has been reached.

The Agreement on Agriculture required countries to reduce outlays on domestic policies that provide direct economic incentives to producers to increase resource use or production. All WTO member countries are meeting their commitments to reduce these outlays, and most countries reduced this type of support by more than the required amount. However, support from those domestic policies considered to have the least effect on production, such as domestic food aid, has increased from 1986-88 levels.

In the Agreement on Agriculture, 25 countries that employed export subsidies agreed to reduce the volume and value of their subsidized exports over a specified implementation period. To date, most of these countries have met their commitments, although some have found ways to circumvent them. The EU is by far the largest user of export subsidies, accounting for 84 percent of subsidy outlays of the 25 countries in 1995 and 1996. Despite substantial progress in reducing export subsidies, rising world grain supplies and falling world grain prices will make it difficult for some countries to meet future commitments unless they adopt policy changes.

The Uruguay Round's SPS Agreement imposed disciplines on the use of measures to protect human, animal, and plant life and health from foreign pests, diseases, and contaminants. The Agreement can be credited with increasing transparency of countries' SPS regulations and providing improved means for settling SPS-related trade disputes, including some important cases involving agricultural products. The Agreement has also spurred regulatory reforms in some countries. The SPS Agreement and the Agreement on Technical Barriers to Trade could provide a framework for disputes over genetically modified organisms (GMOs) brought to the WTO for arbitration.

Changes made to the multilateral dispute resolution process in the Uruguay Round may be as important to agricultural trade as the improvement in the substantive rules governing trade in agricultural goods. Initial evidence indicates that the WTO dispute settlement system is a significant improvement over its GATT predecessor. For example, a single country can no longer block the formation of a dispute resolution panel, or veto an adverse ruling by blocking the adoption of a panel report. These improvements have led to a number of important agricultural trade cases being adjudicated before the WTO. The outstanding question for the WTO is whether members whose practices have been successfully challenged under the new dispute settlement procedures will live up to their obligations.

Other agriculture-related issues, including a large and diverse group of potential new WTO members, the challenge of dealing with state trading enterprises within WTO disciplines, and the issues particular to developing countries, will shape the agenda for future agricultural trade liberalization discussions. Thirty-two countries are currently seeking membership in the 132-member WTO. Countries seeking WTO membership accede under conditions negotiated with WTO members. Acceding countries benefit from WTO membership through privileged trade status with WTO members, but may incur adjustment costs in reforming their trade policies and reducing tariffs to meet WTO requirements. Current WTO members gain greater access to the markets of acceding countries.

State trading enterprises (STEs), governmental and nongovernmental entities that have been granted special rights or privileges through which they can influence trade, continue to be important to the trade of agricultural commodities because many countries consider them an appropriate means to meet domestic agricultural policy objectives. Continuing concerns about the trade practices of state trading enterprises in some WTO member countries, and the potential accession of China and other countries where STEs are prominent, will keep STEs on the WTO agenda.

Developing countries received special treatment in the Uruguay Round, including less stringent disciplines in reforming their trade policies than those that apply to developed countries. In the next round of multilateral agricultural trade negotiations, developing countries will continue to have special interests in the areas of special and differential treatment, export restraints, price stability, food security, food aid, and stock policies. As developing countries identify their positions, coalitions of countries with common trade interests may emerge.

The Uruguay Round of Multilateral Trade Negotiations was completed in 1994 with the signing of the Uruguay Round Agreements at Marrakesh. The Round produced a number of important achievements, including replacing the General Agreement on Tariffs and Trade (GATT) as an institutional framework for overseeing trade negotiations and adjudicating trade disputes, with the World Trade Organization, and extending GATT/WTO rules of trade to new areas such as intellectual property and services. Among the most significant accomplishments of the Uruguay Round was its focus on the treatment of agricultural trade under the GATT and the resulting new disciplines on agricultural trade policy.

Until the Uruguay Round, agriculture received special treatment under GATT trade rules through loopholes, exceptions, and exemptions from most of the disciplines applying to manufactured goods. As a result, the GATT allowed countries to use measures disallowed for other sectors (e.g., export subsidies), and enabled countries to maintain a multitude of non-tariff barriers that restricted trade in agricultural products. Participants in the Uruguay Round continued the GATT's special treatment of agricultural trade by agreeing to separate disciplines on agriculture in the Agreement on Agriculture (URAA), but initiated a process aimed at reducing or limiting the exemptions and bringing agriculture more fully under GATT disciplines.

Under the Agreement, countries agreed to substantially reduce agricultural support and protection by establishing disciplines in the areas of market access, domestic support, and export subsidies. Under market access, countries agreed to open markets by prohibiting non-tariff barriers (including quantitative import restrictions, variable import levies, discretionary import licensing, and voluntary export restraints), converting existing non-tariff barriers to tariffs, and reducing tariffs. URAA signatory countries also agreed to reduce expenditures on export subsidies and the quantity of agricultural products exported with subsidies, and prohibit the introduction of new export subsidies for agricultural products. Domestic support reductions were realized through commitments to reduce an aggregate measure of support (AMS), a numerical measure of the value of most trade distorting domestic policies. The agreement is implemented over a 6-year period, 1995-2000.

In addition, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) established rules to prevent countries from using arbitrary and unjustifiable health and environmental regulations as disguised barriers to trade. And a new process for settling disputes among WTO members, agreed to during the Uruguay Round, promised improvements in the resolution of trade disputes. As part of the URAA, member countries agreed to begin negotiations for a continuation of the agricultural reform process 1 year before the end of the URAA implementation period.

The 3 years of implementation since the Agreement's entry into force in 1995 have provided some evidence from which to evaluate the impact of the Uruguay Round on agricultural trade. This report evaluates the progress to date in implementing the various Uruguay Round agreements and disciplines, and addresses emerging issues that will have a bearing on agricultural trade in the context of the WTO. It offers an interim assessment of the effects of the Round on agricultural trade and considers the future direction of agriculture in the WTO. Given the limitations of space, the scope of the report, while attempting to be comprehensive, is not all-encompassing. Other topics of importance to agriculture, such as the Agreement on Technical Barriers to Trade, and tariff reductions in processed products and agricultural inputs, are not covered.

This report also does not address one of the most important outcomes of the Round: the expected expansion in world income and economic activity and its effect on demand for agricultural products, which could far outweigh the direct effect of reductions to barriers on agricultural products. And a formal assessment of the benefits of the URAA itself awaits further investigation. It is hoped, nonetheless, that a comprehensive picture will emerge of the institutional and practical environment in which agricultural trade takes place that will also provide a perspective from which to anticipate future agricultural trade negotiations.

Market Access Issues

In the seven rounds of GATT negotiations prior to the Uruguay Round, agricultural tariffs were not included fully in general tariff negotiations because of concerns for low incomes and declining employment in agriculture. In the Uruguay Round Agreement, the rules governing agricultural trade were changed fundamentally. Members agreed to convert all non-tariff agricultural barriers (NTBs) to ordinary tariffs (tariffication), to bind all agricultural tariffs, and to subject them to reductions. Members also agreed to establish tariff-rate quotas (TRQs) to preserve historical trade levels and to create some new trade opportunities in highly protected markets. Some reductions in agricultural tariffs also were achieved. Nonetheless, agricultural tariffs remain very high for some politically sensitive products in some countries, limiting the trade benefits to be derived from the new rules. Significant disparities also remain between both commodities and countries and between basic commodities and their processed products within countries. The adequacy of rules governing administration of tariff-rate quotas also remains an issue. [John Wainio (wainioj@em.agr.ca), Gene Hasha (ghasha@econ.ag.gov), and David Skully (dskully@econ.ag.gov)]

The Role of Tariffs in Trade and in the GATT

The original preamble to the GATT (1947) sought reciprocal and mutually advantageous reductions in tariffs and other barriers to trade and the elimination of discriminatory treatment in international commerce. It was recognized that expansion of the trade could increase production, raise living standards, and encourage full employment through more efficient use of global resources. A basic GATT principle is that protection of domestic industries, where deemed politically necessary, should be provided through the least distorting means, i.e. by customs tariffs administered without discrimination. Maximum tariff levels also should be "bound," a guarantee that tariffs cannot exceed negotiated levels without consultation and compensation where appropriate.

The traditional focus of the GATT on tariffs reflects the ability of fixed tariffs to provide protection to domestic production while preserving essential benefits of markets. Fixed tariffs allow traders to know reliably what levies they must pay, in percentage or absolute terms, and assure the right to do business on those terms, establishing a stable and predictable basis for international trade. Fixed tariffs also preserve the transmission of price signals to producers and consumers, encouraging a more efficient allocation of resources and increased production, income, and employment. The level of protection provided by tariffs to any national sector also is transparent and therefore more susceptible to negotiations among governments.

Unfortunately, the benefits of a stable tariff regime are not achieved when bound tariffs are high and tariffs actually applied are manipulated in response to market conditions. While lower applied tariffs are more conducive to trade than higher bound tariffs, varying applied tariffs interfere with global price transmission and undermine the transparency and predictability of international trade. Most countries have published national tariff schedules which do not change arbitrarily. However, when some countries manipulate applied tariffs to insulate domestic producers and consumers from the need to adjust to movements in world prices, the burden of those adjustments is concentrated on fewer countries, world price instability is increased, and the global efficiency of resource allocation and global income are reduced.

Early GATT Rounds Provided Special Treatment for Agriculture

Early GATT rounds successfully reduced the average bound tariff rate on industrial goods from 40 percent in 1945 to near 6 percent in 1978, following full implementation of the Tokyo Round. The Uruguay Round further reduced average industrial tariffs to 4 percent. The story of agricultural tariffs has been very different. Political concerns for declining agricultural employment and low incomes impeded negotiations on tariff reductions and led to several general or country-specific exemptions that virtually absolved agriculture from most disciplines applied to industrial trade. The most important exemption for market access was an exemption in Article XI:2 from the general prohibition on quantitative trade restrictions. Agriculture was not fully integrated into general tariff reduction negotiations during the first seven GATT rounds (table 1).

Before the Uruguay Round, only 58 percent of the agricultural tariffs of the developed economies were bound in the GATT, compared with 78 percent of industrial tariffs. Even after the Uruguay Round, bound agricultural tariffs now

Summary of Uruguay Round Agreement on Agriculture Market Access Provisions

Tariffication, Tariff Bindings, and Reductions

- Non-tariff barriers to be converted to tariff equivalents (tariffication) equal to the difference between internal and external prices existing in the base period.
- All tariffs to be bound (i.e., cannot be increased without notification and compensation).
- Reduce existing and new tariffs by 36 percent, on a simple average (unweighted) basis, in equal installments over 6 years.
- Reduce tariffs for each item by a minimum of 15 percent.

Minimum and Current Access

- Minimum access import opportunities to be provided for products subject to tariffication with imports below 5 percent of domestic consumption in the base period.
- Countries must agree to maintain current access opportunities equivalent to those existing in the base period. Current access import opportunities (for example under quotas or voluntary export restraints) to be provided for products subject to tariffication with imports exceeding 5 percent of domestic consumption in the base period.
- To ensure that these access opportunities can be met, countries will establish tariff-rate quotas, with the access amounts subject to a low duty and imports above that amount subject to the tariff established through tariffication.
- Increase minimum access quotas from 3 percent of domestic consumption to 5 percent over implementation period.

Safeguards, Exceptions, and Special and Differential Treatment

- Special temporary agricultural safeguard mechanism put in place for products subject to tariffication. Imposed if increase in volume of imports or drop in price of imports exceeds certain trigger levels.
- Special treatment allows countries, under certain conditions, to postpone tariffication up to the end of the implementation period as long as minimum access opportunities are provided.
- Developing countries allowed the flexibility of ceiling bindings, longer implementation periods (10 years) and lower reduction commitments in tariffs (24 percent average reductions with 10 percent minimum). Least developed countries subject to tariffication and binding but exempt from reduction commitments.

Base Period, Implementation Period

- Base period: 1986-88. Implementation: 6 years, beginning in 1995 (10 years for developing countries).

average over 40 percent ad valorem, roughly equivalent to the average for industrial tariffs at the end of World War II. The reduction of agricultural tariffs remains a large task for negotiators in the next round. GATT experience with industrial tariffs provides some options for approaching agricultural tariff negotiations. However, that the GATT's success on industrial tariffs took eight rounds of negotiations over 50 years provides some perspective on the challenge. The challenge in agriculture remains a special one because of the continuing strong aversion of important WTO members to subject agriculture to the same disciplines applied to other sectors.

The URAA Succeeds in Reforming the Rules for Agriculture

Market access provisions (see box "Summary of Uruguay Round...") of the Uruguay Round Agreement established disciplines on trade distorting practices while maintaining historical trade volumes and assuring some increased access to highly protected markets. Most importantly, NTBs were banned, including quantitative import restrictions, variable import levies, discretionary import licensing, non-tariff measures maintained through state trading enterprises, voluntary export restraints, and similar border measures—all measures other than ordinary customs duties. NTBs could be "tariffied", i.e. converted to ordinary tariffs. All preexisting and new tariffs were to be bound and subjected to reductions. The establishment of bindings for all also was an important achievement of the Uruguay Round, providing a basis for negotiations in further WTO rounds. To avoid any negative impact on trade related to tariffication, access quotas equal to historical trade levels were established to maintain access for commodities subject to tariffication, or access quotas providing minimum access opportunities were

Table 1--A summary of multilateral trade negotiations before the Uruguay Round

Name and date	Main accomplishments	Agricultural milestones
Geneva (1947), Annecy (1949), Torquay (1950-51)	The first round was successful in both binding and reducing tariffs on non-agricultural goods. The next two focused more on binding tariffs.	No significant discussion took place on agricultural trade in the first three rounds.
Geneva (1955-56)	Negotiations based on request-and-offer lists. Countries initially negotiated bilaterally while considering multilateral balancing opportunities.	GATT revised to allow export subsidies on primary products. The U.S. obtained waiver to impose quantitative import restrictions.
Dillon Round (1960-62)	Request-and-offer remained the primary method for tariff negotiations. Tariffs on manufactured items were reduced, on average, only 8-10%.	The EC agreed to low or duty-free bindings on soybeans and products, corn gluten feed, other oilseeds and products, and cotton.
Kennedy Round (1963-67)	First across-the-board tariff negotiations. Countries negotiated specific exceptions to a linear tariff-cutting formula of 50%. Industrial country tariffs on manufactured items were reduced an estimated 35%.	Agricultural negotiations centered on EC policy mechanisms. EC proposed binding the margins between producer price supports and world reference prices ("montant de soutien"). Negotiations ended in stalemate.
Tokyo Round (1973-79)	Debate focused on tariff-cutting formula. A compromise Swiss formula reduced disparities among tariffs while cutting global industrial tariffs by 30-35%.	Agriculture was identified as a separate agenda item but negotiations generally were unsuccessful. Small tariff concessions and import quota enlargements resulted from traditional request-and-offer negotiations.

established where trade had been minimal. The special exemption under GATT article XI:2, allowing quantitative restrictions in agricultural trade, was effectively eliminated. As part of this process, the United States also agreed to give up its waiver, under which it had maintained import quotas, and to convert Section 22 quotas to tariffs.

The URAA Achieves Some Reductions of Protection and Increases in Trade

The rules and principles governing agricultural market access and other agricultural and trade policies were rewritten radically in the Uruguay Round. Some reductions in tariffs also were achieved, providing tangible increases in some agricultural trade flows. However, for more politically sensitive trade flows, many member countries endeavored, in the details of the agreement, to limit the implications of the new rules for those sensitive sectors, limiting reduction in effective protection or increases in trade. The sectors that are sensitive vary among member countries, but dairy and sugar are sensitive in most developed countries. Member countries agreed to principles and some specific parameters for tariffication, tariff reductions, and the establishment of tariff-rate quotas that were provided as guidelines. However, the guidelines had no legal status and, overall, were sufficiently general to allow members considerable latitude in their implementation. Members were legally committed only to whatever provisions they included in the schedule of commitments which each member provided for inclusion in the final agreement, regardless of correspondence with the guidelines. The new Uruguay Round rules are the important initial step towards more significant expansion of agricultural trade through further tightening of the disciplines combined with credible enforcement.

The guidelines for tariffication directed countries to establish a tariff equivalent to the effective gap between domestic and world prices that had resulted from application of NTBs in a specified base period. Some countries exaggerated measures of domestic prices or understated measures of world prices, increasing the apparent gap between domestic and world prices and increasing the new tariff established. This practice, aptly known as “dirty tariffication,” was most commonly employed where support for domestic production was most politically sensitive. The base period chosen, 1986-88, was a time of very high protection levels, contributing further to the setting of high tariffs under tariffication. Other very high tariffs resulted from ceiling bindings by many developing countries in cases where tariffs had not previously been bound. In many cases, these new bindings were significantly above applied rates. Many agricultural tariffs did not result from tariffication but existed before the Uruguay Round, but dirty tariffication and new ceiling bindings resulted in some cases in new bound tariffs that provided greater protection than had previously existed. A World Bank study has estimated that the final bound agricultural tariff rates after implementation of the Uruguay Round will be below the level of protection estimated to have existed prior to the round for only 13.5 percent of world agricultural trade. (Finger, etc., 1996).

The guidelines for tariff reduction commitments also provided considerable flexibility that allowed actual cuts in protection to be minimized for more sensitive sectors. Members agreed to reduce all preexisting and newly created tariffs by an average of 36 percent, but no less than 15 percent for any tariff, a modest reduction given the level of agricultural tariffs. New tariffs created through tariffication

were subject to the same reductions, but in those cases where dirty tariffication had established tariffs providing greater protection than the NTBs they replaced, subsequent reductions were less meaningful than the nominal percentage reduction. The requirement for reductions of 36 percent, *on a simple average basis*, had limited significance. The tariffs most critical for protection of domestic agriculture generally are only a subset of the total. By making rather large cuts in tariffs for commodities that do not compete with domestic production or large percentage cuts in tariffs that already were very low, the 36-percent average reduction could be achieved with minimal cuts in politically sensitive tariffs. For example, reducing a 3-percent tariff to 1 percent is a 67-percent cut, which combines with a 15-percent cut on an important commodity for a 41-percent average reduction. Achieving the required 36 percent average also could be assisted by relatively large reductions for tariffs newly established through dirty tariffication at very high levels, allowing relatively large percentage reductions without meaningful loss of protection.

Very large tariffs, particularly those very much larger than necessary to protect the difference in domestic and world prices, are often called "megatariffs". The base tariffs presented in figure 1 and the bound tariffs in figure 2 include individual country tariffs that are greater than 100 percent. Where megatariffs exist, it is common for tariffs actually applied to be less, sometimes much less, than bound tariffs. It is expected generally that larger tariffs were reduced by smaller percentages since it is political sensitivity that leads to both high tariffs and a reluctance to reduce them. The data presented in figure 1 demonstrate a strong bias towards smaller reductions for higher tariffs, particularly for megatariffs above 100 percent.[1] In many of the cases in which high tariffs are to be reduced by a large percentage, the final bound tariffs will still be significantly higher than current tariffs actually applied. Thus these reductions, while large, will have no impact on trade. Figure 2 presents current or most recent data available for selected countries' applied and bound tariffs for wheat, demonstrating the extent to which applied tariff rates are below the scheduled bound tariffs after partial Uruguay Round implementation. (Integrated Database/WTO and TRAINS Database/UNCTAD)

Tariff Rate Quotas Establish Access Opportunities

Recognizing that tariffication would not necessarily guarantee increased trade and that "dirty tariffication" actually could increase protection, members agreed to establish quotas to maintain historical trade levels or to increase trade where historical trade had been minimal. The guidelines provided for tariff-rate-quotas (TRQs) equal to the amount of imports in a recent historical period or a minimum percentage of consumption in that period, whichever was larger. These quotas are called tariff-rate quotas (TRQs) because a within-quota tariff lower than the bound rate is applied to imports up to the quota amount. Imports beyond the quota amount incur a higher bound most-favored-nation (MFN) rate.

The guidelines adopted for tariff-rate quotas, like those for tariffication and tariff reductions, provided considerable latitude in the calculation of specific commitments, including quota volumes, and the setting of within-quota tariff rates. Some countries calculated the quota at a broad level of

Figure 1
Base Tariffs on Grains and Reduction Rates, Selected Countries

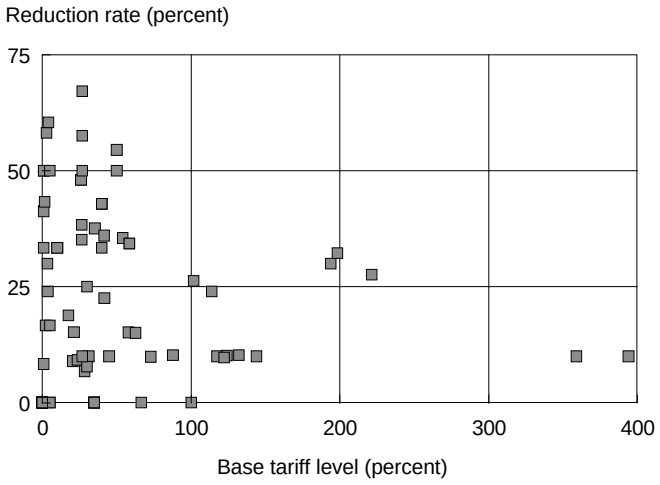
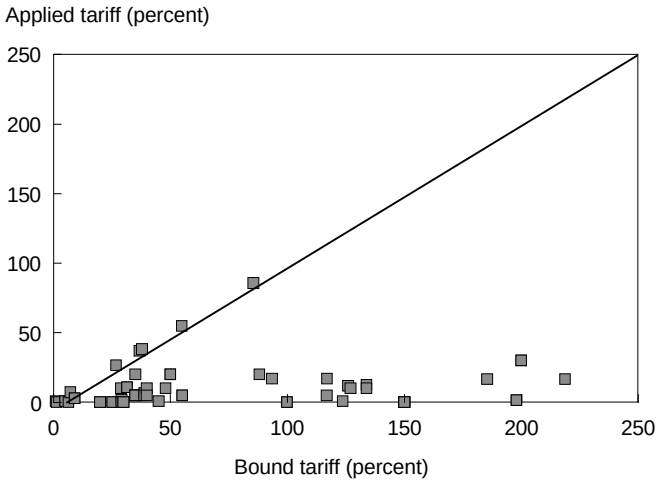


Figure 2
Bound vs. Applied Tariffs for Wheat, Selected Countries



[1]Figure 1 presents tariffs from WTO country schedules for wheat, barley, maize, and sorghum at the 4-digit level for Argentina, Australia, Canada, Chile, Colombia, Czech Republic, Ecuador, Egypt, European Union, Hungary, India, Indonesia, Japan, Malaysia, Mexico, New Zealand, Philippines, South Korea, Thailand, and Venezuela. Specific tariffs were converted to ad valorem equivalents using national import unit values for 1995.

product aggregation, such as "meat" or "dairy products," and then allocated the total TRQ among the components of the aggregates, perhaps arbitrarily. Quotas of individual commodities could be set to minimize the effect on sensitive commodities. In some cases, the aggregate quotas were not allocated to individual commodities, leaving flexibility to allocate quantities based on market conditions. Specific requirements for the allocation of quotas were not specified, and allocation and administration of TRQs remains an issue, particularly concerning adherence to the MFN principle, which would forbid discrimination against imports from any WTO member country. The guidelines called for TRQs to be established for all tariffied commodities, but they were not established in all cases. To generate the full quota volume of trade, the within-quota tariff must be less than the gap between the domestic and world price that results after implementation of the TRQ, allowing profitable trade for the full quota amount. Quotas may not be filled or trade may not result if the within-quota tariff is too high. Trade also will not result if domestic prices are not above world price levels, even with a zero within-quota tariff.

The URAA also established special safeguard provisions for products subject to tariffication, which allow countries to temporarily apply higher tariff rates in response to sudden import surges or drops in prices. The safeguards are triggered if the volume of imports exceeds the average of the previous 3 years by a certain percentage (which differs depending on the imports' proportion of consumption) or if the price of the imported product drops at least 10 percent below the base period world reference price.

What Remains for the Next Round

Despite its significant achievements, the URAA would have to be considered only the first stage in reforming world agricultural markets. Agricultural tariffs still average over 40 percent, and high bound tariffs allow some countries to continue imposition of lower applied tariffs which may be adjusted in response to changes in market conditions. It is the unfortunate legacy of dirty tariffication in the Uruguay Round that current high bound tariffs may allow some countries to accept reductions in bound rates in the next WTO round without actually reducing protection or increasing trade. Further reductions in bound tariffs in the next round can significantly increase agricultural trade if applied tariffs also are reduced. Another important issue in the next round will be the effectiveness of disciplines on the use of the special safeguard provisions to prevent circumvention of tariff cuts.

Other issues relate to disparities among tariffs. Differences in tariffs among commodities or countries are referred to as "tariff dispersion". For example, tariffs for oilseeds generally are much lower than those for grains, and average tariffs for some countries are much higher than the average for other countries. Another important disparity is between tariffs for primary and processed products. Tariffs for processed products commonly increase, or escalate, above tariffs for primary products. Such "tariff escalation" can be a significant bias against trade in processed products. Studies have demonstrated that sectors with relatively low tariffs can still have high rates of protection on value added products. (Yeats)

Approaches to Negotiated Tariff Reductions

The experience of past GATT rounds in reducing industrial tariffs provides some options for approaching agricultural tariff negotiations. Most early industrial tariff reductions were achieved through bilateral negotiations in which countries made requests or offers to major trading partners. The results were multilateralized through the (MFN) principle. Request-and-offer negotiations do not systematically address the problems of tariff escalation or tariff dispersion among countries or commodities nor do they assure that very high tariffs will be reduced at all.

In order to achieve broader liberalization, the Kennedy Round (sixth round) began with participants agreeing to an overall linear tariff-cutting formula of 50 percent. Specific exceptions were then negotiated. This approach provided an initial major step forward, followed by minor steps backward. Agriculture was exempted from this across-the-board approach, however. One advantage of an across-the-board linear cut is that it results in automatic reciprocity. A large across-the-board linear cut in agricultural tariffs such as the 50-percent cut proposed during the Kennedy Round would significantly reduce agricultural tariffs. However, a linear cut might not reduce some megatariffs enough to stimulate trade. A linear or constant percentage formula for tariff reductions also does not address the issues of tariff dispersion or tariff escalation.

In the Tokyo Round, the across-the-board reduction approach, with some exceptions, was continued. However, considerable debate surrounded the formula to be used. Eventually, a compromise formula, the Swiss formula (see box "Tariff Reduction Formulas"), was employed. By reducing higher tariffs by greater percentages, all disparities among tariffs were reduced. Larger reductions for higher tariffs also address the problem presented when very high bound rates allow lower applied tariffs, often involving reduced price transmission.

Expanding Access Quotas

Lowering tariffs is not the only way to increase trade. For commodities subject to TRQs, expanding the quotas might have a more immediate impact on trade. As Josling points out, at some point increasing the quota would make the high above-quota bound tariffs irrelevant (Josling, 1998). Of course, this would only be true in those cases where the TRQ was being administered so as to attract the guaranteed access quantity. In fact, the administration of TRQs has been

Tariff Reduction Formulas

To harmonize tariff structures by having the highest tariffs experience the greatest cuts, alternative tariff cutting formulas were proposed during the Tokyo Round that produced distinctly different outcomes. Figure 3 shows the beginning (t_i) and ending (t_n) tariffs under some of those formulas. The formula, its parameters, and the implementation period would be subject to negotiation.

As an alternative to a straight linear cut (the dotted line in figure 3), one proposal called for linear reduction with an additional "harmonization" adjustment (term b). In this case, an even deeper cut could be applied than in a straight linear formula, since the linear reduction would be partially compensated for by the harmonization term:

(1) $t_n = a*t_i + b.$

The dashed line in figure 3 represents the case where a = .25 and b = 10. In the case of initially low tariffs, the new tariffs are higher than what would result from a straight linear cut. In the case of initially high tariffs the opposite would result. Note, however, that this approach would actually raise lower tariffs (where $t_i < b/(1-a)$). In this case, the second term might be dropped or the formula only applied on higher tariffs (where $t_i > b/(1-a)$).

As an alternative to (1), a harmonization formula designed to achieve even deeper cuts in high tariff rates was considered.

(2) $t_n = t_i - (t_i^2/100)$

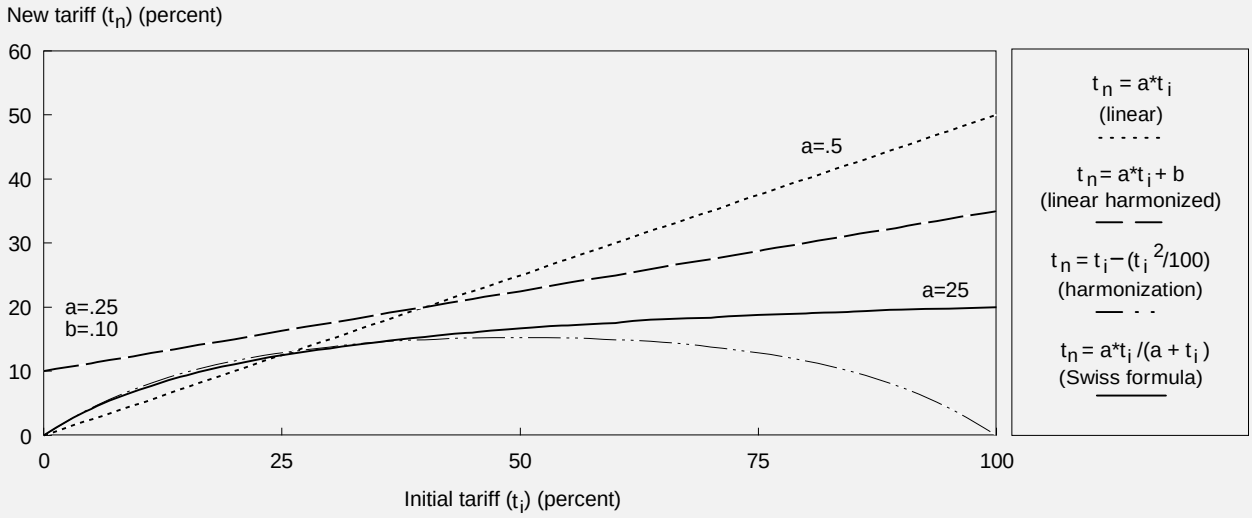
The problem with this formula is that it was meant to deal with what were considered high tariffs in the manufacturing sector, i.e. tariffs over 20 percent. For tariffs over 50 percent, the cuts accelerate until the formula yields a new tariff of zero for an initial tariff of 100 percent.

In the end, the Swiss formula, which places an upper bound on all tariffs, was generally applied:

(3) $t_n = (a*t_i) / (a+t_i)$, where a = the upper bound on all new tariffs.

The maximum tariff level allowed after the cuts would be negotiated. Using this formula and setting a=25 (as in figure 3), an initial tariff of 25 percent would be reduced by 50 percent while a tariff of 100 percent would be reduced by 80 percent.

Figure 3
Alternative Tariff Reduction Formulas



among the most contentious issues resulting from the implementation of the URAA.

GATT article XIII provides two criteria for judging whether tariff quotas are being properly administered: 1) quota fill and 2) distribution of trade. TRQs should allow imports up to the quota amount if market conditions permit. If countries establish within-quota tariffs that are larger than the price gap between domestic and world prices that results after imposition of the TRQ, the quota is unlikely to be filled because trade is not profitable. Of course, if demand is not significant, quotas also will not fill. If a within-quota tariff is smaller than that price gap and the quota is not fully used, the TRQ may have been inappropriately administered. The distribution of trade criteria is related to the GATT principle of nondiscrimination, which asserts that trade shares should be determined by the relative efficiency of suppliers and not by alternative, discriminatory criteria. Some countries, however, have counted previously negotiated bilateral commitments against their TRQs, or have agreed to side deals negotiated outside of the MTN setting.

In spite of the problems associated with TRQs, they still, in principle, provide more market access than the NTBs they replaced, particularly when compared with absolute quotas. Under an absolute quota it is legally impossible to import more than the quota amount. Under a TRQ, imports can exceed the quota amount as long as the market is willing to incur the tariff applied on quantities in excess of the quota. Likewise, in spite of the problems associated with tariffication, tariffs are a transparent instrument of protection compared with NTBs, which tend to insulate markets and adversely affect the workings of the marketplace. The move towards a tariffs-only approach to agricultural trade should lead to more efficient and stable global markets.

Conclusions

The greatest success of the URAA in the area of market access was in rewriting the rules governing agricultural trade rather than in achieving large reductions in protection. The tariffication of all non-tariff barriers was a truly significant achievement; however, it was carried out in a manner that allowed some member countries to minimize reductions in (or even increase) import protection for their agricultural sectors.

The tariff bindings and reductions agreed to by some countries did not reduce protection or facilitate increased trade for politically sensitive commodities. As a result, protection of agricultural markets from imports remains high on average. Moreover, this protection remains highly variable, with much higher tariffs on some commodities and with higher average tariffs in some countries. For most industrial countries, even after reductions, the ad valorem measure of final bound tariffs in agriculture will remain higher than the average rate of protection for agriculture in 1982-93 (Ingco).

While bound tariffs tend to overstate levels of protection because many countries apply tariffs that are well below bound rates, it is bound tariffs that have been negotiated in the past and most likely will be negotiated during the next WTO round.

Having undergone the processes of tariffication, binding new and existing tariffs, and successfully negotiating modest initial goals to reduce these tariffs, the agricultural sector is now well positioned for further trade liberalization. The next round will have to further reduce tariffs, particularly the megatariffs, to secure important additional gains from trade. Fortunately, the experience of past rounds offers some ideas about how this can be done. For commodities subjected to TRQs, an option, or perhaps a complement, to reducing tariffs is to expand quotas. At the same time, however, the upcoming negotiations will have to examine whether some TRQ administration methods are inherently likely to result in underfilling of quotas or in a discriminatory distribution of trade and, if so, whether disciplines should be established.

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Domestic Support Commitments: A Preliminary Evaluation

Changes in the mix of domestic agricultural support policies in WTO member countries between 1986-88 and 1995 suggest that related effects on production and trade may have been reduced. All member countries are meeting their URAA commitments to reduce support from those domestic agricultural policies deemed to have the largest effect on production ("amber policies"), and reductions in most countries greatly exceed their commitments. Domestic support from those policies thought to have the least effect on production ("green box policies") has increased from 1986-88 levels. [Fred Nelson (fjnelson@econ.ag.gov), Edwin Young (ceyoung@econ.ag.gov), Peter Liapis (pliapis@econ.ag.gov) and Randall Schnepf (rschnepf@econ.ag.gov)]

Introduction

In an unprecedented act, WTO member countries agreed to discipline some domestic policies, as well as trade policies, as part of the Uruguay Round Agreement on Agriculture (URAA).[1] Other domestic policies were exempt from any disciplines. The "disciplining" of domestic policies is being accomplished by requiring countries to control and gradually reduce expenditures (or support levels) on the targeted, non-exempt policies. At stake is the successful accomplishment of the WTO's long term goals—to reduce support and protection of agriculture and establish a fair and market-oriented agricultural trading system, while having regard for certain non-trade concerns of individual countries.

This article presents preliminary analysis of the structure of domestic agricultural policy that has arisen under the URAA. Changes in measures of support for different policies are evaluated in terms of their potential implications for market orientation and trade.

Countries Agree To Reduce Domestic Support

Some limitations on domestic support were thought to be essential for the successful achievement of WTO's trade goals aimed at establishment of "a fair and market-oriented agricultural trading system…and correcting and preventing restrictions and distortions in world agricultural markets." And yet, individual countries reserve the right and may be obligated by the electorate to use domestic support policies to pursue various national policy objectives.

All domestic policies whose provisions are restricted to agricultural producers and/or landowners are likely to have some effect on production, and, thus, on trade. And domestic policy objectives often are the motivation for many trade policies, since, by directly influencing imports and exports, trade policies can be used to facilitate domestic price and income goals. For a trade agreement to be reached in a world wide context, therefore, individual countries had to be willing to trade off some aspects of domestic policy in favor of facilitating world market goals. In the final URAA, these trade-offs involve the methods of implementing domestic policy, rather than the domestic policy goals themselves.

In discussions leading up to the URAA, domestic policies were segregated into categories to indicate the relative acceptability of the policies (see box: "Domestic Policy Categories in the [URAA]…"). In the final agreement, domestic policies deemed to have the largest effect on production and trade (amber box policies) are to be disciplined by requiring limitations or gradual reductions in related support levels. Policies presumed to have the least effect (no more than "minimal trade-distorting effects") on production and trade (green box policies) are exempt from any disciplines. How to tell whether or not effects of specific policies are more than "minimally trade distorting" is an issue yet to be definitively addressed by WTO guidelines.

In general, the domestic policies considered to have the largest effects on production and trade are those that provide direct economic incentives to producers to increase or decrease current resource use or current production, since such changes affect supplies available for export, and the demand for imports. These incentives are known as "coupled" incentives because of the direct link to current production. Examples are administered price supports, input subsidies, and direct per unit payments. Payments and other incentives not directly linked to inputs or production may, therefore, be termed "decoupled." When support is decoupled, farmers base production decisions on expected market returns, not on expected government support.

The URAA green box includes a direct payments category called "decoupled income support," where eligibility is "determined by clearly-defined criteria such as income, sta-

[1]Trade policies, in this paper, refer to the set of policies designed specifically to affect trade flows and prices through use of import quotas, tariffs, and export subsidies. Domestic policies include all other agricultural policies within a country that aim to influence internal farm and rural incomes, resource use, production, consumption of agricultural products, or environmental impacts of farming.

Domestic Policy Categories in the Uruguay Round Trade Agreement on Agriculture [1]

Amber box policies ($115 billion)	These were the domestic policies presumed to have the largest potential effects on production and trade. The base period level of amber support (1986-88 for most countries) was "bound" for all countries, meaning that this level was established as an initial absolute upper limit for sup port. Twenty-eight countries, including most of the major agricultural producers and/or traders, also agreed to phase down the level of support provided through these amber policies (as mea sured by the AMS) over a specified period of time. Developed countries agreed to a 20 percent reduction in amber support over a 6-year period, relative to the base level of support, while developing countries agreed to a 13-percent reduction over a 10-year period and least developed countries agreed to not increase support beyond the base period level.
Green box policies ($127 billion)	These policies were considered to have the smallest potential effects on production and trade. "Green" means that countries could "go ahead" with these policies, that is, they are exempt from support reduction commitments.
Blue box policies ($35 billion)	For the 1995-2000 notifications, amber box payments related to production limiting programs can be placed in a special, temporary exemption category called the "blue box," if the amount of payments are based on fixed area and fixed yields, or a fixed number of livestock, or if they are based on no more than 85 percent of the base level of production. Any such payments in the base period are included in the base level of support (AMS). (See Article 6, paragraph 5 of the URAA.)
Special and differential exemptions ($4 billion)	Certain domestic investment and input subsidies of developing and least developed countries are exempt from support reduction commitments (see Valdes and Young article in this report).
De minimis exemptions ($5 billion)	Another category of excludable support is termed "de minimis, and is based on the notion that expenditures below a certain threshold (defined as 5 % of the value of production for developed countries and 10 % for developing countries) are sufficiently benign that they do not have to be included in the AMS calculation.
Total support ($286 billion)	Total value of the above support categories.

[1]Support data shown are for 1995, as reported to the WTO by individual countries. Based on unpublished information from the WTO.

tus as a producer or landowner, factor use or production level in a defined and fixed base period." "The amount of such [decoupled] payments in a given year shall not be related to, or based on, the type or volume of production (including livestock units) undertaken by the producers in any year after the base period." Neither shall the amount of such payments be "related to, or based on…prices…[or] …factors of production employed in any year after the base period." "No production shall be required in order to receive such payments." (Paragraph 6, Annex 2).

Based on the above URAA definition, coupled support, therefore, might be considered to be support that is related to, or based on production, resource use, or prices in some year after the base period, especially if that year is the current year.

To accommodate the EU and the United States and to bring the negotiations to a conclusion, countries agreed to redefine some amber box "payments under production-limiting programmes" as exempt "blue box" policies if they met specific criteria (see the criteria in the box: "Domestic Policy Categories in the [URAA]…"). Examples of 1995 blue box policies are the former U.S. deficiency payments and the EU compensatory payments.[2]

[2]EU compensatory payments are payments made to producers for area sown to grains, oilseeds, or protein crops ("arable crops"). These payments were established to compensate producers for the loss of income caused by the reduction of intervention, or support prices after 1992. Payments are based on fixed, historical yield in each region, and the total area eligible to receive compensatory payments is also fixed. Producers with an area planted to arable crops sufficient to produce more than 92 tons of grain must set aside part of their area in order to receive compensatory payments.

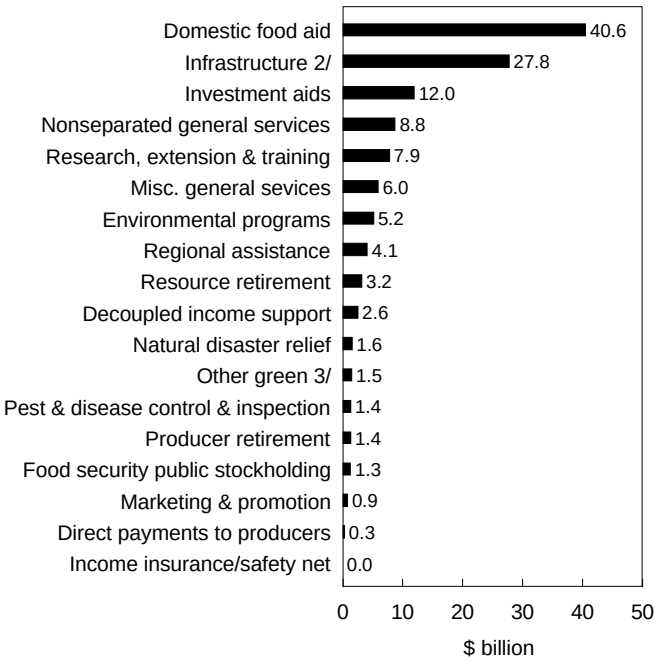
In identifying potentially exempt green box policies, the URAA accommodates the political need for individual countries to be able to use policies related to issues of equity (e.g., food security and aid to the needy), market failure (e.g., environmental programs), and the absence, or inadequacies of risk markets (e.g., insurance and income safety net programs). The Agreement therefore includes a suggestive list of the types of green box programs that may be considered exempt, as long as they meet certain specific criteria, including the one fundamental criteria that they be, at most, minimally trade distorting (figure 4, table 2). The term, minimally trade distorting, however, is not defined in the URAA.

Aggregate measure of support. Support levels from amber box policies are quantified, according to the URAA, by calculating an aggregate measure of support (AMS) for each country.[3] Support reduction commitments were implemented by 28 countries agreeing to keep their annual AMSs from exceeding specified upper limits, or "ceilings" that decline over time relative to their level in the base years 1986-88. Other member countries agreed, in effect, to not increase support above the level in the base year. The final decision about who would actually make support reduction commitments was, itself, worked out during the negotiations. Ratification of the URAA text also implies acceptance of the individual country commitments, as submitted.

In addition to the exemption from disciplines for green and blue box policies, other exemptions were also granted that reduced the level of some countries' AMS. Developing countries received "special and differential" exemptions for certain input and investment subsidies based on the principle that developing countries need to be allowed some flexibility to generate economic development through subsidized agricultural development. Also exempt were individual measures of amber box subsidies that were considered too small to count, resulting in the "*de minimis* exemption" (table 3).

[3]The AMS combines estimated support levels from all non-exempt policies for all commodities into one overall measure. Non-exempt policies in the AMS include commodity-specific market price supports based on administered prices, non-exempt direct government payments to producers, and other commodity-specific transfers, plus non-commodity specific measures of support received by producers, such as capital, input, and insurance price subsidies (see table 2 for U.S. examples). As a domestic measure, the AMS excludes export subsidies and impacts of import restrictions not also tied to domestic administered price programs.

Figure 4
Green Box Expenditures, 1995 1/



1/ Total for 36 countries who notified green expenditures as of May 1998.
2/ One of several expenditure types in the "general services" categories. Incudes various rural capital works projects.
3/ Includes all other expenditures notified as green, where the type was not specified.

Support Reduced from Amber Box (AMS) And Blue Box Policies[4]

Support reduction commitments more than met. All countries reporting their 1995 AMS to the WTO have met their support reduction commitments. Most of these countries have, in fact, exceeded their support reduction commitments by a large margin (table 4, and see text box for amber box policy commitments).

Effects of domestic policies on trade likely reduced. Support from policies with the greatest potential to affect production and trade has decreased significantly since the URAA base period. The total value of the 1995 AMS for the first 24 countries who notified—$115 billion—is equal to only about 57 percent of the AMS level in the 1986-88 base period for these countries. The blue box payments, however, were excluded from the AMS in 1995 (based on Article 6 of the URAA) even though they were included in the base year AMS. Combining the 1995 blue box payments with the reported AMS, for purposes of comparison, increases the 1995 support level to 73 percent of the base.

AMS and blue box policies affect production. Policies included in the current AMS tend to raise production because such benefits are usually "coupled" with production, meaning that increases in production will likely bring about increases in the policy benefits and vice versa. The effect of such a support policy on producers is to encourage

[4]This analysis uses unpublished information from the WTO and data from country notifications to the WTO for 1995. (Data for 1996 are incomplete as of November 1998). Membership in the WTO requires that countries annually provide information on commitments, changes in policies and support, and other matters related to outstanding trade agreements—a process called "notification." In the initial WTO agreement, 26 countries made AMS reduction commitments. Two additional countries made commitments upon accession to the WTO. As of May 1998, 24 countries had notified the WTO for 1995. These 24 countries accounted for 99 percent of total support for the 28 AMS countries in the base period.

Table 2--Classification of U.S. domestic programs for 1995 and 1996 notification to the WTO

Notification category	Selected U.S. program activity
Aggregate measure of support (AMS):	
Market price support	Dairy, peanuts, sugar price support based on administered prices
Non-exempt direct payments	Marketing loans and loan deficiency payments, loan forfeit benefits, user marketing payments
Other non-exempt measures	Storage payments, commodity loan interest subsidies
Non-product specific support	Irrigation and grazing programs, crop insurance and state credit programs
Payments under production limiting programs (blue box payments)	Deficiency payments in 1995 (included as a non-exempt direct payment in the base period)
Exempt, green box support:	
General services--	
Research	Agricultural and economic research, statistics, library services, outlook
Pest and disease control	Animal and plant health and disease control
Training, extension, advisory	Cooperative State extension and cooperative services
Inspection and marketing services	Inspection of grain, imports, and food; market news and grading and standardization
Other general services	Conservation operations and other non-payment environmental activities
Stockholding for food security	Food Security Commodity Reserve
Domestic food aid	Food stamps; women, infants, children nutrition
Decoupled income support	1996 production flexibility contract payments
Income insurance and safety nets	(U.S. revenue insurance included in the AMS)
Relief from natural disasters	Livestock and crop disaster payments (U.S. crop insurance included in the AMS)
Structural adjustment: resource retirement	Conservation Reserve Program
Structural adjustment: investment aids	Farm credit, ownership, operating loans (FmHA)
Environmental payments	Soil conservation and water quality programs
Regional assistance, producer retirement	(None in the United States)

Table 3--Total support and share of support for specified policies for countries notifying for 1995

Country	Total support	Green policies	Amber policies	Blue policies	S&D 1/ exclusion	*De minimis* exclusion
	Mil. dol.			--Percent--		
Australia	822	86	14	0	0	0
Brazil	5,531	88	0	0	6	5
Canada	3,031	51	19	0	0	30
Colombia	508	63	11	0	26	0
Cyprus	214	61	38	0	2	0
Czech Republic	176	75	25	0	0	0
European Union	113,239	21	54	24	0	1
Hungary	271	39	0	0	0	61
Iceland	240	12	78	9	0	0
Japan	69,607	47	52	0	0	1
Korea	8,257	63	33	0	#	4
Mexico	4,021	60	17	0	24	0
Morocco	316	50	4	0	47	0
New Zealand	128	100	0	0	0	0
Norway	3,316	20	47	34	0	0
Poland	691	63	37	0	0	0
Slovak Republic	242	#	99	1	0	0
Slovenia	176	48	52	0	0	0
South Africa	1,380	55	33	0	0	12
Switzerland	5,924	39	61	0	0	0
Thailand	2,202	62	29	0	10	0
Tunisia	122	24	51	0	25	0
United States	60,926	76	10	12	0	3
Venezuela	1,259	43	43	0	14	0
Other countries	3,127	89	0	0	10	1
All countries (mil. dol.)	285,724	126,878	115,453	35,028	3,348	5,018

= less than 0.5 percent.

1/ S&D = "Special and differential" policies exempt from support reduction commitments because of special considerations given to developing economies (see box: "Domestic Policy Categories...").

Source: Unpublished WTO information and data from country domestic support notifications as of May 1998.

them to increase output to maximize profits. Payments for exempt blue box policies compensate producers for foregone income. Blue box payments received in excess of foregone income from program compliance immediately increase producer wealth, lead to expectations of future windfalls, and may encourage expanded production, especially if any production limitations are subsequently relaxed.

Table 4--Actual support (AMS) as a percent of commitment levels, 1995

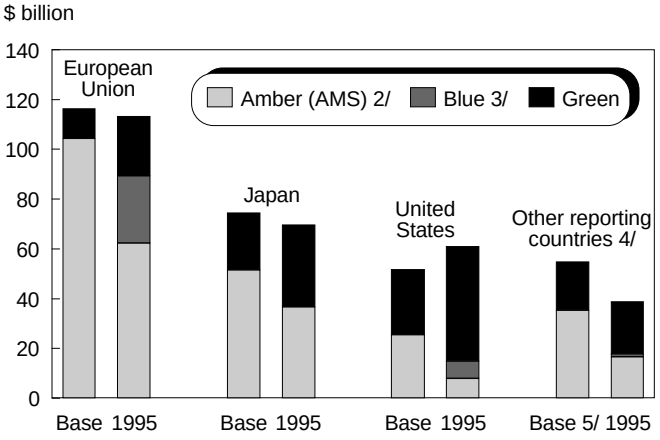
Percent	Countries *
0 to 19	Canada, Colombia, Czech Republic, Hungary, Mexico, Morocco, New Zealand, Poland
20 to 39	Australia, United States
40 to 59	Slovak Republic, Venezuela
60 to 79	Cyprus, European Union, Iceland, Japan, Norway, South Africa, Thailand
80 to 100	Brazil, Korea, Slovenia, Switzerland, Tunisia

* As of June 1998 Costa Rica and Israel had not yet notified. Papua New Guinea and Bulgaria were not required to notify on their 1995 domestic supports, since they joined the WTO after the original Agreement on Agriculture was signed.

Support concentrated in three countries. The European Union, Japan, and the United States are by far the largest providers of amber support in absolute terms, accounting for about 90 percent of the total AMS for the 24 countries that reported an AMS as of June 1998. These results reflect the size of these countries' agricultural sectors, and the rate of subsidization in these countries, both of which are affected by unique circumstances in 1995, such as weather and demand factors (figure 5). The 1995 rate of subsidy, per dollar of output from amber plus blue box policies, was about 30 percent in EU and Japan, and 7 percent in the United States.[5] The blue box payments were relatively large for the EU and United States, while Japan reported no blue box payments (table 3). Although these support indicators are

[5]The subsidy rate is the value of support divided by the value of production at domestic market prices, as reported to the WTO. For Japan, the value of "gross agricultural output" for 1994 was the divisor, based on data from the Statistics of Agricultural Income, Ministry of Agriculture, Forestry, and Fisheries.

Figure 5
Comparison of Support 1/



1/ Unpublished WTO information and 1995 notification data.
2/ Amber in this chart is the AMS combined with values exempt under de minimis and developing country provisions.
3/ Blue box expenditures are included with the amber (AMS) box in the base year.
4/ Includes 21 other countries who reported AMS commitments for 1995.
5/ Missing base year data for some countries with relatively small support levels were included by assuming the values were the same in the base year as in 1995.

not measures of trade distortion, per se, the combination of a high rate of subsidy and a large amount of subsidy for both the EU and Japan emphasizes the potential for these countries to affect world trade.

Policy changes have occurred. Several countries have undertaken policy changes from 1986-88 through 1996, relying less on market price support and more on direct payments and green box policies. For example, reforms of the European Union's Common Agricultural Policy during 1992 to 1995 reduced support prices and increased its reliance on direct payments. The EU total support from AMS-plus-blue box payments in 1995 was 15 percent below the base period level of support. Japan has held its administered prices constant or reduced them since 1986-88, and its AMS decreased 29 percent.

The United States also made important reforms under two major Farm Acts in 1990 and in 1996. The U.S. AMS-plus-blue box payments declined 42 percent from the base period through 1995 and were down again in 1996. However, total support in the United States increased from the base level through 1995, due to increased green box expenditures (largely domestic food assistance programs). Acreage reduction programs were eliminated in 1996. Producers now have 100 percent flexibility to plant for the market. And the blue box deficiency payments, applicable for the last time in 1995, have been replaced by decoupled production flexibility contract payments. These new payments, which are reported in the green box, are the main source of direct payments after 1995, and their inclusion in 1996 caused total green box support to increase from 1995 to 1996.

Increased Support Observed from Green Box And Other Exempt Policies

Support from green box policies, those presumed to have the smallest potential effects on production and trade, increased 54 percent from 1986-88 to 1995, while AMS changes suggest that support from policies thought to have the greatest potential effects on production and trade decreased in many countries. Actual effects of reported green box policies on production and world trade depend on the total amount of subsidy channeled through the particular policies and on the way in which the subsidies are provided by each policy. The URAA provisions establishing criteria for which policies may be considered green box policies focus attention on the way that policies are implemented, but do not explicitly limit the amount of the subsidy.

All WTO-exempt policies provide some sort of subsidy, or assistance to agriculture, otherwise they would not need to be granted exemption status. Most of the expenditures on green box policies, worldwide, went for domestic food aid, infrastructure services, other general government service programs, and investment aids for structurally disadvantaged producers (figure 4). Of 19 countries reporting green box data both in the base and in 1995, 16 notified an increase in green box expenditures in nominal terms since the base. Most of this increase was concentrated in three countries—the United States, EU, and Japan (figure 5). The 1995 value of green box policies ($127 billion) was greater than the total reported for the amber box AMS ($115 billion).

Production effects of green box policies. Green box policies are presumed to have the smallest effects on production and trade, and are, in fact, required to have "no, or at most, minimal" effects on trade and also "shall not have the effect of providing price support to producers." Although these overall requirements for the green box remain vague, the specific criteria for decoupled payments (detailed above) suggest that, at least, these payments would have no direct effect on current production decisions. However, any policy that transfers income to producers could conceivably have some effect on production by increasing wealth and reducing the risk of financial failure. Some specific policies that otherwise meet the URAA green box criteria could have significant positive effects on production if financed with a large enough total amount of government expenditure.

Domestic food aid was the single largest category of green support in 1995, totaling $40 billion, most of which was spent by the United States. U.S. food aid increased $18 billion from the base to 1995 because of increases in the Food Stamp Program.

Other green box expenditures include a variety of different types of programs with unique approaches to providing benefits to producers and the rural economy. Each has its own potential to affect production. Government service programs

affecting "infrastructures" ($28 billion) and "other general government service" activities ($25 billion) provide information, inspections, and other kinds of assistance to agriculture in general, but do not directly subsidize producers or specific commodities' production. The cost of constructing irrigation and electricity distribution facilities, roads, and other production-cost influencing structures in rural areas, however, are reduced because of the infrastructure policies. Investment aids (e.g., farm credit subsidies or grants) to structurally disadvantaged producers ($12 billion) are designed to increase production and income of some producers, but the effect may be minimal if the criteria for the eligibility is sufficiently limited to a small enough share of the total farm sector. The other ten categories of support are not yet very important, quantitatively, averaging about $2 billion each, worldwide (figure 4).

Implications for the WTO

Most countries have been able to reduce their amber support levels much more than required under the URAA, suggesting that it might not be too hard, politically, and/or economically, for some further reductions in the AMS ceiling to be made in future trade negotiations. However, a dozen countries, including Japan and the EU, still have support levels in 1995 equal to at least 60 percent of their commitment ceiling, so the extent of future reductions may be limited. The EU would be particularly affected by much larger reductions in support ceilings if the blue box exemptions were denied in the future. The 1995 AMS for the United States was only 27 percent of its commitment ceiling, and U.S. blue box policies no longer exist, so it might be relatively easy to make significant future reductions in the AMS ceiling level in this country. AMS commitments are on an aggregate basis, however, so if future commitments were commodity specific, it might be more difficult to make significant additional reductions beyond that agreed to already.

Changes in the mix of domestic policies in WTO countries over time, involving moving from reliance on amber policies and toward more reliance on green policies, suggest that related effects on production and trade may also have become smaller. However, complementary reforms in trade policies must also take place to guarantee increased world market orientation. That is, trade policies can increase domestic prices regardless of domestic support levels. So, reducing domestic support alone is not sufficient to guarantee reduced effects on trade.

If green box expenditures continue to increase in importance, the particular green box programs being used need to be evaluated to guarantee that they really meet both the fundamental criteria for the green box as well as the policy-specific criteria. A problem of interpretation arises in implementing the URAA because of the undefined fundamental criteria for the green box that the reported programs be no more than minimally distorting of production and trade. Consequently, some programs reported in the green box could satisfy the policy-specific criteria for being green and yet also could have "significant" production effects with great enough financing and program participation.

Export Subsidy Commitments: Few Are Binding Yet, But Some Members Try To Evade Them

In the Uruguay Round of the GATT, 25 countries that employed export subsidies agreed to reduce the volume and value of their subsidized exports over the period 1995/96 to 2000/01. To date, most of these countries have met their commitments, although some have devised schemes to circumvent them. The EU, by far the largest export subsidizer, holds an 84-percent share of 1995 and 1996 subsidy outlays for the 25 countries since it relies on export subsidies to bridge the gap between high domestic support prices and lower world prices. Despite substantial progress in reducing export subsidies, rising world grain supplies and falling world grain prices could require some countries to adopt policy changes in order to meet their future commitments.
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Introduction

The URAA imposed meaningful disciplines on agricultural export subsidies for the first time (see box "The Uruguay Round Agreement on Agriculture and Export Subsidies"). Prior to URAA implementation, export subsidies significantly distorted agricultural trade. During the late 1980s, the United States and EU engaged in a "subsidy war" in which both countries battled to undercut each other's prices in wheat export markets. Over the decade, U.S. market share declined while EU market share increased dramatically. Other exporters such as Argentina, Australia, and Canada advocated the elimination of export subsidies which they argued increased pressure on their national treasuries and pushed them out of some export markets.

Experience with Export Subsidy Commitments

Each year, WTO members are required to notify the WTO Committee on Agriculture concerning the volume of their subsidized exports, their expenditures on export subsidies, and the volume of their unsubsidized exports, by commodity, as specified in their country schedules. As of July 1, 1998, most countries' notifications had been received for 1995 (1995/96 for some countries) and 1996 (1996/97), the first 2 years of URAA implementation. Of the 25 members with export subsidy commitments, all but one have submitted notifications for 1995 (Colombia) and 1996 (Mexico).

Based on the available WTO notifications, high world grain prices kept countries' use of export subsidies well below their WTO commitments in both 1995 and 1996. The EU, typically the largest user, even imposed taxes on grain exports. These events were unforeseen at the time the URAA was being negotiated. Now that world grain prices have fallen, however, meeting commitments for these goods may become more difficult.

Of the 25 countries that have export subsidy commitments in their WTO schedules, the EU by far employs the most export subsidies (figure 6). The EU accounted for nearly 84 percent of the $7.6 billion of export subsidies notified to the WTO for 1995 and $8.4 billion reported for 1996 (as of July 1, 1998). Based on which volume commitments were nearly filled in both 1995 and 1996, it appears that the EU is most reliant on subsidies for cheese, other milk products, bovine meats, olive oil, poultry, and fresh fruit and vegetables. In years of low world prices, the EU would also be reliant on subsidies for grain exports as well.

In contrast, the United States ranked ninth overall in export subsidy expenditures in 1995. The United States allocated roughly 80 percent of its less than $26 million in export subsidy expenditures to dairy products (mostly skim milk powder) and the remainder to poultry meat. U.S. expenditures increased to $121 million in 1996. All U.S. subsidies were for dairy products, of which nearly 80 percent went toward exports of skim milk powder.

Only four countries exceeded one or more of their value commitments in 1995, and two did in 1996 (see table 5). The largest expenditure overrun in percentage terms was by Cyprus for Halloumi cheese in 1995 (405 percent of its value commitment of $195,000 and 189 percent of its volume commitment of 986 tons). In 1996 Cyprus fully filled both its volume and value commitments for Halloumi cheese. For Cyprus to meet its cumulative commitments by the 2000/01 deadline, it will need to severely limit export subsidies for Halloumi cheese in the years prior to 2000/01.

South Africa, the second largest user of export subsidies in 1995 and 1996, exceeded its expenditures on subsidies for cocoa and its volume commitments for wine in those years. However, the South African government terminated its export subsidy program in July 1997.

Figure 6
Countries' Shares of Total Export Subsidies (Value)

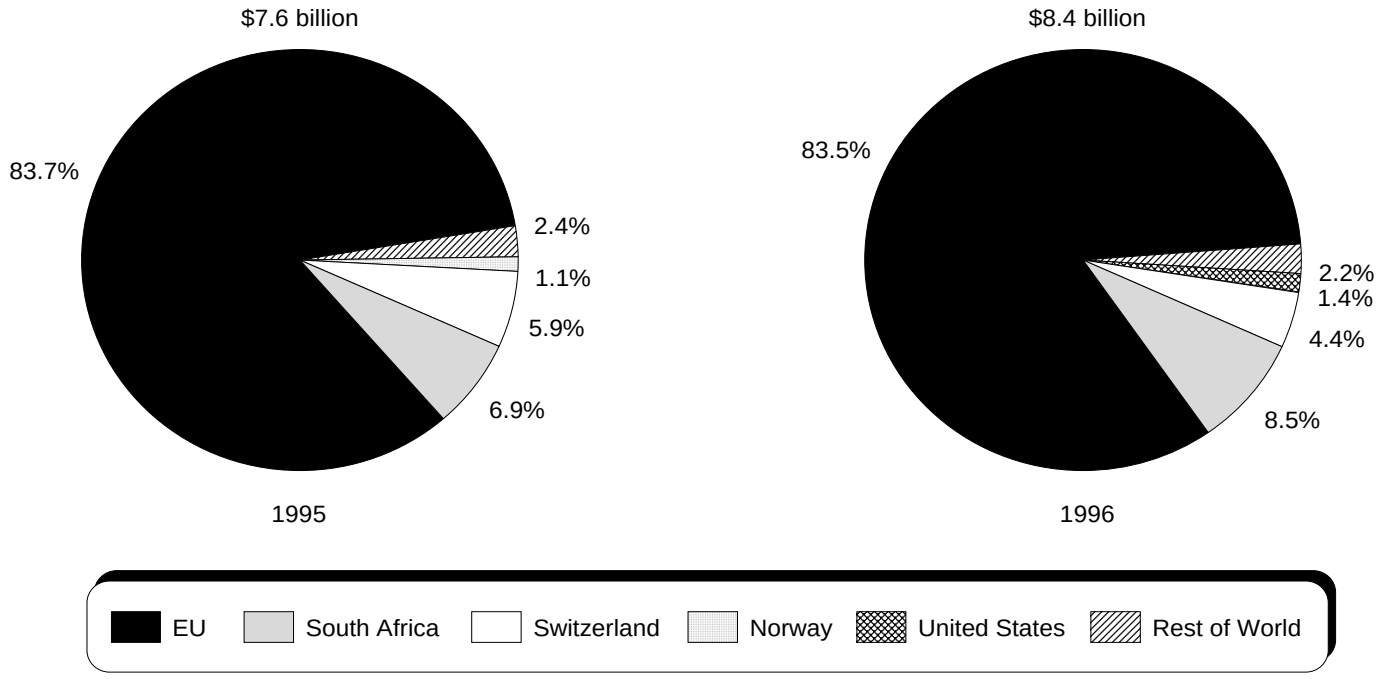

Table 5--Countries exceeding URAA commitments on export subsidies, 1995 and 1996

Country	Commodity	Commitment	Notification	Percent of commitment
		1995		
		1,000 dollars		
Cyprus	Cheese	195	789	406
Hungary	Coarse grains	1,727	4,862	282
Norway	Poultry	110	268	243
South Africa	Tea	1,667	1,865	112
	Cocoa	11,248	12,140	108
		Tons		
Cyprus	Cheese	986	1,860	189
Norway	Poultry	27	59	214
South Africa	Other milk product	444	616	139
	Beer	27,417	28,940	106
	Wine	23,598	24,217	103
Switzerland	Live animals	13,806	15,312	111
		1996		
		1,000 dollars		
South Africa	Cocoa	12,481	35,331	283
EU	Rice	64,795	91,550	141
	Wine	68,345	75,573	111
		Tons		
EU	Rice	157,100	226,500	144
	Olive oil	135,400	140,400	104
	Beef	1,010,900	1,177,400	116
	Wine*	2,742	3,035	111
Poland	Sugar	122,900	143,000	116
South Africa	Fruit & vegetable	235,791	240,599	102
	Wine	22,742	124,318	547

* thousand hectolitres

The Uruguay Round Agreement on Agriculture and Export Subsidies

The Uruguay Round Agreement on Agriculture (URAA) imposes disciplines on agricultural export subsidies for the first time and begins to reduce the use of export subsidies in agricultural trade. GATT contracting parties agreed to:

- reduce the volume of subsidized exports by 21 percent over 6 years from a 1986-90 base period level (14 percent over a 10-year period for developing countries), and
- reduce the value of export subsidies by 36 percent over 6 years from a 1986-90 base period level (24 percent over 10 years for developing countries).

Twenty-five members of the WTO are committed to reduce their export subsidies. Countries' WTO export subsidy schedules specify how much of each commodity can be exported with subsidy, and permitted subsidy expenditures for each commodity. Under the agreement, countries may not initiate subsidies for commodities that are not in their export subsidy schedules.

The text of the URAA provides some flexibility between years in terms of subsidy reductions. If a country exceeds its commitments in any of the years two through five, it must reduce subsidy levels the next year and assure that the total cumulative value of export subsidies and volume of subsidized exports over the entire implementation period is no greater than the totals that would have resulted from full compliance with its subsidy schedules. Member countries must meet their commitments in the last year of the implementation period (2000/01).

The URAA defined several types of export subsidies that are subject to reductions, including:

- direct export payments by governments to firms, industries, or producers of agricultural products contingent on export performance
- sales or gifts of government stocks at prices lower than acquisition prices
- export payments financed through government action, including payments financed by levies on producers
- subsidies to reduce export marketing costs, including handling and export-specific transportation, and
- subsidies on goods incorporated into export products.

GATT contracting parties agreed to exempt bona fide food aid transactions and widely available export market promotion and advisory services from the list of export subsidies. Countries also must restrict their use of other export marketing practices that could cause them to circumvent their export subsidy commitments.

Lastly, countries also agreed to discuss disciplines for the use of export credit and credit guarantee practices in the OECD.

In all other cases where countries exceeded their commitments in 1995, their export subsidies were well below their commitments for 1996. Thus, for the time being, they have met, or are at least close to meeting their requirements for the export subsidy implementation period under the URAA.

In 1996, the EU, Poland, and South Africa exceeded their volume commitments. The EU and Poland both claim that they can carry over unused portions of their 1995 commitments to make up for their overrun in 1996. Because the countries were far below their commitments in 1995/96, they argued that they have the ability to apply the additional amount not used in 1995/96 to any of the years up to 1999/00. Others argue that flexibility provisions in the agreement are meant only to deal with situations where a country exceeds its limits and has to pay back—not as an opportunity for countries to "bank" unused subsidies.

In 1995 and 1996, grains accounted for the largest volume of subsidized exports (see table 6), though they were far below commitment levels because world grain prices were high (especially in 1995). Fruits and vegetables, other milk products, beef, and sugar (in 1996) accounted for most of the remaining subsidized exports. These products, along with oilseeds and vegetable oils, have been allotted the largest permitted quantities in the countries' WTO export subsidy schedules. In terms of volume commitments, those that have come closest to being filled are other milk products, cheese, and bovine meats. Due to high prices, oilseed allotments were barely used in 1995 and only slightly more in 1996.

Implementation Issues

Very few countries have changed their policies substantially to conform with their export subsidy commitments or to

Table 6--Volume commitments used

Commodities	1995* Subsidized exports	1995* Commitment	1995* Share used	1996** Subsidized exports	1996** Commitment	1996** Share used	Change from '95-'96
	1,000 tons		Percent	1,000 tons		Percent	Percentage points
Wheat & wheat flour	4,350	59,452	7	14,110	42,820	34	26
Coarse grains	7,666	28,156	27	11,845	19,213	62	34
Rice	99	784	13	227	726	31	19
Oilseeds	5	2,799	0	4	638	1	0
Vegetable oils	202	2,000	10	140	1,765	8	-2
Oilcakes	0	360	0	0	74	0	0
Sugar	897	6,085	15	1,373	4,443	31	16
Butter and butter oil	155	631	25	287	594	48	24
Skim milk powder	399	754	53	359	666	54	1
Cheese	447	555	81	425	515	82	2
Other milk products	1,267	1,538	82	1,248	1,437	87	4
Bovine meat	1,020	1,561	65	1,178	1,486	79	14
Pigmeat	380	679	56	296	655	45	-11
Poultry meat	463	794	58	414	755	55	-3
Sheepmeat	1	29	4	1	38	2	-3
Live animals	59	171	34	66	165	40	6
Eggs	97	130	75	70	125	56	-19
Wine	297	842	35	470	812	58	23
Fruit and vegetables	1,594	7,256	22	1,894	6,646	29	7
Tobacco	16	268	6	4	250	2	-4
Cotton	0	55	0	0	54	0	0
Total	19,414	114,900	17	34,712	83,876	41	24

* Excluding Colombia.

**Excluding Canada, Colombia, Mexico.

plan for reduced commitments in the future. The most notable reforms are to South Africa's and Canada's export subsidies. South Africa ended its subsidy program in 1997 and Canada terminated its rail subsidy for exported commodities in 1995. The EU has to reduce its internal prices to avoid exceeding its export subsidy commitments in future years, particularly when the Central and East European countries join the EU-15. Of concern to many WTO members are export subsidy waivers and circumventions that undermine the substantial export subsidy disciplines of the URAA. The EU and Canada instituted export marketing policies that allow them to circumvent their export subsidy commitments. Hungary obtained a waiver from its export subsidy commitments, which it argues were miscalculated.

EU's export subsidy commitments and enlargement drive CAP reform: Ten Central and Eastern European (CEE) countries have applied for membership in the EU. The application of the CAP mechanisms to the CEE countries would be very costly to the EU. It would also increase prices and stimulate agricultural production in the CEE countries, increasing their reliance on export subsidies. The EU is close to meeting its WTO commitments on the permitted volume and value of export subsidies. If the CEE's accession forces the EU to subsidize the exports of many commodities, the EU would certainly exceed its export subsidy constraints. Thus, the EU has proposed the Agenda 2000 reforms of its CAP, further reducing price support to farmers and reducing the associated need for export subsidies. However, the Agenda 2000 proposals have not been widely embraced by the EU member countries, who ultimately will have to vote whether to adopt the reforms.

Even if the Agenda 2000 proposals pass in their current form, they do not tackle the issue of reliance on export subsidies for all products. Comparing the bound rate in 2000/01 to subsidized expenditures in 1995 and 1996, one can see where the EU may have problems meeting its commitments in the future (see table 7). Expenditures for many commodities were far above the final bound levels. Even with the Agenda 2000 reforms, the EU may still have difficulty meeting its WTO expenditure commitments for wine, and fruits and vegetables.

The EU subsidizes dairy product components: Clearly, some of the export subsidy limits have been binding. For example, the EU has started to export some processed cheese claiming that it is an amalgamation of butter, skim milk powder, and natural cheese, and then counting export subsidies on the processed cheese against subsidies for the three component products. This leads the EU to subsidize more cheese than was agreed upon in the URAA.

The EU claims that this is possible through a modified version of the "Inward Processing Relief" (IPR) system. Traditionally under the IPR, third country products are imported tariff-free, processed in the EU, and then re-

Table 7--Comparison of EU export subsidies in base period to 1995, 1996, and 2000 bound rate

Commodity	Base	1995	1996	2000 bound rate	Change from base to '95	Change from base to '96	1996/bound rate
		-- Million ECU --				-- Percent --	
Total agricultural export subsidies	11,438	4,885	5,565	7,446	-57	-51	
Wheat and flour	2,015	119	318	1,290	-94	-84	0.25
Coarse grains	1,636	303	389	1,047	-81	-76	0.37
Rice	58	30	72	37	-47	26	1.96
Oilseeds	43	0	0	28	-100	-100	0.00
Olive oil	85	62	39	54	-27	-54	0.72
Sugar	780	379	525	499	-51	-33	1.05
Butter/butter oil	1,481	256	552	948	-83	-63	0.58
Skim milk powder	431	141	170	275	-67	-61	0.62
Cheese	534	438	271	342	-18	-49	0.79
Other milk products	1,090	728	732	698	-33	-33	1.05
Bovine meat	1,958	1,507	1,527	1,254	-23	-22	1.22
Pigmeat	299	101	71	191	-66	-76	0.37
Poultry meat	142	116	73	91	-18	-48	0.80
Eggs	68	13	7	44	-81	-90	0.16
Wine	61	51	60	39	-17	-3	1.52
Fruit and vegetables	96	82	72	61	-15	-25	1.18
Tobacco	63	18	3	40	-71	-95	0.08
Incorporated products	448	491	566	413	10	26	1.37
Other agricultural products	150	51	119	96	-66	-21	1.23

exported without a subsidy. Neither finished products nor components of the finished product benefit from an export subsidy. However, beginning in February 1997, new rules implemented by the EU recast traditional inward processing to allow the use of export subsidies for components of processed cheese. According to Eurostat, the EU exported about 3,000 metric tons of processed cheese using this scheme in 1995/96. Processed cheese exports treated in this way jumped to 17,000 tons in 1996/97 and to an estimated 65,000-70,000 tons in 1997/98.

The Commission argues that "inward processing" increases third country exports to the EU. Non-subsidized components from third countries (such as New Zealand powdered milk) may be used to produce the cheese. Nevertheless, non-EU cheese manufacturers fear that the EU will be able to undercut their prices by allocating its export subsidies this way. Additionally, there is the fear that an EU policy of transferring subsidies from one product category to another could spread to other agricultural products, such as using grain export subsidies to produce low cost poultry. This would weaken the WTO's export subsidy commitments, which depend on specific commodity definitions.

Canada establishes a two-tier price system for milk: Prior to August 1, 1995, the Canadian government assessed a levy on dairy producers to fund subsidized exports of surplus dairy products. On that date, the Canadian government initiated a two-tier price system that prices milk cheaper to processors when used in the export of manufactured dairy products than when used domestically. Canada represents only about 1 percent of global trade in dairy products, but its dairy exports have grown significantly in recent years. New Zealand and the United States have complained to the WTO that Canada's milk pricing system allows it to circumvent its export subsidy commitments. Canada has notified to the WTO only those dairy product exports that have been subsidized with funds obtained from producer levies.

Hungary also had problems meeting original obligations: In September 1997 Hungary submitted a request to the WTO's Council for Trade in Goods for a waiver from its export subsidy obligations. Hungary alleged that its base period export subsidies were not calculated correctly, due to trade conducted in non-convertible currencies and other ad-hoc arrangements that were unknown by the administrative body estimating Hungary's base subsidies. Consequently, Hungary argued that its base outlay level was set at $423 million when it should have been set at $1 billion. Hungary claimed that its export subsidy schedule did not permit subsidies to a level that would maintain Hungarian market share of its agricultural exports. Hungary argued that preserving its level of agricultural exports is critical to a country in a transition period and requested that revised commitments be put in place until January 1, 2002, when the country would agree to comply with its original export subsidy limits.

On October 22, 1997, the WTO agreed to grant Hungary the requested waiver and set revised export subsidy commitments, based on Hungary's request. Hungary's government is required to submit annual reports on the waiver's anniversary date that explain how it has applied the waiver. The annual notice is supplementary to Hungary's export subsidy notification.

New Disciplines on Agricultural Export Credit Guarantees Under Negotiation in the OECD

Most major exporting nations guarantee commercial credit for sales of agricultural products, and, in some cases, insure sales on special terms if the sales are viewed to be in the exporting country's "national interest." Exporting nations offer to guarantee private bank loans with competitive (commercial) interest rates, loan terms (more than 6 months to as much as 10 years), and, in some cases, freight coverage. Export credit guarantees expand importers' demand for agricultural products when importers have difficulty obtaining foreign exchange. Credit guarantees can help stabilize economies in crisis by allowing countries to continue importing agricultural products and obtain inputs such as cotton and hides for export industries.

Export credit guarantees are grounds for competition among exporters. As export price subsidies are reduced under the URAA, the competitive aspects of credit guarantees have come under increasing scrutiny. Uruguay Round negotiators agreed to continue talks in the Organization for Economic Cooperation and Development (OECD) to establish disciplines on agricultural export credit guarantees, but major exporters have not yet reached an agreement.

Future Talks May Focus on Further Subsidy Reductions

For the next round of WTO talks on agriculture, the United States and the Cairns Group are calling for the complete elimination of export subsidies and for rules to prevent circumvention of export subsidy commitments. In the Cairns Group's opinion, "it is essential that the 1999 negotiations ensure the early, total elimination and prohibition of all forms" of export subsidies. The Cairns Group also is pushing negotiators in the OECD to apply to agricultural credit guarantees the same international laws that govern government-guaranteed export credits for manufactured goods. The Cairns Group's pleas for subsidy elimination may gain credence if importing countries' difficulties in obtaining credit incite major exporters to step up their competition for those markets with larger export subsidies and generous credit terms.

Another high-profile issue is whether the URAA definition of an export subsidy already covers all export marketing practices that could be considered export subsidies or whether additional refinements in the definition are needed to restrict some of the current subsidy circumventions. Decreasing world grain prices and deteriorating economic conditions in key importing countries will spur further debates on the conditions under which international food aid may be exempted from export subsidy restrictions.

Conclusions

Prior to the URAA, export subsidies were an important policy tool in agricultural trade, particularly for trade in grains and dairy products. In signing the URAA, countries that employed export subsidies agreed to reduce the volume and value of their subsidized exports over the period 1995/96 to 2000/01. To date, most of the 25 countries that agreed to reduce their export subsidies have met their commitments.

In 1995 and 1996, grains accounted for the largest volume of subsidized exports, but because grain prices were high, subsidized exports of grains were far below both volume and value commitment levels, though they increased in 1996. In terms of volume commitments, those that have come closest to being filled are other milk products, cheese, and bovine meats. Again, due to high prices, the grain and oilseed volume and value allotments were barely used in 1995 and only slightly more in 1996.

Very few countries have changed their policies substantially to conform with their export subsidy commitments or to plan for reduced commitments in the future. The EU, by far the largest export subsidizer, continues to rely on export subsidies to bridge the gap between high domestic support prices and lower world prices. The enlargement of the EU's Common Agricultural Policy (CAP) to some of the Central European countries enhances pressures to reduce domestic agricultural prices in the EU and avoid excessive levels of export subsidies.

Some countries did change their policies to "conform" to their URAA export subsidy commitments. The countries appear to have implemented practices that allow them to circumvent those commitments and undermine the substantial export subsidy disciplines of the URAA. In the eyes of their trading partners, the EU and Canada's export marketing policies for dairy products allow them to circumvent their export subsidy commitments.

For the upcoming multilateral negotiations, the United States and the Cairns Group of countries are calling for the complete elimination of agricultural export subsidies and for rules to prevent the circumvention of export subsidy commitments. Their call to eliminate subsidies may gain credence if importing countries' market conditions and financial problems encourage major exporters to compete for those markets with larger export subsidies and generous credit terms. Deteriorating economic conditions in key importing countries also will spur further debates on the conditions under which international food aid may be exempted from export subsidy restrictions.

Implementation of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures

The Uruguay Round's SPS Agreement imposed disciplines on the use of measures to protect human, animal, and plant life and health from foreign pests, diseases, and contaminants. Three years into its implementation, the Agreement can be credited with increasing transparency of countries' SPS regulations and providing improved means for settling SPS-related trade disputes. The Agreement has also provided impetus for unilateral regulatory reforms in some countries. [Donna Roberts (droberts@ustr.gov)]

Introduction

From the perspective of trade in primary and processed agricultural products, some of the most important new disciplines of the Uruguay Round are found in the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). It is widely acknowledged that SPS measures, which regulate movement of products across international borders, are necessary to protect public health or the environment from pests, diseases, and contaminants, It is likewise acknowledged that these measures can be used to thwart commercial opportunities created by other trade liberalization policies. Although economists have found it difficult to systematically evaluate the impacts of SPS regulations on trade in agricultural goods, or to assess their relative importance in the world trading system, there has long been broad recognition that these measures can significantly impede trade. Despite this recognition, it was not until the 1986-1993 Uruguay Round multilateral trade negotiations that separate disciplines were negotiated for SPS measures.

The challenge before the negotiators of the SPS Agreement was to create a set of rules that would strike the proper balance between allowing health and environmental protection while disallowing mercantilist regulatory protectionism. In broad terms, the Agreement recognizes the right of each WTO member to adopt trade-restricting measures to protect human, animal, and plant life and health, but requires such measures to be based on a scientific assessment of the risks and to be applied only to the extent necessary to achieve public health or environmental goals. The SPS Agreement also recognizes standards promulgated by certain international organizations to be "safe harbor" standards—i.e., a member that adopted these standards would be "rebuttably presumed" to be in compliance with the Agreement.

Initially, some major agricultural exporting countries voiced concerns that the Agreement (and the jurisprudence interpreting the Agreement) might allow wide latitude in adopting SPS measures—that importing countries could impose measures that impede trade, no matter how unlikely or how inconsequential the identified risks were. Alternatively, environmental and consumer advocates were troubled that under the SPS Agreement, the standards for crafting SPS measures could be too high—that the Agreement might limit the ability of governments to raise food safety standards or to adopt precautionary measures to protect the environment from foreign biological hazards in instances where the risks were not well understood. This article examines developments since the entry into force of the SPS Agreement in January 1995, with a view to evaluating if and how the Agreement has served the interests of the liberal trading system from the evidence to date.

The SPS Agreement: Origins and Principal Provisions

Prior to the conclusion of the Uruguay Round, multilateral disciplines on the use of SPS measures were found in the original GATT Articles (primarily Article XX—*General Exceptions*) and the 1979 Tokyo Round Agreement on Technical Barriers to Trade (a plurilateral agreement known as the Standards Code). These legal instruments stipulated that measures could not be "applied in manner which would constitute…a disguised restriction on international trade" or "create unnecessary obstacles to trade." The consensus view that emerged in the decade following the Tokyo Round was that loopholes in the GATT and the Standards Code had failed to stem disruptions of trade in agricultural products caused by proliferating technical restrictions.

Not one SPS measure was successfully challenged before a GATT dispute settlement panel after the Tokyo Round, and several prominent disagreements over SPS measures in the 1980s remained unresolved. Meanwhile, the commitment to negotiate an Agriculture Agreement during the Uruguay Round that would discipline the use of agricultural non-tariff barriers for the first time heightened concerns that governments would resort to regulatory compensation, in the form of SPS barriers, to appease domestic producers in this politically sensitive sector.

The SPS Agreement established new substantive and procedural disciplines for a wide array of sanitary and phytosani-

tary measures. The substantive requirements found in the Agreement suggest a normative basis for SPS measures, while the procedural obligations facilitate decentralized policing of such measures.

Many of the most significant substantive disciplines are found in Article 5 of the Agreement. The cornerstone of the Agreement is found in Article 5.1, which requires that any SPS measure be based on an assessment of risks posed by the import. Articles 5.2 and 5.3 contain an indicative list of factors, such as potential production or sales losses and eradication costs, that are to be taken into account in risk assessments and in risk management decisions that limit imports. Article 5.5 states that members shall avoid arbitrary or unjustifiable distinctions in levels of health or environmental protection provided by SPS measures, if such distinctions result in discrimination or a disguised restriction on international trade. And Article 5.7 indicates that if relevant scientific evidence is "insufficient," members may adopt SPS measures on a provisional basis while seeking additional information about the risks posed by a recently identified hazard. Four other Articles comprise the remaining principal substantive disciplines in the Agreement (see box "Principal Provisions of the WTO SPS Agreement").

The substantive provisions of the SPS Agreement suggest that the parameters of the SPS negotiations were established by the risk assessment paradigm. Within this paradigm, analysts identify measures that will achieve an acceptable level of risk (or appropriate level of protection, in the language of the Agreement) and policymakers' choices are restricted to this set. Determination of an "appropriate level of protection" or risk target typically embeds value judgments in scientific assessments of risks, and may encourage myopic focus on only the risk-related costs of measures. This normative basis for regulatory decisionmaking stands in contrast to the economic paradigm, in which the aim is to infer appropriate levels of protection using economic welfare analysis tools to systematically analyze the benefits as well as the costs (including risk-related costs) of different regulatory options. The SPS Agreement's implicit endorsement of a normative foundation based on "risk-related costs" rather than "benefit-cost analysis" may have stemmed from philosophical objections to the introduction of economic benefits into risk mitigation decisions. Or, it may have stemmed from pragmatic concerns related to developing disciplines that would not unduly complicate judgment about compliance with the Agreement.

Distinguishing health and environmental protection from mercantilist economic protectionism relies on effective decentralized policing by WTO members of the many SPS measures that are promulgated each year. The procedural requirement to notify WTO trading partners of changes in SPS measures that affect trade underpins the system established by the SPS Agreement to facilitate multilateral monitoring. Notification provides an opportunity for trading partners to comment on a measure *before* it is adopted, thereby potentially averting fractious trade disputes. On the notification form, members are asked to provide a justification of the proposed measure, to explicitly identify the products to which it applies, and to note whether it conforms to an international standard (if one exists). Such "transparency provisions" for regulatory measures are particularly important in view of the fact that exporters often report that complying with undocumented *de facto* measures represents a significant impediment to trade.

The Agreement has created other mechanisms to improve the institutional setting for addressing SPS barriers as well. The Agreement establishes a SPS Committee, made up of delegations representing each WTO member country, to develop SPS policy guidelines and discuss selected measures. And WTO dispute settlement procedures are available to members in instances where bilateral and multilateral technical exchanges have reached an impasse. If formal consultations do not result in a mutually agreeable solution between the parties to a dispute, a member can request a dispute panel (and subsequently the WTO Appellate Body if necessary) to rule whether a measure is in compliance with the provisions of the SPS Agreement.

The SPS Agreement: A Catalyst for Regulatory Reform?

As anticipated, the Agreement has generated a broad-based regulatory review among some WTO members, as major agricultural exporters and importers determine whether they and their trading partners are in compliance with the new substantive and procedural disciplines. Evidence is accumulating that suggests that, at least in the "G-8" countries (Argentina, Australia, Canada, the EU, Japan, New Zealand, Thailand, and the United States) that led the SPS negotiations, regulatory authorities in several instances are either unilaterally modifying regulations to comply with the Agreement's substantive obligations or voluntarily modifying regulations after technical bilateral exchanges. For example, the United States' recent adoption of its "regionalization regulation" is a significant departure from its long-standing practice of only recognizing entire countries as "free" or "not free" of a particular disease. This regulatory action has allowed imports of uncooked beef from regions in Argentina that have been recognized as free of foot and mouth disease into the United States for the first time in 80 years. And after 3 years of bilateral technical exchanges, the United States recently replaced a controversial 83-year old ban on Mexican avocados with a geographical/seasonal process standard that allows imports.

Similar examples of an accelerated schedule for "upgrading" SPS measures in the G-8 countries include the lifting of a 46-year old ban on U.S. tomatoes by Japan, acceptance of Canadian salmon by New Zealand, and Australia's acceptance of cooked poultry meat. Other examples can be found.

Principal Provisions of the WTO SPS Agreement

Article 2 (Basic Rights and Provisions): Members have the right to take SPS measures necessary for the protection of human, animal, or plant life or health (Article 2.1), but measures must be applied only to the extent necessary, be based on scientific principles, and not be maintained without sufficient scientific evidence (Article 2.2). SPS measures must not discriminate between members where identical or similar conditions prevail, including between their own territory and that of members (Article 2.3).

Article 3 (Harmonization): Members shall base their SPS measures on international standards (if they exist) that are promulgated by the Codex Alimentarius Commission (Codex), the International Organization of Epizootics (OIE), or the International Plant Protection Convention (IPPC) (Article 3.1), unless they choose to adopt measures that result in a higher level of health or environmental protection (Article 3.3).

Article 4 (Equivalence): The Agreement recognizes that different measures can provide equivalent levels of health or environmental protection. Therefore, a country must allow imports from an exporting nation with different SPS measures from its own if the exporter objectively demonstrates that its measure achieves the importer's appropriate level of protection.

Article 5 (Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection): Members are obliged to base their measures on a risk assessment, taking into account, when possible and as appropriate, risk assessment methodologies developed under the auspices of the relevant international organizations (Article 5.1). Factors that should be taken into account in a risk assessment—including available scientific evidence; relevant processes and production methods; relevant inspection, sampling, and testing methods; relevant ecological and environmental conditions; and quarantine or other treatment—are found in Article 5.2.

Article 5.3 stipulates that countries are to consider direct risk-related costs (e.g., potential production or sales losses or control and eradication costs) both in assessing risks and managing risks through the choice of an SPS measure to protect plant or animal health. Article 5.5 states that each member is also obliged to avoid arbitrary or unjustifiable distinctions in the levels of protection it considers to be appropriate if these distinctions would result in a disguised restriction on international trade, in order to achieve the objective of consistency in the application of SPS measures. Article 5.7 allows members to adopt temporary measures to mitigate unfamiliar risks while collecting additional information that would permit an objective risk assessment and re-evaluation of the temporary risk-management measure.

Article 6 (Adaption to Regional Conditions, Including Pest- or Disease-Free Areas and Areas of Low Pest or Disease Prevalence): This provision recognizes that pest- or disease-free areas are largely determined by geographic and other ecological conditions, not political boundaries, and therefore may be part of one country, or all or parts of several countries. Import protocols must therefore be based on a risk assessment that evaluates the claims by exporting countries that certain regions are free of quarantine diseases or pests, or that the prevalence of quarantine pests and diseases is low.

Source: General Agreement on Tariffs and Trade, 1994. *The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts*, Geneva.

In all of these cases, a finding by regulatory scientists that an import protocol could be designed to reduce risks to negligible levels was a necessary condition for a change in regulation. However, it was no doubt easier to enact these regulatory changes within the new framework of multilateral SPS disciplines that provided policymakers with some assurance that the measures of trading partners would be obliged to conform to the same principles.

Notification Requirements Improve Transparency

More systematic evidence is available to gauge compliance with the procedural obligation to notify trading partners of proposed SPS measures that might affect trade. The data indicate that complete regulatory transparency still remains a goal. More than half of the members have not yet notified a single SPS measure, although all the transparency disciplines have been obligatory for all members since 1995 (table 8). Most non-complying members are low or lower-middle income countries. Many members in the upper middle and high income categories that have not yet notified an SPS measure are member states of the EU (the European Commission notifies EU-wide SPS measures, but the member states notify the few national measures that fall outside the competence of the Commission) or small economies whose actions are unlikely to affect international markets. In contrast, the major agricultural importing and exporting

Table 8--WTO member SPS notifications by income class, 1995-November 1998

WTO members/ income status 1/	Non-notifying members	Notifying members	Number of measures
Low income	33	7	17
Lower middle income	19	19	161
Upper middle income	9	11	271
High income	14	20	517
Total	80	52	966

1/ As defined by the World Bank.

Source: WTO (G/SPS/W/50, G/SPS/GN/11, and G/SPS/GEN/48, 60, 80, 87, and 99) and author's calculations.

members are conscientiously observing the transparency obligations. These major trading nations, together with other members, have notified a total of 966 measures during the first 2 years of the Agreement.

It is too early to make a strong judgment whether the transparency provisions of the SPS Agreement will significantly curb regulatory protectionism over time. Nevertheless, in the short run, its contribution to promoting symmetry of information among members—many of whom are less-developed countries (LDCs) that are dependent upon the import and export of raw and semiprocessed agricultural products—should be recognized.

For example, the EU notified WTO members in early 1998 of a proposed regulation to lower maximum residue levels (MRLs) for aflatoxin in a wide range of foodstuffs, which prompted protest from a large number of members (including Senegal, the Gambia, India, Brazil, and the Philippines). These countries argued that the EU's proposed MRLs would significantly increase exporters' costs without increasing food safety, since there was no evidence that products that satisfied prevailing (higher) MRLs for aflatoxin posed health risks. The EU subsequently announced that it would revise its proposed aflatoxin MRL for peanuts, adopting the (draft) international standard instead. The EU also announced that it would reconsider its proposed aflatoxin MRLs for other commodities. Under other circumstances, LDC members may have had difficulty in learning about the details of the regulation at the proposal stage, either to successfully challenge the measure before it was adopted (as in this case) or to prepare for its eventual adoption.

Disputes Under the SPS Agreement

WTO members have used the forum provided by the SPS Committee to air grievances over measures when bilateral technical exchanges have reached an impasse. On occasion, when Committee exchanges have failed to produce results that are satisfactory to both parties, members have requested formal WTO consultations. These consultations have, in some instances, obviated the need for referring the matter to a WTO panel.

South Korea's change in policy regarding government mandated shelf-life standards provides one example where formal consultations led to a negotiated settlement (table 9). The U.S. government questioned the scientific basis for uniform shelf-life requirements during WTO consultations with South Korea in May 1995. Three months later, the two governments notified the WTO that they had reached a mutually acceptable solution to the dispute: South Korea agreed to allow manufacturers of frozen foods and vacuum-packed meat to set their own use-by dates. Formal consultations may also successfully resolve the 1996 complaint by the United States against some of Korea's numerous inspection measures that result in port delays that greatly exceed the norm in Asia.

To date, three SPS disputes have advanced to WTO panels: the EU-U.S./Canada *Hormones* dispute, the Australia-Canada *Salmon* dispute, and the Japan-U.S. *Varietal Testing* dispute. It was widely expected that the long-running disagreement between the United States and the EU over the safety of hormonal growth stimulants in beef cattle production would be the bellwether test of the new disciplines in the SPS Agreement. The dispute raised broad questions about the extent to which the new multilateral trade rules could limit a country's ability to adopt standards that exceeded the international norm or to exercise caution in policy decisions. The EU claimed that the level of health protection provided by the international standards for the hormones at issue did not meet its exigent public health goals. The EU also broadly argued in its defense of the ban that adequate allowance should be made for regulating risks that are imperfectly understood but that could cause irreversible harm, often referred to as the *precautionary principle*.

After a WTO panel ruled that the ban violated the provisions of the SPS Agreement in August 1997, the case was appealed. Four months later, the Appellate Body upheld the panel's decision that the ban was not in compliance with the disciplines in the SPS Agreement. The Appellate Body concurred that the EU ban was not based on a risk assessment, as there appeared to be no "rational relationship" between the EU's measure and the health risks described by existing scientific evaluations of consuming hormone-treated beef. The Appellate Body likewise agreed with the panel that while the EU was entitled to adopt a measure that provided a higher level of protection than the international standards, it had not produced scientific evidence to support the claim that the ban actually did so. The decisions also noted that while the EU had broadly argued that its regulatory decision had been guided by the precautionary principle, it had been unwilling to specifically defend its measure under the provision of the Agreement that codifies the precautionary princi-

Table 9--Overview of formal disputes under the SPS Agreement, 1995-1998

Measure	Complaining party	Status
Korean shelf-life measures	United States	Settled case
Korean measures concerning bottled water	Canada	Settled case
Korean measures concerning inspection of agricultural products	United States	Pending consultations
U.S. measures affecting poultry imports from the EU	EU	Pending consultations
EU measures affecting imports of wood from conifers	Canada	Pending consultations
EU measures affecting the prohibition of asbestos and asbestos products	Canada	Panel requested
EU measures concerning meat and meat products (hormones)	United States and Canada	Completed Appellate Body proceedings *Ruling: the EU ban on imports of hormone-treated beef was not based on a risk assessment; the EU did not produce scientific evidence to support the claim that its ban provides a higher level of health protection than international standards provide.*
Australian measures affecting the importation of salmon	Canada	Completed Appellate Body proceedings *Ruling: Australian measures were not based on a risk assessment; the ban on salmon imports measures provided a level of protection that was arbitrarily higher than levels of protection provided by other Australian measures to prevent the introduction of disease in its recreational and commercial fish stocks.*
Japanese varietal testing requirements	United States	Completed WTO panel proceedings *Ruling: Japanese measures were maintained without sufficient scientific evidence; were not the least-trade restrictive means for achieving Japan's appropriate level of protection; and were not transparent.* Japan notified the United States on November 24, 1998 that it will appeal the panel's findings.

ple. Article 5.7 permits members to adopt temporary measures to mitigate unfamiliar risks while collecting additional information, but since the EU considered its measure final, not provisional, it did not defend the hormone ban under this provision. The Appellate Body ruled that the EU measure must therefore be consistent with the obligations specified in the other Articles of the Agreement.

Formal consultations also failed to produce negotiated solutions in the Australian-Canadian *Salmon* dispute and in the Japan-U.S. *Varietal Testing* dispute. These two disputes centered on measures that were justified on the basis of protecting, respectively, recreational and commercial fish stocks and orchards from exotic pathogens. Rulings in these two cases (by the Appellate Body in the *Salmon* dispute and by a WTO panel in the *Varietal Testing* dispute) were released in October 1998.

The Appellate Body concurred with Canada in the *Salmon* dispute that Australia's 1975 ban on imports of fresh, chilled, or frozen (eviscerated) salmon from the Northern Hemisphere was inconsistent with the legal obligations set forth in the SPS Agreement. As in the *Hormones* dispute, the Appellate Body ruled that the measures at issue were not based on a risk assessment. The report that Australia relied on to inform its policy decision did not constitute a risk assessment in the view of the judges, because it neither evaluated the likelihood of entry, establishment, and spread

of diseases, nor evaluated the potential consequences of these diseases. The Appellate Body agreed with the earlier panel finding that the report contained "general and vague statements of mere possibility of adverse effects occurring; statements which constitute neither a quantitative nor a qualitative assessment of probability." The Appellate Body also concurred with Canada that the ban provided a level of environmental protection that was arbitrarily higher than that provided by other Australian SPS measures because Australia allows imports of other fish that are potentially vectors for the same, or even more virulent, diseases.

At issue in the *Varietal Testing* dispute were Japanese requirements to test whether methyl bromide treatments effectively exterminate codling moths on new varieties of fruit and walnuts. The United States argued that such requirements restricts U.S. exports (since the cost of the required trials discourages exporters from marketing new hybrids in Japan) and were unscientific, since Japan could produce no evidence to support the claim that variety is a causal factor of variation in extermination efficacy. The panel concurred that Japan's phytosanitary measures were not based on "sufficient scientific evidence". It also agreed with U.S. position that the testing requirements were not the least-trade restrictive means for achieving Japan's appropriate level of protection (since evidence presented during the proceedings indicated that testing each product, rather than each variety of each product, was sufficient). The panel also found that Japan's varietal testing requirements were not transparent since they had not been published. Japan notified the United States in November 1998 that it will appeal the panel's findings.

Two facts related to the list of formal SPS complaints shown in table 9 merit comment. First, although there were virtually no trade disputes over SPS measures that advanced to formal dispute settlement proceedings during the 47 years of GATT, there have been formal complaints related to nine distinct issues over the first 3 years of the SPS Agreement. This increase suggests that the prospects for disciplining the use of measures that the private sector reports as significant impediments to agricultural trade have in fact improved in the post-Uruguay Round legal environment. Secondly, all formal SPS disputes to date have arisen between "high-level" countries (countries with rigorous standards, rigorously enforced), which prompts the observation that claims asserting the new SPS disciplines would result in an intolerable assault on developed countries' food safety and environmental standards have likely been overstated.

Conclusion

The outcomes of formal disputes that reach WTO panels (and especially the highly visible *Hormones* dispute) are likely to dominate any judgment in the near term about whether the SPS Agreement (and jurisprudence which interprets that Agreement) contributes to effective functioning of the world trading system. To date, decisions in the *Hormones*, *Salmon*, and *Varietal Testing* cases, which may signal how WTO tribunals will generally interpret some of the Agreement's disciplines in SPS cases, have ratified the central importance of the substantive obligation to base sanitary and phytosanitary measures on an objective assessment of risks. The decisions in these three cases, which found that the disputed measures were not "based on a risk assessment" or that they were "maintained without sufficient scientific evidence," recognized that science is descriptive, not prescriptive, but held that there must be a "rational relationship" between the policy choices made by governments and objective scientific assessments that go beyond hypothesis or hazard identification.

The requirement to reference scientific evidence in dispute proceedings eliminates recourse to a stonewalling strategy of declarations rather than explanations, which was used to great effect by some governments in defense of the most egregiously protectionist SPS measures prior to the Uruguay Round. But the "rational relationship" judicial test also implies that multilateral trade rules will discipline the use of protectionist SPS measures that feature only a slim element of genuine health or environmental protection.

The *Hormones* rulings on the Agreement's provisions related to international standards and precautionary regulatory decisions will perhaps dispel concerns that WTO tribunals might view as their mandate the vigorous promotion of globalization at the expense of national sovereignty. The WTO Appellate Body explicitly ruled that international standards are not obligatory under the terms of the SPS Agreement, which should allay anxieties that the Agreement would promote "downward harmonization" of national standards to facilitate trade. And although the panel and Appellate Body did not concur with EU arguments that its regulatory choice could be seen as precautionary in view of the breadth of scientific consensus on the safety of hormones, the *Hormones* case did highlight the fact that the SPS negotiators made provision for the adoption of measures to mitigate unfamiliar risks on a temporary basis.

Beyond the high-profile WTO disputes, the past 2 years have seen a number of unilateral and negotiated decisions to ease SPS trade restrictions. The principles and the institutional mechanisms established by the Agreement are therefore credited with being an important factor in prompting or prodding some members to revise especially conservative SPS measures. These revised measures have eased strains in bilateral trade relations, notably between the United States and East Asia, and the United States and Latin America.

Compliance with the transparency provisions of the Agreement may weigh heavily in future evaluations of whether the Agreement has made a significant contribution to the liberal international trading system. Changes in regulatory regimes, which track changes in production, process-

ing, and detection/eradication technologies, are routine, not the exception, and these changes will likely continue to spawn disagreements between importers and exporters. In this context, the continuing injunction to base measures on a risk assessment and to notify one's trading partners of proposed SPS measures could make a sizable (albeit, difficult to measure) contribution to the multilateral trading system. Gauging this contribution will entail weighing whether an ounce of prevention has produced a pound of cure.

Further study of individual SPS measures will provide evidence about the degree to which the SPS disciplines contribute to good economic policy. While the Agreement requires a measure to be based on "scientific principles" and on "sufficient scientific evidence," nothing in the Agreement requires countries to enact only those measures whose "benefits" outweigh the "costs." Indeed there is some question of whether the Agreement could actually hinder efforts to base SPS measures on economic efficiency criteria if policymakers chose to do so. But despite differences between what economists would recommend and what the Agreement might allow or proscribe, the SPS Agreement has clearly reduced the degrees of freedom for the disingenuous use of SPS measures to restrict imports in response to narrow interest group pressures. This contribution to the world trading system should not be underestimated. Over time, one can anticipate that further research, drawing on evidence provided by unilateral policy choices and future dispute panel decisions, will permit more substantive judgement about how well the legal principles of the WTO/GATT system function to address SPS measures, and how they might be improved.

For more information see:

Donna Roberts, "Preliminary Assessment of the Effects of the WTO Agreement on Sanitary and Phytosanitary Trade Regulations," *Journal of International Economic Law*, 2: 377-405, 1998.

Donna Roberts, Timothy Josling, and David Orden, "A Framework for Analyzing Technical Trade Barriers," Technical Bulletin, Econ. Res. Serv., U.S. Dept. Agr., forthcoming.

Biotechnology in Agriculture Confronts Agreements in the WTO

The recent introduction of agricultural products produced through biotechnology has given rise to new trade disputes. These disputes could test the adequacy of the science-based frameworks provided by the SPS and TBT agreements to resolve biotechnology issues. *[David R. Kelch (dkelch@econ.ag.gov), Mark Simone, and Mary Lisa Madell (mlmadell@email.aphis.usda.gov)[1]]*

Trade disputes have surfaced over labeling of genetically modified organisms (GMOs) and the differing regulatory approval systems among countries. The disputes will likely continue as new GMOs are introduced onto the world market. The Sanitary and Phytosanitary (SPS) Agreement and the Technical Barriers to Trade (TBT) Agreement in the WTO provide guidelines for developing regulations based on science. While scientists in importing and exporting countries have found the GMOs safe, some consumer and environmental groups, particularly in the 15-member European Union (EU), have pressured their governments into regulatory procedures and labeling of GMOs that have disrupted corn trade already and look to do so again in the future. Bilateral consultations have not resolved the issue and the EU is further assessing the environmental impact of large volumes of seeds before final approval is granted--even though their scientific committees have approved the varieties in question. While the United States exhausts the bilateral process of consultation and negotiation, it remains to be seen whether the SPS and TBT Agreements provide enough guidance to settle the disputes raised by the introduction of GMOs.

Importance to the United States

The ability to genetically manipulate organisms to produce desirable crop traits that can benefit producers, consumers, and the environment, will likely revolutionize the production and marketing of agriculture and food products worldwide. U.S. multinational companies are among the leading developers of genetically modified crop varieties—especially export crops such as corn, soybeans, and cotton—and U.S. producers of these crops are adopting this new technology at a rapid rate. The acceptance of GMOs in the world market is critical for the future prosperity of U.S. producers of corn, soybeans, and cotton, and for the companies that provide the technology, because of these crops' dependence on exports.

The European Union's (EU) reaction to consumers' and environmentalists' concerns about GM crops led to a mandate to label foods that contain GMOs, and Japan has also proposed a labeling regulation for GMOs. EU consumers have suffered a sequence of food-borne diseases, the last of which was the "mad cow" disaster that shook the faith of EU consumers in their scientists to the core.

Environmentalists in the EU are convinced that the long-term effects of GMOs are unknown and cast doubt on EU scientific findings to the contrary. Treading warily, the EU Commission has instituted a lengthy and exhaustive regulatory system for approval of GMOs that has proven to be a barrier to the timely flow of traded goods. The EU's relatively prolonged approval of U.S. varieties of GM corn in 1998 led to a loss of around $200 million for U.S. exporters.[2] Currently, the SPS and TBT Agreements of the Uruguay Round provide guidelines for bilateral negotiations on developing regulations and labeling, but the Agreements may not be satisfactory to the EU, or other countries, to settle disputes in their current form because the agreements specify that regulations and labeling be science-based, which does not take into account religious and ethical beliefs of some people or other citizens who do not accept the judgement of scientists.

The Regulatory Issue

GMOs have been successfully and rapidly introduced into agriculture in the United States, in part because the U.S. regulatory system was prepared to treat these products like conventional products for risk assessment and safety purposes. In 1986, the U.S. government adopted a "Coordinated Framework" for regulating biotechnology-derived products in response to public and industry concerns about food and environmental safety and quality. This streamlined regulatory process was designed to ensure that all aspects of public safety were covered. Because of the "Coordinated Framework" approach, the United States has been able to regulate GMOs through existing legislation and regulatory agencies based on the principle that biotechnology-derived products are not fundamentally different from other products in terms of safety evaluation, therefore, existing regulations are appropriate and adequate. And only final products and their intended uses would be subject to regulation, not the method of production, although methods are regulated for worker and environmental safety.[3]

[1]Mary Lisa Madell is a trade policy analyst with the Animal and Plant Health Inspection Service (APHIS) of USDA.

[2]An estimate by the Foreign Agricultural Service of USDA.

[3]Caswell, Margriet F., Keith O. Fuglie, and Cassandra A. Klotz. Agricultural Biotechnology: An Economic Perspective. AER No. 687. ERS, USDA. May 1994.

In contrast, the EU has a separate regulatory system for GMOs, regulates both process and product, and its regulatory approval takes two to three times as long as the system in the United States. The United States was shut out of its traditional Spanish market for corn because the EU was unable to approve the U.S. Bt corn varieties in the time frame required. The same problem will likely occur in 1999 and in the foreseeable future if new U.S. GM varieties of corn enter export channels to the EU. The dispute will continue because it is not likely the EU will have approved any of the new varieties in time for U.S. imports and new varieties cannot be separated from varieties already approved without incurring significantly higher costs.

The Labeling Issue

Labeling is not required by the United States if the U.S. regulatory system finds that there is no fundamental difference between the GMO varieties and the non-GMO varieties. Labeling in the United States is only required if there is a significant difference between the conventional and the GM product. For example, if there is a significant difference in nutritional components, the label would indicate this difference—not that the product was produced through biotechnology.

The EU labeling requirement for GMOs does not have a scientific basis to require a label. The EU's own scientific committees agree that the GMOs currently imported are safe for consumption and the environment. The EU's stated justification is "to provide consumers with information that they want." Accurate labeling of products that contain GMOs at an appropriately specified threshold level will be technically difficult. Moreover, GMOs are inputs in a very large number of both food and feed products, making the labeling issue even more complicated. A label will likely be construed as "negative" by the consumer even though GMOs have been approved by scientific bodies. The EU's mandatory labeling requirement is opposed by the United States and by U.S. exporters to the EU because of the unsubstantiated scientific basis and impractical aspects of the legislation.

The WTO and Non-tariff Trade Barriers

GMOs were not a trade issue when the SPS and TBT Agreements were negotiated in 1994. How then might the rights and obligations of the SPS Agreement relate to trade in GMOs? One of the first things to consider is whether there are international standards applicable to GMOs. Under the SPS Agreement, if a country bases its measures on applicable international standards, those measures are presumed to be in compliance with the SPS Agreement. While countries are not obligated to adopt international standards as their own measures, they don't violate the SPS Agreement if their measures are based on an international standard. A country may choose to impose a measure that is not based on an international standard, even if it provides a higher level of protection, if there is a scientific justification.

Currently, there are no international standards that specifically govern GMOs nor is there a harmonization of regulatory approaches mandated, although the SPS and TBT Agreements have spurred counties to modify their regulatory systems. Also, the OECD is in the process of attempting to provide a process that will allow its member countries to harmonize their regulatory approaches for GMOs. The International Plant Protection Convention (IPPC) covers plant health and the environment but doesn't make any distinctions between traditionally developed products and GMOs.

There aren't any international standards for the length of time that a risk assessment takes, or for the regulatory process for adopting SPS measures, or for how much public comment is appropriate as part of the process. The recent problems over trade in GMOs with the EU have centered around its regulatory process, which has been criticized as being slow, cumbersome, insufficiently transparent, and subject to political manipulation. The SPS and TBT Agreements specify transparency of regulations as a requirement for approval systems but these transparency provisions have yet to be tested in an official dispute proceeding.

Labeling and Regulatory Processes Under the TBT and SPS Agreements

The TBT Agreement governs technical regulations and standards, including packaging, marking and labeling requirements, and procedures for the assessment of conformity. The disciplines of the both the SPS and TBT Agreements are designed to prevent technical regulations from creating unnecessary and arbitrary obstacles to international trade, and require that such regulations be no more restrictive than necessary. To date it has not been determined whether the EU's mandated labeling directive or its slow and non-transparent approval system for GMOs comprise technical regulations that create "unnecessary obstacles" to trade.

While regulatory systems and labeling requirements are to be based on science according to the SPS and TBT agreements, considerations such as religious and ethical convictions or lack of trust in science/scientists to justify labeling and the way regulatory bodies function may have to be addressed. At this point it remains to be seen whether further elaboration on the both TBT and SPS Agreements will have to take place to resolve these issues.

Improvements in WTO Dispute Settlement

While there has been much discussion about the improvement in the substantive rules governing trade in agricultural goods resulting from the Uruguay Round Agreement on Agriculture and Sanitary and Phytosanitary Measures (SPS), equally important to agricultural trade may be the Uruguay Round changes made to the multilateral dispute resolution process. The initial evidence indicates that the WTO dispute settlement system is a significant improvement over its GATT predecessor. However, the outstanding question for the WTO is no longer whether member countries have an effective means to vindicate their rights. It is whether members whose practices have been successfully challenged under the new and improved dispute settlement procedures will live up to their obligations. [Kevin J. Brosch, USDA Foreign Agricultural Service, e-mail: broschk@fas.usda.gov]

Uruguay Round Strengthened Weak GATT Rules on Agriculture

The Uruguay Round agriculture negotiation and the SPS negotiation—which originally began as the fourth element of the agricultural negotiating agenda—were intended to bring rules governing agricultural trade into line with those affecting trade in other forms of goods. The general perception was that GATT substantive rules, as applied to trade in agricultural goods, were much weaker than as applied to trade in other goods. In particular, GATT Article XVI.1, which concerned the use of domestic subsidies including any form of income or price support, was largely an entreaty, exhorting GATT member countries not to use domestic subsidies in a manner that caused serious harm to the interests of their trading partners. In reality, however, Article XVI did not contain effective disciplines to prevent misuse. The lack of any real discipline in Article XVI.1 was far more troublesome for agricultural trade than for trade in other goods for the simple reason that the use of domestic subsidies was far more prevalent in agricultural production than in any other sector of the world economy. Even more problematic, GATT Article XVI.2-5, which concerned the use of export subsidies and established a strict rule outlawing their use after 1958, contained an express exception for "primary products," a term that included all unprocessed agricultural products and some widely traded products at early stages of processing.

Pre-Uruguay Round rules were also weak with respect to market access for agricultural products. One of the three basic concepts underpinning the GATT (and now the WTO) system is the progressive liberalization of a tariff-only trading system—i.e., the "binding" and gradual reduction of duties through a series of negotiating "rounds." However, no GATT rules compelled any of its members to offer concessions on, or to bind, agricultural tariffs. In fact, prior to the Uruguay Round, relative to tariffs on industrial goods, few agricultural tariff lines were bound. Moreover, the rule designed to insure that the GATT remained a "tariff-only" system (Article XI, which forbade prohibitions or restrictions on imports other than duties, taxes, or charges) also contained significant exceptions for agriculture.

Finally, pre-Uruguay Round rules made it possible for countries to frustrate market access rules by imposing restrictions disguised as health barriers. The experience of the United States and other meat-exporting nations with the European Union's ban on imports of meat produced with hormones (when the EU's own medical experts had concluded that the meat posed no known health risk) made it apparent that even if the basic market access rules of the GATT were strengthened, protectionist countries could erect other nontariff barriers by claiming health justifications. A successful agricultural negotiation required, therefore, that acceptable parameters applying the general exception contained in GATT Article XX(b) (allowing deviation from GATT rules for measures "necessary to protect human, animal or plant life or health") be negotiated.

Pre-Uruguay Round Dispute Settlement System Emphasized Consensus over Adjudication

The Uruguay Round agriculture and SPS negotiations attempted to deal with—and in many ways successfully addressed—these patent deficiencies in substantive GATT rules. However, it will never be entirely clear whether the real problem of the GATT was the weakness of its substantive rules or the weakness of the GATT dispute settlement process in enforcing the obligations and vindicating the rights that did exist. And nowhere was the failure of the GATT dispute settlement system more apparent than in agriculture.

The GATT dispute settlement system was based entirely on GATT Article XXIII, under which any GATT contracting party that considered that any benefit accruing to it under

Settling Disputes in the WTO

Dispute settlement in the WTO follows this sequence of events:

Consultations: Members attempt to resolve their disputes through bilateral consultations.

Panel established: If the members have not resolved their dispute within 60 days, the complainant may request that the Dispute Settlement Body (DSB) establish a panel.

- Panel formation is automatic.
- Panel establishment should take 20-30 days.
- The panel is directed to examine the case referred by the DSB in light of the provisions of the GATT and to present findings on the case to the DSB that will help the DSB make its recommendations.
- The three panelists generally are chosen from among former representatives to the GATT or former government representatives that have extensive knowledge of trade matters.

Panel proceedings: Each panel follows several steps in formulating its findings.

- *Panel examination:* The panel meets with the parties and third countries to hear their presentation of facts and arguments.
- *Interim review stage:* The panel first sends the descriptive part of the report to the parties for comment. After a period of time determined by the panel, the panel sends an interim report consisting of both the descriptive sections and the panelists' findings and conclusions to the parties for comments.
- The panel first issues the report to the parties and then to the DSB.

Adoption of the panel report: The panel report must be adopted by the DSB within 60 days of its circulation to WTO members unless a party to the dispute appeals the report or the DSB decides by consensus not to adopt the panel report. A party may appeal a panel decision if it does not agree with an issue of the law or the panel's legal interpretation. A standing Appellate Body of seven individuals appointed by the DSB hears dispute panel appeals and makes recommendations to the DSB, which are incorporated in the final panel report. An appellate report is allowed up to an additional 30 days.

Implementation: The losing party to the dispute must submit its proposals for implementation of the panel report "within a reasonable period of time." If the losing party to the dispute does not promptly comply with the panel decision, it must negotiate with the complainant to determine a mutually acceptable compensation.

the agreement had been nullified or impaired, could refer the matter for investigation and ruling by the CONTRACTING PARTIES. (The term "CONTRACTING PARTIES" written in capital letters was meant to signify all of the GATT contracting parties acting together and by consensus).

The concept that a dispute between two parties over application of the GATT Agreement could be successfully resolved before a meeting of all GATT contracting parties was, of course, unrealistic. GATT negotiators apparently expected that Article XXIII would provide the broad framework for dispute settlement, but that detailed procedures would be worked out in negotiations of an International Trade Organization (ITO). When negotiations over the establishment of an ITO failed, the GATT system was left to proceed on the basis of the bare bones of Article XXIII. It did not take long for the GATT contracting parties to realize that the volume of unresolved disputes and the ungainly nature of an adjudicative process that, in theory, required judgment by all members and consensus decisionmaking necessitated some pragmatic refinements.

As a result, the GATT developed a system of adjudication by panels of judges chosen by the parties to the dispute through formalized procedures. Over the years, the GATT contracting parties issued a number of decisions and interpretations setting forth procedures for resolving disputes under Article XXIII. The first formal Decision on Procedures under Article XXIII (14S/18) was reached and agreed to on April 5, 1966. Subsequent decisions, understandings and declarations, were reached and issued in 1979, 1982, 1984, 1989 and 1994.

The essence of these various decisions was to establish a system whereby disputes between parties would be heard by a panel of three judges chosen by the parties. Despite the

numerous attempts to improve and fine-tune the system, however, GATT dispute settlement had some very fundamental flaws, most of which resulted from the premise that dispute settlement in the GATT was essentially a process of decisionmaking, rather than a more traditional process of adversarial adjudication. As Jackson noted in his writings on the GATT, Article XXIII reflects less the traditional judicial notion of adjudication of rights than the diplomatic notions of the necessity of consultation among contracting parties and the overall maintenance of "continued reciprocity and the balance of concessions in the light of possibly changing circumstances" (Jackson, 1969, pp. 169-170). This may reflect the fact that the initial GATT negotiations were focused far more on obtaining tariff concessions than on developing long-term trading rules.

Pre-Uruguay Round Dispute Settlement Frustrated the United States

In any case, Article XXIII and the procedures developed in its interpretation contained a number of deficiencies in the eyes of those who favored a more adjudicative dispute settlement model. Historically (and perhaps not surprisingly), the United States has been the most litigious member of the multilateral trading system. U.S. complainants, therefore, have been particularly frustrated by aspects of the GATT dispute settlement that effectively denied the United States its GATT "day in court." For example, under the old GATT system, any contracting party could "block" the creation of a panel by not agreeing to its formation. A single contracting party's ability to "block" panel formation was based on the notion that if one contracting party did not agree, consensus was destroyed.

Similarly, even where a panel had been formed and the parties had litigated the dispute before the panel, a single contracting party could "block" the adoption of the panel report, which gave the losing party the ability to veto an adverse ruling. Again, the underlying notion was that all GATT actions, even the adoption of a panel report, had to be done by consensus. There are, of course, no analogous rules in the laws of the GATT members themselves. National laws universally require defendants to respond to accusations, and no legal system permits a losing defendant to veto an adverse verdict. Nonetheless, this was GATT dispute settlement before the Uruguay Round.

Although it would seem evident that such a system could never prove satisfactory, there was a belief—perhaps "hope" is more appropriate—that "blocking" of panel formation or report adoption would not be a significant problem because contracting parties would exercise restraint and block only in rare and unusual circumstances. The reality, of course, is that "blocking" was a problem in any instance because it inherently undermined the confidence in a workable system by allowing one contracting party to frustrate another's attempt to vindicate the rights for which the latter had negotiated.

One other anomaly was that dispute panels were not necessarily obliged to make a decision. Panels could, if they wished, simply hold that they did not know how to interpret a particular provision of the GATT, or how to apply a particular provision in the circumstances presented. The panel could avoid holding whether the complainant was right or wrong in its assertion of rights and simply conclude that it could not decide. This, of course, seriously undermined confidence in the dispute settlement system and in the GATT agreements themselves.

Each weakness in the dispute settlement process contributed, over the years, to the impression that the GATT trading system did not deal effectively with problems in agricultural trade. The problem of "blocking" the formation of panels surfaced dramatically in the dispute between the United States and the European Union over the EU's measures affecting trade in beef produced with growth-promoting hormones. When the United States attempted to raise the EU's measures as GATT-illegal import restraints without scientific justification, the EU simply refused to allow a panel to be formed. The United States ultimately retaliated by placing its own restrictions on European tomatoes and other products, and blocked the EU's attempts to raise the retaliatory measures before a panel.

In other cases, e.g., in its challenge to EU Production Aids granted on Canned Fruit, the United States was successful in having a panel formed. However, when the panel concluded that the United States was entitled to compensation because the EU production aids "upset the competitive relationship between [EU canned fruit and imported canned fruit]," the EU refused to allow the panel report to be adopted.

Nearly as galling were the decisions of the GATT dispute panel in challenges brought against the EU's system of export subsidies for wheat flour and sugar. The challenge raised by Australia and Brazil was that the EU was using its subsidies to capture "more than an equitable share of world export trade" within the meaning of Article XVI. Despite the desire of the complainants to establish a clear standard for contracting parties' rights under this provision, the dispute panels engaged largely in ad hoc analysis without providing any greater light on the subject (WTO, 1995, pages 453-455). When the United States marshaled a challenge to the EU wheat flour subsidies in 1983, the panel effectively concluded that it could not determine what the phrase "equitable share" meant.

Uruguay Round Improves Dispute Settlement System

The new WTO Understanding on the Rules and Procedures Governing the Settlement of Disputes ("DSU") offers improvement in all three of these areas (see box "Settling Disputes in the WTO"). First, a contracting party may no longer block the formation of a panel because the rule

requiring consensus has, in effect, been stood on its head; Article 6 of the DSU now requires consensus to block panel formation. Article 6.1 states:

> "If a complaining party so requests, a panel shall be established at the latest at the DSB (Dispute Settlement Body) meeting following that at which the request first appears as an item on the DSB's agenda, unless at that meeting the DSB decides by consensus not to establish a panel."

This rule effectively makes dispute settlement automatic upon the filing of the complaint because, after all, there can be no consensus not to establish a panel without the complaining party. Thus, the new rule maintains the traditional GATT notion of consensus decisionmaking, but makes it meaningless in practice. The new "automatic" rule effectively marks a move from the consensus model to the litigious model.

Similarly, panel reports can no longer be blocked by a single party. Adoption of panel reports is now automatic within 60 days from when the report is circulated unless a party has appealed; and, in cases of appeal, automatic after the completion of the appeal process. DSU Article 16 marks an even further departure from the GATT consensus decisionmaking model as it does not even mention the word "consensus." It states simply that "the report shall be adopted."

Finally, the DSU makes it clear that the function of the panels is to decide, and not duck, difficult issues presented in disputes. Article 11 of the new DSU provides

> The functions of panels is to assist the DSB in discharging its responsibilities under this Understanding and the covered agreements. Accordingly, a panel should make an objective assessment of the facts of the case and the applicability of and conformity with the relevant covered agreements, and make such other findings as will assist the DSB in making recommendations or in giving the rulings provided for in the covered agreements.

Over the years, some of the most trenchant criticisms of the GATT trading system were those directed at the lack of automaticity in dispute settlement, and at the failure of GATT dispute panels to effectively address the issues presented. The new DSU appears to have effectively addressed these issues. The Beef Hormone Dispute between the United States and the European Union, a dispute that the EU had long avoided under the GATT dispute settlement system, has now been fully adjudicated through both the dispute panel and appellate processes. Similarly, the EU Banana Import case—a politically and diplomatically charged challenge to the EU's system of import preferences given to former European colonies—has been fully adjudicated. The adjudication of these cases, so politically charged in Europe, probably would have been blocked had it not been for the Uruguay Round improvements to dispute settlement.

Indeed, in the 3-1/2 years since the WTO Agreements have come into force, at least five important agricultural and SPS cases have been adjudicated before the WTO. In addition to the Hormone and Banana disputes, there have been challenges by Brazil to the EU market access for poultry; by Canada to Australia's restrictions on fresh salmon imports; and by the United States to Japan's requirements for varietal testing of quarantine treatments of certain fruits. In several cases, the parties have not only adjudicated their dispute before a panel, but have already raised the dispute to, and have received, appellate review. It is not an exaggeration to say that there have been significantly more agricultural-related disputes brought and adjudicated within the past 3-1/2 years than during any comparable period in the past.

Improved Dispute Settlement System Promotes Resolution of Disputes

Although it is impossible to judge, the more automatic dispute settlement system may also foster earlier and more satisfactory settlements of potential disputes. Since the WTO Agreements came into force, there have been satisfactory settlements of several potentially nettlesome trade disputes without having to resort to the formal dispute settlement process. Examples are the disputes over Hungarian export subsidies, Philippine pork and poultry tariff-rate quota (TRQ) administration, and Korean shelf life rules. While under the old GATT system, these types of agricultural disputes—involving, respectively, export subsidies, market access, and SPS issues—often dragged on for years. Each of these recent disputes was resolved in a relatively short time period, perhaps because of greater certainty of being brought before the court of world opinion.

Conclusion

It appears that the WTO dispute settlement system is a significant improvement over its GATT predecessor. But, of course, the WTO Agreements are, in the final analysis, agreements among sovereign nations and the enforcement of panel decisions depends ultimately on the willingness of member countries to play by the rules and to accept judgments, even adverse judgments, where disputes arise. The question for the WTO is no longer whether members have an effective means to vindicate their rights. It is whether members whose practices have been successfully challenged under the improved dispute settlement procedures will live up to their obligations. On this point, the jury is still out.

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Two of 32 Applicants for WTO Membership Successfully Complete Accession Negotiations

Any country or separate customs territory with full autonomy in formulating trade and economic policy can accede to the WTO under conditions negotiated by the acceding country and WTO members. Acceding countries benefit from acceptance into the WTO, which works to facilitate international cooperation concerning trade and economic relations. Acceding countries are required to reform their trade policies as well as make tariff concessions to WTO members, which also benefit the acceding country. Current WTO members will gain greater access to the markets of acceding countries, but also will face more diverse trading partners in the WTO. [Karen Z. Ackerman (ackerman@econ.ag.gov)]

Introduction

Article XII of the Marrakesh Agreement establishing the World Trade Organization (WTO) states that any country or separate customs territory with full autonomy in formulating trade and economic policy can accede to the WTO under conditions negotiated by the acceding country and WTO members. A country requesting WTO membership must submit to the WTO a Memorandum on its Foreign Trade Regime that details its trade policies as they relate to WTO rules. Interested WTO members form a working party to evaluate the policies of the applicant country. The working party requests additional information on existing policies and assesses commitments by the acceding country to liberalize its trade policies. Simultaneous with the working party review, bilateral negotiations are held between the acceding country and interested WTO members to identify areas where reforms are necessary and to establish specific market access commitments for imported goods and services.

After interested WTO members are satisfied that the applicant government's trade policies conform with the laws of the WTO and that the market access package is adequate, a protocol package is prepared that consists of the working party report and a draft of the Protocol of Accession—the terms of accession and a package of concessions. The accession package is then put to the full WTO membership for approval.

Accession to the WTO has become more complex because the WTO builds on its predecessor, the GATT, by incorporating the results of the Uruguay Round of trade negotiations, which strengthened existing rules and introduced new rules governing trade in services and intellectual property. Virtually all applicants will need to make some changes in their trade regimes to meet WTO requirements. This is particularly important for agriculture, where new disciplines on export subsidies, market access, domestic support, and sanitary and phytosanitary standards were established.

How Do Acceding Countries and WTO Members Benefit from the Accessions?

Countries that succeed in their accession will be admitted to an organization that "provide[s] a common institutional framework for the conduct of trade among its members..." (Article II of the Marrakesh Agreement Establishing the World Trade Organization). Upon entry into the WTO, the acceding countries will gain Most Favored Nation (MFN) status with all WTO members, access to the strengthened dispute settlement mechanism, and the ability to influence future WTO rules through negotiation. Many of the acceding countries already have MFN with their major trading partners, but entry into the WTO will ensure that larger countries can not arbitrarily exploit their market power to raise tariffs against smaller new members in response to internal protectionist pressures without due process and compensation (Hoekman and Kostecki, page 26). The strengthened WTO dispute settlement rules enable WTO members to obtain redress for trade complaints. The chief benefits, however, accrue from the gains from liberalized and more efficient trade practices, which promote lower costs and increase commerce and investment. Lastly, acceding countries will be able to negotiate improved access for their products in future trade rounds.

Once the acceding countries become WTO members, current members will have the right to question their trade practices in WTO committees and invoke WTO dispute settlement procedures when the acceding countries' trade practices do not conform with GATT rules. WTO members also are likely to benefit from increased access to the markets of the acceding countries as their economies become more open. For example, China's growing economy points to increased demand for many agricultural products, including meats, fruits, vegetables, dairy products, sugar, and tobacco (USDA, 1998).

Who Are the Current Applicants for Accession to the WTO?

Thirty-two countries are seeking accession to the WTO. They are Albania, Algeria, Andorra, Armenia, Azerbaijan, Belarus, Cambodia, the People's Republic of China, Croatia, Estonia, Georgia, Jordan, Kazakhstan, the Kyrgyz Republic, Lao People's Democratic Republic, Latvia, Lithuania, Former Yugoslav Republic of Macedonia, Moldova, Nepal, Sultanate of Oman, Russian Federation, Samoa, Saudi Arabia, Seychelles, Sudan, Chinese Taipei (Taiwan), Tonga, Ukraine, Uzbekistan, Vanuatu, and Vietnam. Neither Hong Kong nor Macao are included in China's application for accession since they were founding members. Hong Kong remained a separate WTO member after it became part of the People's Republic of China on July 1, 1997. Macao also will retain its WTO membership as a separate customs territory after sovereignty reverts to China on January 1, 1999.

On October 14, the WTO's General Council approved the protocols of accession for the Kyrgyz Republic and Latvia after the two countries successfully completed their accession negotiations this summer. The two countries will become full members of the WTO 30 days after they notify the WTO Secretariat that their governments have ratified their accession to the WTO. On July 17, the Kyrgyz Republic became the first new republic created from the former Soviet Union to have completed its accession negotiations. (Panama, Mongolia, Bulgaria and Ecuador also completed WTO accession negotiations in 1996 and 1997 and are all now WTO members.)

What Are Some Basic Characteristics of the Economies of the WTO Applicants?

Of the 32 acceding countries, almost half are Baltic countries and the New Independent States (NIS) of the former Soviet Union. Six Asian countries or economies also have sought membership in the world body, including China and Taiwan. Applicants from Africa and the Middle East include Algeria, Jordan, Oman, the Seychelles, and Saudi Arabia. Together the acceding country governments represented over 1.7 billion people in 1996, 70 percent from mainland China alone.

Many applicants hope to develop their economies through enhanced trade and investment, primarily of manufactured goods and services. Over half of the applicants had gross domestic products (GDP) of less than $20 billion in 1996. Agriculture contributes prominently to the economies of many of the smaller acceding countries, representing more than 40 percent of GDP in Albania, Armenia, Cambodia, the Kyrgyz Republic, Laos, Moldova, and Nepal. Even in the larger economies, agriculture remains important for food security and employment (table10).

Table 10--Top agricultural traders among the acceding countries, 1996

Country	Exports	Imports	Total
		$ million, f.o.b	
Algeria	71	2,350	2,421
China (mainland)	11,529	9,050	20,579
Russian Federation	1,652	9,702	11,354
Saudi Arabia	338	4,160	4,498
Taiwan	2,814	5,423	8,236
Ukraine	2,021	1,026	3,047
Uzbekistan	1,989	623	2,612
Vietnam	1,081	969	2,050

Source: U.N. Food and Agriculture Organization statistics.

If the acceding countries expand market access and make needed reforms to their trade regimes, accession will spur agricultural trade. Agricultural trade for the group of 32 WTO applicants totaled less than $70 billion in 1996, about two-thirds of 1996 U.S. agricultural trade. Almost half of the acceding countries' 1996 agricultural trade can be attributed to the largest traders—mainland China, the Russian Federation, and Taiwan. Negotiations to enhance the transparency of these countries' agricultural trade regimes is particularly important, since they and other major agricultural traders among the acceding countries are net importers of agricultural goods.

"Accession to the WTO requires full respect of WTO rules and disciplines…" (WTO Ministerial Declaration, May 25, 1998). To this end, the WTO membership generally requires the acceding countries to reform their economies and enhance the transparency of their trade regimes in accordance with WTO rules during the accession process. The two countries of the group of 32 that successfully completed their accession negotiations made substantial economic and trade reforms prior to accession.

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State Trading Enterprises in World Agricultural Trade

The URAA made significant progress in reducing countries' export subsidies and reforming the rules applying to agricultural trade, but highlighted the differences between government policies governing private trade and trade by government-supported enterprises. State trading continues to be important to the trade of staple agricultural commodities because many countries consider it an appropriate means to meet domestic agricultural policy objectives. Only a few agricultural state trading enterprises (STEs) have the potential to affect world trade, and reforms have eroded the powers of some of the most powerful STEs. However, continuing concerns about the trade practices of STEs in some WTO member countries and the potential accession of China and other countries seeking membership in the WTO will keep STEs on the WTO agenda. [Karen Z. Ackerman (ackerman@econ.ag.gov)]

Introduction

As early as 1947, the Contracting Parties of the General Agreement on Tariffs and Trade (GATT) recognized that state trading enterprises (STEs) could distort global trade. The 1947 GATT acknowledged STEs as legitimate participants in international trade, but established guidelines for their trading activities and exhorted GATT Contracting Parties to negotiate for reductions in the trade barriers established by STEs. In its "Understanding on the Interpretation of Article XVII" reached in the Uruguay Round, the WTO defines STEs as "governmental and nongovernmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through purchases or sales the level or direction of imports or exports."

The Uruguay Round Agreement on Agriculture (URAA) made significant progress in reducing countries' export subsidies and reforming the rules applying to agricultural trade, but highlighted the differences between government policies governing private trade and trade by government-supported enterprises. In the Uruguay Round, countries agreed to convert all nontariff barriers to bound tariffs, and thus to base agricultural protection on tariffs (see "Market Access Issues" article in this report). In countries where private trade is governed by a tariffs-only regime, import demand is restricted primarily by the level of tariffs. However, when an STE controls imports, purchase decisions may be based on political rather than commercial criteria, and may leave import demand unsatisfied (Josling, 1998). On the export side, improved disciplines on the use of export subsidies have made more apparent the difference between government export subsidies to commercial firms for export sales and trade by government-sponsored export monopolies.

The lack of transparency in the pricing and operational activities of STEs has caused some WTO members to express concern that other WTO members could use STEs to circumvent Uruguay Round commitments on export subsidies, market access, and domestic support. State trading also figures prominently as an issue for the WTO accession negotiations of China and other countries. The opacity of the trade regimes of some acceding countries where STEs play a large role in exporting or importing could mask export subsidies and import barriers.

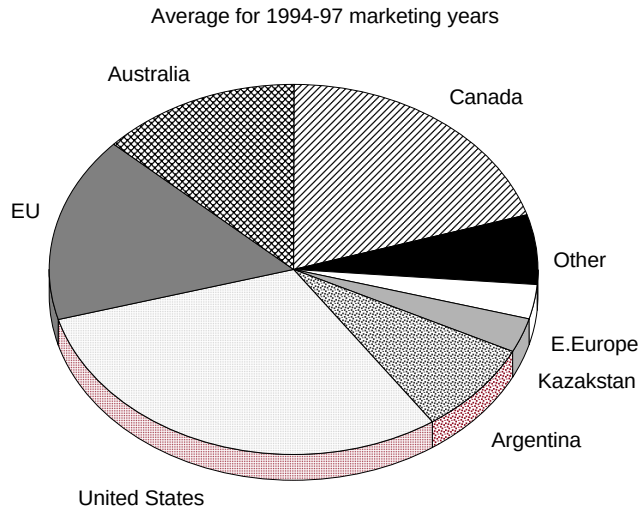
How Important Are State Trading Enterprises To World Agricultural Trade?

State trading is more important to agriculture than to other industries because many countries consider it an appropriate means to meet domestic agricultural policy objectives such as price support for farmers, economies of scale in procuring and marketing important agricultural products, or food security (WTO, 1995). STEs operate in a wide range of agricultural commodities, but have been most active in world trade in grains and dairy commodities (butter and milk powder).

STEs are prominent among wheat exporters and importers. In the 1994 through 1997 wheat marketing years, 33 percent of wheat exports were handled by two large STEs—the Australian and Canadian Wheat Boards (figure 7). Other large wheat exporters, the United States and the EU, also maintain government institutions that subsidize private traders' exports (although the United States has not used EEP to subsidize wheat exports since 1995). Private firms dominate Kazakhstan's wheat exports with 90 percent of the market, but Kazakhstan's State Food Contract Corporation, an STE, handles the remaining 10 percent. Exporter STEs in Poland and other Central European countries also co-exist with private firms.

During 1994-1997, STE imports accounted for between one-third and one-half of global wheat imports. China and Japan import wheat through monopoly agencies, while STEs in Egypt, Pakistan, and others co-exist with private traders. Indonesia's BULOG (*Badan Urusan Logistik*)

Figure 7
Major Exporters' Shares of the World Wheat Maket



opened trade in wheat to private traders in 1998, following in the footsteps of Israel, Mexico, the Republic of South Korea, Morocco, the Philippines and others who opened their wheat imports to the private sector in the 1980s and 1990s. Algeria also is beginning to allow private traders to import some wheat.

STEs account for about half of world rice exports and nearly a third of rice imports. Private traders export rice from the largest rice exporting country, Thailand, but rice exports from Vietnam, the second largest rice exporting nation in 1998, are controlled by the government through export licenses to state companies. Australia and China also use STEs to export their rice. Imports by Indonesia's BULOG accounted for 13 percent of world rice imports from 1994 through 1998, followed by the Philippines' National Food Authority with 5 percent, and China's National Cereals, Oil and Foodstuffs Import and Export Corporation (COFCO) with 4 percent. STEs in Japan and the Republic of South Korea, North Korea and Malaysia also import rice.

The chief export state trader in dairy products, the New Zealand Dairy Board, handles about 30 percent of world dairy product exports. Smaller dairy STE exporters handle some, but not all of their countries' exports and include the Australian Dairy Corporation, the Canadian Dairy Commission, and the Polish Agricultural Marketing Agency. Mexico's Compania Nacional de Subsistencias Populares (CONASUPO), also an STE, used to dominate imports of milk powder with about 35 percent of global nonfat dry milk imports. In 1998, the Mexican government granted import licenses for 27,000 tons of milk powder (about one-quarter of Mexico's milk powder imports this year) to a large multinational firm with a processing plant in the Mexican state of Chiapas.

State Trading Enterprises in the GATT

GATT Article XVII recognizes STEs as legal enterprises, but requires that they not discriminate among importers or exporters when they make purchases or sales and that STEs act "in accordance with commercial considerations." Countries must report information about their STEs to the GATT (now, the WTO). Recognizing that STEs might be operated to create trade barriers, the GATT advocates negotiation between countries to reduce or limit obstacles to trade created by STEs.

The Understanding on Article XVII in the 1994 Uruguay Round Agreement established a working definition of STEs, stronger notification requirements, and a working party under the Council for Trade in Goods to review countries' notifications and revise the 1960 questionnaire for countries' reports to the GATT of their STEs. The revised questionnaire was approved in 1998.

Specific STE activities are subject to other GATT laws. For example, Article 4 of the 1994 GATT Agreement on Agriculture prohibits countries from using import restrictions imposed by state trading enterprises.

What Are the Major Concerns about State Trading Enterprises?

The fundamental concern with activities of STEs is that such entities have been granted exclusive or special rights or privileges which contribute to distortions in international agricultural trade. Critics of state trading argue that STEs lack of price transparency could be used to mask export subsidies and import tariffs. It also is argued that statutory authorities provide STEs with opportunities unavailable to commercial firms that compete against them.

STEs may have exclusive rights to purchase and sell particular commodities destined for the domestic or export markets. They might use this statutory power to act as a monopsonist/monopolist, offering producers lower prices than those available in the world market and/or charging consumers higher prices than those prevailing in the international market. The added returns or profits that would be available from the domestic market could be used by STE exporters to subsidize foreign sales of one or more commodities in which they have monopsony or monopoly rights. WTO member countries that use STEs to practice this type of price discrimination have the potential to circumvent their export subsidy commitments. In addition, returns garnered from these statutory authorities typically are not available to commercial firms that have to compete against STEs in the international market.

STEs may engage in the practice of price pooling where the final price paid to producers is a blended price based on net revenue of all sales in foreign and domestic markets. Price pooling, designed essentially to minimize price and income risks to producers, may allow STEs to pay producers the same return regardless of the time of delivery during the marketing year. This provision provides STEs greater flexibility in discretionary pricing in the international market (through delayed payments to domestic producers), an arrangement not available to private exporters who have to compete with other domestic sellers in acquiring exportable products.

State trading may violate the tariffs-only principle enshrined in the GATT and extended to agricultural trade in the Uruguay Round. Because most state trading importers have exclusive rights to purchase and sell particular commodities, it is difficult to determine whether purchases—both domestic and imports—are being restricted because of lack of demand or because of a specific governmental policy such as domestic protection, control of foreign exchange regime, or revenue generation.

Other privileges granted to STEs may restrict trade or competition. STEs may control the grades and standards of imported products. Such control can lead to discriminatory treatment against goods of certain national origin, impeding the free flow of goods. Governments may give STEs preferential exchange rates for imports. This discourages competition and puts private importers at a distinct disadvantage. STEs are occasionally allowed to keep over-quota tariff revenues or resale price differentials. STEs can use revenue from such sources to subsidize other aspects of their operations to the disadvantage of private entrepreneurs.

Governments can provide various facilities to STEs that are not available to private firms. For instance, underwriting of producer payments by the government may allow state traders to undertake pricing risks beyond what a commercial enterprise would do. Similarly, STEs are also known to enjoy government benefits such as tax breaks, transport subsidies, preferential rates on utilities, and capital expansion funds that may, over the long run, provide STEs with a competitive edge vis-a-vis commercial traders and distort the world trading system.

STEs have greater potential to affect the quantities and pricing of their imports or exports if they:

—control both domestic marketing and foreign trade (exports for net exporters or imports for net importers);

—control trade in several products that may be substitutes or complements;

—administer domestic procurement and pricing policies or trade policies or receive benefits from these policies that are not awarded to private firms;

—receive financial benefits from the government, including government funding, underwriting, access to foreign exchange at preferential interest rates, or tax breaks.

Few Large STEs Control Their Countries' Domestic Market and Trade

Four export state traders and four import-oriented STEs were chosen from among the STEs that countries notified to the WTO and from other information. Each STE's potential to affect trade was evaluated based on its control of domestic markets and trade, government benefits, and policies (table 11).

Only a few of the eight major STEs have the potential to affect global agricultural trade, although all maintain some discretion over their countries' imports or exports. The Australian Wheat Board (AWB), and New Zealand Dairy Board (NZDB) control almost all exports of their respective commodities, but must compete with other firms to procure and sell production in their respective home markets. Australia's Queensland Sugar Corporation (QSC) procures all Queensland production of raw sugar which it markets to refineries and is the sole exporter of Queensland raw sugar (almost all Australian raw sugar exports). The QSC does not market refined sugar in Australia. The Canadian Wheat Board (CWB) has a virtual monopsony on domestic procurement and controls the marketing of Canadian wheat and barley for human consumption at home and in export markets. Government underwriting of the operations allow the AWB and CWB to take price risks in international markets that are not available to private firms. However, the Australian government's underwriting of the AWB's initial payments to its growers will end in July 1999.

Internal calls for competition may reduce some of the powers of STE exporters. The Australian Wheat Board (AWB) will be restructured as a private corporation and will need to seek funding in international financial markets, while maintaining its exclusive export authority. New Zealand dairy producers are protesting vigorously the New Zealand government's intention to end the exclusive export authorities enjoyed by the New Zealand Dairy Board and other export boards in 3 to 5 years.

All four of the import-oriented STEs control some of their countries' imports of their respective commodities. The Japan Food Agency is the exclusive importer of most wheat and barley under Japan's tariff-rate quotas (TRQs) for those commodities and of rice under Japan's minimum access commitment for rice. CONASUPO garners almost all of the import licenses allocated under Mexico's milk powder TRQ, although, for the first time in 1998, the Mexican government issued import licenses for almost one-fifth of Mexico's milk powder imports to a private multinational company. Korea's Livestock Products Marketing Organization (LPMO) was allocated only 40 percent of Korea's beef

Table 11--Classifying eight major agricultural state trading enterprises 1/

STE	Commodities	Domestic market control	Control of trade	Government finance
NET EXPORTERS				
Australian Wheat Board	Wheat	None	Export monopoly -no control over imports	Gov't underwrites initial payments to growers till July 1999
Canadian Wheat Board	Western Canadian wheat and barley for human consumption	Sole marketer of domestic production	Export monopoly, but licenses small amounts of exports by other provinces -no control over imports	Government underwrites CWB operations
New Zealand Dairy Board	Dairy products	None	Export monopoly -no control over imports	No government financing
Queensland Sugar Corporation, Australia	Raw sugar	No exclusive authority, but sells Queensland raw sugar to refineries.	Export monopoly for Queensland, but other provinces export small amounts of sugar -import tariff was eliminated in July 1997	No government financing
NET IMPORTERS				
Japan Food Agency	Wheat, barley, rice	Markets imported commodities.	Import monopolies on wheat for human consumption under the TRQ, almost all rice, and barley under the TRQ	Government agency fully financed by the government
Indonesia's Badan Urusan Logistik or BULOG	Garlic, rice, soybeans, sugar, wheat, wheat flour	Controlled the distribution of imported commodities to processors and retailers through restrictive licensing. Procured rice for national stocks. Maintained administered price systems for wheat flour and sugar.	BULOG's import monopolies for wheat, flour, soybeans, and sugar were terminated in 1998. BULOG first purchased rice through an open import tender in September 1998, but it is unclear whether the private sector will pick up BULOG's rice trading and procurement activities.	Government agency fully financed by the government
Livestock Products Marketing Organization (LPMO), South Korea	Beef	None	The LPMO purchased 90% of Korea's beef imports in 1993, 84% in 1994, and an estimated 70% in 1995. For 1998, the private sector was allocated 60% of Korea's beef import quota, but indications are that the private sector allocation will not be met.	Government corporation fully financed by the government
Compania Nacional de Subsistencias Populares (CONASUPO), Mexico	Milk powder	Resells imported milk powder to commercial firms and to a government affiliate.	Imported almost all milk powder under Mexico's milk powder TRQ until 1998, when a private firm was granted licenses for almost one fourth of Mexico's milk powder imports.	Government agency financed by the government

1/ Based on information submitted in countries' WTO notifications, Japan and Korea trade statistics, United Nations Food and Agriculture Organization statistics, and USDA Foreign Agricultural Service post reports.

import quota in 1998, although indications are that the LPMO may be the largest Korean beef importer this year.

Import STEs increasingly are being dismantled as governments respond to pressures to reform their economies. Indonesia's BULOG controlled both domestic and import markets for several agricultural commodities until 1998 when the Indonesian government ended BULOG's import monopolies on all commodities. It is not clear whether BULOG will be the exclusive rice importer for Indonesia in the future, although the agency is continuing to negotiate with foreign suppliers to import rice.

Until recently, BULOG imported rice, wheat, wheat flour, soybeans and sugar through the licensing of private firms who acted as its agents; procured less than 10 percent of domestic rice production for government stocks; maintained storage facilities; maintained administered price systems for wheat flour and sugar; and allocated imported commodities to processors and retailers. Private firms have been slow to pick up BULOG's business because of weak domestic demand. They also have been unable to obtain import letters of credit and, for a time, were unable to compete with BULOG's subsidized prices for some commodities.

In a less dramatic example, the Japan Ministry of Agriculture and Foreign Affairs' May 1998 announcement to allow private firms to import feed wheat stems from its decision to abolish a special program that produced bran for the domestic feed industry. Japan has not announced any plans to allow competition for imports of food wheat or barley within its TRQs, but plans to eliminate the Food Agency's monopoly over imports of domestically produced wheat.

State Trading in Acceding Countries

The lack of transparency in the pricing and trade practices of STEs in countries seeking WTO membership will continue to absorb the attention of trade negotiators. Of particular concern to WTO members is state trading in China, the largest country seeking accession to the WTO. Chinese provincial governments control domestic grain markets and, in conjunction with the national government, determine trade quantities. China's national and provincial governments employ super-STEs like COFCO and China National Textiles Import and Export Corporation (Chinatex) to conduct their trade in grains and cotton (table 12). China's changing grain policies and state control make it difficult to determine whether its state agencies are using export subsidies to facilitate exports of rice and corn.

Governments in other acceding countries engage in state trading of only a few agricultural commodities. National and regional governments in Russia and the Ukraine control domestic procurement and the interregional movement of grain in their countries. Saudi Arabia continues to control imports of barley through an STE, and Algeria imports wheat and dairy products through state agencies. The Vietnamese government also controls exports of rice.

Table 12--China's agricultural state trading enterprises

STE	Commodity	Average export/ import value, 1993-95
Exports:		$ million
COFCO	Corn 1/	704
COFCO, other SOE's 2/	Sugar	368
Native Products and Animal Byproducts Company	Tea	308
COFCO	Rice	261
Imports:		
COFCO	Wheat	1,268
COFCO, other SOE's	Vegetable oils	1,140
Chinatex 3/	Cotton	758
COFCO	Corn	272
COFCO	Rice	203

1/ Most of China's 1993-95 corn exports took place in 1995. 2/ COFCO is the China National Cereals, Oil and Foodstuffs Import and Export Corporation. SOE's are state-owned enterprises. 3/ China's State Council issues import licenses to firms other than Chinatex during periods of scarce cotton supplies.

Sources: USDA, ERS and USDA, FAS information about China's agricultural marketing institutions. Trade data come from the U.N. Food and Agriculture Organization.

Conclusions

The GATT, and now the WTO, recognized the trade distortions that can occur as the result of state trading. The two principal concerns that the WTO has regarding State Trading Enterprises (STEs) are the following: (1) the exclusive rights granted to STEs allow them to engage in non-competitive behavior that contributes to trade distortions; and (2) the lack of transparency in STEs' pricing or operations could conceal violations of countries' WTO obligations and commitments. As the WTO moves towards tariffs as the only agricultural trade policy available to countries, WTO members may need to improve the discipline on non-competitive behavior practiced by STEs. Only a few of the major agricultural STEs examined have the potential to significantly affect world trade, and reform has begun to erode the powers of some of the most powerful STEs. Concerns about the trade practices of STEs in some WTO member countries and the potential accession of China and other countries seeking membership in the WTO will keep STEs on the WTO agenda.

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Developing Countries' Issues in the WTO Related to Agriculture

Developing and less-developed countries have special interests (special and differential treatment, export restraints, price stability, food security, food aid, and stock policies) in relation to the WTO in the next round of negotiations, in addition to being concerned with the fundamental WTO policy issues of market access, domestic support, and export competition. As these developing and less-developed countries identify their positions, coalitions of countries with common trade interests may emerge. [Constanza Valdes (cvpecc@telcel.net.ve) and Edwin Young (ceyoung@econ.ag.gov)]

The URAA established a new set of multilateral rules and disciplines for agricultural trade and domestic interventions. It also recognizes that the ability to meet these obligations varies widely from one country to another, providing for less restrictive disciplines for DCs.[1]

During the URAA negotiations many of the DCs viewed liberalization of world agricultural markets as a threat to their economic well-being and food security. Thus, they sought and were given special treatment that either exempted or gave longer phase-in periods for reforming policies and opening markets. The URAA maintained principles from earlier negotiating rounds of *Special and Differential Treatment (SDT)* for DCs. These principles are contained in all of the WTO Agreements (see box, "Special and Differential Treatment in the URAA").

DCs and the Next Round

The major areas in the past negotiations (market access, domestic support, and export subsidies) are topics of concern to all WTO members (see other articles in this report for a discussion of the general WTO concerns). For DCs a key issue for agricultural negotiations at the next WTO agricultural round is whether they will continue to receive "special and differential treatment" and if they do, what form it will take. Implementation of existing commitments will continue until 2004 for DCs, whereas the industrialized countries will have to make their last cuts of tariffs and subsidies in the year 2000.

Preferential access, initially introduced in 1965, encourages industrial countries to assist DCs in their trading conditions and not to expect reciprocity for concessions made to DCs. A second measure, agreed to at the end of the Tokyo Round in 1979, provides a permanent legal basis for the market access concessions made by the developed to the developing countries under the generalized system of preferences (GSP). Under such preferential schemes, beneficiaries obtain market access through zero tariffs or lower tariff rates on certain products and quota allocations.

It is difficult to distinguish a separate DC position on many issues since individual country interests are diverse. As DCs identify their negotiating positions for the next round, they will be looking for coalitions of countries with common trade interests. The individual interests of DCs in the negotiations will vary depending on whether a country is a net food and raw material exporter, a net food and raw material importer, or a country that is concerned primarily with food self-sufficiency. The interests will also depend on whether a country is a producer of primary agricultural commodities or processed foods. Many DCs will stress how agricultural trade liberalization has different economic effects on developed countries compared to DCs, and they will try to ensure that new multilateral rules will reinforce the DCs' development policies. The form that any continuation of special and differential treatment takes will be important to the success of any new agreement. However, the types of concessions granted to DCs could slow the economic development and transition to free market economies in these countries.

Encouraging Development and Economic Reform

Over three-quarters of WTO members are developing countries and countries in the process of economic reform from non-market systems. As a consequence, the URAA paid much attention to the special needs and problems of developing and transition economies.

Since the mid-1980s, many countries have been implementing trade liberalization programs. The transition from protectionist to increasingly market-oriented domestic and trade policies, as well as improved investment conditions in many DCs, stemmed from multilateral (as part of their accession negotiations to GATT) and unilateral reforms. The substantial cuts in protection brought on by the Uruguay Round are estimated to lead to gains ranging from $55 billion to $90 billion (or 1.2 to 2.0 percent of GDP) in DCs, while the

[1]Countries self designated their classification as developed, developing and least-developed. In this paper DCs include all WTO member countries except European transition economies (except for Romania), Japan, Australia, New Zealand, and South Africa and the countries in North America, the EU, and EFTA.

Special and Differential Treatment in the URAA

Developing countries' reduction commitments are generally two-thirds those for developed countries and implementation periods are longer: 10 versus 6 years. Least-developed countries are not required to undertake across the board reduction commitments, but tariffs and domestic support are bound at base levels. Other exempt policies include certain input and investment subsidies to agriculture, as well as stocks held for food security purposes.

Market Access

- In allocating tariff-rate quotas (TRQs), special consideration can be given to the particular needs of developing country exporters.
- Exemptions in reduction commitments for market access are provided for certain products deemed of importance to food security.
- Developed countries agreed to provide better terms of access for agricultural products important to developing countries. The terms include greater liberalization of trade in tropical agricultural products to help developing countries shift production out of illicit crops.

Domestic Support

- Least developed countries are granted additional exemptions, including delayed applications of the provisions and more time for notification on domestic support (only every 2 years).
- For the non-commodity specific AMS provisions, the *de minimis* exclusion is 10 percent of the total value of agricultural output for DCs (versus 5 per cent for other countries).
- Domestic support to encourage diversification from growing illicit narcotic crops is exempted from inclusion in the DCs' calculation of AMS.
- DCs are permitted additional green box flexibility for programs to store foodstuffs and sell at subsidized prices to the rural and urban poor and to provide general investment subsidies to agriculture.

Export Support

- DCs are permitted to provide subsidies to reduce export marketing costs, and to provide internal and international transportation subsidies for agricultural exports.
- Differential treatment is provided for agricultural export credits.

gains to the world as a whole are in the order of $200 billion *(Martin and Winters)*. With the URAA, DCs agreed to take on their required obligations. They were, however, given longer transition periods to adjust to the more difficult WTO provisions. In addition, a Ministerial decision on measures in favor of least developed countries provides extra flexibility to those countries in implementing WTO agreements, calls for an acceleration in the implementation of market access concessions affecting goods of export interest to those countries, and seeks increased technical assistance for them.

Market Access

The process of agricultural sector reform has been reflected in reductions of overall tariff rates, export subsidies and domestic support programs. Developing countries that did not have tariff bindings before the Uruguay Round only had to bind those tariffs, they did not have to reduce them. Currently, the average applied tariff in DCs varies between 10 and 20 percent, considerably lower than the 20 and 60 percent range of a decade ago. Tariffs applied to foodstuffs are very close to general tariffs *(CEPAL, December 1997)*.

DCs have widely divergent goals concerning market access and creating a more favorable trade environment for their agricultural products. The negotiating position of many exporting DCs with competitive agricultural sectors will be similar to that of the Cairns Group, of which several DCs are members. These countries will seek progressive universal reduction of trade barriers and tariff-rate reduction formulas. Other exporting DCs with less competitive sectors will focus efforts on maintaining preferential market access, although most exporting DCs expect to increase exports as tariffs are reduced. For the least-developed countries, the principal problem is not market access, but lack of production capacity to achieve new trading opportunities.

From a commodity standpoint, an important issue for DCs arises from implementation of the URAA, that is likely to

continue into the next round, is gains in market access in developed economies for their agricultural exports, particularly sugar, bananas, beef, citrus fruits, and horticultural products (fresh and semi-processed). In the URAA, developed countries provided greater than average reductions on tariffs of particular products of interest to DCs (a 37-percent reduction on all agricultural products compared with a 43-percent reduction for tropical products). Developing country exports have grown by more than 90 percent since 1986. In addition, developing countries' share of world agricultural trade increased from 40.0 percent in 1990 to 41.6 percent in 1996.

A recent UNCTAD/WTO study on tariff peaks and escalations indicates that post-URAA tariff peaks (that is, rates above 12 percent) are concentrated in the agricultural sector (EU-87 percent, Japan-80 percent, US-36 percent, and Canada-28 percent). The highest frequency and the highest rates appear for sugar, tobacco, cotton, and prepared fruits and vegetables—all products of interest to DC exporters. Also, eliminating steep tariff escalation[2] in these products will stimulate processing in the developing countries. Exporting countries, including DCs, will not only push for reduction of "peak rates" and "tariff escalation." Many will favor continued tariff reductions in both developing and in developed economies.

Developed countries maintained their General System of Preferences or GSP scheme for DCs. Several agricultural products of significant interest to DCs (e.g. sugar, bananas, beef, and other commodities) are covered by preferential arrangements. Increasing the number of preferential arrangements means more beneficiaries and more competition for preferential markets, resulting in a more efficient distribution of trade, and benefiting lower cost exporters at the expense of higher cost suppliers.

DCs might seek to increase the tariff quota quantities of developed countries and to introduce alternative mechanisms to provide DCs (currently under the GSP) with enhanced access to the allocation of minimum access quotas. Also, they may seek to create clearer guidelines on the allocation procedures for import licenses.

Importing DCs are concerned with the impacts of free trade on domestic producers and on food supplies. Some importing DCs, especially in Latin America, have been adjusting applied tariff rates as a means of regulating imports and stabilizing domestic prices. This was done in Argentina and Mexico at the end of 1994 in response to foreign exchange constraints, and for Brazil in an effort to limit the growth of its trade deficit *(CEPAL, November 1997)*.

[2]The situation where zero or low tariffs are applied to the imports of primary commodities, with tariffs increasing or escalating as the product undergoes increased processing.

Export Subsidies

Twenty-five WTO members, of which 10 are DCs,[3] committed to reduce their export subsidies. DCs do not have a unified position on export subsidy reductions. Since export subsidies reduce world commodity prices, exporting DCs who compete with export subsidies favor the reductions. Even when countries are not competing directly in subsidized markets, displacement of exports from third countries affects world price levels. Since export subsidies lower food prices, importing countries will face higher import costs if subsidies are reduced. Consequently, these DCs may oppose subsidy reductions or require a stronger commitment of food aid and trade credit. However, importing DCs need to recognize, as many already do, that subsidized imports reduce incentives for domestic production.

Most DCs Provide Limited Domestic Support To Agriculture

Prior to the Uruguay Round, the agricultural sectors in DCs received very little government support (and in many cases agriculture was taxed rather than subsidized) due, in part, to exchange-rate overvaluation, budgetary constraints, and the lack of administrative infrastructure to provide the subsidies. In addition, many DCs, principally in Latin America, implemented structural adjustment programs (SAPs) in conjunction with the World Bank and IMF loans. The SAPs involved substantial trade liberalization accompanied by fiscal and monetary austerity and devaluation measures. As a result, many DCs had very low or zero aggregate measures of support (AMS) in the 1986-88 base period. Of the approximately 60 percent of WTO member who reported base AMSs of zero, all are DCs.

A low or zero AMS distinguishes most DCs from most industrial countries. The special and differential treatment for DCs (the 10 per cent *de minimis* and the green box) give most DCs wide scope to support their agricultural sectors with minimal impacts on trade. Of the 42 developing countries' WTO domestic support notifications for 1995 and 1996 (as of May 1998), 12 notifications show recourse to the *de minimis* provision. During the next agricultural negotiations, DCs might seek to add a clause to the domestic support reduction commitment that would allow for greater flexibility to increase income support if the need arises. All countries, including DCs, are free to provide decoupled income support, which falls under the green box.

Food Security, Domestic Food Aid, and Price Variability

The likely impacts of the URAA on the level and stability of market prices raised food security concerns among food importing DCs, but also among some developed countries

[3]DCs with export subsidy commitments include: Brazil, Colombia, Cyprus, Indonesia, Israel, Panama, Romania, Turkey, Uruguay, and Venezuela.

such as Japan. While in the long run trade will raise national income (and thus improve food security), in the short run, the low-income food-deficit countries are concerned that more liberal world agricultural markets will lead to higher import prices or reduce their food aid and reduce food security. The concerns of food importing DCs are addressed in the Marrakesh Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Program on Least-Developed and Net-Food Importing Countries (NFIC),[4] which includes mechanisms to monitor food aid under the Food Aid Convention and to ensure a sufficient level of food aid in grant form and/or concessional terms.

DCs are concerned with both the level and variability of prices. In the past, several food importing DCs benefited from exporter subsidies. With reductions in subsidies, these food importing DCs must pay higher prices for commodities. In a summary of various modeling efforts assessing the impacts of the URAA on world market prices, Sharma, Konandreas, and Greenfield found expected price increases of between 4 and 7 percent. Prices for rice, wheat, sugar, and corn were forecast to increase, having a negative impact on net DC importers. However, prices for coffee, cocoa, and bananas were expected to decline because of the URAA, to the detriment of net DC exporters. However, with more countries participating in trade in larger amounts and in more transparent and price responsive ways, a given shock in supply should be accompanied by smaller price changes (Collins and Glauber). Food products should move from areas of relative surplus to areas with food deficits.

There is growing concern among net food importing DCs about the impact of reduced food aid availability resulting from a reduction of surplus stocks and the higher prices. FAO estimated that in the year 2000, the food import bill of the low-income food-deficit countries will reach US$9.8 billion and 14 percent of this increase would stem from the Uruguay Round *(FAO, 1994)*. The Marrakesh Decision also calls for donor aid programs to provide technical assistance to LDCs and NFICs that need to improve their agricultural productivity and infrastructure, and possibly short-term assistance to help finance normal commercial imports. To date, eight DCs report using special and differential provisions for public stockholding for food security purposes while six countries are providing foodstuffs at subsidized prices to meet food requirement needs for poor households.

Sanitary and Phytosanitary (SPS) Measures

Recognizing that developing countries may encounter difficulties in complying with the SPS measures of importing countries, the Agreement on Sanitary and Phytosanitary Measures (SPS) included, for the benefit of DCs, provisions on equivalence in the SPS measures, the provision of technical assistance, longer time frames for compliance, and delayed application of the provisions.

The SPS measures of major importer countries are becoming increasingly complex, and in some cases require a level of technology not yet widely available to developing country exporters. For example, testing laboratories may not have the personnel or equipment necessary to do basic testing for product certification.

The WTO, in cooperation with other international organizations, provides technical assistance in the form of regional and national seminars on the SPS agreement to DCs. Currently, technical assistance is being provided to DCs in the areas of processing technologies, research and infrastructure, and in the establishment of national regulatory agencies to allow DCs to comply with SPS measures, so that developing countries may meet the appropriate level of SPS protection required by developed country importers. DC exporters will remain concerned that SPS barriers do limit their export opportunities.

Conclusions

Continuation of the reform process, further progressive reductions of protection and support, and liberalization of agricultural trade started at the URAA, are of major importance not just for DCs but for all WTO members. A key concern to many DCs is continuation of special and differential treatment for developing countries given in the URAA with respect to their development needs. To fully enjoy the benefits of world trade liberalization, DCs need to bargain at the next round for access to developed countries' markets for their agricultural exports. DCs may also bargain for technical and economic assistance to help them speed the reform of their domestic and trade policies.

Despite URAA achievements to date, distortions affecting DC agricultural trade persist. Tariffs and other nontariff barriers, as well as export subsidies, continue to distort world agricultural markets. Domestic support disciplines have permitted high support levels to continue for the more sensitive commodities. Rules regarding the use of export credit, food aid, and other forms of marketing assistance for exports remain unresolved. Also, some agricultural products of interest to DCs have remained largely outside the liberalization process and remain highly protected—dairy products, sugar, peanuts.

It is unlikely that at the forthcoming worldwide agricultural trade negotiations a unanimous DC coalition will emerge. As DCs identify their negotiating positions for the next round they will be looking for coalitions of countries with common trade interests. Strong coalitions will likely be able to affect the direction of the negotiations.

[4]Net-food importing countries (NFICs) comprise the 48 least-developed countries as defined by the United Nations and 18 developing countries.

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Agreement on Agriculture. Part of the Uruguay Round agreement covering three major areas related to agriculture: market access, export subsidies, and internal support. The Agreement on Agriculture is one of the 29 individual legal texts included under an umbrella agreement establishing the WTO. The agreement is implemented over a 6-year period, 1995-2000.

Aggregate Measure of Support. An index that measures the monetary value of the extent of government support to a sector. The AMS, as defined in the Agreement on Agriculture, includes both budgetary outlays as well as revenue transfers from consumers to producers as a result of policies that distort market prices. The AMS includes actual or calculated amounts of direct payments to producers (such as deficiency payments), input subsidies (on irrigation water, for example), the estimated value of revenue transferred from consumers to producers as a result of policies that distort market prices (market price supports), and interest subsidies on commodity loan programs.

Articles (of the GATT). Clauses of the General Agreement that lay out the rules and procedures that Contracting Parties will observe in their conduct of international trade and trade policy. Each of the 38 Articles in the GATT deals with a different aspect of trade.

Blue Box Policies. A popular expression to represent the set of provisions in the Agreement on Agriculture that exempts from reduction commitments those payments from production-limiting programs, such as diversion payments on set-aside land.

Bound tariff rates, Tariff "binding". Tariff rates resulting from GATT/WTO negotiations or accessions that are incorporated as part of a country's schedule of concessions. Bound rates are enforceable under Article II of GATT. If a WTO member raises a tariff above the bound rate, the affected countries have the right to retaliate against an equivalent value of the offending country's exports or receive compensation, usually in the form of reduced tariffs on other products they export to the offending country.

Cairns Group. An informal association of 15 agricultural exporting countries, formed in 1986 at Cairns, Australia. The Cairns Group was a strong coalition in the Uruguay Round of multilateral trade negotiations, seeking removal of trade barriers and substantial reductions in subsidies affecting agricultural trade. Cairns Group members are Argentina, Australia, Brazil, Canada, Chile, Colombia, Fiji, Indonesia, Malaysia, New Zealand, Paraguay, the Philippines, South Africa, Thailand, and Uruguay.

Consultations. Discussions between two WTO members for the purpose of avoiding or resolving a trade dispute.

Country schedules. The official schedule of subsidy commitments and tariff bindings as agreed to under GATT for member countries.

Decoupled. Payments to farmers that are not linked to current production decisions. When payments are decoupled, farmers make production decisions based on expected market returns.

De minimis *provision*. The total AMS includes a specific commodity support only if it equals more than 5 percent of its value of production, and noncommodity-specific support only if it exceeds 5 percent of the value of total agricultural output.

Dispute Settlement Body (DSB). The General Council of the WTO, composed of representatives of all member countries, convenes as the Dispute Settlement Body to administer rules and procedures agreed to in various agreements. The DSB has authority to establish panels, adopt panel and Appellate Body reports, maintain surveillance of implementation of rulings and recommendations, and authorize suspension of concessions or other obligations under the various agreements.

Export subsidies. Special incentives, such as cash payments, extended by governments to encourage increased foreign sales; often used when a nation's domestic price for a good is artificially raised above world market prices.

GATT (General Agreement on Tariffs and Trade). An agreement originally negotiated in Geneva, Switzerland, in 1947 among 23 countries, including the United States, to increase international trade by reducing tariffs and other trade barriers. The agreement provides a code of conduct for international commerce and a framework for periodic multilateral negotiations on trade liberalization and expansion. Before the formation of the WTO, adherents to the GATT were referred to as "Contracting Parties." Refers also to the institution responsible for organizing and overseeing multilateral trade negotiations and dispute resolution that was superseded by the WTO.

Green Box Policies. A popular term that describes domestic support policies that are not subject to reduction commitments under the Uruguay Round Agreement on Agriculture. These policies are assumed to affect trade minimally, and include policies related to such activities as research, extension, food security stocks, disaster payments, the environment, and structural adjustment programs.

Market access. The extent to which a country permits imports. A variety of tariff and non-tariff trade barriers can be used to limit the entry of foreign products.

Most Favored Nation (MFN) Status. An agreement between countries to extend the same trading privileges to each other that they extend to any other country. Under a most-favored-nation agreement, for example, a country will extend to another country the lowest tariff rates it applies to any third country. A country is under no obligation to extend MFN treatment to another country, unless both are members of the WTO, or unless MFN is specified in an agreement between them.

Non-tariff trade barriers. Government measures other than tariffs that restrict trade flows. Examples of non-tariff barriers include quantative restrictions, import licensing, variable levies, import quotas, and technical barriers to trade.

Notification process. The process by which member countries report to the WTO information on commitments, changes in policies, and other related matters as required by the various agreements.

Organization for Economic Cooperation and Development (OECD). An organization established in December 1960 to study and discuss trade and related matters. Members include the United States, Canada, the European Union, Norway, Iceland, Switzerland, Poland, Hungary, the Czech Republic, Australia, New Zealand, Mexico, Japan, Korea, and Turkey.

"Round". Refers to one of a series of multilateral trade negotiations held under the auspices of the GATT for the purposes of reducing tariffs or other trade barriers. There have been eight trade negotiating rounds since the adoption of the GATT in 1947.

Sanitary and Phytosanitary (SPS) Measures. Technical barriers designed for the protection of human health or the control of animal and plant pests and diseases. Under the Uruguay Round Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures, WTO member countries agreed to base any SPS measures on an assessment of risks posed by the import in question and to use scientific methods in assessing the risk.

Section 22. A provision of the U.S. Agricultural Adjustment Act of 1933, as amended, that authorizes the imposition of quotas or fees on imports of commodities when these measures are necessary to prevent imports from interfering with the operation of U.S. support programs on the products involved. In 1955, the United States obtained a GATT waiver for quantitative import restrictions applicable to commodities specified under Section 22.

Special and differential treatment. A principle allowing developing countries to have lesser reduction commitments than developed countries. In the Uruguay Round, disciplines applying to developing and least-developed countries were less stringent than those applying to developed countries.

Tariff. A tax imposed on imports by a government. A tariff may be either a fixed charge per unit of product imported (specific tariff) or a fixed percentage of value (*ad valorem* tariff).

Tariffication. The process of converting nontariff trade barriers to bound tariffs. This was done under the Uruguay Round Agreement on Agriculture in order to improve the transparency of existing agricultural trade barriers and facilitate their proposed reduction.

Tariff-rate quota. Application of a higher tariff rate to imported goods after a certain quantitative limit (quota) has been reached. A lower tariff rate applies to any imports below the quota amount.

Technical Barriers to Trade (TBT). Refers to regulations, standards (including packaging, marking, and labeling requirements), testing and certification procedures, and other non-tariff barriers that can create obstacles to trade. Under the Uruguay Round Agreement on Technical Barriers to Trade (TBT Agreement), WTO members agreed to disciplines on the use of these measures as they apply to both industrial and agricultural products.

Tokyo Round. The GATT negotiations formally initiated by the Tokyo Declaration in 1973 and completed in 1979. More countries were involved in the Tokyo Round than previous rounds (including many developing countries and several East European countries), and discussions were expanded to include non-tariff trade barriers.

Uruguay Round. The Uruguay Round of multilateral trade negotiations, under the auspices of the GATT. The Agreement on Agriculture is one of the 29 individual legal texts under an umbrella agreement establishing the WTO. The negotiation began at Punta del Este, Uruguay, in September 1986 and concluded in Marrakesh, Morocco, in April 1994.

World Trade Organization (WTO). Established on January 1, 1995, as a result of the Uruguay Round, the WTO replaces GATT as the legal and institutional foundation of the multilateral trading system of member countries. It provides the principal contractual obligations determining how governments frame and implement domestic trade legislation and regulations. And it is the platform on which trade relations among countries evolve through collective debate, negotiation, and adjudication.

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