

## Implementation of Uruguay Round Tariff Reductions

The “Quint” group of major agricultural trading nations—the U.S., the European Union (EU), Japan, Canada, and Australia—met September 30-October 1 to discuss objectives for the next round of multilateral trade negotiations. One of the main U.S. objectives of the next trade round is to achieve further cuts in agricultural tariffs.

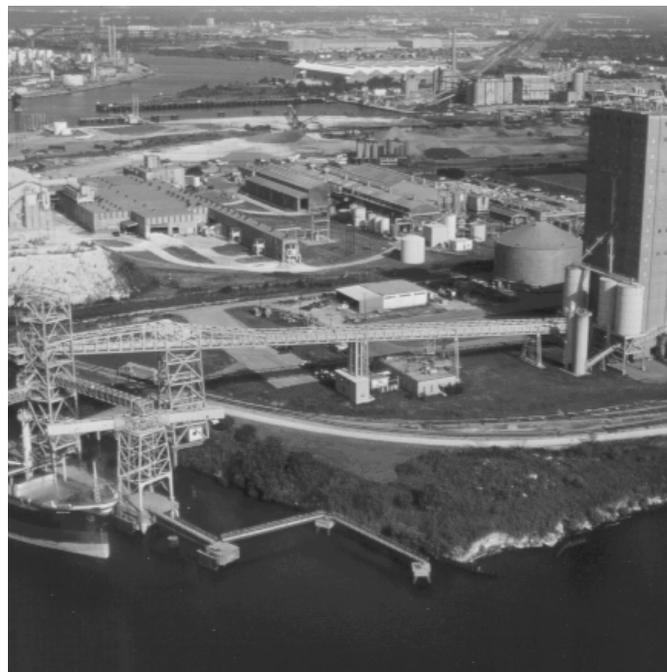
Prior to the last round of negotiations—Uruguay Round (1986-94)—tariffs on agricultural goods, in sharp contrast to manufactured goods, were scarcely touched. Even in cases where they were reduced, impact on trade was often lessened by the existence of nontariff barriers (NTB’s), including quotas, variable levies, and discretionary import licensing. This changed with the Uruguay Round Agreement on Agriculture (URAA), which required countries to convert agricultural NTB’s to ordinary tariffs. The weight of remaining protection in the agricultural sector has now shifted toward tariffs, some of which are extremely high and provide levels of protection that are unevenly distributed across countries, commodity markets, and levels of processing.

Signatories to the URAA agreed to bind new and existing tariffs at levels above which they cannot be raised without penalties. Developed countries further agreed to reduce all agricultural tariffs by at least 36 percent on average over the period 1995 to 2000, with a minimum reduction of 15 percent per tariff-line (refers to the product or products to which the legally established tariff applies). Countries were also to provide a minimum level of import opportunities for products previously protected by NTB’s. This was accomplished by creating tariff-rate quotas (TRQ’s), which impose a relatively low tariff on imports up to a minimum access level. Because of the generally transparent and quantifiable nature of tariffs, they are considered a highly visible and easily negotiable target for reductions (compared with NTB’s) dur-

This article, second in an *AO* series on agricultural tariffs, is based on preliminary data from the Agricultural Market Access Database (AMAD), being developed jointly by several organizations, including USDA’s Economic Research Service, Agriculture and AgriFood Canada, the European Commission, the United Nations Conference on Trade and Development, and the Food and Agriculture Organization of the United Nations.

Upon completion, the database will contain data at the tariff-line level on market access commitments (tariffs and tariff-rate quotas) of about 50 WTO members. In addition, where available, information on TRQ implementation, trade, applied tariffs, and commodity production and consumption will also be incorporated into the database.

The AMAD is expected to become available to the public early next year. For more information about the AMAD, contact Paul Gibson at [pgibson@econ.ag.gov](mailto:pgibson@econ.ag.gov).



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ing the next round of trade negotiations, to be launched by the World Trade Organization (WTO) in Seattle on November 30.

While none of the Quint group countries has indicated the extent to which agricultural tariffs should be reduced, it is generally believed that the U.S., Canada, and Australia will favor somewhat deeper cuts than the EU or Japan. This article compares the level and nature of tariff protection in these countries at the conclusion of the Uruguay Round and at the outset of the next round, and highlights those sectors in each country where tariffs remain particularly high.

### *Selective Cuts Minimize Impacts*

Under the URAA, countries had a great deal of flexibility in deciding how much each agricultural tariff would be cut, so average reductions vary by country. Australia cut 75 percent of its agricultural product tariffs by levels above the required 36-percent average, resulting in the largest average reduction at 48 percent. The other countries all slightly exceed the average requirement, with overall cuts of 37 to 38 percent. Canada was unique in cutting both within-quota and over-quota tariffs of their TRQs; other countries cut only the over-quota tariffs.

All countries except Australia tended to reduce their *ad valorem* tariffs (tariff as a percent of product value) by greater amounts than other tariffs (e.g., specific monetary amount per unit of product). Studies that calculated *ad valorem* equivalents (AVE) for these other tariffs indicate that the top 20 rates in the EU,

## Comparing Tariffs

Comparing tariff schedules across countries is difficult for a number of reasons. First, countries levy tariffs in a number of ways: 1) as a percentage of the value of imports (*ad valorem tariffs*), 2) as a monetary amount per unit of import (*specific tariffs*), or 3) as a combination of the two (*compound tariffs*). The percentage of bound agricultural tariffs among the Quint countries levied on an ad valorem basis ranges from 98 percent in Australia to 56 percent in Japan and the U.S. After the Uruguay Round provisions have been fully implemented, ad valorem rates will account for 69 percent of all agricultural tariffs in the Quint.

Essentially, one wants to compare the level of protection provided by each tariff over time. While it is easy to gauge the relative protection provided by two ad valorem tariffs, analyzing their non-ad valorem counterparts requires calculation of an ad valorem equivalent (AVE)—dividing the non-ad valorem tariff by an import price or import unit value. The level of protection of a non-ad valorem (on a percentage basis) varies inversely with import price—a decline in import price yields an increase in the level of protection (and vice versa).

Once AVE's have been calculated, relevant comparisons of tariffs across countries usually require calculation of a mean tariff, at the country or commodity level. The mean tariff helps account for differing levels of precision in countries' tariff schedules. For instance, in the category *cheese and curds*, there are seven tariff lines for Australia and Japan, 34 for Canada, 48 for the EU, and 129 for the U.S.

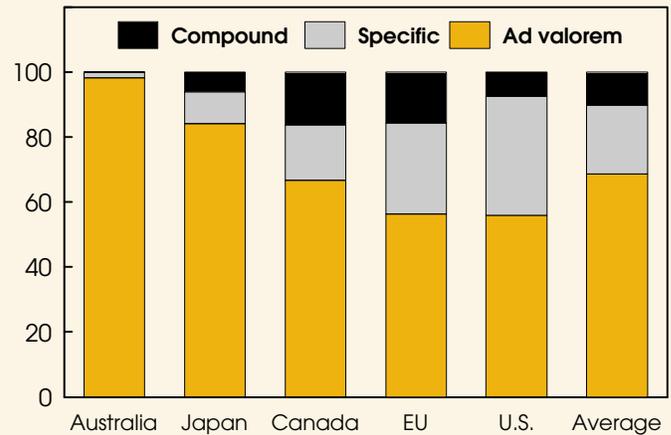
There are a number of ways to compute tariff means, none of which is without bias. The most common—used in this study—is a simple (unweighted) arithmetic average. Applying no weighting scheme is considered by some to be inferior to weighting—a “simple average” gives equal weight to kumquat imports and wheat imports, if each enters as a single tariff-line item under the national tariff nomenclature.

Japan, and Canada and the top 16 in the U.S. are non-ad valorem tariffs. Given that these tend to be less transparent than ad valorem tariffs, it is not surprising that countries would apply this form of tariff to their most highly protected products.

The use of tariff protection for agricultural products is most widespread in the EU, followed by the U.S., Japan, Australia, and Canada, as measured by the proportion of duty-free most-favored-nation (MFN) tariff lines. All countries show a marked increase in the proportion of items that will be duty-free after all of the Uruguay Round reductions are implemented. For the Quint as a whole, this proportion will increase from 20 to 25 percent by the year 2000. The provision that no individual tariff need be cut more than 15 percent—a modest reduction given the high level of some agricultural tariffs—allows countries to continue sheltering import-sensitive commodities from international competition. Canada, Japan, and the U.S. each utilized this pro-

## Ad Valorem Tariff Is Most Common Type of Ag Import Duty

Percent



"Ad valorem" tariff is a percentage of product value; "specific" refers to amount per imported quantity; "compound" is a combination of the two. Economic Research Service, USDA

Weighting based on import values, perhaps the most commonly used scheme, may bias average tariff estimates downward, because items with the highest tariffs will receive virtually no weight as almost no imports will enter under such tariffs. Weighting based on shares of domestic value of production would be preferable since highly protected commodities produced in large amounts would get large weights, but production data at the tariff-line level are rarely available. Therefore, to calculate a national average, a tariff-weighting scheme is often based on simple (unweighted) averages aggregated to a level where data on appropriate production weights are available, as was done by the Organization for Economic Cooperation and Development in a recent analysis. Ultimately, there is no ideal weighting scheme.

vision extensively by reducing about 30 percent of their tariff-lines by the 15-percent minimum. In contrast, Australia cut 98 percent of its tariffs by more than the minimum, while the EU reduced all its tariffs by at least 20 percent.

The smallest cuts tended to be made on the over-quota tariffs of products protected by TRQ's. Included in this category for Canada are poultry and dairy products; for Japan, grain and dairy products; and for the U.S., sugar, peanuts, and dairy products. Not only were these tariffs reduced by significantly smaller amounts than other tariffs, but they tended to be higher to begin with.

Today, the majority of all tariffs are ad valorem. Agriculture is somewhat unique in the extent to which specific or compound tariffs are still used, largely because of the increased protection that they can provide against large drops in import prices.

## Special Article

## Average Tariff Reductions Reflect Size of Cuts and Level of Tariffs

	Average tariff cut in:			Share of tariffs reduced by:		
	Ad valorem <sup>1</sup>	Other <sup>2</sup>	All tariffs	15%	>15% - 36%	> 36%
	Percent			Percent		
Australia	44	81	48	2	23	75
Canada	43	34	38	26	50	23
European Union <sup>3</sup>	42	32	37	0	82	18
Japan	39	27	37	31	15	54
U.S.	38	37	37	29	36	35

Simple unweighted average tariff cuts following implementation of Uruguay Round Agreement on Agriculture.

1. Tariff as a percentage of product value. 2. Includes all other tariffs for which a reduction rate could be calculated. 3. Includes reductions in within-quota tariffs.

Economic Research Service, USDA

“Base” tariffs reflect the level of tariff protection built into each country’s agricultural sector at the conclusion of the Uruguay Round and are the starting point for making yearly reductions. Bound tariffs are the maximum MFN rate (non-discriminatory tariffs extended among WTO members) that a country will be able to charge on imports after the URAA provisions have been fully implemented. However, countries may choose to apply a tariff below the bound rate, and often do, particularly for imports from trading partners that have been granted preferential rates or exemptions (such as under NAFTA). Since MFN tariff schedules will most likely be the subject of negotiations at the next round, it is the bound MFN tariffs that are compared here.

The most striking feature of each country’s tariff profile is its low overall level. By 2000, bound tariffs will average below 10 percent in each of the Quint countries, with levels lowest for Australia, followed by Canada, the U.S., EU and Japan. The calculated means exclude non-ad valorem tariffs, since non-ad valorem tariffs cannot be averaged without making assumptions about the level of import prices and exchange rates in the year 2000. Thus, the calculated mean tariff cannot be interpreted as a reflection of the overall restrictiveness of a country’s trade policy. Border protection is actually higher than indicated by the mean of a country’s ad valorem tariffs, because non-ad valorem tariffs tend to be more protective than their ad valorem counterparts. On the other hand, a great deal of trade takes place at tariff levels below the MFN level (including preferential rates under trade agreements like NAFTA). If the actual tariffs at which trade took place were included in the calculation, the mean would be lower.

The Canadian tariff schedule provides an excellent example of this disparity between the two types of tariffs. A large number of Canada’s compound tariffs take the form of alternate duties (constructed to provide added protection by hedging against changes in import prices), which allows easy approximation of an AVE. Canada’s bound tariff on butter in 2000, for instance, will equal 298.7 percent, *but not less than C\$4,001 per metric ton*. The AVE of such a tariff could be higher than 298.7 percent should import prices fall below C\$1339.47 per metric ton (4001 divided by 2.987), while ensuring a minimum 298.7-percent ad valorem protection when import prices are above this level. Combining the ad valorem portion of these tariffs with Canada’s ad valorem rates gives overall base and bound simple means equal to 31.3 and 25.3 percent (over 917 tariff lines), respectively, versus means of 7.4 and 4.8 percent (over 762 tariff lines).

The economic and trade distortions associated with a country’s tariff structure depend not only on the size of its tariffs, but also on the dispersion of these tariffs across all products. Two ways to describe this is *standard deviation* from the mean value, which measures absolute dispersion among all values in the group, and *percentage of tariff peaks*, or the proportion of products for which the tariff level exceeds some multiple of the mean.

Based on standard deviation, ad valorem tariffs for Australia show the most uniformity, while those for Canada exhibit the most dispersion around the mean. While evidence provided by the standard deviation is by no means conclusive, in general the more dispersion in a country’s tariff schedule, the greater the distortions caused by tariffs on production and consumption patterns. Farmers will tend to increase production of those products protected by high tariffs, while consumers will tend to shift their purchases from products subject to high tariffs to competing products with lower costs (due to lower or zero tariffs).

With all tariffs cut by at least 15 percent, dispersion in each country as measured by standard deviation declines between the base and bound tariff schedule. But when measured as the proportion of tariff lines that are over three times the country mean (referred to as tariff peaks), dispersion increases between base and bound tariffs in each country, except Australia. An increase in tariff peaks occurs when high tariffs are reduced by less than the average reduction over all tariffs. The greater the percentage of tariff peaks in a country’s schedule, the greater the potential economic distortions, especially when highly substitutable products are available on the domestic or international market. Products with ad valorem tariffs that are greater than three times the mean tariff include: for Australia, potatoes and some flours and meals; for Canada, wheat, barley, and certain meat products; for the EU, tobacco products and some fruit juices; for Japan, selected processed cheeses and meats; and for the U.S., peanuts, peanut butter, and certain fruits.

Lower levels of tariff protection do not always mean the tariff schedule is less distorting. Australia, which has the lowest mean and standard deviation in its ad valorem tariffs, also has the highest proportion of tariff peaks, while Canada, which has the second-lowest mean and the lowest proportion of tariff peaks, has the highest standard deviation.

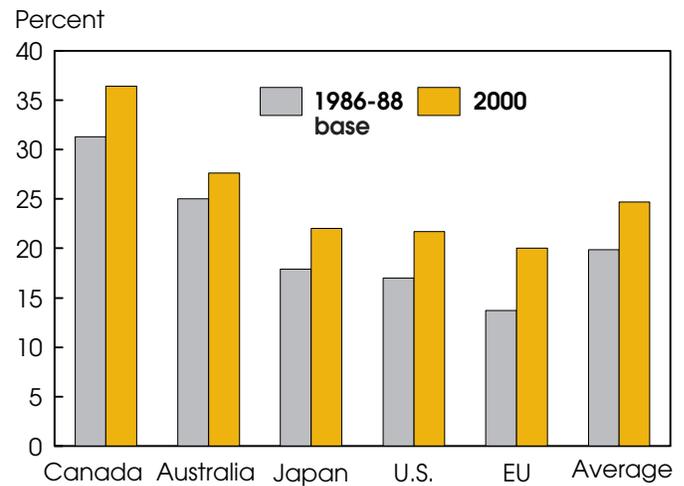
By 2000, mean ad valorem base tariffs will have fallen by 37 percent in Japan and the U.S., 36 percent in Canada, 34 percent in the EU, and 33 percent in Australia. Without exception, however, reductions in the mean tariff are less than the average reduction over all ad valorem tariff lines, an indication that low tariffs were reduced by a larger amount than high tariffs.

The largest share of each country's ad valorem tariffs is less than or equal to 5 percent—ranging from 73 percent of Australia's tariffs to 44 percent of Japan's. The less-than-5-percent category includes what are sometimes referred to as "nuisance" tariffs, so small as to not be an impediment to trade but still require paperwork. All countries tended to cut tariffs in this category by the greatest amounts, ranging from average reductions of 76 percent in the EU to 47 percent in the U.S. To the extent that these tariffs were already small enough to allow unlimited imports, these cuts would not likely result in any appreciable trade increases.

Tariff rates between 5 and 15 percent account for between one-quarter and one-third of ad valorem tariffs in Quint countries. Countries tended to cut tariffs of this size by less than those in the 0-5-percent range, but by more than their higher tariffs. The one exception was Australia, which tended to cut tariffs of over 15 percent by larger amounts. For all countries, the average cuts in both this category and the 15-25-percent category were fairly significant, ranging from 30 to 48 percent, leading to the conclusion that any significant trade expansion resulting from the Uruguay Round tariff reductions probably occurred for products found in these two categories.

Tariffs over 25 percent include a relatively small number of critically important tariffs, a great proportion of which are the over-quota tariffs of a TRQ. Tariffs in this group tend to provide solid protection to a country's domestic industry, and are sometimes high enough to preclude trade. For this reason, countries agreed to create TRQ's during the Uruguay Round, to ensure that at least a minimum amount of import opportunity existed for these products. Most of the tariffs that were reduced by the minimum amount allowable are found in this category. As these are the tariffs that countries reduced by the least amounts and apparently

### Canada Leads in Share of Ag Products Entering Duty-Free



Based on total tariff lines.  
Economic Research Service, USDA

value the most, further reductions will no doubt encounter the greatest resistance in the next round.

A subset of the final category are the megatariffs, often defined as tariffs greater than 100 percent. Megatariffs are sometimes referred to as redundant tariffs, because they could be reduced significantly without actually improving market access. Only Canada (with four) and the U.S. (with five) will have ad valorem tariffs of over 100 percent after 2000. The relatively low number of ad valorem tariffs at high protection levels results from countries favoring non-ad valorem tariffs for their most sensitive products, as demonstrated in Canada's tariff schedule. At least 82 of Canada's 429 non-ad valorem agricultural tariffs will be greater than 100 percent in 2000 (using an AVE), even after being subjected to reductions. Sixty-four of these will be greater than 200 percent, with one over 300 percent.

### Average Tariffs Decline Under URAA, but Tariff Peaks Generally Increase

	Base tariffs (1986-88)			Bound tariffs		
	Simple mean <sup>1</sup>	Dispersion		Simple mean <sup>1</sup>	Dispersion	
Standard deviation <sup>2</sup>		Tariff peaks <sup>3</sup>	Standard deviation <sup>2</sup>		Tariff peaks <sup>3</sup>	
		Percent		Percent		
Australia	5.8	8.4	8.5	3.8	5.2	7.9
Canada	7.4	19.0	3.0	4.8	15.6	3.5
European Union	11.5	11.4	1.8	7.6	8.3	4.8
Japan	15.2	15.6	3.9	9.5	10.1	4.5
U.S.	8.0	15.6	5.9	5.1	12.5	6.3

Excludes within-quota tariffs. Bound tariffs are maximum rates country will be able to charge on imports after Uruguay Round Agreement on Agriculture (URAA) is fully implemented in 2000.

1. If within-quota tariffs had been included, the means for most countries would be smaller. Likewise, application of a trade-weighting scheme would also result in lower mean tariffs. 2. Variation on either side of the mean of a country's tariff levels. 3. Percentage of ad valorem tariffs exceeding three times the mean.

## Special Article

## Lowest Tariffs Received Highest Cuts Under URAA

		Original tariff level			
		0 - 5%	5 - 15%	15 - 25%	over 25%
		<i>Percent</i>			
Australia	Share of total	73	24	3	1
	Average reduction	49	35	48	49
Canada (incl. within-quota)	Share of total	65	32	1	2
	Average reduction	61	36	24	22
European Union	Share of total	46	35	15	4
	Average reduction	76	38	30	28
Japan	Share of total	44	31	17	7
	Average reduction	49	44	34	34
U.S.	Share of total	68	25	4	2
	Average reduction	47	37	32	23

Economic Research Service, USDA

*Options for the Next Round*

While converting NTB's to tariffs is generally regarded as a significant step in trade liberalization, implementation of tariff-cutting provisions of the URAA is generally viewed as an important, but less substantial outcome. Despite the progress made in reducing tariffs, cuts were generally made in such a way as to minimize the resulting trade liberalization. Tariffs most critical for protection of domestic agriculture generally are only a subset of a country's total tariff schedule, and countries tended to make extensive use of the flexibility offered by the Uruguay Round provisions to reduce these tariffs by the lowest amounts allowable.

Agricultural tariffs tend to be higher than those on manufactured items, and in addition are unevenly distributed across countries and commodities. Tariffs provide greater transparency over NTB's, but some tariffs still pose significant impediments to market access and involve high costs to agricultural producers in exporting nations and to consumers in importing nations. Achieving significant reductions of tariffs will be one of the central objectives of the next round. For products with the highest tariffs, even significant reductions may not actually make markets more accessible to foreign competitors. Cutting these tariffs enough to increase trade flows implies some sort of tariff-cutting formula, such as that proposed during the Tokyo Round (1973-79), might be used to achieve deeper cuts for high tariff rates.

Another important aspect of tariff schedules is the distortion associated with rates that vary over a wide range. Increases in tariff dispersion could result in a country's trade becoming more rather than less distorted. This distortion can easily increase when implementation of tariff reductions allows a bias toward smaller reductions for higher tariffs.

Should some tariffs be eliminated rather than reduced? Previous rounds have seen proposals to eliminate "nuisance" tariffs (those under 2 or 3 percent) to avoid negotiating tariff reductions that have little or no effect on world trade. An early agreement to eliminate these tariffs would do little to increase trade, but would prevent countries from claiming the reduction as a concession.

Evidence from the URAA clearly demonstrates that countries tended to reduce these tariffs by large amounts in order to reach the 36-percent average cuts required over all tariffs.

Similarly, within-quota tariffs associated with TRQ's could be eliminated for the same reason. Since it was expected that countries would charge "low or minimal duties" to provide minimum access, cuts in within-quota tariffs can be viewed as being largely redundant. They do not result in market expansion since imports in excess of the quota are subject to the higher over-quota tariff. The existence of within-quota tariffs also makes it difficult to determine why some TRQ's are not being filled. Either the TRQ is being administered in a way that dissuades importers from taking advantage of the minimum access amount, or the domestic price is less than the imported price (including tariff). In the latter case, this may be because the within-quota tariff has been set so high as to nullify the access opportunity. A simple way to assure that these tariffs are not the reason for unfilled quotas, particularly if the next round results in an agreement to increase these quotas, is to eliminate them altogether.

Finally, eliminating use of non-ad valorem tariffs (i.e., converting them to ad valorem rates) would increase transparency in tariff schedules. Nevertheless, specific tariffs (monetary amount per unit of product) are favored by some countries because the total duty on an import shipment is easier for customs officials to determine, relying only on quantity imported, not quantity times price. But such tariffs conceal the amount of protection by complicating estimation of average tariff levels, and can impede the level of market access promised by tariff reductions should import prices decline, thus increasing the level of protection (AVE) provided by specific tariffs. A suitable alternative to eliminating non-ad valorem tariffs might be to require countries to provide their AVE's to the WTO, so comparisons of protection provided by countries' tariff regimes could be easily made. **AO**

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