

MTN STUDIES

2

Tokyo-Geneva Round: Its Relation to U.S. Agriculture

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UNITED STATES SENATE

RUSSELL B. LONG, *Chairman*

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ABRAHAM RIBICOFF, *Chairman*



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(Executive Summary)

THE TOKYO/GENEVA ROUND: ITS RELATION
TO U.S. AGRICULTURE

by
James P. Houck
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In the recently-concluded Tokyo/Geneva Round, the United States placed high priority upon achieving improvements in agricultural trade through MTN agreements. As with previous rounds, major breakthroughs in protectionist agricultural trade policies were not obtained, even though the Tokyo/Geneva Round lasted for 5 1/2 years. However, a series of tariff and trade barrier agreements were achieved that will modestly enhance the highly favorable balance of trade exhibited by U.S. agriculture. The changes in non-tariff trade barriers achieved in the Tokyo/Geneva Round may establish extremely valuable precedents for future bilateral or multilateral trade negotiations. Moreover, tariffs on some important U.S. exports to major markets were bound against future increases.

The economic effects of these specific MTN agreements in agriculture were measured and evaluated in this report. The consultative commodity agreements and the GATT framework changes also negotiated at the Tokyo/Geneva Round are not emphasized in detail in this study since it is not possible to measure their direct economic impact at this time.

The following table contains summary estimates reflecting the results of economic analyses on the MTN agreements. The three major packages negotiated with Japan, the European Economic Community (EC-9), and Canada

will enhance annual U.S. agricultural exports by an estimated \$215 million, \$168 million and \$56 million respectively. A series of agreements with some 30 additional nations will add \$23 million for an overall total of \$462 million annually. This is approximately 2.1 percent of the 1976 base trade figures used throughout the report and by the Office of the Special Trade Representative for comparison purposes.

Estimated Value of MTN Agreements for Agricultural Trade

Item	Net change in exports (+) or imports (-) (million dollars)	Change in employment (thousand jobs)
<u>Export agreements</u>		
Japan	+ \$215	
EC-9	+ 168	
Canada	+ 56	
Other countries	+ 23	
Subtotal	+ 462	+ 35
<u>Import concessions</u>		
Dairy products	- \$ 66	
Other commodities	- 40	
Subtotal	- 106	- 3
Net change, overall	+ 356	+ 26

This modest, but significant, net gain in trade will add an estimated 34 thousand jobs to the agricultural and agribusiness sector of the U.S. economy. In addition, tariff bindings were obtained on products whose exports totaled \$1,278 million in 1976. About 80 percent of this total is accounted for by a "free" binding on soybeans conceded by Japan and by other tariff bindings on soybeans and their products offered by five other nations.

On the agricultural import side, the United States has made a significant quota adjustment for dairy products (cheese) and a series of tariff reductions for other products. The value of these concessions in terms of increased agricultural imports is approximately \$106 million. Thus, these concessions will increase agricultural imports by about 1.0 percent over the 1976 base trade figures. An estimated 8 thousand jobs in agriculture and agribusiness will be lost as a result.

The net change in overall agricultural trade due to the MTN agreements is an increase of \$356 million. This corresponds to the annual value of sales of about 6,500 average-sized farms in the United States. A net increase of about 26 thousand jobs will occur as a direct result of these agreements. From the standpoint of income and employment, U.S. agriculture will receive distinct and measurable benefits from the agreements reached in the Tokyo/Geneva Round.

May 1979

THE TOKYO/GENEVA ROUND: ITS RELATION
TO U.S. AGRICULTURE

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THE TOKYO/GENEVA ROUND: ITS RELATION
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by

James P. Houck*

Even though the final agreements and implementing legislation are not yet in place, the essentials of the current multilateral trade negotiations (MTN) are well enough settled so that their effect on U.S. agriculture can be at least partially evaluated. The five-and-a-half-year Tokyo/Geneva Round was the seventh and lengthiest set of negotiations held since the formation of GATT in 1947. It was the second round in which a major effort was made to deal with non-tariff barriers to agricultural trade along with traditional tariff bargaining.

Those efforts, in the 1964-67 Kennedy Round, were largely unsuccessful. Most of the difficulties encountered in that round carried over into the Tokyo/Geneva Round. Despite these difficulties and despite the crucial role that persistent, non-tariff barriers play in shaping the size, composition, and direction of agricultural trade, some agreements were forged that will be significant for U.S. agriculture in the coming months and years. The purpose of this report is to look at these agreements as well as the tariff packages within the broad context of U.S. agricultural trade and trade policy as they have evolved in recent decades. As part of this

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effort, the agricultural and trade policies of some important foreign nations will be examined briefly to illuminate the difficulties inherent in attempts to reach international accords for farm products.

The plan of the paper is as follows. First, the evolution of U.S. agricultural trade over the past 25-year period will be discussed. The goal here is to put the agricultural trade picture into a useful perspective and to distill, from the mountains of available data, magnitudes and relationships that are most relevant for the purpose at hand. Next is an examination of the crucial aspects of agricultural and food policies which have shaped the trends and relationships discussed previously. Third is a discussion of the Tokyo/Geneva Round with emphasis on agricultural issues followed by some analyses of the negotiated agreements. Finally is a section of summary and conclusions.

Although a complete documentation of the sources of data and other information will not be attempted, a few relevant and generally helpful references are included at the back of this report. Citations to this literature in the text are indicated with bracketed numbers. Data used and referred to in this report are mainly from official USDA sources and official publications of other nations and international agencies [2][5][10][11][12][14][22][23][24]. Some technical notes and other materials are presented in appendixes to the report.

I. An Overview of Agricultural Trade

The purpose of this section is to provide a brief overview of the U.S. position in the agricultural trade picture. First we will consider the evolution of world agricultural trade and the U.S. role in that evolution. Second we will look at the nature of U.S. agricultural trade as it has unfolded over the past 25 years or so. The base of most comparisons in this section will be the 1950-54 period.

Agricultural Trade in Perspective

Since about 1950-54, the volume of world production of all goods, both agricultural and non-agricultural, has more than tripled. During that time, the share of total output moving into international trade has increased greatly. In fact, while world output has tripled, the volume of all world trade has more than quadrupled since 1950-54. Consequently, the world as a whole is more dependent on and economically-committed to trade than ever before.

In the period from 1950-54 to the present, the agricultural part of total trade has more than doubled in volume. This growth in agricultural trade has significantly outpaced the growth in world agricultural production. Thus the nations of the world also are more dependent upon one another than ever before for food, fiber, and agricultural raw materials. However, agricultural trade has fallen from about 30 percent of total world trade in 1950-54 to approximately 15 percent today.

There are two main reasons behind the relatively slower growth in world agricultural trade in comparison with that of industrial trade.

First is the pervasive tendency for farm production to grow more slowly than industrial production. This is because of the role food and fiber play in human life and because these products still must be generated by natural, biological processes, not just mechanical and chemical ones. Second is the complex set of barriers and impediments to agricultural trade which have been erected over the years via national policies. These barriers do not have exact counterparts in the industrial sectors.

The Composition of World Agricultural Trade

Since 1950-54, the composition of world agricultural trade has undergone gradual change. Food and feed products have grown from 45 percent of the total in the earlier years to almost 70 percent today. In this category, the major growth items have been oilseeds, feed grains, and livestock products (mainly meat and related items). The effects of rising international affluence, the emergence of numerous centrally-planned nations as feed and food importers, and the growing food-deficit status of numerous, less-developed nations have fueled this trend.

Agricultural raw materials, as a category, have dwindled in relative importance from 29 percent in 1950-54 to about 11 percent today. The major items in this category are products displaying relatively stagnant markets. Among them are fibers (cotton, wool, etc.), tobacco, and rubber. The gradual substitution of synthetic for natural materials is a major reason behind these slower growth rates.

The U.S. Position in the Agricultural Trade Picture

As world markets for farm products have grown and changed in the

past 25 years, the U.S. role has become larger and larger. Much of this growth has been because trade demand has grown and shifted toward products such as grains and oilseeds, which traditionally have been part of U.S. production patterns. The relative decline in the value of many agricultural exporters' currencies (especially the U.S. dollar) in terms of currencies of several major food and raw material importers has helped to sustain and increase world demand for farm exports. But some important supply factors also have been at work. For example, many recent developments in crop production technology have enhanced the natural efficiency of the United States in the production of temperate-zone food and feed grains. Similarly, adjustments in U.S. agricultural policy over the past 15-20 years have reflected the vital role exports play in generating farm income. These adjustments have kept most major U.S. farm exports quite competitive in world markets.

The net result of these trends and forces has been that the United States now accounts for about 16 or 17 percent of all world agricultural exports as compared with about 12 percent in 1950-54. The relatively faster growth in markets where the U.S. supplies exports has meant that U.S. farm product imports from the rest of the world have grown less rapidly. Consequently, our share on the import side has fallen. United States imports now account for about 8 percent of world agricultural trade. This is down from about 28 percent in 1950-54. Yet, we are still a major agricultural importing nation--behind only West Germany and Japan.

Export Commodities

To illustrate some of the major changes mentioned earlier, commodity profiles of U.S. agricultural exports in 1953 and in 1977 are shown below.

U.S. Agricultural Exports

Item	1953 (\$3 billion)	1977 (\$29 billion)
Oilseeds and products	11%	27%
Feed grains	7%	23%
Wheat	14%	13%
Tobacco and cotton	35%	11%
Livestock products	15%	11%
Other	<u>18%</u>	<u>15%</u>
Total	100%	100%

Notice the relative growth in today's three largest commodity categories, oilseeds (mainly soybeans), feed grains (mainly corn), and wheat. This group has virtually doubled in importance since the early 1950s with all the relative growth coming from oilseeds and feed grains. These three "big ticket" commodities now represent almost two-thirds of U.S. farm exports.

Some traditional, politically-important crops like tobacco and cotton have lost ground in a relative sense. Altogether, the myriad items captured in the "Other" category also have dwindled in proportion to the total. Many of these products such as citrus fruit, rice, and almonds have grown in export sales and are politically-important because the income

generated by their sales is concentrated in rather small geographic areas of the United States.

The following brief tabulation illustrates the growth in volume (not value) of major agricultural commodity exports since the 1950-54 period.

Volume of U.S. Agricultural Exports

Item	1950-54 (quantity index, 1950-54=100)	1977	Average annual growth rate (percent)
Grains and feeds	100	550	7.1
Oilseeds and oils	100	1,135	10.2
Livestock products	100	288	4.3
Dairy products	100	45	(-)3.13
Cotton	100	102	0.1
Tobacco	100	136	1.2
Fruits and vegetables	100	326	4.8
Total agricultural exports	100	375	5.4

Overall, the volume of exports has more than tripled; almost quadrupled. The largest growth rates in physical volume have been in oilseeds, grains, and fruits and vegetables.

Today the vast bulk of U.S. agricultural exports are sales for hard currencies. Only about 6 percent of the value generated by export sales are from special government programs. Variously termed, "food for peace," "food aid," "P.L. 480," or "concessional exports," these sales have steadily dwindled in relative importance since the late 1950s and early 1960s. In the early days of Public Law 480 (the Agricultural Trade Development and

Assistance Act of 1954), concessional shipments accounted for 25 to 40 percent of the value of our export trade, averaging about 30 percent in the 1954-60 period. These special sales to food-short, friendly nations were very important for some commodities such as wheat, rice, soybean oil, cotton, tobacco, and non-fat dry milk. The relatively constant annual dollar appropriation for P.L. 480 export sales forced both volume and relative importance downward since the early 1960s.

Major Export Markets

Over the past 25 years, the destinations of U.S. farm exports have altered to some extent. However, these shifts have not been dramatic. Changes occur rather slowly in the worldwide distribution of wealth, in the basic efficiencies of agricultural production, in the international network of farm and trade policies, and in other factors which influence the direction and composition of trade flows.

For example, the five leading buyers of U.S. agricultural exports in 1950-54 were, in order of importance, Japan, United Kingdom, West Germany, Canada, and the Netherlands. In those years, these five nations took 45 percent of all U.S. agricultural exports. In 1977, the top five, also in order, were Japan, the Netherlands, West Germany, Canada, and the Soviet Union (the U.K. was seventh, behind Korea). As in 1950-54, the top five in 1977 also accounted for 45 percent of all sales. Thus, at the top of the heap, no major realignments occurred with the obvious and important exception of the recent emergence of the USSR as a major market. India, pursuing its national policy of self-sufficiency in food grains, dropped from sixth place in 1950-54 (before P.L. 480) to sixteenth place

in 1977. The nine-nation European Community (EC-9) can be viewed, for trade policy purposes, as a single market. Today, the EC-9 dominates all destinations, accounting for about 25-30 percent of all U.S. agricultural exports.

Down further in the heap, some significant shifts have occurred. The centrally-planned nations of the USSR, Eastern Europe, and the People's Republic of China (PRC) together now purchase about 7 percent of our farm exports compared with only 2 or 3 percent in 1950-54. The large and diverse group of nations in Asia, Africa, and Latin America, often designated as LDCs, now account for 31 percent of U.S. agricultural export sales, up from about 24 percent in 1950-54. Although not classified separately in earlier years, the Organization of Petroleum Exporting Countries (OPEC) now takes 7 percent of the U.S. farm exports. This is a marked increase from very small quantities and values throughout the 1950s and 1960s.

Among the LDCs, it is naturally the higher-income group of food-deficit nations which emerge as important, regular customers of U.S. agriculture since hard currency sales dominate the scene. The top five LDCs in the U.S. export market in 1950-54 with 15 percent of the total trade were, in order, India, Cuba, Venezuela, Egypt, and Mexico. In 1977, with a 13 percent share, were, in order, Korea, Taiwan, Mexico, Egypt, and Iran.

Together, these relative increases caused the share of the developed, wealthy nations to fall from 72 percent down to 62 percent over the 25-year period under discussion. Western Europe, as a whole, was 45 percent of our market in 1950-54, but dropped to 34 percent in 1977. All of this drop was accounted for by a relative fall in the importance of the nations now in EC-9. The rest of Western Europe held a constant 7 percent share.

Exports and Agricultural Output

As mentioned earlier, the total volume of agricultural exports from the United States to all destinations has increased from an index value of 100 in 1950-54 to 375 in 1975. Yet in the same period, national agricultural production has risen only 50 percent. This means that a much larger share of U.S. output is being exported now than was true 25 years ago. In fact, only about 10 percent of cash receipts from farming came from exports in 1950-54. Now it is about 24 percent.

Exports are not only a larger share of farm income than ever before in modern times, they are also a relatively unstable component of that income. During this 25-year period, it has been estimated that agricultural exports were about ten times more unstable in terms of year-to-year changes than the domestic utilization of U.S. farm production [13]. Among export commodities, year-to-year fluctuations in overseas sales of grains and feed are well above the export average and contribute importantly to total instability in both the export sector and farm income generally.

Agricultural Imports by the United States

Although the dollar value of U.S. agricultural imports has more than doubled since 1950-54, the physical volume has increased by only 50 percent. Many imported items (mainly tropical products) do not compete with domestic farm output. These commodities (officially called complementary imports) such as coffee, tea, bananas, rubber, cocoa, etc. now account for about 40 percent of the total agricultural import bill. This is down from approximately 60 percent in 1950-54. The balance of agricultural imports is competitive at least to some extent with domestic production. Major items in this category (officially called supplementary imports) are beef, sugar,

dairy products, wine, fruits, and vegetables. Of all food consumed in the United States, imports have accounted for a relatively constant 9 to 12 percent share in recent times. The following list shows how imports share in the U.S. consumption of some important products.

U.S. Agricultural Imports

Item	Imports as share of domestic consumption (percent)
Coffee, tea, cocoa, bananas	100
Fish	57
Wool	50
Sugar	43
Fats and oils	10
Red meat	7
Fresh fruit (other than bananas)	6
Fresh vegetables	6
Dairy products	2

Some sizable and interesting changes have occurred in the mix of U.S. agricultural imports. These are illustrated in the following profile of competitive agricultural imports over the 25-year period.

U.S. Imports of Supplementary Agricultural Products

Item	1950-54 average	1977
	(\$1.9 billion)	(\$6.7 billion)
(percent)		
Meat and meat products	9	19
Fruits and vegetables	6	15
Sugar	23	17
Wool	16	1
Oils and oilseeds	10	9
Dairy products	2	5
Tobacco	5	5
Wines and malt liquors	2	2
Other	<u>27</u>	<u>27</u>
Total	100%	100%

We now import relatively more meat, fruits and vegetables, and dairy products than we did in 1950-54. The growth in demand for hamburger meat (the principal import), the increasingly competitive supplies of off-season fruits and vegetables from Latin America, and the growth in demand for cheeses of all types have accounted for these increases. The inroads of synthetic fibers and the slow growth in domestic textile manufacturing are behind the relative drop in wool imports. A relatively slow demand growth for sugar and increased domestic production have led to the relative drop in sugar's position among our major competitive imports.

Our sources of agricultural import supplies are heavily tilted toward

less developed nations for both competitive and non-competitive food and fiber imports. On the non-competitive side, the top five suppliers in 1977 were Brazil, Indonesia, Colombia, Mexico, and Ivory Coast with 46 percent of the total. Overall, LDCs provided about 94 percent of our agricultural imports in this category.

For products which compete for markets with U.S. production, the five leading suppliers in 1977 were the Philippines, Canada, Mexico, Australia, and New Zealand. These five nations account for 38 percent of competitive imports. About 50 percent of all competitive imports are now being supplied by countries commonly classified as less-developed.

Agricultural Trade and the U.S. Balance of Payments

The strong positive contribution that agricultural trade has made to the U.S. balance of payments is well known and needs very little documentation or elaboration here. The typical measure of agriculture's net contribution is the value difference between annual agricultural exports and imports. Currently this measure is running at approximately \$10-12 billion annually and has been consistently positive since 1960.

In one sense, this calculation is something of an understatement of the net contribution of U.S. agriculture in the trade balance picture. The difference between agricultural export earnings and expenditures on foreign products directly competitive with the output of that sector in the U.S. economy may be a more appropriate measure. Under this view, we would exclude the import value of coffee, tea, bananas, rubber, silk, etc. from comparison. These non-competitive imports are mainly tropical products and have no more direct relation to the efficiency or productivity of our own, mainly temperate zone, agriculture than do imports of television sets or rattan furniture.

Under this view the current positive contribution to the balance of payments attributed to U.S. agriculture is currently approximately \$18-20 billion on an annual basis. In this sense, agricultural trade has, with only two exceptions (1936 and 1940), contributed positively to the nation's annual trade balance back at least as far as 1900.

The recent fall in the value of the U.S. dollar relative to a number of other currencies is a much-discussed topic with implications for agricultural trade but also extending far beyond it. The fall in the dollar's value makes our farm exports look relatively cheaper to nations whose currencies are appreciating, such as Japan, Germany, Switzerland, etc. To the extent that domestic demand in such nations can respond to lower relative prices of farm imports, consumption (hence imports) will be stimulated. Yet U.S. farm exports have not increased to the extent that might otherwise be supposed because currency devaluation relative to the yen, the mark, etc. also has occurred for other major agricultural exporters. The U.S. market share has not boomed at least partly because the U.S. dollar has not fallen much or at all relative to the currencies of Canada, Australia, Brazil, and Argentina--our major competitors for world markets.

II. The Role of National Policies Affecting Agricultural Production and Trade

Natural differences among lands and people are powerful forces shaping the direction, magnitude, and composition of agricultural trade. Perhaps agricultural trade flows most closely approach those suggested by the pure theory of international trade and the concept of comparative advantage. Yet, major distortions away from the theoretical model are evident. These distortions are mainly the result of trade policies and trading decisions made by national governments. For agricultural products, these trade policies and decisions are virtually always extensions of domestic agricultural and food policy decisions. Agricultural trade policy reflects and supports the fundamental commitments made by a government to its farmers, its domestic food industries, and, occasionally, its consumers.

Barriers to agricultural trade are very difficult to negotiate internationally. Major changes in these barriers toward more liberal trade usually undermine some national farm and food policies by making them more costly or administratively-difficult to operate. Moreover, up to the present time, almost no nation has shown much willingness to negotiate the structure or terms of its own, internal agricultural policy. In most nations, the existing agricultural policies and programs, though imperfect to be sure, have been slowly and painfully constructed. They are not altered or put aside lightly.

These rigidities are reinforced by the method by which trade negotiations under GATT are, and have always been, conducted. For instance, four of the major parties in worldwide agricultural trade are the United States, Japan, the EC-9, and Canada. If any agricultural trade agreements of

consequence are to be reached, one or more of these four must be interested and involved. Each of these traders has a complex set of domestic agricultural policies which carry over into its trade policy in ways which severely restrict its ability to negotiate broadly with others on agricultural trade. Furthermore, the historical tendency to treat agricultural negotiations as a separate package, largely isolated from industrial agreements, has added even more rigidity to the system.

Let us consider some important elements of food and agricultural policies in Japan, the EC-9, and Canada, insofar as agricultural trade is concerned. One cannot hope to understand past, present, and potential trade negotiations in agriculture without some appreciation of the policy structure of these nations and trading areas.

Japan*

Year in and year out, Japan is the United States' largest agricultural trade customer despite its complex and basically trade-restrictive agricultural and food policy. This is because the Japanese economy is wealthy and diversified. Approximately 24 percent of Japan's 114 million people live in farm households. Most of Japan's farms are operated as family units, but 90 percent of them are part-time farms. The average farm size is about 2.5 acres. Only about 6 percent of Japan's farms are more than 5 acres in size [14][19][21].

Two foundation stones of Japan's agricultural policy are rice and self-sufficiency. Rice accounts for about 35 percent of farm output and 33 to 34 percent of the total caloric intake of the nation's people. Rice prices at the farm are supported at levels which are very much higher than world prices. This high support level for rice has far-reaching

*Mr. David Salmon, Graduate Research Assistant, University of Minnesota, assisted in preparing this section.

effects on all of Japan's agriculture. Land-use for other crops and for livestock throughout the country must compete with rice. Hence, the effect of the artificially high rice price spreads throughout the agriculture and food complex creating protectionist pressures virtually everywhere in the farm economy.

Although dependent on foreign suppliers for food and other raw materials, Japan still maintains a strong commitment to as much self-sufficiency in food as is practicable. Bitter past experience fosters this commitment. The following tabulation indicates the approximate degree of Japan's current self-sufficiency in agricultural products.

Item	Degree of Japan's self-sufficiency in 1972 (percent)
Rice	100
Vegetables	99
Eggs	98
Milk	88
Meat	83
Fruits	82
Feeds	40
Sugar	19
Wheat	8
Soybeans	4
All foods	72

This generally high degree of self-sufficiency and its broad distribution

among commodities suggests a rather protective agricultural policy for this nation with its high population density and only 15-16 percent of its land suitable for agriculture. Japanese consumers devote an average 25-27 percent of their consumption expenditures to food, with rice making up about 34 percent of the total food intake. Much of the pressure for and support of protective policies on behalf of Japan's farmers, at the expense of consumers and taxpayers, can be traced to the special characteristics of that nation's political life as it relates to agriculture.

The Policy Environment. Japan has a two-house parliamentary system based on the British model. However, the actual operation of the government is unique to Japan. The Liberal Democratic Party (LDP) has been continually in power since 1948, and nearly all government and lobbying agencies are firmly connected with the LDP. An important feature of the Japanese parliamentary system is that voting in the Diet (legislature) is almost always along party lines. Virtually all important decisions are hammered out beforehand within the various factions of the LDP.

The LDP draws its strength from two main constituencies, big business and the rural districts. The voting districts in Japan have been apportioned so that the rural vote is over-represented in national elections. For this reason, the LDP is heavily influenced by Japanese farm interests. The most powerful of the LDP's agriculture-related organizations is the Overall Agricultural Policy Research Council. Whenever the Ministry of Agriculture, Forestry, and Fisheries (MAFF) considers major policies, it never fails to consult this council beforehand in its efforts to build a consensus.

The MAFF has the responsibility of promoting Japanese agriculture and

improving Japan's food self-sufficiency. As is the case with all Japanese ministries, the MAFF is staffed with career bureaucrats who maintain considerable influence with the LDP and who often shuttle back and forth between ministry and political posts.

Within the ministry is a Secretariat charged with policy formation. In addition, there are several intra- and extra-ministerial bureaus. Of these, the Economic Affairs Bureau (EAB) is most involved with agricultural imports. The EAB is engaged in a variety of negotiations, including the Tokyo/Geneva Round. The EAB also supervises the Central Bank for Agricultural Cooperatives. Other bureaus of interest within the MAFF are the Animal Industry Bureau, which handles the distribution of quotas for beef imports, and the Agricultural Production Bureau, which handles orange import quotas.

The MAFF has strong ties to farm interests through its contacts with farmer cooperatives as well as through the LDP. With its traditional concern for improving the farmer's position and increasing Japan's food self-sufficiency, the MAFF has not been centrally concerned with foreign affairs or with the nation's overall trade balance.

By almost any standards, Japanese farmers are well-organized for economic and political action. Three organizations are particularly important. The first is Zenno, the largest farmers' cooperative in Japan. Over 95 percent of the rice crop and 15-20 percent of the mandarin orange crop are produced by farmers who are members of this co-op. Although Zenno is definitely concerned with political issues concerning the livelihood of its farmers, it is primarily involved with business matters. Zenno operates input purchasing facilities as well as outlets for its

members' crops. An affiliated company (Unico-op) sells about 35 percent of all feed grains imported into Japan. It also handles imported soybeans, orange juice, and many other imported food products. It also exports Japanese mandarin oranges. As a result, Zenno is extremely important to its members and, consequently, commands considerable loyalty from them. Zenno has been well-led and is very firm concerning its demands on the LDP and the MAFF.

Nichienren is a smaller co-op primarily aligned with the orange growers. Nichienren also commands considerable loyalty, but its smaller size enables Zenno to overshadow it.

Another very powerful farmer group is Zenchu. Zenchu is primarily a political organization rather than a business cooperative. Zenchu commands extensive farmer backing and conducts extremely effective lobbying and other political action. Zenchu leaders claim that they can deliver 10,000 farmers to demonstrate in Tokyo on 48 hours notice.

Overall, these groups are well-led, strongly motivated and have very clear goals. One American businessman who has dealt with them for years has characterized them as "extremely firm-handed and tough." The co-ops influence a large bloc of votes that are extremely important to the LDP. Furthermore, some observers believe that LDP's support in the cities is waning, and that the party's dependence on the rural vote may increase. The farmers' groups and the MAFF share the same goals and are generally in agreement on policy matters. Therefore, the Zenno and Zenchu are especially powerful factors in the decision-making process regarding agricultural imports.

The farmers' goals are simple. If a sizable group of Japanese farmers are engaged in producing a particular product, the farm groups will support measures to restrict the importation of that product or a close substitute. If there is no significant Japanese production of a particular agricultural product, then the group is not much concerned with government policy toward that product unless it substitutes for a domestic item.

As is the case with most Japanese government ministries, the MAFF is rather independent of other government agencies and jealously guards this independence. While the MAFF "consults" with other agencies such as the Ministry of Finance and the Ministry of International Trade and Industry, they are in fact, rather well insulated from each other. The MAFF has a long history of doing much as it pleases in accordance with its view of its responsibilities.

For this reason, only the higher levels of the LDP can be expected to bring effective pressure to bear on the MAFF. Moreover, the MAFF can (and often has) successfully resisted this pressure. This resistance is strengthened by the MAFF's and the LDP's common ties with Zenno and Zenchu. The LDP needs the rural vote, so the agricultural trade policy of Japan will continue to reflect the economic goals of Japanese farmers more than anyone else's.

To implement policy decisions, Japan uses quite simple and straightforward methods of controlling food imports, namely government procurement, tariffs, and quotas. The allocation of quotas is handled in several ways. Generally, the quotas are parceled out to private companies, farmer co-ops and their affiliates, or to quasi-governmental agencies.

In addition to these formal means of control, Japan's commodity

distribution system also forms an informal barrier to imports. Most food products are distributed to consumers through a chain of intermediaries which tend to be closely bound to traditional sources of supply. Thus, it can be reasonably difficult to export food products to Japan even if there are no formal barriers to entry.

The U.S. Role. Because the United States efficiently produces a number of the products which Japan does not grow extensively (soybeans, corn, cotton, wheat, tobacco), we are by far her largest source of agricultural imports. As the origin of 30-35 percent of Japan's agricultural imports, the United States is about three times more important to Japan than any other single food exporting nation. Here is a brief profile of our 1977 exports to Japan.

U.S. Agricultural Exports to Japan

Item	U.S. agricultural exports to Japan, 1977 (percent of total)
Soybeans and products	25
Feed grains	28
Wheat	10
Cotton	8
Tobacco	7
Hides	5
Other	<u>17</u>
Total (\$3.9 billion)	100%

Soybean imports are free of tariff or quota restrictions as are corn, grain sorghum for feed, and cotton. Government agencies directly handle

imports of barley, wheat, and tobacco, reflecting a tightly-administered domestic market for these products. Livestock and meat are imported under licenses issued to selected trading companies. These licenses maintain overall quota allocations so as to control total domestic supplies. Other relevant commodities subject to import quotas applied by the Japanese government include fresh oranges and tangerines, dried legumes, most fruit and vegetable juices, and bovine leather.

On the other side of the ledger, we import relatively little of agricultural origin from Japan. Our farm purchases from Japan in 1977 were only \$79 million compared to \$3.9 billion worth of products moving the other direction, almost 50 times more. These products are mainly specialty items, highly processed fruits and vegetables, and a little tea. Very little scope exists for trade negotiations between Japan and the United States solely on agricultural products.

The European Community

Because of our political and cultural orientation toward Europe, we seem to be generally better informed about European agricultural and economic matters than those of nations like Japan. This is reflected in the thorough discussions of agricultural and trade policies of the nine-nation European Community (EC-9) to be found in newspapers, magazines, journals, and research reports. Consequently, a full discussion of the EC-9 agricultural and trade policies will not be attempted here--such analyses can be found in many official and non-official publications [6] [7][18]. Instead, this section will focus on the central aspects of the Common Agricultural Policy (CAP) of the Community which shape the

willingness and ability of the EC-9 to negotiate agricultural trade agreements within the MTN framework.

The Common Agricultural Policy and International Trade. For all its anomalies and inconsistencies the CAP is a joint Community policy. In fact, an official publication of the EC-9 observes that the CAP "was introduced in 1962 and has unfortunately remained the only real joint Community policy." [6] Without a CAP, it is unlikely that the original six-nation Common Market could have been achieved. It is also unlikely that the Community of today could remain intact without some form of common farm and food policy. Therefore, it should not be surprising that Community officials and political leaders in Europe will do nothing in international forums and agencies to seriously undercut the fragile CAP from the outside. There are plenty of internal forces shredding its fabric on a daily basis.

Agriculture is very diverse within the Community. Although conditions vary greatly within and among its nations, farming in Europe has long been conducted on a smaller scale, with higher per-unit costs, and less overall efficiency than in the major farming regions of the United States and Canada. In addition, prior to the formation of the original Common Market, each member nation had its own complex and generally-protectionist agricultural policy to which it was strongly committed.

The only feasible way that a mutually-acceptable farm policy, providing for substantial self-reliance in food and agricultural raw materials, could be formed among the members was by means of high common prices and no direct production controls. Such a policy could only be sustained by a thoroughly protective import/export trade policy. There simply was no other workable pathway to agreement. Even today, no apparent alternative exists except for continual

repairing and re-patching of the original scheme. Powerful farm organizations, a widespread desire for self-reliance in food, the prosperity of the Community, plus important pockets of low farm income in Italy and France add rigidity to the current system, effectively preventing any substantial revamping.

Following is a brief summary of the extent of agricultural self-sufficiency within the EC-9.

Item	Degree of EC-9 self-sufficiency (1974/75)
	(percent)
Cheese	104
Wheat	112
Poultry	101
Meat	96
Fresh vegetables	93
Butter	100
	(116 for the EC-6)
Corn	55
Sugar	91
Rice	90
Fresh fruit	80
Citrus	42
Soybeans and products	15

These rates of self-reliance are protected through the CAP mainly by internal price guarantees to Community farmers. [6][7][18] Arrived at politically, guaranteed ("target") prices are maintained within the EC-9 via market intervention by government agencies for surplus products and via import

controls for commodities in which the Community is deficit. All of the bizarre complexities of the CAP for agricultural markets really boil down to these two fundamental ideas.

When surplus production occurs, it is acquired and stored for future disposition or exported with whatever financial subsidy is needed to sell it abroad. For deficit products, the main import controls are (1) the well-known variable levies (the difference between internal guaranteed prices and world market prices c.i.f. Europe), (2) other tariffs, special levies, and some quotas.

For major products where an official "target" price is not established, such as beef, pork, eggs, poultry, fruit and vegetables, and tobacco, various tariffs or levies apply. These can be adjusted on relatively short notice to provide price protection for and preference to Community growers. These guarantees are known variously as "guide prices," "sluice-gate prices," "reference prices," and "norm prices." Because, like "target" prices, these are all domestic price guarantees, they reflect internal economic and political conditions. Moreover, they are sustained by adjustable (not fixed) levy formulas. Consequently, they are extremely difficult, if not virtually impossible, to negotiate internationally under current conditions.

Because each nation in the EC-9 maintains its own currency and retains much of its own financial independence, the CAP price targets and support levels are expressed in "units of account," an artificial Community-wide accounting device. As long as relative values of the members' currencies are constant, the "unit of account" prices can reflect market harmony throughout the Community. However, today's floating system of international exchange rates has allowed relative European currency values to slip and

slide, causing "unit of account" prices to rise and fall when they are translated into specific currencies. This, in turn, has spawned a complex layer of border tax adjustments which are now applied to intra-Community trade in farm products. In effect, there is now a separate set of exchange rates among European currencies applied only to agricultural trade--these are called "Green Rates." This has added a new tangle of complexity to the CAP which clearly narrows the short-run ability of the Commission to negotiate internationally by further weakening the CAP's cohesiveness and organizing principles.

The U.S. Role. The United States has an enormous stake in EC-9's level of agricultural trade. In 1977, as in previous years, about 30 percent of our farm exports went into the Community. As is well known, these exports are scattered among dozens of commodities. However, they are also highly concentrated in bulk agricultural raw materials as a look at the following tabulation reveals.

U.S. Agricultural Exports to EC-9

Item	U.S. exports to the EC-9 in 1977 (percent)
Oilseeds and products (mainly soybeans)	42
Feed grains* (mainly corn)	23
Tobacco*	6
Wheat and rice*	3
Fruits and vegetables*	4
Hides and skins	2
Variety meats	2
Nuts	2
Tallow	1
Cotton	1
Poultry*	1
Other	<u>13</u>
Total (\$7.1 billion)	100%

*Commodity groups for which trade is influenced by minimum import prices and adjustable tariffs or levies.

Even though feed grains, soybean products and tobacco account for over 70 percent of the total, the remaining items, though small in percentage terms, reflect very large dollar volumes. This latter 30 percent of our 1977 agricultural trade to the EC-9 was approximately \$2 billion. This is larger than our agricultural exports to any single nation outside EC-9 except Japan. This explains the intense concern by U.S. interests in EC-9 trade policy across the board including that for items like citrus, nuts, chicken and turkey, rice, and various meat products.

Over the past decade and longer, the U.S. has exported \$4 to \$5 worth of farm products to the EC for each \$1 of agricultural imports from the Community. These imported products are highly diverse and tend to be rather highly-processed foods or specialty items. Below is a profile of our 1977 farm imports from EC-9. None of the products in the "Other" category exceeds 2 percent of the total.

U.S. Agricultural Imports from EC-9

Item	Agricultural imports in 1977 from EC-9 (percent)
Wines and malt liquors	30
Pork products	14
Cocoa products	10
Dairy products (mostly cheese)	7
Candy	2
Nursery stock	2
Other	<u>35</u>
Total (\$1.4 billion)	100%

As with Japan, this comparison with our agricultural exports illustrates

why negotiating trade barriers only within agriculture sectors is likely to be difficult and only of marginal importance to U.S. agriculture as a whole.

Canada

Among the developed nations of the world, Canada occupies a unique position in the U.S. agricultural trade picture. Canada is a leading export customer for U.S. farm products and an important source of our agricultural imports. In 1977, Canada was the fourth leading buyer of U.S. farm exports at \$1.55 billion (two of the three nations ahead of Canada are inside the EC-9, Japan being the other). On the other hand, Canada is our third leading source of farm imports, exceeded in 1977 by only Brazil and Mexico. In 1977, the import value from Canada was \$672 million.

Like the United States, Canada's leading agricultural export customers are the EC-9 and Japan. The United States now ranks third in this regard having recently been overtaken by Japan. We take approximately 16 percent of Canada's total farm exports. On the import side, the United States currently supplies more than half (57 percent) of Canada's agricultural purchases.

Much of this large flow of trade across our common border with Canada is due to the vast geographical size of both nations. When not excluded by trade barriers, many products can move across a long international border more economically than they can within either nation. This happens when forces of localized comparative advantage in production and marketing are not overcome by national trade policies. This tendency is illustrated by looking at the distribution of commodities involved in U.S.-Canadian agricultural trade.

From the U.S. export viewpoint, there are no overwhelmingly dominant products in our trade with Canada. The following profile of 1977 trade values illustrates this fact.

U.S. Agricultural Exports to Canada

Item	U.S. agricultural exports to Canada, 1977 (percent)
Soybeans and products	13
Processed fruit	12
Fresh vegetables (including potatoes)	11
Pork (fresh, chilled, frozen)	8
Fresh fruit	7
Cotton	4
Other	<u>45</u>
Total (\$1.55 billion)	100%

The comparative diversity in U.S. agricultural regions together with the lower cost of our feed grains and oilseeds lies behind the importance of fruit, vegetables, soybeans, and pork in this trade picture. None of the products in "Other" exceeds 4 percent of the total in value.

The same general picture emerges from a similar profile of Canada's agricultural exports to the United States. (Next page.)

U.S. Agricultural Imports from Canada

Item	U.S. agricultural imports from Canada, 1977 (percent)
Live cattle (mainly feeders)	16
Beef, veal (frozen, chilled, fresh)	7
Sugar and products	6
Ale, beer, <u>etc.</u>	5
Biscuits and wafers	3
Coffee extracts	3
Fur skins	3
Other	<u>57</u>
Total (\$672 million)	100%

The availability of range and pasture in the western provinces of Canada enables a profitable flow of live feeder cattle and processed beef to occur in most years. None of the items in "Other" exceeds 3 percent of the total in value.

Broadly speaking, Canada and the United States face similar conditions in their domestic agricultures and in their trading relations. For example, both nations rely on agricultural trade to contribute positively to their international balance of payments. The agricultural export/import ratio for Canada is typically somewhat smaller than that for the United States (1.2 for Canada in 1977 as compared with 1.7 for the United States). In addition, about 70 to 75 percent of Canada's agricultural exports are grains, feeds, and oilseed products--for the United States it is about 65 percent. Consequently, like the United States, Canada's trade policy and domestic farm policy are heavily dominated by the promotion of exports and the management of grain production and inventories by means of government policy. The agencies, institutions, and the extent of direct

involvement by the government differs markedly between the two nations and among commodities. [4] However, the problems are clearly similar.

A similar parallel also exists on the import side. The Agricultural Stabilization Board of Canada has the responsibility to stabilize prices and "assist the industry in realizing fair returns. . . ." [17] Under legislation, the Board must support the prices of various commodities at not less than 80 percent of previous ten-year average market or base price. When imports of stabilized or supported products interfere with this policy, quota and tariff measures are readily available to Canadian authorities on a commodity-by-commodity basis. Hence domestic agricultural policy decisions about farm prices and incomes tend to control Canadian trade policy especially with respect to imports.

If agricultural trade between the United States and Canada were as free as it is between our own individual states (no tariffs or quotas), it is unlikely that vast changes would occur in the basic location of production or in the trade patterns of the two nations, even for dairy products or meat. Certainly nothing comparable to the adjustments that would occur in Europe or Japan under free agricultural trade. Consequently, the scope for trade negotiations between the two nations is related not to fundamental differences in social philosophy, geography, or to economic structure but to modest differences in agricultural resources, farm support systems, and the natural tendency for an economical flow of many products to occur back and forth across a long, shared border.

III. The Tokyo/Geneva Round in Brief Perspective

The official chronology will show the current Tokyo/Geneva Round to have been the lengthiest formal trade negotiation in GATT history. The previous record-holder was the Kennedy Round, which lasted from May 1963 to June 1967, a total of 54 months. The Tokyo/Geneva Round opened in September 1973 and lasted for 79 months. During this time, however, there have been significant delays and some temporary adjournments. The five negotiating rounds before the Kennedy Round were comparatively short. This is because tariff cuts and tariff bindings were about the only issues addressed. Moreover, these cuts and bindings mainly covered trade in industrial items and a few tariff-burdened agricultural goods. Non-tariff trade barriers were largely bypassed.

Agricultural trade issues have formed a large part of the recent discussions. For reasons mentioned earlier, such discussions are not completed quickly or easily. In addition, both the Kennedy Round and the Tokyo/Geneva Round have featured some serious and rather delicate changes in the basic legal and institutional framework of the GATT itself. These negotiations have been slow and, like the agricultural talks, subject to temporary adjournments and delays. [9]

The Kennedy Round (1963-67)

As with the current Tokyo/Geneva Round, official statements were continually advanced in the Kennedy Round about the crucial importance of agricultural negotiations and agreements from the U.S. viewpoint. Here is a typical example from a 1963 speech by Christian A. Herter, the U.S. Chief Negotiator for the Kennedy Round.

It is, of course, the firm position of my Government that negotiations must include agricultural products. This means that my government will not be prepared to conclude the negotiations until equitable tariff and trade arrangements have been developed for agricultural products.

This is remarkably similar to our official stance in the Tokyo/Geneva Round buttressed by similar language and intent in the Trade Act of 1974 which authorized U.S. participation in the round. However, major breakthroughs in agricultural trade negotiations simply did not materialize in the Kennedy Round. As those familiar with the history of trade agreements know, the major parties were simply too far apart and too inflexible within their own domestic policy constraints to maneuver toward anything new or far-reaching on the international scene.

At the 1967 conclusion of the Kennedy Round, the political commitment for substantive agricultural agreements was deemed to have been satisfied in two main ways. First, an International Grains Arrangement was signed. It was an outgrowth and extension of previous International Wheat Agreements. It contained both a 4 1/2-million-ton Food Aid Convention and an ill-fated, price-fixing Trade Convention for wheat. Secondly, a set of tariff cuts and bindings was concluded covering agricultural products whose trade values, at that time, were \$866 million on the U.S. export side and \$860 million on the import side. [26] Incidentally, at 1978/79 price levels, these trade coverage values would now approximate \$2.0 billion. (This for comparison with trade coverage values in the \$3.0 billion range to be discussed later in connection with current agreements.)

Major Agricultural Participants in the Tokyo/Geneva Round

Under negotiating procedures which have evolved in GATT since its 1947 founding, multilateral tariff and trade concessions for commodities,

commodity groups, and industrial sectors tend to occur only when two or more of the leading trading nations in the relevant products are willing and able to agree on the main terms of a settlement. Then other interested parties can join in and, by their participation, round out a multilateral package.

Consequently, the main actors in today's agricultural trade negotiations are nations who are (1) very important traders in agricultural commodities--exporters, importers, or both, and (2) heavily interested in the trade of particular commodities where trade problems exist and where change is at least conceivable. In the Tokyo/Geneva Round, much as with the Kennedy Round, center stage in the agricultural negotiations is occupied by the United States, the EC-9, and Japan. (Though important in earlier rounds, the United Kingdom is now submerged within the EC-9 at least for agricultural trade matters.) Other important nations on the inner fringe, next to the "big three," are Canada, Mexico, Brazil, Argentina, and Australia.

Within the traditional context of GATT negotiations, these few nations form the pool from which pairs and other combinations must be drawn for significant dealing to occur. Naturally, the major trading nations may find areas of potential negotiation with smaller (in trading terms) countries. These areas are likely to involve tariff cuts and bindings and possibly the lowering of specific trade barriers on commodities of particular interest to the parties. Kennedy Round agreements between Korea, Yugoslavia, and the United States are illustrative of this type of accord.

The LDCs

Over the years the membership of GATT has grown to approximately 87 full or provisory members and 24 newly-independent states who maintain

de facto application of the GATT. [9][5, Aug. 1975] Of these 111, 98 are participating in the Tokyo/Geneva Round. Among these participants, 71 (72 percent) are nations which can be classified as LDCs. Many are very small in economic terms and smaller yet in international trade. Still, their presence in GATT and their more collective voice in the United Nations Conference on Trade and Development (UNCTAD) has stimulated some basic changes in the articles of GATT and its procedures to allow for generalized trade preferences for LDCs, for non-reciprocity in negotiations with wealthy nations, and for special flexibility in applying negotiated trade measures.

Because many LDCs depend heavily on exports of tropical agricultural products and raw materials on one hand and because special access to world grain supplies is crucial for some others, their main interests at the Tokyo/Geneva Round (and elsewhere) are on (1) market access for raw and semi-processed products, (2) international commodity agreements, (3) tariff cuts and tariff preferences offered by developed nations, and (4) food aid arrangements. Generally speaking, the impact of the LDCs collectively on GATT negotiations and multilateral trade agreements is still rather marginal. Their relative trade volume is small, nation by nation, and their economic interests quite diverse. In addition to GATT, the UNCTAD is an emerging forum for LDC interests to be articulated and perhaps negotiated seriously in the future.

The Goals of the Tokyo/Geneva Round

The objectives of the current round were set out in the so-called Tokyo Declaration of September 1963, which formally opened the negotiations. The 98-nation Trade Negotiations Committee of GATT has overall responsibility for the several groups and working units that actually conduct the

negotiations. The principal groups and themes for the MTN, as set out in the Tokyo Declaration, are for

1. Tariffs
2. Non-tariff measures
3. Agriculture
4. Tropical products
5. Safeguards
6. The GATT framework.

Tariffs. This group encompasses the traditional goals and activities of most prior GATT negotiations. As the core of virtually all GATT rounds, the negotiation of tariff offers and requests for both agricultural and industrial products likely will determine the success or failure of what is finally agreed to in the Tokyo/Geneva Round. A central goal adopted for this round was a multilateral series of tariff agreement both to lower duties and to harmonize them among nations. Harmonization implies that higher tariffs would be cut relatively more than lower tariffs. Agreed-upon general formulas were adopted for this purpose.

Non-tariff Measures (NTM). Emphasis on non-tariff barriers established in preliminary discussions and official statements was given concrete status within this general theme and in the objectives of the associated working group. The NTM negotiations were separated into five sub-group categories:

1. Quantitative Restrictions--mainly quotas and licensing procedures
2. Subsidies and Countervailing Duties--procedures to deal with "dumping" via export subsidies and consequent tariff retaliation by importers

3. Technical Barriers--mainly product standards, labeling and packaging restrictions, statements of origin, etc.
4. Customs Issues--primarily the valuation of products for tariff purposes, nomenclature, and related customs procedures
5. Government Procurement--regularizing and opening up procedures for government purchasing in many nations so that international sellers have better access to government contracts.

Agriculture. Along with the NTM theme, the issue of agricultural trade was identified separately in order to provide a negotiating basis for whatever commodity agreements might be proposed. Sub-groups were identified for grains (primarily coarse grains), meat, and dairy products. Negotiations for an international wheat agreement proceeded in parallel fashion first within the International Wheat Council and more recently in Geneva under the auspices of UNCTAD.

Tropical Products. The Tokyo Declaration singled out tropical products in order to highlight the importance of such products to the LDCs and to deal with them somewhat separately since they are usually not directly competitive with domestic agriculture in the United States, Europe, Japan, and other developed nations. A major issue is tariff differences between raw and semi-processed tropical products. Moreover, some concrete agreements and concessions for tropical products appeared early in the round suggesting that a separate grouping for these products would be sensible within the overall negotiating context.

Safeguards. This theme and its associated negotiating group were designed to improve the mechanism by which nations could impose restrictions or withdraw prior concessions when competing domestic industries are

severely injured by sudden or unexpected changes in imports. The prompt and orderly phasing out of safeguard actions also is emphasized.

GATT Framework. This is basically a catch-all category for the review and revision of the General Agreement itself in order to make it more suitable to modern conditions, to make it better able to accommodate the trade and development problems of LDCs, to provide a better mechanism for managing trade conflicts, and to speed up and clarify the settlement of disputes.

The Nature of the Agreements

From the U.S. point of view the MTN agreements for agriculture can be visualized under three main headings. The first is the set of bilateral packages of requests and offers negotiated with major trading partners. Second is the series of commodity agreements established in the agriculture working group, and third is the remaining GATT code agreements which incorporate the revisions and refinements in the structure of GATT and its related rules and understandings about trade in agricultural goods. The balance of this report focuses upon the specific agricultural trade and tariff agreements reached with other trading partners, large and small. In particular, the economic value of the agreements obtained on agricultural exports and the concession granted on agricultural imports are estimated and compared. In addition, an attempt is made to assess the overall impact of the agricultural agreements upon employment here in the United States. No attempt is made to measure the economic impact of other MTN agreements which will affect agricultural trade indirectly. These include the subsidies/ countervailing duty codes, the safeguard codes, and the commodity consultation agreements for meat, dairy products, coarse grains, and general food policies. These agreements may be very crucial in the future for promoting

trade growth and managing potential trade conflicts, but it is virtually impossible to measure that value at this time.

IV. The Negotiated MTN Agreements for U.S. Agricultural Exports

In the negotiating process, a series of bilateral packages involving the United States and its major trading parties has emerged. In addition, a broad series of lesser agreements involving many agricultural trading partners has been achieved. These packages cover both tariff and non-tariff items. This section of the report looks at the economic impact of these settlements insofar as they currently are available for analysis.

Japan

The U.S.-Japan settlement insofar as agriculture is concerned has three major components. First is a set of tariff bindings which apply to about 14 items imported by Japan, most important of which is soybeans. Second is a series of tariff reductions granted by Japan on about 67 listed categories of items, widely diversified. Third are increases in Japanese import quotas of a few tightly-controlled items, namely high-quality beef, oranges, orange juice, and grapefruit juice. The U.S.-Japan package contains no agricultural concessions from the United States toward products for which Japan is a major supplier.

Tariff Bindings. Within the package, tariff bindings covered some 14 items whose 1976 base trade value is \$809 million. These bindings are scattered over a number of products. However, the "free" binding on soybeans alone accounts for \$770 million, or 95 percent of this total. It is impossible to calculate or predict the value of this trade concession. Most observers feel that a similar "free" binding on soybeans obtained from the European Common Market during the 1962 Dillon Round and sustained since then has been at least partially responsible for the huge growth of soybean exports to Europe. Common Market soybean imports covered by the

bound "free" tariff level in 1963 were only 60 million bushels; in 1977, they were 276 million bushels. Given the relatively low level of per capita meat consumption in Japan and its high income elasticity, the "free" binding on soybeans could easily approach a value similar to that for the EC-9 as time goes on. Such bindings for soybeans and other products are valuable insurance, especially if protectionist sentiment continues to grow around the world.

Tariff Cuts. Excluding bound items, the value of the new tariff reductions averages 35 percent, across the board. For purposes of analysis and comparison, the tariff reductions were assumed to exert downward pressure on retail and wholesale prices of these items inside Japan. The economic value of any tariff reduction occurs because the total market for the general product line expands and because the market share of imported items grows due to their relative price reduction. The analyses in this section focus on the total tariff reductions as negotiated, without considering the intermediate staging that will occur in their actual application beginning in 1980. The 1976 market values used for comparison are those reported in the working memos prepared by the Office of Special Trade Representative (STR). These values are employed for comparison purposes only.

Table 1 contains the basic results of calculations on the trade effects of the negotiated tariff changes. They are to be viewed as approximations indicating relative magnitudes; they are not precise predictions because, among other things, they attempt to isolate the effect of tariff changes. Moreover, they are, in a sense, lower bounds on the estimated change since no Japanese supply responses to the tariff-induced price changes were entered into the calculations.

Table 1. Japan-U.S. Tariff Package; Summary of Agricultural Trade Increases by Japan under Full Tariff Reductions as Negotiated

Item	Base trade value ^{a/}	New value	Change
	million U.S. dollars		
Fruits and vegetables	168	197	+29
Poultry	16	29	+13
Livestock products			
Pork	150	185	+35
Tallow	40	42	+ 2
Offals	14	15	+ 1
Horsemeat	4	5	+ 1
Grain and feed	4	5	+ 1
Seeds	3	4	+ 1
Oilcake	25	29	+ 4
Cottonseed oil	7	9	+ 2
Others	<u>13</u>	<u>16</u>	<u>+ 3</u>
Total	444	536	+92

^{a/} 1976 trade value (STR memos).

The estimates were computed by multiplying together (1) the proportional price change implied by the tariff cuts, times (2) the price elasticity of demand for the product in question (gleaned from various research publications [1][8][20][21]), times (3) the ratio of total consumption to imports of the particular product in Japan. This computation provides an estimate of the percentage increase in sales of the computed item. This estimate is then applied to the trade value figures previously mentioned on the plausible assumption that the tariff cuts do not alter f.o.b. or c.i.f. prices in the world market. See Appendix A for a more technical description of this procedure.

Almost 40 percent of the trade increase is concentrated in the pork market. The calculation as presented assumes that imported pork will actually fall in relative price because of the negotiated settlement. However, Japanese imports of pork are subject to duties which partially resemble variable import levies. Consequently, this part of the calculation could be void if the relative price of imported pork is not permitted to decrease inside Japan. The totals show that trade values increased by an estimated \$92 million or about 21 percent of the base value of the covered items. Without pork, the \$57 million increase represents 19 percent of the base value of covered items.

Quota Increases. The U.S.-Japan settlement contained import quota relaxation for four commodities in which the United States has a sizable, direct interest: high-quality beef, oranges, orange juice, and grapefruit juice. Table 2 illustrates the current quotas, the full relaxation implied in the settlement, and the estimated trade value of the quota increases. The calculations in table 2 assume that the new, larger quotas are entirely filled by imports.

Table 2. U.S.-Japan Quota Agreements; Summary of Changes
and Estimated Annual Trade Value

Item	Original quota	New quota	Change	Annual value of change
	(million lbs.)			
Beef	37.0	67.9	+30.9	\$77.3 mil. ^{a/}
Oranges	99.2	180.8	+81.6	\$24.5 mil. ^{b/}
Orange and grapefruit juice	8.8	27.6	+18.7	<u>\$21.5 mil.</u> ^{c/}
Total				\$123.3 mil.

^{a/} Calculated at \$2.50/lb.

^{b/} Calculated at 30¢/lb.

^{c/} Calculated at \$1.15/lb.

Summary. The estimated values of the tariff changes and the quota adjustments by Japan amount to about \$215 million. To this must be added the unknown but possibly very large future value of the tariff bindings achieved, especially on soybeans. Another positive point about this agreement is that the quota adjustments do, in fact, reflect negotiated changes in significant non-tariff barriers. The precedent-setting value of these concessions should not be overlooked or minimized despite the relatively small dollar amounts involved, as compared to total U.S.-Japan trade. They may presage further opportunities for negotiated changes in import quotas with Japan and perhaps other trading partners.

The European Community (EC-9)

Unlike the settlement with Japan, the potential agreement with EC-9 involves concessions on agricultural items by both parties. (The U.S. concessions are covered in the next major section of this report.) The EC-9 concessions cover about \$960 million worth of trade in 1976 as reflected in STR memos. Approximately \$867 million is accounted for by tariff cuts and levy adjustments, an estimated \$66 million is accounted for by the creation of a new tariff line for high-quality beef (restaurant and hotel quality) not previously available, about \$19 million involves a "free" tariff binding on peanut imports, and about \$8 million is covered by a technical tariff reclassification agreement for some poultry items.

The EC-9 Tariff Cuts. The tariff concessions by EC-9 span a variety of products totaling \$867 million in trade value. Their contribution to expanded trade is shown in table 3, which is constructed on the same basis as table 1, see Appendix A. Full tariff cuts are assumed, the 1976 base values are those reflected in various STR memos; the estimated trade changes

Table 3. U.S.-EC-9 Tariff Package; Summary of Estimated Agricultural Trade Gains from Full EC-9 Tariff Cuts and Levy Adjustments as Negotiated.

Item	Base trade value ^{a/}	New value	Change
	(million dollars)		
Rice	124.1	129.6	+ 5.5
Dried peas	29.2	29.6	+ 0.4
Poultry			
Turkey legs	5.3	7.2	+ 1.9
Turkey breasts	0.9	1.0	+ 0.1
Other poultry	2.5	3.4	+ 0.9
Tobacco	411.2	423.5	+12.3
Livestock products			
Various offals	116.7	158.7	+42.0
Animal oils and alcohols	17.7	22.1	+ 4.4
Hormone products	52.5	78.8	+26.3
Oilseed products	10.4	10.7	+ 0.3
Fruits and vegetables	91.3	98.6	+ 7.3
Others	5.2	5.8	+ 0.6
Total	867.0	969.0	+102.0

^{a/} 1976 trade value (STR memos).

are calculated according to the same formula as with the Japanese package (the implied price cut times a market demand elasticity times the consumption/import ratio); no European supply responses to changed market conditions are taken into account. [27][28] The totals show that trade values increase by an estimated \$102 million or about 12 percent of the value of covered items.

High Quality Beef Concession. A new tariff line for high-quality restaurant and hotel beef will cover an informally-agreed import volume of 10,000 metric tons or less. The traditional variable levy will not apply to this line. At a per-unit trade value of \$3.00 per pound, this EC-9 concession will approximate \$66 million in new trade if the 10,000 ton quantity is met by U.S. exporters.

Summary. In terms of increased trade values, the EC-9 settlement shows an estimated \$102 million tariff-related increase and \$66 million in new beef trade for a total of \$168 million. The value of the tariff-category reclassification in poultry is unknown at this time as is the future value of the "free" peanut tariff binding. It is unlikely that this binding will approach the trade value generally attributed to the earlier soybean binding in the EC-9. But, reflecting a trade value of \$19 million, it cannot be ignored in assessing the value of this agreement.

Canada

Canada's trade concessions to the United States in agriculture involve mainly the reduction and binding of existing tariffs. The trade coverage, using STR's 1976 base values, is \$422.5 million. Of this total, \$412.6 million is accounted for by commodities for which tariffs were reduced. About \$9.7 million involves binding of "currently-applied" tariffs on

prepared cereal foods. (These "currently-applied" tariffs are actually lower by approximately 40 percent than the official book rates.) Another \$0.2 million is accounted for by Canada's agreement to open the importation of canned turkey for "general licensing," but no tariff offers on Canada's poultry tariffs of 5-10 cents per pound were made.

Table 4 shows estimated trade values of the proposed settlement with Canada. These values were calculated on the same basis as those for Japan and EC-9 (tables 1 and 3) using estimated demand elasticities, consumption/import ratios, and calculated price changes due to the full negotiated tariff cuts. [11][12] The total new trade value is estimated at \$55.7 million. On the \$412.6 million base, this is a 13.5 percent trade gain strictly due to the tariff cuts. For further summary, this value will be taken as \$56 million.

Other Nations

At this writing, the United States had reached specific MTN tariff and access agreements with about 30 other nations or groups of nations acting together. These agreements cover tariff bindings and reductions as well as some adjustments in non-tariff trade barriers. In this section, we will look generally at these agreements and their potential trade value, making specific country references as appropriate. This discussion is not intended to be an exhaustive catalog of the MTN agreements but rather an assessment of their probable economic impact.

Tariff Bindings. Approximately 60 individual tariff bindings were achieved on products exported by the United States. Twenty nations offered these bindings, the most important of which, in terms of 1976 trade coverage

Table 4. U.S.-Canada Agreement; Summary of Estimated
Agricultural Trade Gains from Full Canadian
Tariff Cuts as Negotiated

Item	Base trade value ^{a/}	New trade value	Change
	(million dollars)		
Pork and related products	157.8	202.4	+44.6
Live cattle, sheep, and goats	68.4	71.0	+ 2.6
Vegetable oils	17.8	18.1	+ 0.3
Corn and other grains	98.4	101.7	+ 3.3
Tobacco and cigarettes	7.1	10.6	+ 3.5
Orange juice	38.5	39.3	+ 0.8
Potatoes, fresh and frozen	<u>24.6</u>	<u>25.2</u>	<u>+ 0.6</u>
Total	412.6	468.3	+55.7

^{a/} 1976 values (STR memos).

figures, are shown separately in table 5. The total trade value of these bindings is almost \$450 million, with 59 percent concentrated in soybeans and soybean oil. These bindings represent no new trade but do represent insurance against future duty increases by participating governments.

Tariff Reductions. Approximately 90 individual tariff reductions were achieved with 18 nations on a wide variety of U.S. agricultural exports. These negotiated duty cuts vary from quite large to very small. The 1976 trade coverage of these tariff agreements is approximately \$46.5 million. Using the general method employed in the analysis of the Japanese, EC-9, and Canadian agreements, the estimated value of new trade generated by these tariff cuts taken together is only \$7.0 million.

Two major items are included in this \$7.0 million. Approximately \$1.6 million is accounted for by a sizable tariff cut offered by the Dominican Republic on soybean and peanut oil. Another \$2.0 million comes from a duty reduction on soybean oilcake offered by Korea. The other \$3.4 million is widely scattered among the 88 or so other new tariff cuts.

Non-tariff Barriers. At present, about 15 individual agreements on non-tariff trade barriers are in hand. They range from increases in import quotas to licensing procedure changes to bindings on import mixing regulations. Three of these are subject to direct economic analysis and are important enough to warrant separate consideration. Two involve import quota increases on high-quality beef by Austria and Switzerland respectively. The third is a duty cut and mixing regulation binding on tobacco imports by Australia.

Table 6 illustrates the analysis of beef quota changes. These total \$13.6 million in new trade. The estimated value of the Australia tobacco concession is \$1.8 million. Thus the total value of these three non-tariff concessions is estimated at \$15.4 million.

Table 5. MTN Agreements; Miscellaneous Tariff
 Bindings Negotiated by the United States
 by Commodity and Country

Item	Country	Trade coverage value, 1976
		(million dollars)
Dairy breeding cattle	Mexico ^{a/}	\$ 13.5
Tallow	Mexico ^{a/}	9.3
Soybeans	Mexico ^{a/}	57.8
Soybeans	Taiwan	183.5
Feed corn	Taiwan	11.3
Wheat	Taiwan	88.4
Tallow	Korea	41.1
Soybean oil	India	22.8
Others	--	<u>21.9</u>
Total		449.6

^{a/} Pending final agreements.

Table 6. MTN Agreements; Trade Value of Quota
Adjustments on Beef by Austria
and Switzerland

Country	Original quota	New quota	Change	Annual value of change
	(metric tons)			(million dollars)
Austria	300	600	+300	\$ 1.8 ^{a/}
Switzerland	300	2,300	+2,000	<u>11.8^{b/}</u>
Total value				\$13.6

^{a/} Calculated at \$2.75/lb.

^{b/} Calculated at \$3.00/lb. for 700 metric tons and \$2.50/lb. for 1,300 metric tons.

Summary. Adding together the new trade value of the tariff cuts and non-tariff concessions equals \$22.4 million. Since several of the other non-tariff concessions were not specifically evaluated, this estimate might be considered as a minimum value of the MTN agreements with approximately 30 individual nations other than Japan, EC-9, and Canada. For further summary, this value will be taken as \$23 million.

V. The Negotiated MTN Agreements for U.S. Agricultural Imports

There are two major categories of specific trade concessions offered by the United States. The first and most important is an enlargement and rearrangement of section 22 import quotas on cheese. The second category contains a wide variety of tariff reductions on agricultural imports ranging from wool to canned pineapple. At this writing, some of these offers are not contained in final agreements, pending overall completion of the negotiations with a few nations including Brazil, Mexico, and the Philippines. For this report, estimates are presented for the dairy import concession and for as many of the other important agreements, on a commodity basis, as possible at this time.

The MTN Agreement on Dairy Import Quotas

The proposed MTN agreement on dairy imports enlarges the quotas on foreign cheese, eliminates the current "price break" system, and brings all "price break" cheeses under the new quota. If the new quota system had been put into effect last year, approximately 15 thousand metric tons of additional cheese could have been imported into the United States on an annual basis. The new quota level is 124 thousand metric tons. Cheese imports totaled 109 thousand tons in 1978. The difference is 15 thousand metric tons.

Since the implementation of the new quota system is proposed for 1980, this 15-thousand-ton figure is an upper yearly estimate subject to annual decreases. This is because cheese imports, especially "price break" imports, have been increasing recently and probably will continue to do so.

Moreover, increased quota levels need not necessarily be filled with increased imports. In fact, in 1977 and 1978, actual cheese imports were below quota levels (83 percent in 1977 and 87 percent in 1978).

However, for this discussion, assume that all of the potential 15 thousand metric tons enters in a single year. This is the equivalent of 275 million additional pounds of milk on the domestic market. To be generous with this estimate, allow it to be 300 million additional pounds of milk equivalent. This is approximately one-quarter of 1 percent (0.25%) of the total annual U.S. milk production. It also represents slightly less than 1 percent (0.9%) of total U.S. cheese production on an annual basis.

Taking some widely-used price response estimates, this potential increase in imports could depress milk prices by 5.4 cents per cwt at the farm level. [3][25] This particular downward movement in prices would occur only if nothing else changed and if cheese prices were sufficiently above support levels so that a downward adjustment of this magnitude actually could occur. Cheddar cheese prices in the market would need to be 1 or 2 cents per pound above supports for this to happen. If not, government cheese purchases would prevent the price from falling. Based on the 1978 average farm price of all manufacturing milk, \$9.68/cwt, this downward price pressure of 5.4 cents due to increased imports is equal to a little over one-half of 1 percent (0.56%) of the 1978 price.

Taking the 1978 level of milk output as a basis, the cost of this trade concession to U.S. dairy farmers is \$66 million (5.4/cwt times 1219 million cwt). This represents about one-half of 1 percent (0.5%) of the farm value of milk production in 1978. In 1976 terms, this cost would amount to \$65 million.

Some observers like to think of imports and changes in imports in terms of the dairy farms and dairy herds that they represent. Recall that the proposed quota increase would add 300 million pounds of milk equivalent to U.S. markets. At 1978 production levels, this is equivalent to 27 thousand average milk cows. This may seem like a lot of cows, but it is only about one-quarter of 1 percent of the U.S. dairy herd in 1978. Furthermore, each year since 1955, the U.S. dairy herd has dropped in size by an average of 440 thousand cows per year. So in perspective, the maximum impact of the quota increase is on the order of 6 percent of the annual dairy herd shrinkage that has been underway for many years.

Other MTN Agricultural Concessions

There are no other MTN concessions in agriculture that even approach the value of the cheese import quota agreement. For the most part these other concessions are tariff reductions across a rather wide spectrum of products. Those readily susceptible to economic analysis are shown in table 7 in the format used for evaluating foreign concessions on U.S. exports. The basic method is also the same, see Appendix A. [29]

The coconut oil concession involves elimination of the current duty of 1 cent per pound. Tariffs on lamb are to be cut from 1.7 to 0.5 cents per pound. Tariffs on apparel wool are to be reduced by 60 percent. The canned pineapple tariff will go from 3 to 1 percent ad valorem. The tobacco concession involves various tariff cuts on cigars and cigar tobaccos. On canned beef, the duty cut is from 7.5 percent to 3.0 percent ad valorem. The barley concession reduces the tariff from 7.5 cents per bushel to 5.0 cents.

The United States also agreed to cut tariffs on a series of products covered by various import quotas. Since the quotas themselves were not

adjusted, estimates were not calculated for "new" trade on these products. Items in this group include meat items (mainly beef) covered by the Meat Import Law of 1964, butter, cream, and two specific staple lengths of cotton. The tariffs on cheese will be cut 20-25 percent as the proposed new quota system is put into place. Some modestly important agricultural offers are still pending final agreement with a few nations such as Mexico, Brazil, and the Philippines. These involve winter vegetables, orange juice, avocados, cut flowers, and palm oil.

Summary

The total value of the MTN agricultural concessions offered by the United States probably approximates \$106 million. This figure is the sum of the value of the dairy concession plus the new trade generated by the specific tariff reductions analyzed in table 7.

Table 7. Value of Miscellaneous MTN Tariff
Concessions Offered by the United States

Item	Import value ^{a/}	New import value	Change
(million dollars)			
Coconut oil	\$179	\$187	\$ + 8
Lamb	21	29	+ 8
Wool	54	60	+ 6
Canned pineapple	68	73	+ 5
Tobacco products	36	41	+ 5
Cooked beef	68	73	+ 5
Barley	53	56	<u>+ 3</u>
Total			+ 40

^{a/} 1976 base values.

VI. Estimated Employment Effects

A perennially-important point of discussion about any international trade agreement is its potential impact on employment. That is the subject of this section. To examine the employment effects of the MTN agreements in agriculture, an input-output model of the U.S. economy was used.* The estimated employment effects are shown in table 8. They are stated in terms of jobs of all kinds gained or lost under full implementation of the MTN agreements as analyzed in previous sections of this report.

These estimates are the changes in employment which occur as the increases in agricultural exports and imports due to the MTN agreements work their way through the economy. They are "long-run" impacts in the sense that they allow for multiplier effects to occur within and between sectors of the U.S. economy. In particular, the tabular data reflect (1) an export increase of \$462 million, heavily concentrated in meat products, fruits, and vegetables, and (2) an import increase of \$106 million, heavily concentrated in dairy products (mainly cheese). The changes in "Agricultural employment" shown in the table include adjustments in both the farm production sector and the first handlers of raw agricultural products. Naturally, these are only approximations based on the aggregated structure of the particular input-output model used.

The employment effects in table 8 are net of any other changes in the economy. In reality, these modest employment impacts are likely to be overridden and obscured by other changes in the farm sector and the national economy during the time over which the MTN package is implemented.

*Dr. Wilbur Maki, Department of Agricultural and Applied Economics, University of Minnesota, assisted in the preparation of this section.

Table 8. Estimated Employment Effects of MTN Agreements in Agriculture ^{a/}

Category	Export product sector	Import product sector	Net change
	(thousand jobs)		
Agricultural employment	+ 22	- 5	+ 17
Marketing, processing, and other employment	<u>+ 12</u>	<u>- 3</u>	<u>+ 9</u>
Total	+ 34	- 8	+ 26

^{a/} This analysis is based on unpublished work in the Department of Agricultural and Applied Economics, University of Minnesota, which draws on and updates previously-published research. [30][31]

Consider another approach by which to gauge the economic impact of the agreements on the farm sector. The net value of the MTN agricultural agreements to the U.S. economy is estimated to be + \$356 million. This value is calculated at ports of departure and includes inland freight, insurance, and other costs including whatever processing and packaging is involved. An approximate farm level equivalent of this \$356 million is \$230 million. The average 1976 gross income of all U.S. farms was about \$35 thousand per farm. Thus, the MTN agreements will add value to the U.S. farm sector equal to the output of about 6,500 average farms.

VII. Summary

In the recently-concluded Tokyo/Geneva Round, the United States placed high priority upon achieving improvements in agricultural trade through MTN agreements. As with previous rounds, major breakthroughs in protectionist agricultural trade policies were not obtained even though the Tokyo/Geneva Round lasted for 5 1/2 years. However, a series of tariff and trade barrier agreements were achieved that will modestly enhance the highly favorable balance of trade exhibited by U.S. agriculture. The changes in non-tariff trade barriers achieved in the Tokyo/Geneva Round may establish extremely valuable precedents for future bilateral or multilateral trade negotiations. Moreover, tariffs on some important U.S. exports to major markets were bound against future increases.

The economic effects of these specific MTN agreements in agriculture were measured and evaluated in this report. The consultative commodity agreements and the GATT framework changes also negotiated at the Tokyo/Geneva Round are not emphasized in detail in this study since it is not possible to measure their direct economic impact at this time.

Table 9 contains summary estimates reflecting the results of economic analyses on the MTN agreements. The three major packages negotiated with Japan, the European Economic Community (EC-9), and Canada will enhance annual U.S. agricultural exports by an estimated \$215 million, \$168 million and \$56 million respectively. A series of agreements with some 30 additional nations will add \$23 million for an overall total of \$462 million annually. This is approximately 2.1 percent of the 1976 base trade figures used throughout the report and by the Office of the Special Trade

Table 9. Summary Table; Estimated Value of MTN Agreements
for Agricultural Trade

Item	Net change in exports (+) or imports (-) (million dollars)	Change in employment (thousand jobs)
<u>Export agreements</u>		
Japan	+ \$215	
EC-9	+ 168	
Canada	+ 56	
Other countries	+ 23	
Subtotal	+ 462	+ 34
<u>Import concessions</u>		
Dairy products	- \$ 66	
Other commodities	- 40	
Subtotal	- 106	- 8
Net change, overall	+ 356	+ 26

Representative for comparison purposes. This modest, but significant, net gain in trade will add an estimated 34 thousand jobs to the agricultural and agribusiness sector of the U.S. economy. In addition, tariff bindings were obtained on products whose exports totaled \$1,278 million in 1976. About 80 percent of this total is accounted for by a "free" binding on soybeans conceded by Japan and by other tariff bindings on soybeans and their products offered by five other nations.

On the agricultural import side, the United States has made a significant quota adjustment for dairy products (cheese) and a series of tariff reductions for other products. The value of these concessions in terms of increased agricultural imports is approximately \$106 million. Thus, these concessions will increase agricultural imports by about 1.0 percent over the 1976 base trade figures. An estimated 8 thousand jobs in agriculture and agribusiness will be lost as a result.

The net change in overall agricultural trade due to the MTN agreements is an increase of \$356 million. This corresponds to the annual value of sales of about 6,500 average-sized farms in the United States. A net increase of about 26 thousand jobs will occur as a direct result of these agreements. From the standpoint of income and employment, U.S. agriculture will receive distinct and measurable benefits from the agreements reached in the Tokyo/Geneva Round.

APPENDIX A

A Method of Calculating New Trade Values from Tariff Changes

The method used in this report is developed from partial equilibrium analysis of economic theory. For any given product, let

$$(1) \quad I = C - S$$

where

I = volume of imports

C = volume of domestic consumption

S = volume of domestic production

Then if P is the domestic price observed at the import level

$$(2) \quad \frac{\partial I}{\partial P} = \frac{\partial C}{\partial P} - \frac{\partial S}{\partial P}$$

Then by making appropriate multiplications and divisions, equation (2) can be restated in a more general elasticity form as follows:

$$(3) \quad \frac{\partial I}{\partial P} \cdot \frac{P}{I} = \left[\frac{\partial D}{\partial P} \cdot \frac{P}{D} \right] \frac{D}{I} - \left[\frac{\partial S}{\partial P} \cdot \frac{P}{S} \right] \frac{S}{I}$$

or

$$(4) \quad E_I = E_D (D/I) - E_S (S/I)$$

where

E_I = price elasticity of import demand

E_D = price elasticity of domestic demand

E_S = price elasticity of domestic supply

For purposes of this analysis, E_S was taken to be equal to 0 in all cases.

This rules out specific consideration of domestic supply response to changed prices as tariffs change. Moreover, this formulation assumes that the import demand changes do not alter world prices--a plausible assumption in this context.

$$(5) \quad E_I = E_D (D/I)$$

The import demand elasticity is the domestic demand elasticity weighted by the ratio of consumption to imports, this ratio being greater than or equal to 1.0.

Finally the percentage change in imports ($\% \Delta I$) as a result of a given MTN agreement was calculated as

$$(6) \quad (\% \Delta I) = E_I (\% \Delta P)$$

when ($\% \Delta P$) is the estimated percentage change in domestic price as the result of a specified tariff change. To obtain the dollar value of "new" trade, the result of equation (6) was applied to the 1976 base trade figures on the assumption that the United States maintains its 1976 market share of all import markets. Since E_S was taken as zero, the dollar estimates of new trade are smaller than if domestic output adjustments to lower prices are considered.

April 1979
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APPENDIX B

A BRIEF ANALYSIS OF THE MTN
AGREEMENT ON DAIRY IMPORT QUOTAS

by
James P. Houck*

The proposed MTN agreement on dairy imports enlarges the quotas on foreign cheese, eliminates the current "price break" system, and brings all "price break" cheeses under the new quota. If the new quota system had been put into effect last year, approximately 15 thousand metric tons of additional cheese could have been imported into the United States on an annual basis.^{1/}

Since the implementation of the new quota system is proposed for 1980, this 15 thousand ton figure is likely to be an upper estimate. This is because cheese imports, especially "price break" imports, have been increasing recently and probably will continue to do so. Moreover, the increased quota levels may not necessarily be filled with increased imports. In fact, in 1977 and 1978, actual cheese imports were below quota levels (83% in 1977 and 87% in 1978).

However, for the purpose of this discussion, assume that all of the potential 15 thousand metric tons enters in a single year. This is the

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^{1/}The new quota level is 124 thousand metric tons. Cheese imports totaled 109 thousand tons in 1978. The difference is 15 thousand metric tons. This is the equivalent of about 275 million pounds of milk. All data in this paper are drawn from official USDA publications and sources, including the Dairy Situation, ESCS, USDA (various issues) and Agricultural Statistics, USDA, 1978.

equivalent of 275 million additional pounds of milk on the domestic market. To be generous with this estimate, allow it to be 300 million additional pounds of milk equivalent. This is approximately one quarter of one percent (0.25%) of the total annual U.S. milk production. It also represents slightly less than one percent (0.9%) of total U.S. cheese production on an annual basis.

Taking the same price response estimates used recently by a spokesman for dairy interests, this potential increase in imports could depress milk prices by 5.4¢ per cwt at the farm level.^{2/} This particular downward movement in prices would occur only if nothing else changed and if cheese prices were sufficiently above support levels so that a downward adjustment of this magnitude actually could occur. Cheddar cheese prices in the market would need to be one or two cents per pound above supports for this to happen. If not, government cheese purchases would prevent the price from falling. Based on the 1978 average farm price of all manufacturing milk, \$9.68/cwt, this downward price pressure of 5.4¢ due to increased imports is equal to a little over half of one percent (0.56%) of the 1978 price. Compare this to average increases in farm milk prices of about 8.1% per year since 1970.

Taking the 1978 level of milk output as a basis, the cost of this trade concession to U.S. dairy farmers is \$66 million (5.4/cwt times 1219 million cwt). This represents about one half of one percent (0.5%) of the farm value of milk production in 1978.

^{2/}Graf, Truman F. "Statement on International Trade Negotiations and the U.S. Dairy Industry," March 5, 1979. The author used analysis reported in The Impact of Dairy Imports on the U.S. Dairy Industry, Agricultural Economic Report No. 278, ERS, USDA, January 1975.

Some observers like to think of imports and changes in imports in terms of the dairy farms and dairy herds that they represent. Recall that the proposed quota increase would add 300 million pounds of milk equivalent to U.S. markets. At 1978 production levels, this is equivalent to 27 thousand average milk cows. This may seem like a lot of cows, but it is only about one quarter of one percent of the U.S. dairy herd in 1978. Furthermore, each year since 1955, the U.S. dairy herd has dropped in size by an average of 440 thousand cows per year. So in perspective, the maximum impact of the quota increase is on the order of 6 percent of the annual dairy herd shrinkage that has been underway for many years. This phenomenon has had almost nothing to do with imports or trade policy.

Look at this from another viewpoint. The 27 thousand cows replaced by new imports also could be taken to represent about one thousand average-sized dairy herds (farms) in the United States. Between 1955 and 1978, about 16 thousand of these 27-cow herds went out of production each year. Moreover, the rate at which all milk-cow farms disappeared between 1965 and 1974 was 70 thousand farms per year (see attached table). This may be a deplorable situation to dairy interests, but it has very little to do with imports.

No one could argue that increased import quotas bestow direct economic benefits on U.S. dairy farmers. But, on the other hand, the negative impact of the proposed quota increases under the MTN agreement is almost negligible in any realistic perspective.

NUMBER OF MILK COW FARMS

The top ten ranking States in number of milk cow farms in 1974 were as follows: Wisconsin, 54,000; Minnesota, 36,000; Kentucky, 26,000; Pennsylvania, 25,500; North Carolina, 25,500; Missouri, 23,000; New York, 22,000; Iowa, 20,000; Tennessee, 19,000; Ohio, 16,500. This number includes farms with milk cows even where all milk was consumed on the farm where produced. Please refer to the chapter on Minnesota's Rank in the Dairy Industry for historic aspects of change in rank.

TABLE 61: NUMBER OF MILK COW FARMS, BY STATES, 1965-74

State	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Alabama	33,000	28,000	24,000	20,000	16,000	13,000	11,000	9,000	8,000	7,000
Alaska	110	90	90	90	90	90	90	80	70	70
Arizona	1,500	1,300	1,200	1,100	1,000	800	800	780	750	800
Arkansas	25,500	22,000	19,000	17,000	14,000	12,000	10,000	9,000	8,000	8,000
California	11,300	10,000	9,300	8,700	8,000	7,200	6,500	6,300	6,100	5,900
Colorado	9,800	9,000	8,000	7,600	6,600	6,000	5,400	5,200	5,000	5,000
Conn.	2,600	2,300	2,100	1,900	1,800	1,600	1,500	1,400	1,300	1,200
Delaware	650	750	700	650	600	550	500	450	450	450
Florida	4,700	4,200	3,800	3,600	3,300	3,000	3,400	3,500	3,500	3,100
Georgia	22,000	20,000	16,000	13,000	11,000	9,000	8,000	7,000	6,000	5,000
Hawaii	200	190	170	150	130	110	100	100	100	100
Idaho	14,000	13,000	11,500	10,500	9,500	8,500	7,600	7,000	6,200	6,200
Illinois	27,000	23,000	20,000	18,000	19,000	16,000	15,000	14,000	12,000	12,000
Indiana	23,000	20,000	17,000	15,000	15,000	14,000	13,000	12,000	11,000	11,000
Iowa	57,000	50,000	44,000	39,000	36,000	32,000	28,000	24,000	22,000	20,000
Kansas	24,500	21,500	19,500	17,000	16,500	13,500	12,000	10,500	9,000	8,000
Kentucky	57,000	53,000	47,000	42,000	37,000	33,000	30,000	27,000	26,000	26,000
Louisiana	24,000	21,500	18,000	16,000	14,000	12,000	11,000	10,000	9,000	9,000
Maine	4,400	3,800	3,400	3,100	3,900	2,500	2,400	2,300	2,200	2,200
Maryland	6,700	6,400	6,000	5,600	5,400	5,000	4,800	4,600	4,400	4,200
Mass.	2,800	2,600	2,300	2,100	1,900	1,700	1,600	1,500	1,400	1,400
Michigan	31,000	28,000	24,000	22,000	20,000	18,500	17,500	16,000	14,700	14,000
Minnesota	72,000	69,000	62,000	56,000	51,000	46,000	44,000	41,000	38,000	36,000
Mississippi	35,000	31,000	26,000	23,000	19,000	16,000	14,000	12,000	9,000	9,000
Missouri	56,000	51,000	46,000	40,000	36,000	31,000	27,000	26,000	25,000	23,000
Montana	10,400	9,400	8,600	7,800	7,200	6,500	5,800	5,300	4,500	4,500
Nebraska	27,000	24,000	21,000	18,000	16,000	14,000	12,000	11,000	10,000	9,500
Nevada	900	900	800	800	700	600	600	550	550	550
N. H.	2,500	2,100	1,900	1,700	1,500	1,300	1,100	1,000	900	900
N. J.	2,500	2,300	2,100	1,900	1,700	1,600	1,500	1,400	1,300	1,000
N. Mex.	3,700	3,500	3,100	2,800	2,500	2,200	2,000	1,900	1,500	1,500
New York	39,000	37,000	35,000	32,000	30,000	28,000	26,000	24,500	22,500	22,000
N. C.	43,000	40,000	34,000	35,000	24,000	30,000	27,000	27,000	13,000	15,500
N. Dak.	20,000	18,000	16,000	14,000	13,000	12,000	11,000	10,000	9,000	8,500
Ohio	40,000	36,000	32,000	29,000	26,500	23,500	21,500	19,800	18,300	16,500
Oklahoma	22,000	20,000	17,000	16,000	14,000	13,000	11,500	10,500	9,000	9,000
Oregon	12,500	11,000	9,800	8,500	7,400	6,500	6,600	5,200	4,800	4,800
Pa.	42,000	40,000	38,000	35,000	32,000	30,000	29,000	27,000	26,000	25,500
R. I.	350	320	290	260	230	210	180	170	170	170
S. C.	11,000	9,000	8,000	7,000	6,000	5,000	4,500	4,300	4,000	3,800
S. Dak.	20,500	19,000	17,500	16,500	14,000	13,000	12,000	11,000	10,000	9,000
Tennessee	51,000	46,000	42,000	37,000	33,000	30,000	27,000	23,000	18,000	18,000
Texas	40,000	37,000	34,000	31,000	28,000	26,000	22,000	18,000	16,000	16,000
Utah	6,200	5,700	5,300	4,700	4,200	3,800	3,500	2,700	2,400	2,000
Vermont	7,300	6,800	6,400	5,900	5,500	5,100	4,800	4,700	4,600	4,500
Virginia	37,000	34,000	30,000	26,000	23,000	20,000	18,000	16,000	14,000	13,500
Wash.	14,000	12,500	11,000	9,500	8,200	7,000	6,200	6,000	5,700	5,000
W. Va.	19,000	17,000	14,000	12,000	10,000	8,500	7,500	6,500	6,000	6,100
Wisconsin	66,000	62,000	76,000	71,000	68,000	64,000	62,000	59,000	56,000	54,000
Wyoming	3,900	3,600	3,400	3,100	2,800	2,600	2,400	2,300	2,100	2,100
UNITED STATES	1,107,710	1,008,750	898,250	808,650	724,160	657,460	599,870	549,530	489,490	473,140

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