A VIEW OF INTERNATIONAL TRADE IN AGRICULTURAL PRODUCTS AND ISSUES SURROUNDING THE GATT NEGOTIATIONS

Jake Ferris[1]

Department of Agricultural Economics
Michigan State University

The most recent series of negotiations under the General Agreement on Tariffs and Trade (GATT) began in Punta del Este, Uruguay in 1986. This series, known as the Uruguay Round, is the eighth since GATT was established in 1947. GATT, a multilateral agreement to increase international trade by reducing tariffs and other trade barriers, provides codes of conducts for international commerce and a framework for periodic negotiations. Past rounds have been quite successful. Industrial tariffs have been brought down from around 40-45 percent just after World War II to less than 5 percent today.

The Uruguay Round was designed broadly to cover traditional industrial tariff negotiations, but also trade in services, protection of intellectual property rights and aspects of international investment as well as agriculture. At the insistence of the U.S., major emphasis has been placed on agriculture. This position was also supported by a coalition of exporting nations known as the "Cairns Group." These two entities, plus the European Community (EC) and Japan have been at center stage in the drama which is now into "Act III."

Why Trade?

A fundamental question behind the GATT negotiations is "Why trade?" The answer is derived from an economic principle known as "comparative advantage."

Here is a very simplified example. Iowa grows very little wheat, but is the number one corn state. Not far to the southwest is Kansas, the leading wheat state which also produces some corn. Iowa, with a humid climate and generally very productive soils, has an <u>absolute</u> advantage over Kansas in growing both corn and wheat, but a <u>comparative</u> advantage in growing corn. Kansas, with a drier climate, has the <u>least comparative disadvantage</u> in growing wheat. "Comparative advantage" would suggest that Iowa should specialize in corn and Kansas in wheat and both states trade two products rather than aim for self-sufficiency in both.

Assume that per acre costs are the same and per bushel weights are the same on corn and wheat, and the following yields per acre prevail:

<u>Yields Per Acre</u>

	Corn	Wheat
Iowa	150	50
Kansas	100	40

Also assume that the total area producing corn and wheat in the two states is the same.

Alternative #1: Assume that each state allocates 50 percent of land to each crop; and that this combination enables each state to be self-sufficient in the combination. The average yield of corn/wheat would be as follows:

	Corn		Wheat		Corn/Wheat
Iowa	50% x 150	+	50% x 50	=	100 bu.
Kansas	50% x 100	+	50% x 40	=	70 bu.
Average for the two states				=	85 bu.

Alternative #2: Assume that Iowa plants only corn and Kansas only wheat. The average yield of corn/wheat would be as follows:

	Corn		
Iowa	100% x 150	=	150 bu. of corn
	Wheat		
Kansas	100% x 40	=	40 bu. of wheat
Average for the two states		=	95 bu.

The gain from specialization would be 10 bushels of corn/wheat per acre. After trading to meet the demands for the combination each state, the Iowa-Kansas economy would have the net gain of 10 bushels per acre.

In addition to such gains as measured by quantities, product quality could also enter into comparative advantage. Universal preferences for French wine or Dutch cheese are examples.

A strength of the United States originates in the fact that state boundaries are not an impediment to the movement of goods and services. The formation of the EC and other common markets attests to the rewards from free trade. Virtually all economists would agree that "international trade makes available to consumers a larger and more diverse bundle of goods and services at lower overall prices than does isolation." (Houck)

What's the Problem?

If free trade is so good, why are nations and regions resisting opening up markets to agricultural products and food? Some of the reasons are as follows:

1. Agriculture has a unique set of policies that affect domestic and international commodity markets--much more so than does industry. Trade liberation means domestic farm programs must be dismantled, at least in part.

2. Food is a sensitive product. In spite of trends to a more global economy, nations have reservations about being more dependent on others for their food supplies. Experiences of hunger, war, embargoes, etc., are still fresh in the minds of the people of some nations. Protection of national health is often cited as rationale for restricting farm and food imports from certain nations.

3. Protecting agriculture means preservation of green space and a more wholesome environment. Japan and Europe, faced with strong industrialization and urbanization pressures, want to retain viable agricultures for this purpose. This is even an issue in parts of the U.S.

4. One of the costs of industrial specialization is increased vulnerability to business cycles. Agriculture can add stability through diversity.

5. An economic rationale for protectionism has been to support an "infant industry." Import restrictions are designed to assist new industries to get started in a competitive global economy. Such measures are designed to ward off "predatory practices" that could scuttle a new industry.

6. Once trade restrictions are in place, vested interests develop in retaining the status quo. Such interests generate political support to avoid change.

7. Producers are much stronger politically than consumers. In industrial nations, trade liberalization often is to the benefit of consumers and taxpayers. But consumer and taxpayer groups are less focused on trade issues than are producer organizations; consequently, members of Congress are more articulate about producer concerns.

Trade is a two-way street. Nations wanting to expand exports will have to accept more imports--in the long-run. If U.S. agriculture is to be a growth industry, it will have to look to the international market. In the 1970's when agricultural exports grew at a double-digit pace, percentage-wise, aggressive marketing was not required. The world, particularly developing nations, wanted our grain and oilseeds and had the means to buy, albeit with borrowed money in many cases.

As the world economic growth rate slowed, the dollar strengthened and other nations became more competitive in the 1980's, U.S. agriculture was faced with increased challenges to

improve quality and become more market oriented. The competition was both fair and unfair. Particularly troubling were the Common Agricultural Policy in the EC and the barriers to agricultural imports in Japan. The high support on grain prices in the EC generated grain surpluses which, in turn, were dumped on the world market with export subsidies. The U.S. countered with the Export Enhancement Program (EEP) employed, for the most part, on wheat.

How Distorted is the International Market on Farm Products?

As President Bush indicated in a recent trip to the Pacific Rim, no nation is completely pure in terms of restrictions to international trade in farm products. As a matter of fact, the U.S. was the original world market "dumper" and led to getting GATT exemptions that created the problem now being blamed on the EC. Do we have any way to measure the degree to which nations are distorting agricultural trade today?

For the purposes of the GATT negotiations, the U.S. Department of Agriculture (USDA) and the Organization for Economic Cooperation and Development (OECD) have attempted to categorize and quantify subsidies to producers and consumers in major nations.

The classification is as follows:

A. Market price support

B. Direct payments

C. Reduction of input costs

D. General services

E. Sub-national (i.e., state subsidies)

F. Other

The major targets in the GATT negotiations are A and B. Some of the items in C and E may also be placed on the table such as interest subsidies. But general services (D), which include research, teaching, extension, and structural adjustment, are not considered trade distorting.

A term called "Aggregate Measure of Support" (AMS) has been used in the negotiations to define the offending subsidies. For the U.S., AMS would include market price support, deficiency payments, commodity loan forfeiture benefits, marketing loans, acreage payments, storage payments, commodity loan interest subsidies and certain other direct payments. Producer assessments would be deducted.

How these subsidies are allocated in the U.S., Canada, EC and Japan is presented in Table 1. In 1988-90, market price support in the U.S. amounted to about $19 billion annually and direct payments, $7 billion. This is a total of $26 billion, compared with $9-10 billion for C-F. Note the very high subsidies for market price support in the EC ($64 billion) and in Japan ($28 billion). The total subsidy is called the Producer Subsidy Equivalent (PSE). In the EC, higher feed prices result in an adjustment to a net PSE for comparison purposes. In essence, producer subsidies in the EC have been double that of the U.S., and Japan's subsidies (with a much smaller agriculture) have been about the same as the U.S.

Market price support is essentially the domestic price less a "reference price" which purports to be the world price for a particular commodity for a given nation. For the U.S., quotas and tariffs on three commodities accounted for nearly all of the market price support which in round numbers were: dairy ($10 billion), beef ($8 billion) and sugar ($1 billion).[2] Direct payments were primarily deficiency payments on feed grain, wheat, rice and cotton.

Tables 2-11 present commodity data for selected nations including the U.S. Contained in the tables are data on production, farm prices and producer subsidies in terms of units familiar to U.S. agriculture. Values and prices have been converted to U.S. dollars. Producer subsidy equivalents are also calculated in terms of the percent of the value of production (including

---

[2]The $8 billion market price support on beef calculated by OECD is subject to question. The difference between the domestic price of U.S. beef and the reference (world) price is exaggerated because the quality of U.S. domestic beef is much higher than beef traded internationally. The USDA prefers to use a $44/MT tariff as the basis for calculation, which reduces the subsidy to $470 million.

direct payments). Consumer subsidy equivalents are presented in terms of total value and percent of consumer expenditures on the product.

For example, on wheat in Table 2, U.S. farmers produced annually about 60 million MT in 1988-90. The value of this output was just over $7 billion and, with $1.7 billion of direct payments, the adjusted value was $8.9 billion. The total value of producer subsidies amounted to $662 million for market price support (primarily EEP), $1,748 million for direct payments (mainly deficiency payments) and $815 million for other--a total of $3,225 million.

Converting these aggregate numbers to dollars per bushel, farmers received an average of $3.25 from the market (the market price subsidy is built into the price), $.80 in direct payments and $.37 in other payments (interest concessions from government loans and Farmers Home Administration; research, extension, etc.). The total return including all subsidies averaged $4.42 per bushel.[3] Sorting out the subsidies in total, the PSE amounted to $1.47 per bushel, 36 percent of the market price plus the direct payment.

Through the marketing price support mechanism, the cost to U.S. consumers in higher wheat prices was estimated at $264 million, or 7 percent of their expenditures on wheat at retail.

Note the relatively low producer subsidies in Australia and high cost of wheat subsidies to consumers in the EC. The high EC consumer costs can be traced to the market price support which generated producer prices of about $5.70 per bushel.

Similar data are presented on rice, corn, soybeans, rapeseed, sugar, milk, beef, pigmeat and poultrymeat in subsequent tables. Note the extremely high producer price on rice in Japan

---

[3]The addition of $.37 for "other payments" in arriving at a total price of $4.42 per bushel is somewhat misleading in that such subsidies most likely contributed to lower costs and increased gross margins and not higher gross prices. However, since production costs were not included in these statistics, the impacts of these other subsidies were added to prices in order to generate more valid comparisons. Ideally, however, the total analysis would be much improved if costs of production could have been taken into account.

in Table 3. The closed market holds rice prices approximately $72 per cwt. above the world market, i.e., producer prices have been about four to five times the world price.

In Table 5, note that producer prices on soybeans in the EC have been somewhat above those in the U.S., but the major difference is the $6.52 per bushel direct payment on top of the market price--an effort to encourage soybean production. Such measures have stimulated a major expansion in oilseed production (rapeseed and soybeans) in the EC.

Because soybeans and soybean meal are not subject to the variable levy, meal is attractively priced in the EC relative to grain. This situation has also pulled in a substantial amount of corn gluten feed from the U.S. which has become more available due to expansion in ethanol production. The disparity between prices on grain and the high-to-middle protein feeds in the EC has led to their call for "rebalancing" in the GATT negotiations.

Some indication of producer prices in the U.S. relative to world markets on sugar and dairy products can be seen in Tables 7 and 8. The producer subsidy equivalents for the market price support of 6.5 cents per pound on refined sugar and $6.58 per cwt. on milk reflect the difference. Note the producer price on milk in New Zealand of $6.51 per cwt. (Table 8). However, these differences exaggerate what the impact of trade liberalization would be. Under trade liberalization, the world market on both sugar and dairy products would be higher than indicated. (See discussion in last section of this paper.)

The attractiveness of the Japanese beef market is indicated in Table 9. The carcass equivalent price at the producer level has been four times the U.S. price and seven to eight times the Australian price (which represents a lower quality beef).

In Tables 12-15, prices and subsidies in developing nations are compared with the U.S. Note that in contrast to the developed nations, the tendency in developing nations is to tax producers and subsidize consumers. This is indicated by the negative signs on producer subsidy equivalents and positive signs on consumer subsidy equivalents.

What Does the U.S. Want From
the Uruguay Round?

The U.S. and the Cairns Group, at one point, proposed a 75 percent reduction in all barriers to market access and trade distorting internal subsidies and a 90 percent reduction in export subsidies. These reductions were slated to start from a base period and be phased in over a 10-year transition period. The specific time schedule has been negotiable, but the long-term direction toward substantial reform has been a fundamental requirement.

Market access as applied to non-tariff import barriers such as variable levies, import quotas, discretionary licensing, import bans and restrictive state trading practices, would be accomplished by a process called "tariffication." A conversion of non-tariff import barriers to tariffs would be based on the observable differences between domestic and world prices for a specific period. Such a procedure has already been implemented in Japan on beef and partially in the U.S. on sugar (with the tariff-rate quota system).

Besides (1) market access, (2) reduction in internal subsidies that distort trade and (3) reduction in export subsidies, the U.S. also advocates effective GATT rules in (4) application of sanitary and phytosanitary measures that affect trade. At present, procedures are not effective in addressing allegations of unjustified trade restrictions under the guise of food safety or plant and animal health needs (Office of Economics, USDA, May 1991).

A compromise proposal put forth recently (December 1991) by Arthur Dunkel, Director General of the GATT, contains the following provisions:

1. Ordinary customs duties, including those resulting from tariffication, shall be reduced by 36 percent from 1993 to 1999. Where there are no significant imports, minimum access opportunities will be established. This access will amount to at least 3 percent of a nation's domestic market by 1993, rising to 5 percent by 1999, using 1986-88 as the base.

2. All domestic support for agricultural producers, except those specifically designated, shall be reduced by 20 percent from 1993 to 1999. The base years shall be 1986-88. Credit shall be allowed for actions taken since 1986. The reduction commitment shall be expressed in Aggregate Measures of Support or specified equivalents. (Provisions of the 1985 and 1990 Farm Bills have positioned U.S. agriculture so that no further reductions in internal support will be needed except on a few products such as peanuts, sugar and wool.)

3. Outlays for subsidized farm exports shall be reduced by 36 percent and quantities by 24 percent over the period of 1993 to 1999, using 1986 to 1990 as a base.

The Dunkel proposal contains the essence of what we believe, to have been a compromise position of the U.S. Administration, although the extent of subsidy cuts was shy of assumed targets. None of the proposals, by the U.S. or other nations, suggest the elimination of support to producers. Countries could implement conservation and environmental programs, disaster relief and crop insurance, and income safety-net programs. Programs which have minimal effects on trade are acceptable. Farm enterprises which are adversely affected by trade liberalization could be assisted by direct payments as long as such payments did not influence production or consumption. It is likely such programs would be used in a transition period to assist producers in converting to alternative enterprises. Also, border protection would remain for special situations such as subsidized exports into the U.S. from non-GATT nations.

How Would the Dunkel Proposal in GATT Affect U.S. Agriculture?

Complexities of world agriculture preclude precise measurements of the eventual impact of trade liberalization on U.S. agriculture. A recent analysis of the Dunkel proposal by the U.S. Department of Agriculture indicates U.S. agriculture stands to gain, in terms of increased

exports, market receipts and net cash farm income (Office of Economics, USDA, March 1992). Government outlays would decline.

Appended to this paper are excerpts from the USDA analysis with commodity impacts highlighted. The analysis focuses on 1998 with the effects of the Dunkel proposal compared with "baseline" projections. The baseline reflects a continuation of current trends and likely policy and technical developments, excluding trade reform. Should the world become more protectionistic as a result of the failure of the Uruguay Round, the projected benefits from trade liberalization would be greater than indicated in the tables.

The projected impacts are most notable in agricultural exports with gains of $4-5 billion per year, about half of which would be grains. This represents 10-13 percent more than the estimated 1991-92 level of $39 billion. Imports would also increase (mostly dairy products, fruits and vegetables, peanuts) by about $.6 billion, or about 2-3 percent of the current level.

Producer revenue gains would be small, partly due to losses of deficiency payments on feed grains and wheat. Revenues to dairy and pork producers would remain the same or decline slightly. Presumably, sheep producers would lose revenue from the Wool Act. Somewhat surprising is that no fall-backs in prices nor producer revenues were projected for sugar even though the loan rate would be 10 percent lower. Prices are expected to remain above the loan rate as a more expansive import policy would be a matter of domestic policy choice and not a GATT requirement.

Substantial net export gains are seen for beef and pork. Beef exports would run 7-12 percent higher with markets opening up in Japan and other Asian countries. Pork exports would be 6-22 percent higher with Canada a major recipient; imports would fall by 5-11 percent, particularly from the EC.

The USDA would expect export gains for a number of crops, including dry beans, potatoes, vegetables, fruits, and greenhouse and nursery products. Gains over the baseline of 10 percent or more are projected for dry beans, apples and other fruit.

Conclusions

What might happen under the Dunkel proposal (or variants which will likely emerge) cannot be measured as precisely as might be indicated in this USDA analysis. Only general directions can be established.

The Dunkel proposal does not go as far as the U.S. administration would have wished even as a compromise. However, the differences were not great. Most significant would be gains in exports and reduction of government outlays rather than increased returns to producers. Some would argue that such a proposal is a "foot in the door" enhancing opportunities for further negotiations at the turn of the century.

In spite of concerns expressed by dairy and sugar producers and their organizations, the USDA projects little if any negative impacts on those industries by the Dunkel proposal. Very likely, these interests will question the USDA's conclusions. In any case, details in the final negotiating process will be watched very carefully.

International trade authorities point out that beyond the benefits that might be quantified even roughly is a possible new order in the international arena to challenge leaders in agriculture, agribusiness and the food system. Given this new environment, these leaders can ply their skills and know-how to capitalize on the opportunities a growing global market will provide. Impetus will be given to biotechnology. These are known as possible dynamic payoffs to trade liberalization.

BIBLIOGRAPHY

Economic Research Service, U.S. Department of Agriculture, Estimates of Producer and Consumer Subsidy Equivalents, Government Intervention in Agriculture, 1982-86, April 1988.

Goldin, Ian and Odin Knudsen, Agricultural Trade Liberalization, Implications for Developing Countries, Organization for Economic Cooperation and Development and The World Bank, 1990.

Houck, James P., Elements of Agricultural Trade Policies, Waveland Press, Inc., Prospect Heights, IL, 1986.

Office of Economics, U.S. Department of Agriculture, Economic Implications of the Uruguay Round for U.S. Agriculture, May 1991.

Office of Economics, U.S. Department of Agriculture, "Preliminary Analysis of the Economic Implications of the Dunkel Text for American Agriculture," March 1992.

Organization for Economic Cooperation and Development, Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris, 1991.

Webb, Allan J., Michael Lopez and Renata Penn, "Estimates of Producer and Consumer Subsidy Equivalents, Government Intervention in Agriculture, 1982-87," Statistical Bulletin No. 803, ERS, U.S. Department of Agriculture, April 1990.

Table 1. Aggregate Producer Subsidy Equivalents (PSEs)
for All Commodities in U.S., Canada, E.C. and Japan,
Annual Average, 1988-90[a]

| | Nation(s) | | | |
	U.S.	Canada	E.C.	Japan
			Mil $	
A. Market price support	18,862	3,395	64,350	28,414
B. Direct payments	7,192	859	4,462	2,426
C. Reduction of input costs				
Interest concessions	3,089	32	--	139
Fuel	1,657	108	--	0
Insurance	126	0	--	526
Irrigation	153	0	--	0
Other	0	28	--	0
Total	5,024	167	--	667
D. General services				
Research, advisory, training	1,038	166	--	474
Inspection	418	196	--	0
Pest and disease control	278	0	--	44
Structures/infrastructures	403	136	--	1,443
Marketing and promotion	88	0	--	175
Other	0	0	--	100
Total	2,225	498	--	2,234
E. Sub-national	1,805	1,272	--	0
F. Other (tax concessions)	469	0	--	0
Total other support (C+D+E+F)	9,522	1,937	9,876	2,900
Gross total PSE	35,577	6,191	78,689	33,740
Feed adjustment	-59	-142	-7,967	-170
Net total PSE	35,518	6,048	70,722	33,569

[a]Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy
Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.

Table 2. Producer and Consumer Subsidy Equivalents on Wheat,
Selected Nations and the E.C., Annual Average, 1988-90[a]

	Nation(s)			
	U.S.	Australia	Canada	E.C.
Production (mil. MT)	59.8	14.6	24.1	77.6
Value of production (mil. $)	7,151	1,678	2,905	16,260
Direct payments (mil. $)	1,748	0	401	40
Adjusted value of production (mil. $)[b]	8,899	1,678	3,306	16,300
Producer subsidy equivalents (mil. $)				
Market price support	662	4	632	5,612
Direct payments	1,748	0	401	40
Other payments	815	200	155	979
Total	3,225	204	1,188	6,631
Values in $/bu.				
Producer price	3.25	3.16	3.43	5.70
Direct payments	.80	0	.61	.01
Other payments	.37	.37	.24	.34
Total return to producers	4.42	3.53	4.28	6.05
Market price support	.30	.01	.96	1.97
Producer subsidy equivalent[c]	1.47	.38	1.81	2.32
Percent producer subsidy equivalent[d]	36	13	36	41
Consumer subsidy equivalent[e]				
Total (mil. $)	-264	-4	-117	-4,265
Percent of value of consumption	-7	-2	-18	-34

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 3. Producer and Consumer Subsidy Equivalents on Rice (Milled Equivalent), U.S. and Japan, Annual Average, 1988-90[a]

	Nation(s)	
	U.S.	Japan
Production (mil. MT)	7.14	10.21
Value of production (mil. $)	1,096	20,698
Direct payments (mil. $)	651	1,737
Adjusted value of production (mil. $)[b]	1,747	22,435
Producer subsidy equivalents (mil. $)		
Market price support	0	16,127
Direct payments	651	1,737
Other payments	119	1,769
Total	770	19,633
Values in $/cwt.		
Producer price	6.96	91.95
Direct payments	4.14	7.72
Other payments	.76	7.86
Total return to producers	11.86	107.53
Market price support	0	71.65
Producer subsidy equivalent[c]	4.90	87.23
Percent producer subsidy equivalent[d]	44	87
Consumer subsidy equivalent[e]		
Total (mil. $)	12	-18,521
Percent of value of consumption	2	-87

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 4. Producer and Consumer Subsidy Equivalents on Corn,
U.S. and the E.C., Annual Average, 1988-90[a]

	Nation(s)	
	U.S.	E.C.
Production (mil. MT)	172.7	25.8
Value of production (mil. $)	16,310	5,348
Direct payments (mil. $)	3,599	-126
Adjusted value of production (mil. $)[b]	19,909	5,222
Producer subsidy equivalents (mil. $)		
Market price support	0	2,166
Direct payments	3,599	-126
Other payments	2,359	375
Total	5,958	2,415
Values in $/bu.		
Producer price	2.40	5.27
Direct payments	.53	-.12
Other payments	.35	.37
Total return to producers	3.28	5.52
Market price support	0	2.13
Producer subsidy equivalent[c]	.88	2.37
Percent producer subsidy equivalent[d]	31	47
Consumer subsidy equivalent[e]		
Total (mil. $)	8	-1,998
Percent of value of consumption	nil	-35

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 5. Producer and Consumer Subsidy Equivalents on Soybeans,
U.S. and the E.C., Annual Average, 1988-90[a]

	Nation(s)	
	U.S.	E.C.
Production (mil. MT)	48.8	1.8
Value of production (mil. $)	11,136	513
Direct payments (mil. $)	212	439
Adjusted value of production (mil. $)[b]	11,348	952
Producer subsidy equivalents (mil. $)		
Market price support	0	0
Direct payments	212	439
Other payments	888	54
Total	1,100	493
Values in $/bu.		
Producer price	6.21	7.62
Direct payments	.12	6.52
Other payments	.50	.80
Total return to producers	6.83	14.94
Market price support	0	0
Producer subsidy equivalent[c]	.62	7.32
Percent producer subsidy equivalent[d]	10	52
Consumer subsidy equivalent[e]		
Total (mil. $)	4	0
Percent of value of consumption	nil	0

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 6. Producer and Consumer Subsidy Equivalents on Rapeseed (Canola),
Canada and the E.C., Annual Average, 1988-90[a/]

| | Nation(s) | |
	Canada	E.C.
Production (mil. MT)	3.58	5.36
Value of production (mil. $)	837	1,122
Direct payments (mil. $)	59	1,193
Adjusted value of production (mil. $)[b/]	896	2,315
Producer subsidy equivalents (mil. $)		
Market price support	64	0
Direct payments	59	1,193
Other payments	83	165
Total	206	1,358
Values in $/MT		
Producer price	234	209
Direct payments	16	223
Other payments	23	31
Total return to producers	273	463
Market price support	18	0
Producer subsidy equivalent[c/]	57	254
Percent producer subsidy equivalent[d/]	23	58
Consumer subsidy equivalent[e/]		
Total (mil. $)	-30	0
Percent of value of consumption	-8	0

[a/]Source: Organization for Economic Cooperation and Development (OECD), <u>Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990</u>, Paris 1991.
[b/]Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c/]Direct and other payments plus market price support.
[d/]Producer subsidy equivalent divided by adjusted value of production.
[e/]Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 7. Producer and Consumer Subsidy Equivalents on Sugar (Refined Equivalent), U.S. and the E.C., Annual Average, 1988-90[a]

	Nation(s)	
	U.S.	E.C.
Production (mil. MT)	5.32	14.17
Value of production (mil. $)	1,873	5,725
Direct payments (mil. $)	0	-571
Adjusted value of production (mil. $)[b]	1,873	5,154
Producer subsidy equivalents (mil. $)		
Market price support	761	3,191
Direct payments	0	-571
Other payments	164	352
Total	925	2,972
Values in $/lb.		
Producer price	.160	.183
Direct payments	0	-.018
Other payments	.014	.011
Total return to producers	.174	.176
Market price support	.065	.102
Producer subsidy equivalent[c]	.079	.095
Percent producer subsidy equivalent[d]	50	58
Consumer subsidy equivalent[e]		
Total (mil. $)	-936	-2,339
Percent of value of consumption	-41	-53

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 8. Producer and Consumer Subsidy Equivalents on Milk (Fluid Equivalent),
Selected Nations and the E.C., Annual Average, 1988-90[a]

| | Nation(s) | | |
	U.S.	New Zealand	E.C.
Production (mil. MT)	66.18	7.93	109.46
Value of production (mil. $)	19,230	1,139	39,575
Direct payments (mil. $)	267	0	-155
Adjusted value of production (mil. $)[b]	19,497	1,139	39,420
Producer subsidy equivalents (mil. $)			
Market price support	9,605	0	23,331
Direct payments	267	0	-155
Other payments	1,339	36	1,554
Total	11,211	36	24,730
Values in $/cwt.			
Producer price	13.18	6.51	16.40
Direct payments	.18	0	-.06
Other payments	.92	.21	.64
Total return to producers	14.28	6.72	16.98
Market price support	6.58	0	9.67
Producer subsidy equivalent[c]	7.68	.21	10.25
Percent producer subsidy equivalent[d]	58	3	63
Consumer subsidy equivalent[e]			
Total (mil. $)	-8,891	0	-17,179
Percent of value of consumption	-46	0	-53

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 9. Producer and Consumer Subsidy Equivalents on Beef and Veal (Carcass Weight Equivalent), Selected Nations and the E.C., Annual Average, 1988-90[a]

	Nation(s)			
	U.S.	Australia	E.C.	Japan
Production (mil. MT)	10.67	1.61	7.69	.56
Value of production (mil. $)	28,176	2,398	29,700	6,127
Direct payments (mil. $)	267	0	704	0
Adjusted value of production (mil. $)[b]	28,443	2,398	30,404	6,127
Producer subsidy equivalents (mil. $)				
Market price support	7,536 [c]	0	14,532	3,302
Direct payments	.267	0	704	0
Other payments	1,933	218	1,421	253
Total	9,736	218	16,657	3,555
Values in $/cwt.				
Producer price	119.82	67.39	175.23	499.56
Direct payments	1.14	0	4.15	0
Other payments	8.22	6.13	8.38	20.63
Total return to producers	129.18	73.52	187.76	520.19
Market price support	32.05	0	85.74	269.22
Producer subsidy equivalent[d]	41.41	6.13	98.27	289.85
Percent producer subsidy equivalent[e]	34	9	55	58
Consumer subsidy equivalent[f]				
Total (mil. $)	-7,835	0	-17,281	-5,876
Percent of value of consumption	-46	0	-49	-54

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Because the OECD did not make allowance for quality differences between U.S. domestic price and the reference (world) price on beef, USDA estimates are much lower and based on a tariff of $44/MT. This amounted to $470 million, resulting in a reduction of over $7 billion on U.S. PSE's on beef and veal.
[d] Direct and other payments plus market price support.
[e] Producer subsidy equivalent divided by adjusted value of production.
[f] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 10. Producer and Consumer Subsidy Equivalents on Pigmeat (Carcass Weight Equivalent), Selected nations and the E.C., Annual Average, 1988-90[a]

| | Nation(s) | | |
	U.S.	E.C.	Japan
Production (mil. MT)	7.07	13.15	1.59
Value of production (mil. $)	9,825	22,756	4,771
Direct payments (mil. $)	0	0	0
Adjusted value of production (mil. $)[b]	9,825	22,756	4,771
Producer subsidy equivalents (mil. $)			
Market price support	0	4,176	2,367
Direct payments	0	0	0
Other payments	639	-2,830	-14
Total	639	1,346	2,353
Values in $/cwt.			
Producer price	63.08	78.51	136.25
Direct payments	0	0	0
Other payments	4.10	-9.76	-.40
Total return to producers	67.10	68.75	135.85
Market price support	0	14.41	67.60
Producer subsidy equivalent[c]	4.10	4.65	67.20
Percent producer subsidy equivalent[d]	7	6	49
Consumer subsidy equivalent[e]			
Total (mil. $)	91	-4,061	-3,054
Percent of value of consumption	1	-19	-50

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.

[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.

[c] Direct and other payments plus market price support.

[d] Producer subsidy equivalent divided by adjusted value of production.

[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 11. Producer and Consumer Subsidy Equivalents on Poultrymeat (Carcass Weight Equivalent), Selected nations and the E.C., Annual Average, 1988-90[a]

	Nation(s)		
	U.S.	E.C.	Japan
Production (mil. MT)	10.12	6.15	1.43
Value of production (mil. $)	8,429	8,872	2,672
Direct payments (mil. $)	0	0	0
Adjusted value of production (mil. $)[b]	8,429	8,872	2,672
Producer subsidy equivalents (mil. $)			
Market price support	203	2,996	309
Direct payments	0	0	0
Other payments	740	-441	41
Total	943	2,555	350
Values in $/cwt.			
Producer price	.378	.655	.849
Direct payments	0	0	0
Other payments	.033	-.033	.013
Total return to producers	.411	.622	.862
Market price support	.009	.221	.098
Producer subsidy equivalent[c]	.042	.188	.111
Percent producer subsidy equivalent[d]	11	29	13
Consumer subsidy equivalent[e]			
Total (mil. $)	-90	-2,778	-370
Percent of value of consumption	-1	-34	-12

[a] Source: Organization for Economic Cooperation and Development (OECD), Tables of Producer Subsidy Equivalents and Consumer Subsidy Equivalents, 1979-1990, Paris 1991.

[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.

[c] Direct and other payments plus market price support.

[d] Producer subsidy equivalent divided by adjusted value of production.

[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.

Table 12. Producer and Consumer Subsidy Equivalents on Wheat,
Selected Nations, 1987[a]

| | Nation(s) | | | |
	U.S.	India	China	CIS[f]
Production (mil. MT)	57.4	44.3	85.8	87.9
Value of production (mil. $)	5,497	6,340	11,199	6,663
Direct payments (mil. $)	3,531	0	0	0
Adjusted value of production (mil. $)[b]	9,028	6,340	11,199	6,663
Producer subsidy equivalents (mil. $)				
Market price support	1,453	-2,398	-1,921	-3,171
Direct payments	3,386	0	0	0
Other payments	874	2,866	0	1,170
Total	5,713	468	-1,921	-2,001
Values in $/bu.				
Producer price	2.61	3.89	3.55	2.06
Direct payments	1.61	0	0	0
Other payments	.41	1.76	0	.36
Total return to producers	4.63	5.65	3.55	2.42
Market price support	.69	-1.47	-.61	-.98
Producer subsidy equivalent[c]	2.71	.29	-.61	-.62
Percent producer subsidy equivalent[d]	63	7	-17	-30
Consumer subsidy equivalent[e]				
Total (mil. $)	-748	2,526	3,049	4,811
Percent of value of consumption	-23	27	26	71

[a] Source: Webb, Alan, Michael Lopez and Renata Penn, "Estimates of Producer and Consumer Subsidy Equivalents," Statistical Bulletin No. 803, ERS, U.S. Department of Agriculture, April 1990.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.
[f] 1986.

Table 13. Producer and Consumer Subsidy Equivalents on Corn,
Selected Nations, 1987[a]/

	Nation(s)			
	U.S.	Mexico	Argentina	Kenya
Production (mil. MT)	179.6	11.6	11.5	1.9
Value of production (mil. $)	13,985	2,222	555	244
Direct payments (mil. $)	7,803	0	0	0
Adjusted value of production (mil. $)[b]/	21,788	2,222	555	244
Producer subsidy equivalents (mil. $)				
Market price support	0	1,280	-149	50
Direct payments	7,803	0	0	0
Other payments	2,256	391	277	-19
Total	10,059	1,671	128	31
Values in $/bu.				
Producer price	1.98	5.29	1.23	3.23
Direct payments	1.10	0	0	0
Other payments	.32	.93	.61	-.25
Total return to producers	3.40	6.22	1.84	2.98
Market price support	0	3.05	-.33	.66
Producer subsidy equivalent[c]/	1.42	3.98	.28	.44
Percent producer subsidy equivalent[d]/	46	75	-23	13
Consumer subsidy equivalent[e]/				
Total (mil. $)	--	301	--	-172
Percent of value of consumption	--	89	--	-26

[a]/Source: Webb, Alan, Michael Lopez and Renata Penn, "Estimates of Producer and Consumer Subsidy Equivalents,"
Statistical Bulletin No. 803, ERS, U.S. Department of Agriculture, April 1990.
[b]/Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c]/Direct and other payments plus market price support.
[d]/Producer subsidy equivalent divided by adjusted value of production.
[e]/Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program
were eliminated.

Table 14. Producer and Consumer Subsidy Equivalents on Soybeans,
Selected Nations, 1987[a]

| | Nation(s) | | |
	U.S.	Brazil	China
Production (mil. MT)	52.3	17.0	12.4
Value of production (mil. $)	11,305	2,632	2,946
Direct payments (mil. $)	23	0	0
Adjusted value of production (mil. $)[b]	11,328	2,632	2,946
Producer subsidy equivalents (mil. $)			
Market price support	0	-152	-275
Direct payments	23	0	0
Other payments	911	-81	0
Total	934	-233	-275
Values in $/bu.			
Producer price	5.88	4.21	6.45
Direct payments	.01	0	0
Other payments	.47	-.13	0
Total return to producers	6.36	4.08	6.45
Market price support	0	-.24	-.60
Producer subsidy equivalent[c]	.48	-.37	-.60
Percent producer subsidy equivalent[d]	8	-9	-9
Consumer subsidy equivalent[e]			
Total (mil. $)	-748	--	483
Percent of value of consumption	-23	--	21

[a] Source: Webb, Alan, Michael Lopez and Renata Penn, "Estimates of Producer and Consumer Subsidy
  Equivalents," Statistical Bulletin No. 803, ERS, U.S. Department of Agriculture, April 1990.
[b] Value of production plus direct payments. Used as base for calculating percent producer subsidy
  equivalents.
[c] Direct and other payments plus market price support.
[d] Producer subsidy equivalent divided by adjusted value of production.
[e] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy
  program were eliminated.

Table 15. Producer and Consumer Subsidy Equivalents on Pigmeat (Carcass Weight Equivalent), Selected Nations, Annual Average, 1987[a/]

	Nation(s)			
	U.S.	Poland[f/]	South Korea	China
Production (mil. MT)	6.5	1.8	.4	18.3
Value of production (mil. $)	10,427	2,447	891	17,807
Direct payments (mil. $)	0	0	0	0
Adjusted value of production (mil. $)[b/]	10,427	2,447	891	17,807
Producer subsidy equivalents (mil. $)				
Market price support	0	-1,423	-544	-11,890
Direct payments	0	0	0	0
Other payments	749	148	75	0
Total	749	-1,275	-469	-11,890
Values in $/cwt.				
Producer price	72.54	62.08	107.49	44.02
Direct payments	0	0	0	0
Other payments	5.21	3.75	9.05	0
Total return to producers	77.75	65.83	116.54	44.02
Market price support	0	-36.10	-65.63	-29.39
Producer subsidy equivalent[c/]	5.21	-32.35	-56.58	-29.39
Percent producer subsidy equivalent[d/]	7	-52	-53	-67
Consumer subsidy equivalent[e/]				
Total (mil. $)	--	1,152	340	13,106
Percent of value of consumption	--	71	22	81

[a/] Source: Webb, Alan, Michael Lopez and Renata Penn, "Estimates of Producer and Consumer Subsidy Equivalents," Statistical Bulletin No. 803, ERS, U.S. Department of Agriculture, April 1990.
[b/] Value of production plus direct payments. Used as base for calculating percent producer subsidy equivalents.
[c/] Direct and other payments plus market price support.
[d/] Producer subsidy equivalent divided by adjusted value of production.
[e/] Amount of subsidy consumers would need to maintain their economic well-being if the producer subsidy program were eliminated.
[f/] 1986.

PRELIMINARY ANALYSIS OF THE ECONOMIC IMPLICATIONS
OF THE DUNKEL TEXT FOR AMERICAN AGRICULTURE

Office of Economics
United States Department of Agriculture
March 1992

AGGREGATE EFFECTS

The most important summary measures of broad effects on American agriculture are exports and farm income. If started in 1993 and completely implemented by 1998, the Dunkel Text would result in higher U.S. exports and farm income in 1998 compared to baseline levels.

A summary of the export effects are listed in the Table 1 below. Added exports in grains account for about half of the total $4 to $5 billion in export expansion over the 6-year period.

TABLE 1.   PROJECTED U.S. AGRICULTURAL EXPORTS IN 1998--DUNKEL
TEXT [1]

Commodity	Change from baseline in 1998
	Bil. $
Grains	2.40-2.80
Cotton	0.30-0.40
Meat	0.40-0.50
Poultry and eggs	0.10-0.15
Tobacco	0.30-0.40
Fruits and tree nuts	0.30-0.50
Vegetables & greenhouse/nursery	0.20-0.30
Total [2]	4.00-5.00

[1] Valued at point of export.
[2] Additional imports of about $600 million--dairy products, fruits and vegetables, peanuts, etc. are also likely.

Farm income gains are made up of several items. The increase in cash receipts is about $5 billion. However, lower government outlays and higher production costs caused by expanded output and higher prices mean that with no re-orientation in farm programs, net cash farm income goes up by about $1 billion.

TABLE 2.   PROJECTED CASH FARM INCOME IN 1998--DUNKEL TEXT

Item	Change from baseline in 1998
	Bil. $
Market receipts	+4.6 to +5.2
Government payments 1/	-2.6 to -2.7
Cash production expenses 2/	+1.2 to +1.3
Net farm income with no reallocation of payment savings to agriculture	+0.8 to +1.2

1/ Due mainly to higher crop prices.
2/ Due to increased planted acreage and higher input prices, etc.

DOMESTIC SUPPORT POLICIES

For most U.S. commodities, no changes would be required to meet internal support cuts of 20 percent by 1998. Policy changes authorized by the 1985 and 1990 Farm Bills and budget legislation have already reduced support substantially for most commodities. The principal exceptions are peanuts, sugar, and wool.

COMMODITY ANALYSIS

The remainder of this report reviews the outcome on a commodity by commodity basis. Readers should recognize that these projections are based on the standard assumptions used in economic baseline projections such as normal weather and other market conditions. Deviations from these trends would certainly be expected in any given year. Therefore these projections are not forecasts of specific outcomes for 1998.

FEED GRAINS

The United States would benefit from increased demand for U.S. feed grain exports and higher prices. Changes in world feed grain markets would result mainly from reduced subsidized feed grain exports, increased market access opportunities, and increased world feed use to meet growing global animal product consumption.

The United States could readily meet additional world feed grain import demand. Other exporters would also benefit from higher feed grain prices. By 1998, U.S. corn exports are projected to rise 5-6 percent above the baseline level.

Larger exports would raise farm prices by 4-6 percent and production would increase a little. Domestic feed use would decline slightly but higher livestock and poultry prices would generally offset increased feed costs. Corn producers' gross income would increase 1-2 percent with corn market receipts rising more than the decline in government payments for corn. The same general results hold for grain sorghum and barley.

Because the U.S. feed grains program was adjusted between 1986 and 1990 and again by the 1990 Farm Bill and budget legislation, no additional program changes would be required to meet the internal support commitment.

CORN SECTOR EFFECTS--DUNKEL TEXT

Item	1998 Projections	Percentage change from baseline in 1998
		Percent
Farm price ($/bu)	2.45 - 2.50	4 - 6
Target price ($/bu)	2.75	0
Production (bil. bu)	9.25 - 9.34	0 - 1
Domestic use (bil. bu)	7.17 - 7.07	0 to -1
Exports (bil. bu)	2.18 - 2.20	5 - 6
Producer revenue (bil. $):		
Market receipts	22.66 - 23.00	4 - 6
Government payments 1/	1.34 - 1.20	-40 to -45
Total	24.0 - 24.2	1 - 2

1/ The government payment figures reflect a reduction in deficiency payments based on higher market prices.

OILSEEDS

Oilseeds have little support and protection in the United States or other exporting countries. A major exception is the European Community where high support prices have stimulated production, leading to a displacement of imports. A GATT panel found the EC oilseed regime to be inconsistent with its GATT commitments. However, this analysis does not include EC program changes that would occur as a consequence of the GATT panel rather than of the Uruguay Round.

U.S. oilseed policies would likely be little affected by a Uruguay Round agreement itself. Imports are subject to generally low tariffs while exports of soybeans and meal are made without subsidies. The U.S. vegetable oil exports receive assistance under the Export Enhancement Program and other programs. Reductions in U.S. export subsidies would likely have little effect on the U.S. industry as other countries also reduce subsidies. Support for soybeans is less than 5 percent of the value of production and therefore not subject to reduction under the Dunkel Text. However, marketing loans for soybeans and minor oilseeds authorized by the 1990 Farm Bill would be subject to cuts if outlays exceeded 5 percent of the value of production.

Overall, a GATT agreement would have small effects on U.S. oilseeds. A slight price increase is projected as protein meal and vegetable oil demand increase due to higher global incomes and livestock product consumption. U.S. oilseed price also will be influenced by higher prices for grains and cotton.

SOYBEAN SECTOR EFFECTS--DUNKEL TEXT

Item	1998 Projections	Percentage change from baseline in 1998
		Percent
Farm price ($/bu)	6.07	1
Production (bil. bu)	2.08	*
Domestic use (bil. bu)	1.37	*
Exports (bil. bu)	0.72	*
Producer revenues (bil. $)	12.63	1

* Less than 1 percent.

WHEAT

The United States would benefit from expanded export opportunities for wheat that would lead to larger exports and higher prices. The major factor affecting the world wheat market through 1998 would be a reduction in subsidized wheat exports.

The United States would be in a good position to improve its world market share which now stands at about 31 percent. Other efficient exporters would also increase their foreign sales. Reductions in U.S. export subsidies would likely have little effect on U.S. exports as other countries also reduce subsidies. By 1998, U.S. wheat exports are projected to rise 10-12 percent above baseline levels.

This boost in exports would raise farm prices by 17-19 percent and production would increase 1-3 percent. Wheat producers' gross income from wheat production would increase 3-4 percent, with market receipts rising and deficiency payments falling because of higher prices. Because the U.S. wheat program was adjusted between 1986 and 1990 and again by the 1990 Farm Bill and budget legislation, no additional program changes would be required to meet the cut in internal support.

WHEAT SECTOR EFFECTS--DUNKEL TEXT

Item	1998 Projections	Percentage change from baseline in 1998
		Percent
Farm price ($/bu)	3.40 - 3.45	17 - 19
Target price ($/bu)	4.00	0
Production (bil. bu)	2.78 - 2.82	1 - 3
Domestic use (bil. bu)	1.20 - 1.19	-5 to -6
Exports (bil. bu)	1.57 - 1.60	10 - 12
Producer revenue (bil. $):		
Market receipts	9.45 - 9.60	19 - 21
Government payments 1/	1.10 - 1.02	-52 to -56
Total	10.55 - 10.62	3 - 4

1/ The government payment figures reflect a reduction in deficiency payments based on higher market prices.

SUGAR

Nearly all national governments intervene in sugar markets, including the United States. A GATT agreement would make sugar production and consumption more responsive to market forces, causing world prices to increase.

The United States could meet the internal support commitment by reducing the loan rate for raw sugar. Depending on production levels, the loan rate for cane sugar would have to be cut from the current $0.18/lb to $0.155-$0.165/lb by 1998 with a similar reduction in the beet sugar loan rate. Access to the U.S. market would be determined annually. Imports beyond the level permitted at low tariffs would be subject to an initial tariff of $0.16/lb.

A GATT agreement and domestic sugar policy used in this analysis would result in imports, domestic prices, and production that are similar to the levels expected under the baseline. While the sugar loan rate would be reduced 8-14 percent from baseline levels by 1998, imports would be the key factor affecting domestic prices and production. A more expansive import policy would be a matter of domestic policy choice not a GATT requirement.

SUGAR SECTOR EFFECTS--DUNKEL TEXT [1]

Item	1998 Projections	Percentage change from baseline in 1998
		Percent
Domestic price ($/lb) [2]	0.2256	0
Loan rate ($/lb)	0.1580	-10
Production (mil. st)	7.97	0
Domestic use (mil. st)	9.72	0
Imports (mil. st)	1.74	0
Producer revenue (bil. $)	2.16	0

[1] Commitments under the Dunkel Text could be met with little effect on U.S. sugar prices and production as compared to the baseline.
[2] Number 14.

MILK

Reform of world dairy trade would lead to an increase in world prices for dairy products. By 1998, world dairy product prices are projected to increase 10-15 percent compared with prices if current global trends were to continue.

U.S. quotas on dairy product imports would be converted to tariffs. Because the tariffs would be relatively high, imports would occur only under the access provisions. By 1998 the access commitments would be the equivalent of an additional 2.6 billion pounds (milk equivalent, fat basis).

U.S. dairy policy would probably not have to be changed to meet internal support commitments by 1998. Support prices have been reduced since the base period and other actions have resulted in additional credits for policy changes.

The key factor affecting U.S. dairy prices and production by 1998 would be additional imports of dairy products under the access provisions. The effect on milk prices and production, however, would be small compared to baseline levels. Government purchases would increase moderately.

DAIRY SECTOR EFFECTS--DUNKEL TEXT

Item	1998 Projection	Percentage change from baseline in 1998
		Percent
All milk price ($/cwt)	13.00 - 12.75	0 to -2
Support price ($/cwt)	10.10	0
Production (bil. lbs)	162 - 160	0 to -1
Domestic use (bil. lbs)	157	*
Exports (bil. lbs ME)	2.0	0
Imports (bil. lbs ME)	5.2	100
Producer revenue (bil. $)	21.0 - 20.4	0 to -3

* Less than 1 percent.
ME: Milk equivalent, milk fat basis.

BEEF AND PORK

A GATT agreement will lead to increased global meat trade. Trade would be boosted by increased market access in developed and rapidly growing countries, while income growth would spur longer-term demand in developing countries. Reductions in subsidized EC exports of beef and pork would also create trade opportunities for other exporters. The United States, as a relatively efficient producer of high quality beef and pork, would expand meat exports and as a result, become a smaller net importer of beef and pork. New Zealand, Argentina and other suppliers would continue to compete for beef trade.

Overall U.S. meat exports would increase 10-12 percent above baseline levels by 1998. In particular, U.S. beef and pork exports to Japan would increase by 1998 from baseline levels. While the Beef-Citrus agreement with Japan is the key factor affecting U.S. beef exports, there would be additional demand for beef as a result of further Japanese tariff reductions as well as increased export sales to other Asian markets. U.S. pork exports to Canada would increase. U.S. beef imports would change little with the tariffication of the Meat Import Act. Pork imports would drop due to reductions in EC export subsidies.

Domestic producers would benefit from larger meat exports that would offset slightly lower domestic use, and higher meat prices would partially offset higher grain prices. Overall, U.S. livestock production by the 1998 would be largely unchanged from baseline levels.

BEEF AND PORK SECTOR EFFECTS--DUNKEL TEXT

Item	1998 Projection	Percentage change from baseline in 1998
		Percent
Beef		
Production (mil. tons)	11.80 - 11.77	0 to -1
Consumption (mil. tons)	12.09 - 11.97	0 to -1
Exports (mil. tons)	0.88 - 0.92	7 - 12
Imports (mil. tons)	1.12	0
Price ($/lb.) [1]	0.87 - 0.91	1 - 6
Value of production (bil. $)[2]	31.2 - 31.6	2 - 3
Pork		
Production (mil. tons)	7.33 - 7.35	0 - 1
Consumption (mil. tons)	7.57 - 7.59	0 - 1
Exports (mil. tons)	0.13 - 0.15	6 - 22
Imports (mil. tons)	0.38 - 0.36	-5 to -11
Price ($/lb.) [3]	0.60 - 0.62	0 - 2
Value of production (bil. $)[2]	14.0 - 14.2	-1 - 2

[1] Omaha steer price. [2] Valued at wholesale. [3] 7 market barrow and gilt price.

POULTRY AND EGGS

A GATT agreement will lead to increased broiler and egg trade. Trade would be boosted by increased market access in developed and rapidly growing countries by the late-1990s, while income growth would spur longer-term demand in developing countries. Reductions in subsidized EC exports of broilers and eggs would also create trade opportunities for U.S. and other exporters.

Domestic producers would benefit from larger exports that would offset lower domestic use, and higher prices would partially offset higher grain prices. Overall, U.S. poultry and egg production by 1998 would be down a little from baseline levels.

POULTRY AND EGGS EFFECTS--DUNKEL TEXT

Item	1998 Projection	Percentage change from baseline in 1998
		Percent
Poultry		
Production (mil. tons)	13.70 - 13.66	-2 to -3
Consumption (mil. tons)	13.07 - 13.03	-2 to -3
Exports (mil. tons)	0.62 - 0.66	2 - 9
Imports (mil. tons)	NA	NA
Price ($/lb.) [1]	0.58 - 0.62	2 - 8
Value of production (bil. $) [2]	19.10 - 19.5	0 - 3
Eggs		
Production (bil.)	70.2 - 69.5	0 to -1
Consumption (bil.)	69.3 - 68.6	0 - -1
Exports (bil.)	1.3 - 1.4	8 - 12
Imports (bil.)	0.1	0 - 1
Price ($/doz) [3]	0.79	0 - 1
Value of production (bil. $) [2]	5.6 - 5.7	0 - 3

[1] 12 city broiler price. [2] Valued at wholesale. [3] New York wholesale.

SHEEP AND WOOL

Government policies affecting U.S. sheep and angora goat producers are support payments for wool and mohair, tariffs on some wool, lamb, and mutton products, and import quotas on mutton. The principal effect of trade reform would be a reduction in wool payments. The support price for wool would have to be reduced about 15 percent from the current level or wool production eligible for support could be reduced by about 30 percent. Mohair support is already below the cut required by the Dunkel Text.

VEGETABLES AND NURSERY AND GREENHOUSE PRODUCTS

The strong growth in U.S. exports of vegetables and nursery and greenhouse products has been due in large part to the opening of markets and reductions of tariff and non-tariff barriers. A GATT agreement would create additional export opportunities. The U.S. vegetable, greenhouse, and nursery product exports would increase by 5-7 percent in 1998. Because of the variety of commodities in this category and the importance of export growth, the summary table below focuses only on exports.

Reduction in U.S. import protection would have mixed effects in vegetable markets. Tariffs for many fresh vegetables are already low or zero, and tariff reductions are unlikely to have much effect on trade. Major competitors in Central America and the Caribbean already have access to the U.S. markets for fresh vegetables and many greenhouse and nursery products through the Caribbean Basin Initiative and the General System of Preferences. For other U.S. products such as frozen broccoli, cauliflower, and canned tomato products, lower tariffs would lead to lower prices. Mexico could increase its share of the U.S. market for some fresh vegetables.

The GATT disciplines on sanitary and phytosanitary measures also would benefit U.S. exports of vegetables by preventing the use of unjustified import barriers under the guise of food safety or plant and animal health. Imports into United States would continue to meet all standards applicable to U.S. domestic production.

VEGETABLES, GREENHOUSE & NURSERY PRODUCTS EXPORTS--DUNKEL TEXT [1]

Item	1998 projected export revenues change from baseline	
	Mil. $	Percent
Dried beans, peas, lentils	30 - 60	10
Potatoes, inc. products	10 - 20	5
Tomatoes, inc. products	5 - 13	9
Other vegetables	140 - 170	6
Total vegetables	180 - 240	5 - 7
Greenhouse and nursery	20 - 30	5 - 7
Total [2]	200 - 270	5 - 7

[1] Tariff cuts of 36% for every tariff line.
[2] Total is not a simple sum of the components to reflect across category adjustments.

FRUITS AND TREE NUTS

The strong growth in U.S. exports of fruits, tree nuts, and wine has been due in large part to the opening of markets and reductions of tariff and non-tariff barriers. A GATT agreement will open up additional export opportunities for U.S. producers. Overall, U.S. fruit and tree nut exports would increase by 4-7 percent, adding $310-$480 million to export values by 1998. Because of the variety of commodities in this category and the importance of export growth, the summary table below focuses only on exports.

New markets, particularly for apples, pears, nuts, and grapefruit, will open in many developing countries that have been closed by import bans or severely restrictive licensing arrangements. In the already important markets of Japan, Taiwan, and Korea, U.S. fresh oranges, table grapes, wine, and other products will encounter reduced tariffs. Tariff barriers for most fruits will be reduced in Korea and Taiwan as well as much of Latin America.

Reduction in U.S. import protection would have mixed effects. Tariff reductions for many products with already low tariffs are unlikely to have much effect on trade. For some U.S. products such as frozen orange juice concentrate, lower tariffs would lead to lower domestic prices. Income growth and import increases in Asia and Europe will raise world prices and help to offset U.S. tariff reductions for frozen orange juice concentrate. U.S. exports of high quality juice will increase.

The GATT disciplines on sanitary and phytosanitary measures would benefit U.S. exports of fruits and tree nuts by preventing the use of unjustified import barriers under the guise of food safety or plant and animal health. Imports into the United States would continue to meet all standards applicable to U.S. domestic production.

FRUITS AND TREE NUTS EXPORTS--DUNKEL TEXT [1]

Item	1998 projected export revenues change from baseline	
	Mil. $	Percent
Grapes, fresh	10 - 20	5
Apples	30 - 60	15
Other fruits	140 - 220	12
Wine	20 - 30	8
Fresh oranges	30 - 60	15
Orange juice concentrate	5 - 10	6
Other citrus	10 - 20	4
Almonds	30 - 50	5
Other tree nuts	12 - 20	5
Total[2]	310 - 480	4 - 7

[1] Tariff cuts of 36% for every tariff line.
[2] Total is not a simple sum of the components to reflect across category adjustments.