U.S. Agricultural Trade

Stephen MacDonald
(202) 219-0822

U.S. agricultural trade has improved significantly since the mid-1980's. Exports jumped from $26 billion in 1986 to $40 billion in 1990, and import growth slowed as the world economy and U.S. competitiveness improved. Farm exports outpaced imports (table 1), more than tripling the U.S. agricultural trade surplus to nearly $18 billion—the seventh highest ever.

Despite agriculture's trade gains over the last 5 years, the sector has not completely recovered to the record-high early-1980's levels. In 1990, exports were higher than in the mid-1980's, but lagged earlier years. Export value remained 8-percent below the 1981 record. The volume of exports was also substantially below peak levels. Export volume totaled 148 million tons in 1990, compared with more than 160 million tons at the beginning of the 1980's.

At the same time, imports hit their third consecutive record high in 1990, rising $1 billion to $22.5 billion. Imports of products that compete with domestic agriculture have continued to surge, offsetting the beneficial effects of declining prices for tropical imports which do not compete with domestic production, such as coffee.

Measuring Agriculture's Competitiveness

Using agricultural trade statistics is one method of measuring the economic health of agriculture. However, these data provide only part of the story. Other comparisons give a better understanding of U.S. agriculture's trade performance. For example, measuring trade as a share of farm production provides an indication of the sector's competitiveness. Similarly, U.S. farm trade can be compared with trade performance in other sectors of the U.S. economy and with other countries. These measures explain why U.S. agriculture is relatively competitive, but not at its peak.

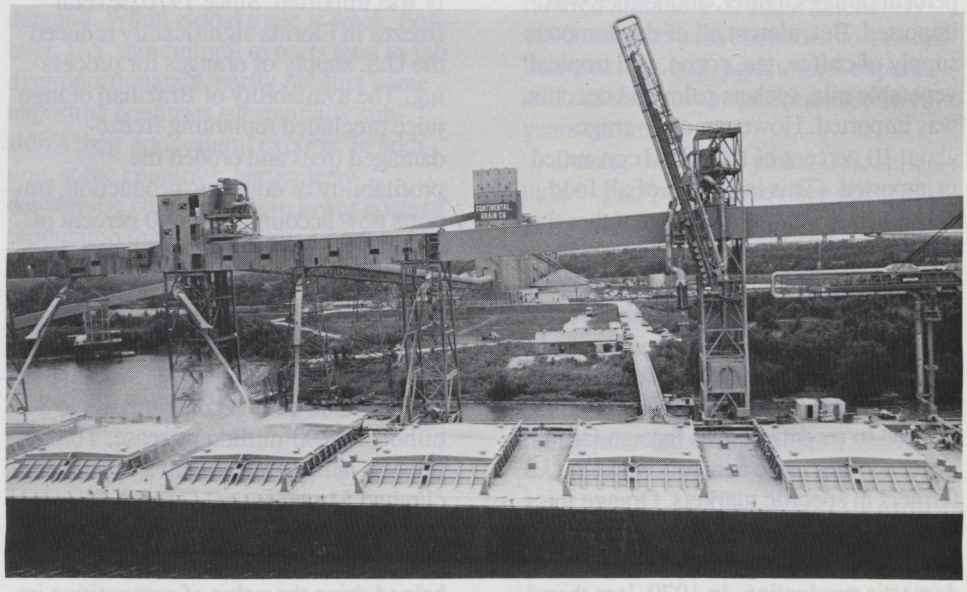
Export earnings as a share of cash receipts from farming provide the broadest comparison of U.S. agricultural output and exports. Cash receipts change with prices and production tonnage, just as export earnings depend on both prices and volume. In 1990, exports equaled 24 percent of cash receipts, slightly lower than in 1989. Since 1968, this share has ranged from 12 to 31 percent, with variations largely paralleling changes in exports, although droughts tend to raise the figure.

A country that exports a substantial share of its farm production probably has a fairly competitive farm sector. On the other hand, if much of a country's food is imported, its farm sector is probably not very competitive. The United States, for example, has a large expanse of fertile soil and generally mild, moist weather, which makes it unsurpassed in its ability to competitively produce and export large amounts of corn, wheat, and other field crops (table 1). Other countries, such as Japan, that rely heavily on imports generally lack the resources to meet domestic consumption needs.

Exports are particularly important for some major U.S. field crops. The United States generally exports about half of its wheat and soybean crops and a quarter of its corn crop in a given year. Other crops with high export shares include rice, sorghum, hops, almonds, walnuts, cotton, and tallow.

In contrast, exports of livestock products equal only about 7 percent of cash receipts, while vegetable and fruit exports come to about 16 and 26 percent of their respective cash receipts. The amount of farm production actually finding its way out of the country is smaller than these shares, since the value of exports is inflated by transportation and processing costs. Such costs are higher for livestock and horticultural products than for grains, oilseeds, or cotton.

Overall, a larger share of the U.S. supply of farm products is exported than imported, sometimes twice as much. The import share of domestic supply varied



The author is an agricultural economist in the Commodity Economics Division, Economic Research Service, USDA.

Table 1.
Grains and Oilseeds Led the List of U.S. Agricultural Exports ...

	Volume [1]			Value [1]		
	1981	1986	1990	1981	1986	1990
	Thousand metric tons			*Million dollars*		
Feed grains and products	69,516	36,327	69,510	10,497	3,817	8,093
Wheat and products	43,592	26,981	28,914	8,052	3,547	4,430
Oilseeds and products	29,802	27,582	23,772	9,305	6,266	6,098
Fruits, nuts, and vegetables	4,024	3,445	5,117	3,558	2,915	5,196
Animal products	2,685	2,598	2,820	4,107	4,353	6,553
Rice	3,172	2,382	2,501	1,537	648	829
Other	9,220	10,637	15,052	6,724	4,763	8,983
Total	162,011	109,952	147,686	43,780	26,309	40,182
..... While Fruits, Nuts, and Vegetables Dominated Imports in 1990						
Bananas	2,442	2,859	3,236	501	700	926
Coffee	987	1,185	1,290	2,800	4,151	1,997
Cocoa and products	431	507	698	953	1,189	1,042
Meat	905	1,139	1,142	2,222	2,248	2,848
Fruits, nuts, and vegetables	NA	3,794	4,337	1,966	3,493	4,826
Sugar	3,746	1,905	1,769	2,170	654	734
Vegetable oils	831	1,173	1,189	522	555	710
Other	NA	NA	NA	6,084	8,094	9,431
Total	NA	NA	NA	17,218	21,084	22,514

NA = Not available. [1]Fiscal years.

Source: *Foreign Agricultural Trade of the United States*, various issues, USDA, ERS.
Contacts: Stephen MacDonald and Susan Pollack (202) 219-0822.

greatly among commodities. Less than 1 percent of eggs, butter, and lettuce was imported. But, almost all of the domestic supply of coffee, tea, cocoa, and tropical vegetable oils, such as palm and coconut, was imported. However, on average about 10 percent of total food consumed is imported. (This is a share of all food consumed in the United States rather than the supply. The import share would be a few percentage points smaller if food produced and exported were taken into consideration.)

While the import share is less volatile than the share for exports, it has increased in recent years as foreign farmers are becoming more competitive with U.S. farmers in specific markets. Orange juice from Brazil is one of the most widely publicized cases of imports displacing domestic production. In 1970, less than 1 percent of the domestic orange juice supply was imported. Since 1970, several freezes in Florida significantly reduced the U.S. supply of oranges for processing. The availability of Brazilian orange juice precluded replanting freeze-damaged trees and eroded the profitability of domestic production. Imports now account for 35-40 percent of domestic consumption.

During fiscal 1990, imports of fruits and vegetables surged again following a destructive December freeze in Florida and Texas. Vegetable prices soared, pushing the value of vegetable imports to $2.3 billion, a $300-million increase. Tomato imports jumped 84 percent and peppers climbed 51 percent.

These increases in vegetable imports are likely to be only temporary. But, they helped drive the value of competitive imports upward in fiscal 1990 for the sixth consecutive year (table 2). Now U.S. imports of meats, fruits, vegetables, and other competitive products total almost $17 billion, up from less than $7 billion in 1977. Increased competitive agricultural imports are benefiting consumers by providing them with lower prices and increased availability of fresh products.

During the past same 13 years, noncompetitive imports, such as coffee, cocoa, and bananas, have remained fairly stable, fluctuating between $5.3 and $7.8 billion.

U.S. Agricultural versus Nonagricultural Trade

The shrinking role of U.S. agriculture in the general economy is reflected in the export and import trends of the last couple of decades. While agricultural exports lag earlier records, nonagricultural exports in 1990 surpassed their 1981 peak by more than $125 billion, making them a significant source of growth for the U.S. economy. U.S. nonagricultural exports have been equivalent to about 7 percent of gross national product (GNP) in recent years, a share that has been climbing yearly since the mid-1980's. As the volume of exports continues to grow faster than the production of goods in the U.S. economy, the export share of nonagricultural production is approaching the 8-percent record set at the beginning of the 1980's.

In contrast, 24 percent of agriculture's production was exported in 1990, well below the 31-percent record reached in 1981. Also, agriculture's share of total U.S. exports has remained below 12 percent since 1986, compared with over 20 percent in 1974, as farm export growth has lagged nonfarm export growth.

Agricultural imports are also becoming less significant to the overall economy. In 1990, agricultural commodities accounted for 4 percent of all U.S. imports, compared with 25 percent in 1960 and 51 percent in 1940. A declining import share of agricultural commodities results from a shift in demand from food to goods that are more responsive to income growth, such as fuels and manufactured goods.

Table 2.
The Value of U.S. Imports of Competitive Products Is Increasing

	Volume [1]			Value [1]		
	1981	1986	1990	1981	1986	1990
	Thousand metric tons			*Million dollars*		
Competitive imports						
Meat	905	1,139	1,142	2,222	2,248	2,848
Fruits, nuts, and vegetables	NA	3,794	4,337	1,966	3,493	4,826
Sugar	3,746	1,905	1,769	2,170	654	734
Vegetable oils	831	1,173	1,189	522	555	710
Grains and feed	NA	2,311	3,468	412	668	1,181
Other	NA	NA	NA	4,010	5,656	6,631
Total	NA	NA	NA	11,302	13,274	16,930
Noncompetitive imports						
Bananas	2,442	2,859	3,236	501	700	926
Coffee	987	1,185	1,290	2,800	4,151	1,997
Cocoa and products	431	507	698	953	1,189	1,042
Rubber	625	794	840	759	605	712
Other	NA	NA	NA	903	1,165	907
Total	NA	NA	NA	5,916	7,810	5,584
Total imports	NA	NA	NA	17,218	21,084	22,514

NA = Not available. [1]Fiscal years.

Source: *Foreign Agricultural Trade of the United States*, various issues, USDA, ERS.
Contact: Susan Pollack (202) 219-0822.

Comparing U.S. and World Agricultural Trade

The United States has been the world's largest exporter of farm products since the end of the 19th century, although not as strong in net agricultural trade in recent years. The United States had been the leader in agricultural trade surplus since 1973, but temporarily dropped to third in 1986.

Between 1980 and 1986, the U.S. share of total world agricultural export value fell from over 18 percent to 12 percent. The United States since recovered the rank of the largest net farm exporter but has won back only part of the share of world agricultural trade volume. The U.S. share of world agricultural trade value stood at 15 percent in 1989, compared with a peak of 19 percent in 1981.

The rise and fall in the U.S. share and rank primarily stem from variations in U.S. agriculture's competitiveness with farmers overseas. However, the rate of expansion in world agricultural trade also tends to affect the U.S. share. Rapidly expanding world agricultural trade generally means a greater share for U.S. exports. The United States has the transportation, stockholding, and productive infrastructure that enable it to meet growing export demand. When global trade is weak, however, U.S. agricultural exports tend to fall disproportionately, partly because some exporting countries substantially subsidize their agricultural exports. In addition, some countries, particularly developing countries, have lower costs of production than in the United States. As a result, there have been large long-term variations in the U.S. share of world agricultural trade, with weakness in the latter half of the 1980's paralleling relatively slow growth in world agricultural trade.

World agricultural trade in recent years lagged nonagricultural trade. In 1989, world agricultural exports totaled $300 billion, a record high. Nonagricultural exports also reached a record high, $2.7 trillion. The agricultural record exceeded the 1981 peak by only 28 percent, while nonagricultural exports were 54 percent higher. Agricultural products accounted for only 10 percent of total world trade in 1989, a share that has steadily declined from 17 percent in 1968 and 1973. Thus, both world and U.S. agricultural trade have receded compared with nonagricultural trade.

Real Agricultural Exports

The most comprehensive comparison of agricultural trade with overall economic activity is made by deflating export value by the rate of general price increases in the economy. The U.S. economy and most of its components tend to grow faster than general price inflation, but agricultural exports do not. The 1990 value of U.S. agricultural exports was $40 billion, about $1 billion below the 1980 value without correcting for inflation. The difference becomes much larger when the effects of inflation are factored out: U.S. exports in 1990 were worth only $25 billion in constant 1980 dollars (table 3).

Another measure that is not affected by inflation is export volume. In 1980, the volume of U.S. agricultural exports totaled 163 million metric tons. By the middle of the decade, agricultural exports had fallen to 110 million as world trade faltered and the U.S. share shrank. By 1990, volume had rebounded to 148 million tons, but U.S. agricultural exports still fell short of the performance of 10 years earlier.

During the last 20 years, U.S. agricultural export prices have risen about 130 percent. But, U.S. consumer prices and nonfarm export prices have risen more than 200 percent. Since farm product export prices rose less than the inflation rate, real farm product export prices fell 28 percent. The difference between changes in farm export prices and the consumer price index represents a loss of

purchasing power for the agricultural sector.

Compounding the decline of real farm product export prices is the long-term tendency of food consumption to increase more slowly than income. As incomes rise, consumers spend most of the extra earnings on goods and services instead of food products. With additional incomes being used primarily to purchase nonagricultural goods and services, the demand for, and thus prices of, these goods and services increases relative to food.

Reversing the downward trend of real agricultural export prices will be difficult. One option is to increase export value through increased processing, higher quality, or alternative higher value crops. The difficulty here is that the United States has a strong comparative advantage in bulk product production. To change this, agriculture would have to bid resources away from the rest of the economy, which would drive up their cost for all sectors of the economy. This could harm the competitiveness of all U.S. products, both agricultural and nonagricultural. Instead, efforts have been directed toward pursuing trade growth through multilateral negotiations and toward encouraging sustainable market growth through economic reforms in consuming countries. ■

Table 3.
Nonagricultural Trade Grows Faster Than Agricultural Trade

	1970	1975	1980	1985	1989	1990
			Billion dollars			
Agricultural exports (deflated) [1, 2]	15	33	41	24	26	25
Total exports (deflated) [2]	92	166	221	168	239	249
Agricultural trade balance [1]	1	12	23	12	18	18
U.S. trade balance	1	2	-36	-134	-135	-121
			Percent			
Export share of farm production [1]	14	25	29	22	23	24
All U.S. exports as share of GNP	4	7	8	5	7	7
U.S. share of world agricultural exports	14	18	18	15	15	NA
U.S. share of world exports	15	13	12	12	12	12
U.S. share of world agricultural imports	11	7	7	9	7	NA
U.S. share of world imports	15	13	14	20	16	16
Agricultural exports as share of all exports	16	20	18	14	11	10
Agricultural imports as share of all imports	13	9	7	6	4	4
			Index (1980 = 100)			
Agricultural export price index [1]	40	88	100	88	91	93
U.S. consumer price index	47	65	100	131	150	158

[1]Fiscal years; all others are calendar years.[2]In 1980 dollars.

Sources: *Foreign Agricultural Trade of the United States*, various issues, USDA, ERS. *Agricultural Outlook*, various issues, USDA, ERS. *FAO Trade Yearbook*, various issues, United Nations, Food and Agriculture Organization.

Contact:Stephen MacDonald (202) 219-0822.