AGRICULTURAL EXPORT MARKETS AND THE POTENTIAL EFFECTS OF EXPORT SUBSIDIES

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PREFACE

This staff working paper, prepared at the request of the Senate Committee on the Budget, examines the causes of shifts in U. S. agricultural exports in the early 1980s. The paper outlines the nature of agricultural export markets and the international trade environment and assesses some potential consequences of export expansion policies based on subsidies.

The principal author is James Vertrees. The paper was prepared in the Natural Resources and Commerce Division under the direction of David L. Bodde. Johanna Zacharias edited the manuscript, and Kathryn Quattrone prepared it for transmittal. In keeping with CBO's mandate to provide objective analysis, the paper offers no recommendations.

Alice M. Rivlin Director

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SUMMARY

In recognition of the abrupt reversal in the early 1980s of rapid expansion of U.S. agricultural exports in the 1970s, the Congress is considering measures to stimulate overseas sales of U.S. farm products. Today, two of every five acres produce for world markets, making exports a critical part of U.S. agricultural sales. But the value of U.S. agricultural exports has declined nearly 20 percent since fiscal year 1981, a sharp downturn in the conditions of the previous decade, when exports grew at a rate of 20 percent a year. Export contraction and record U.S. crops have contributed to depressed farm incomes, record price support outlays this year of \$21.1 billion, and a declining net agricultural trade balance. In response to these problems, the United States has put in place the largest acreage reduction program in history, while other exporting nations continue to increase output.

Weak export markets, as have been recorded during the last two years for most major crops, reduce farm income. Such declines, in turn, prompt pressures to alter U.S. trade policy. Policymakers therefore confront fundamental questions about how much legislative measures can help to halt the current decline in U.S. exports and which policies might be best suited to stimulating sales of U.S. farm products abroad. In particular, export subsidies are under consideration to help recover the share of world markets held by U.S. producers.

U. S. AGRICULTURE IN WORLD MARKETS

Study by agricultural analysts, including those at the Congressional Budget Office, concludes that trends in U. S. agricultural exports tend to follow the expansions and contractions of world markets. When world markets expand, as they did in the 1970s, the United States is typically in a position to capture the largest share of the increase because of its production capacity and large stocks. And conversely, when world markets contract, the United States has difficulty maintaining its relatively large market shares. Forces outside the agricultural sector exert the strongest influence on the U. S. position in world markets—worldwide economic and financial conditions, crop conditions, and the position of the U. S. dollar relative to other nations' currencies. International politics—most importantly, the interaction between the Soviet Union and the United

States--have also exerted a strong force, first boosting U. S. grain sales in the 1970s, and since then, causing them to decline.

Other nations' trade policies also play a major part. Through direct export subsidies and the provision of favorable terms of trade, other exporters' act to sell their relatively much smaller agricultural surpluses at prices that undercut U.S. exports. Through protectionist policies, most importing nations cushion domestic producers and consumers from the impacts of fluctuations in world market prices. As a result, the United States, because of its relatively free (unmanipulative) trade practices, bears most of the burden of adjusting to changes in world trade.

CURRENT EXPORT ASSISTANCE POLICIES

In general, direct export subsidies have not been a large component of U. S. trade policy during the past decade, largely because of the substantial growth in world, and specifically, U.S. agricultural trade. The United States has encouraged liberal trade in those basic crops for which it has a comparative advantage in world markets--mainly wheat, feed grains, rice, soybeans, and upland cotton. It does, however, impose import quotas and other limits on imports of dairy products, sugar, and beef. The United States also provides limited export expansion programs, but to date, the direct subsidy component has been small. In fiscal year 1983, about 18 percent of the total value of U.S. agricultural exports will be financed under government programs--export credits, export credit guarantees, and P. L. 480 concessional sales and donations to low-income developing nations. This is about twice the average share of exports the government has financed since the mid-1970s. About one-fifth of government financing is food aid under P. L. 480. The direct subsidy cost of the remaining government export programs is less than I percent of the total value of agricultural exports.

Subsidies and U. S. Exports

Now, however, using export subsidies to promote agricultural exports has attracted widespread interest. There are two general approaches to export subsidies: uniform subsidies applied to every unit exported, or targeted subsidies applied to specific markets. The evidence is clear that targeted subsidies are more likely than uniform subsidies to generate a higher level of exports per dollar spent. Beyond this, however, it is uncertain whether any large-scale export subsidy program could lead to a net increase in agricultural exports. This is because large-scale subsidization could invite retaliation on the part of competing nations, the main

source of uncertainty. Other exporting nations could take steps to increase sales of the subsidized products in other markets important to the United States, restrict their importation of other U.S. agricultural products, or perhaps alter their nonagricultural trade with the United States.

Besides these uncertainties, four other considerations bear mention:

- o Export subsidies reduce the net cost to foreign buyers of U.S. agricultural products, in effect subsidizing foreign consumption at the expense of U.S. taxpayers. The magnitude and duration of such a subsidy should also be considered in the context of foreign policy and trade in non-agricultural products.
- o The effects of export subsidies are likely to be quite small relative to the macroeconomic policies that affect economic growth, interest rates, and the value of the U.S. dollar.
- o A limited export subsidy program could be designed in such a way as to achieve a small net budget reduction. This would occur if the cost of the subsidy were less than the savings achieved through reduced price support outlays. The amount of net saving is likely to be small, however--measured in tens of millions of dollars, in contrast with the fiscal year 1983 price support expenditures of \$21.1 billion. Few past programs have accomplished such saving. Further, the success of the current acreage reduction program in drawing down government-owned grain stocks appears to reduce the opportunities for net savings.
- o U. S. price support levels appear to be discouraging exports and encouraging grain production abroad. Under current conditions, a reduction in price support levels, which would lower the price for every bushel of grain exported, might be more effective than export subsidies in increasing U. S. exports.

SECTION I. AGRICULTURAL EXPORTS IN THE 1970s AND 1980-INTRODUCTION AND BACKGROUND

The 98th Congress is currently considering a number of short-term approaches for expanding U.S. agricultural exports. The urgency underlying these deliberations stems from an abrupt reversal in the United States' strong position in the world agricultural export market. What in the decade of the 1970s was an extraordinary boom in U.S. farm product exports has, in the early 1980s, transformed into a steep decline.

In the 1970s, the value of U.S. agricultural exports grew at an annual rate of 20 percent, and tonnage of U.S. farm products sold abroad doubled. Between fiscal years 1970 and 1980, the value of U.S. agricultural exports rose from \$6.7 billion to \$40.5 billion, and in 1981, it reached a record high of \$43.8 billion. 1/By fiscal year 1982, however, exports sales had begun to slide, and by the end of this year, they are projected to have declined to about \$35.5 billion, some 19 percent below the all-time high level recorded in 1981. Export tonnage has diminished by some 8 percent. Today, U.S. agriculture is characterized by depressed farm prices, a declining net trade balance, the largest acreage reduction program on record, and unprecedentedly high federal outlays for agricultural price supports. The federal cost of farm price supports is estimated to total \$21.1 billion by the end of this fiscal year.

PURPOSE AND PLAN OF THE PAPER

Subsidizing farm product prices for sales abroad is one approach now under Congressional scrutiny for stemming this precipitous decline in U.S. agricultural exports. (Export subsidies are described in greater detail in Section III.) The purpose of this study is to provide background against which to examine this possible solution, and to review the potential outcomes of export subsidies. This section of the paper therefore charts the phenomenal growth witnessed in the 1970s and the several forces contributing to that growth. The remainder of Section I examines the reversal of those forces in the 1980s and the attendant decline in U.S. farm-product sales to foreign buyers. Section II focuses on other nations' trade policies, particularly as they bear on the U.S. export situation. Section III reviews

^{1.} Unless otherwise specified, all dates on this study are expressed in fiscal years.

agricultural expansion policies the United States has pursued in the past and the possible effects of export subsidies now under consideration.

FORCES AFFECTING EXPORT GROWTH AND CONTRACTION

Five major forces contributed significantly to the rapid burgeoning of U.S. farm exports in the 1970s. The reversal of those forces in the past two years accounts for much of the sudden contraction now occurring:

Expansive forces of the 1970s	Reversals of the early 1980s
Rising real per capita income in many nations and the ability of many nations to finance agricultural imports	Worldwide economic recession and financial instability in many poorer nations with large external debts
Devaluation of the U.S. dollar and flexible exchange rates worldwide	Steady appreciation of the U.S. dollar in international markets
Emergence of the Soviet Union as a major importer of U.S. grain	A sharp drop in the U.S. share of Soviet grain purchases caused by U.S./Soviet political tensions
Food deficits in many nations caused largely by poor harvests	Generally good crops around the world
U.S. farm policies geared to promoting exports	U.S. price supports that work against exports by encouraging overseas production and discouraging consumption
In addition to these factors the trade i	nalicies of other nations continue to

In addition to these factors, the trade policies of other nations continue to exert a strong influence on the demand for U.S. farm products from foreign buyers.

The prevailing conclusion that emerges from analysis of these forces and their impacts is that U.S. exports are subject to influences that are largely external and therefore difficult to manipulate with domestic policies. The structure of world agricultural markets is such that, when global markets expand, the U.S. share will do likewise, and conversely, in times of contraction, the U.S. share will diminish.

U.S. EXPORT GROWTH IN THE 1970s

The following paragraphs and the tables included at the end of Section I, trace the growth of U.S. agricultural exports in the 1970s from three perspectives: by commodity, by region, and by classification of importing country.

Commodities

All U.S.-grown commodities shared in the expansion of exports in terms of both dollar value (see Table 1) and volumes delivered. As the world's largest supplier of grains and soybeans, the United States was able to capture the major share of the expanding market in both these commodities. Together, grains and soybeans (including meal and oil) accounted for about three-fourths of the overall increase in U.S. exports. The United States captured about 80 percent of the increase in world grain trade, increasing its share from 40 percent to about 60 percent. By commodity, the U.S. share of world trade increased from 36 percent to 45 percent for wheat and from 42 percent to 69 percent for feed grains. (Corn, sorghum, barley, and oats are the grains fed to livestock and poultry. In developed nations, half or more of all grain consumption goes for feed grains used in the production of meat and other animal products.) For cotton, world trade increased at a much slower pace in the 1970s; between 1970 and 1980, the United States increased its market share from about 22 percent to 30 percent. Soybean trade worldwide nearly doubled in the 1970s, but the U.S. market share actually declined from more than 90 percent in 1970 to about 75 percent in 1980, principally because of expanded soybean production and exports in Brazil and Argentina.

For these basic crops, the United States was able to increase production and capture a larger export market share because it had considerable excess production capacity in cropland idled under government price support programs. Cropland cultivated in the United States increased about 20 percent between 1970 and 1980, with most of the increase occurring by the mid-1970s. And crop production per acre increased almost 25 percent from 1970 to 1980 as a result of improved agricultural technology (for

example, hybrid seeds). As a result of greater acreage being cultivated and increased productivity, total U.S. crop production rose nearly 45 percent in the 1970s.

Regional Patterns

From a market viewpoint, exports to all regions of the world increased (see Table 2). The regional pattern shifted, however, as the shares of the largest markets—Western Europe and Asia—declined somewhat. At the same time, export shares to Africa, Latin America, and Eastern Europe increased. The fastest-growing markets for U.S. agricultural products were the Soviet Union, Eastern Europe, and the Peoples Republic of China.

Importer Classifications

The markets for U.S. agricultural products can be broken into three groups: developed, developing, and "centrally planned" nations (the third group comprising the Soviet Bloc nations and China). 2/ In the 1970s, the market share of U.S. agricultural exports of the developed countries declined from 64 percent to 50 percent (see Table 3). The market share of the developing countries increased slightly to 35 percent. And the market share of the centrally planned countries rose from 2 percent in 1970 to 15 percent in 1980.

EXPORT DECLINES IN THE EARLY 1980s

The expectation for the 1980s raised by the worldwide trade explosion in the 1970s and strong position enjoyed by the United States has met with severe disappointment. Thus far, the hope that the recent boom would continue, to the benefit of U.S. crop farmers and the nation's trade balance, has been unfulfilled. Since the \$43.8 billion peak recorded in 1981, U.S. farm products exports have declined to \$39.1 billion in 1982 and to a projected \$35.5 billion in 1983—about 12 percent below the 1980 level. The decline in value of exports is attributable not only to lower export prices, but also to declines in the volume of exports—about 9 percent from the record high level of 1980. Again, the pattern can be viewed in terms of commodities, regions, and importer classifications.

^{2.} Based on U.S. Department of Agriculture classification.

Commodities

Though exports of most U.S. farm products decreased in value from 1981 to 1983, grain exports have fallen about 29 percent below the level of two years ago (see Table 4). Today, they account for three-fourths of the decline in the value of total U.S. agricultural exports. Cotton exports have also fallen, by nearly 20 percent from 1981 to 1983, and cotton contributed about 5 percent to the drop in total exports. The export of soybeans and soy products in 1983 declined just slightly--about 3 percent--from 1981. Together, grain, cotton, and soybeans accounted for 90 percent of the decline in agricultural exports since 1981. Only slight increases in exports of less important products (in terms of total exports), such as tobacco and dairy products, have kept exports from falling even further. In volume terms, total agricultural exports in 1983 are about 8 percent below 1981, with oversees sales of feed grain and wheat off by about 20 percent and 10 percent, respectively.

With respect to competing exports, the United States feed grain exports declined in absolute terms by more than the fall in world trade. The U.S. share of the world's feed grain exports has fallen to an average of 60 percent in the 1981/82-1982/83 period, from 70 percent in the preceding two-year period (in July-to-July years). In terms of worldwide volume, average annual feed grain exports fell about 7 percent between these two periods, but competitors' average exports increased 24 percent, while U.S. average exports fell by about 21 percent. For wheat exports, the U.S. market share measured over the same two-year periods increased just slightly, to 45 percent. Comparing 1982/83 with 1981/82, however, world wheat exports fell by about 2 percent, but U.S. wheat exports fell nearly 16 percent, while competitors' exports rose almost 11 percent. As a result, the U.S. 1982/83 market share for wheat fell from 48 percent to 41 percent.

Regional and Importer Classification Patterns

At least for the short term, the markets for U.S. agricultural exports have changed since 1980. In every market area except South Asia and North Africa, U.S. exports fell between 1981 and 1983 (see Table 5). The largest relative declines were in exports to the centrally planned countries: the Eastern European nations in the Soviet Bloc (61 percent), the Soviet Union itself (30 percent), and China (63 percent). In absolute terms, declines in exports to the developed and less developed nations were also pronounced, though far less dramatic (see Table 6). In 1983, the less developed countries accounted for about 41 percent of U.S. agricultural exports, compared to 35 percent in 1980; the centrally planned countries' share has fallen to about

8 percent from 15 percent. The share of the developed countries increased slightly to 51 percent.

INTERPRETATION OF SHORT-TERM CHANGES

Declines in U.S. market shares in the early 1980s, though still of short duration, suggest that the U.S. position in the international grain trade has not changed in one fundamental way: the United States—although the world's single largest supplier of grains—remains a "residual" supplier, in that it fills whatever market needs go unmet by competitors. As a residual supplier, the United States is particularly susceptible to external forces—such as those enumerated at the start of this section—and market conditions. In a period of expanding international markets, as in the 1970s, the United States has the production capacity to increase output and capture the largest share of the growth in world grain exports. And conversely, when international markets are stagnant or declining, as has been the case thus far in the 1980s, the United States usually loses market shares, as competitors act to assure that their much smaller exportable surpluses are sold. The following discussion examines why this has been the case in the early 1980s.

Researchers with the U.S. Department of Agriculture have recently measured the influence of several factors on the changes in the net export demand for certain U.S. commodities--notably wheat, feed grains, and soybean meal--over the 1980/1981-1982/83 period. 3/ The general conclusion that their study reaches is that those forces that tend to dampen demand tend to outweigh forces that would stimulate demand. In other words, foreign income and population growth--potential stimulators--are swamped by the dampening effects of dollar appreciation and financial indebtedness in food-importing nations. Strong downward pressure on U.S. exports also comes from losses of Soviet sales. These competing forces, however, are seen to have different effects on different export commodities.

Because of the worldwide recession, the positive effect of income growth on export demand for wheat, feed grains, and soybean meal was substantially below trend. Foreign crop production had mixed effects: in the case of wheat and soybean meal, increases in overseas production had a

^{3.} See Jim Longmire and John Dunmore, Sources of Recent Changes in U.S. Exports of Wheat, Coarse Grains, and Soybeans, U.S. Department of Agriculture, International Economics Division, Economic Research Service (forthcoming publication).

negative influence on U.S. export demand; for feed grains, relatively stable foreign production had a positive effect on U.S. exports. The net effect of these factors combined was an increase in the export demand for U.S. wheat and feed grains, and a decrease in soybean meal demand.

The study suggests, however, that other factors exerted stronger negative influences on export demand. First, in most nations, the appreciation of the dollar increased importers' local-currency prices for U.S. farm products. For wheat, a too-strong U.S. dollar diminished demand more than foreign income and population growth increased that demand. For feed grains, the negative influence of the dollar appreciation offset these positive factors by more than one-half. Second, the financial indebtedness of many nations had similar negative effects on export demand by limiting their ability to purchase agricultural products.

Third, the study indicates that changes in Soviet purchasing decisions also reduced export demand for U.S. wheat and feed grains. The main changes in Soviet purchasing decisions were a shift from the United States to other suppliers -- in particular, Argentina -- and savings in grain consumption attributable to less waste and substitution of other domestically produced feeds for grains. Before the 16-month Soviet grain embargo that began on January 4, 1980, the United States held about three-fourths of all Soviet grain imports. During the embargo--which affected the 1979/1980 and 1980/1981 world grain marketing years--annual Soviet grain imports nearly doubled from pre-embargo levels. But other exporters captured all the increase, with Argentina picking up about two-fifths. As a result, during the 1979/1980-1980/1981 period, the U.S. share of Soviet grain imports fell to about one-third. In 1981/1982, Soviet imports increased about one-third from the previous year because of the poorest grain crop since 1975/1976. With the embargo lifted, the United States increased its exports to the Soviet Union above the low level of the embargo period, and in fact, about 30 percent above average levels of the late 1970s. Nevertheless, the U.S. market share was only about one-third, because other exporters--mainly Argentina and Canada--were able to increase exports further. As of May 1983, Soviet grain imports are projected to fall by about one-fourth in 1982/83 with the U.S. share slightly smaller than in the previous year.

CONCLUDING OBSERVATIONS

In sum, the Department of Agriculture study substantiates what are considered to be the main causes of recent short-term declines in U.S. agricultural trade: poor economic conditions abroad, financial instability in many nations, appreciation of the U.S. dollar, and changes in Soviet purchasing decisions. In other words, the poor performance of agricultural

exports so far in the 1980s has been determined both by macroeconomic policies affecting interest rates, economic growth, and exchange rates, and by the political interaction of the United States and the Soviet Union.

On the other hand, this study suggests that other nations' trade policies have not had a significant influence on U.S. grain exports over the past two years. For example, the policies of the European Community (discussed in the Appendix) have had a negative influence on U.S. export demand, mainly for wheat; but that impact is estimated to be smaller than that of dollar appreciation. 4/ The analysis suggests, however, that EC policies had a positive influence on the export demand for soybean meal, because the EC nations impose no import levies on nongrain feed imports. One cannot conclude, however, that other nations' trade policies do not adversely affect the United States: they clearly do (as discussed in Section II). The basic point is that these policies have apparently been less important in causing U.S. agricultural exports to fall than other factors have been.

In addition, U.S. farm price supports influence exports. In setting floors under the international prices of agricultural products, grain price supports in particular may set product prices at levels that both discourage consumption of U.S. grains and stimulate higher levels of production in competing countries. A reduction in current price support levels would help to dampen these negative influences on exports.

^{4.} The member nations of the European Community, formerly the European Economic Community or the Common Market, are Belgium, Denmark, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, United Kingdom, and West Germany.

TABLE 1. U. S. AGRICULTURAL EXPORTS BY COMMODITY, FISCAL YEARS 1970 AND 1980 (Values in millions of dollars)

	1970		19	1980		
	Value	Percent	Value	Percent	Growth Rate (In percents)	
Grains and Feeds	(2,576)	(38)	(18,512)	(46)	(21.8)	
Wheat and flour	942	14	6,555	16	21.4	
Rice	322	5	1,170	3	13.8	
Coarse grains <u>a</u> /	988	15	9,185	22	25.0	
Other	324	4	1,602	5	17.3	
Oilseeds and						
Products	(1,676)	(25)	(10,017)	(24)	(19.6)	
Soybeans	1,069	16	6,164	15	19.1	
Soybean cake						
and meal	323	5	1,650	4	17.7	
Soybean oil	139	2	782	2	18.9	
Other	145	2	1,421	4	25.6	
Livestock and						
Products	580	9	3,096	8	18.2	
Poultry and Product	ts	76	-1	546	1	
Dairy Products	105	2	161	<u>b</u> /	4.0	
Horticultural		_		_		
Products	496	7	2,699	7	18.5	
Tobacco	562	8	1,349	3	9.2	
Cotton and Linters	352	5	3,033	7	24.0	
Seeds	52	1	242	1	16.6	
Sugar and Tropical						
Products <u>c</u> /	242	4	826	2	13.1	
Total/Average	6,721	100	40,481	100	19.7	

SOURCE: Congressional Budget Office from U. S. Department of Agriculture, "Foreign Agricultural Trade Statistics of the United States," various issues.

NOTE: Parentheses indicate subtotals.

- a. Includes corn, oats, barley, grain sorghum, and rye.
- b. Less than I percent.
- c. Includes other miscellaneous items.

TABLE 2. U. S. AGRICULTURAL EXPORTS BY IMPORTING REGION, FISCAL YEARS 1970 AND 1980 (Values in millions of dollars)

	1970		19	Compound Growth Rate	
Region	Value	Percent	Value	Percent	(In percents)
Western Europe European	(2,369)	(35)	(12,488)	(31)	(18.1)
Community Other Western	1,926	29	9,576	24	17.4
Europe	443	6	2,912	7	20.7
Eastern Europe	133	2	2,446	6	33.8
Soviet Union	18	<u>a</u> /	1,515	4	55.8
Asia	(2,500)	(37)	(14,239)	(35)	(19.0)
West Asia South Asia Southeast and	222 398	3 6	1,383 795	3 2	20.1 7.2
East Asia	791	12	4,329	11	24.9
Japan	1,089	16	5,775	14	18.2 <u>c</u> /
China	. 0	0	1,957	5	
Canada	767	11	1,837	5	9.1
North Africa	105	2	1,261	3	28.2
Other Africa	124	2	1,025	3	23.5
Latin America	649	10	5,482	14	24.8
Oceania <u>b</u> /	56	1	189	<u>a/</u>	12.9
Total/Average	6,721	100	40,481	100	19.7

SOURCE: U. S. Department of Agriculture, "Foreign Agricultural Trade Statistics of the United States," various issues.

NOTE: Parentheses indicate subtotals.

- a. Less than 1 percent.
- b. Includes Australia, New Zealand, Papua New Guinea, Western Samoa, Southern Pacific Islands, French Pacific Islands, Trust Territory of Pacific Islands, and Pacific Islands, NEC.
- c. Not applicable.

TABLE 3. U. S. AGRICULTURAL EXPORTS BY IMPORTING COUNTRY CLASSIFICATION, FISCAL YEARS 1970 AND 1980 (Values in millions of dollars)

Importer	1970		1980		Compound Growth Rate
Classification	Value	Percent	Value	Percent	(In percents)
Developed Countries <u>a</u> /	4,281	_ 64	20,289	50	16.8
Less Developed Countries <u>b</u> /	2,289	34	14,275	35	20.1
Centrally Planned Countries <u>C</u> /	<u> 151</u>	_2	5,917	_15	44.3
Total/Average	6,721	100	40,481	100	19.7

SOURCE: U. S. Department of Agriculture, "Foreign Agricultural Trade Statistics of the United States," various issues.

- a. Western Europe, Japan, Canada, and Oceania.
- b. All other countries.
- c. Soviet Union, China, and Eastern European members of the Soviet Bloc.

TABLE 4. U. S. AGRICULTURAL EXPORTS BY COMMODITY, FISCAL YEARS 1981, 1982, AND 1983 (Values in millions of dollars)

Commodities	1981	1982	Forecast 1983	Percent Change from 1981
Grains and Feeds	(21,900)	(17,615)	(15,600)	(-28.8)
Wheat and flour	7,965	7,615	6,500	-18.4
Rice	1,537	1,149	800	-48.0
Coarse grains <u>a/</u>	10,512	7,051	6,800	-35.3
Other	1,886	1,800	1,500	-20.5
Oilseeds and				
Products	(9,400)	(9,730)	(9,100)	(-3.2)
Soybeans	5,986	6,479	5,900	-1.4
Soybean cake	-,	.,	,,,,,,	
and meal	1,599	1,453	1,600	0.0
Soybean oil	457	498	500	9.4
Other	1,358	1,300	1,100	-19.0
Livestock and				
Products	3,148	3,164	3,000	-4.7
Poultry and				
Products	765	579	500	-34.6
Dairy Products	243	372	400	64.6
Horticultural	2 22	0.051	0 (00	
Products	3,084	2,851	2,600	-15.7
Tobacco	1,339	1,486	1,500	12.0
Cotton and Linters	2,248	2,163	1,800	-19.9
Seeds	283	296	300	6.0
Sugar and Tropical				
Products b/	1,372	839	<u>700</u>	<u>-48.9</u>
Total	43,780	39,094	35,500	-18.9

SOURCE: U. S. Department of Agriculture, "Outlook for U. S. Agricultural Exports" (May 17, 1983).

NOTES: Parentheses indicate subtotals. Minus signs indicate net declines.

- a. Includes corn, oats, barley, grain sorghum, and rye.
- b. Includes other miscellaneous items.

TABLE 5. U. S. AGRICULTURAL EXPORTS BY IMPORTING REGION, FISCAL YEARS 1981, 1982, AND 1983 (Values in millions of dollars)

Importing Region	1981	Preliminary 1982	Forecast 1983	Percent Change from 1981
Western Europe European	(11,824)	(12,164)	(10,700)	(-9.5)
Community Other Western	8,921	8,894	8,100	-9.2
Europe	2,903	3,270	2,600	-10.4
Eastern Europe	2,056	920	800	-61.1
Soviet Union	1,706	2,322	1,200	-29.7
Asia	(16,133)	(14,137)	(13,800)	(-14.5)
West Asia	1,780	1,486	1,600	-10.1
South Asia Southeast and	598	711	1,300	117.4
East Asia	4,832	4,383	4,500	-6.9
Japan	6,739	5,737	5,600	-16.9
China	2,184	1,819	800	-63.4
Canada	2,141	1,872	1,700	-20.6
North Africa	1,514	1,389	1,600	5.7
Other Africa	1,331	1,058	1,000	-24.9
Latin America	6,870	4,938	4,500	-34.5
Oceania	208	294	200	-3.8
Total/Average	43,780	39,094	35,500	-18.9

SOURCE: U. S. Department of Agriculture, "Outlook for U. S. Agricultural Exports" (May 17, 1983).

NOTES: Parentheses indicate subtotals. Minus signs indicate net declines.

TABLE 6. U. S. AGRICULTURAL EXPORTS BY COUNTRY CLASSIFICATION, FISCAL YEARS 1981, 1982, AND 1983 (Values in millions of dollars)

Classification	1981	Preliminary 1982	Forecast 1983	Percent Change from 1981
Developed Countries <u>a</u> /	20,912	20,067	18,200	-13.0
Less Developed Countries <u>b</u> /	16,925	13,965	14,500	-14.3
Centrally Planned Countries <u>C</u> /	5,946	5,061	2,800	-52.9
Total/Average	43,780	39,094	35,500	-18.9

SOURCE: U. S. Department of Agriculture, "Outlook for U. S. Agricultural Exports" (May 17, 1983).

NOTE: Minus signs indicate net declines.

- a. Western Europe, Japan, Canada, and Oceania.
- b. All other countries.
- c. Soviet Union, China, and Eastern European members of the Soviet Bloc.

SECTION II. THE AGRICULTURAL EXPORT ENVIRONMENT

International trade in agricultural products is influenced in important ways by the policies of importing and exporting nations. The United States, by virtue of its large market shares of trade in basic crops and its relatively free trade policies, is particularly exposed to the destabilizing effects of unanticipated changes in other nations' policies—not only their food, agricultural, and trade policies, but also their macroeconomic and foreign policies as well. To add to the context for considering possible export subsidies, this section recapitulates some of those external influences and how they can affect U. S. agricultural exports.

NATIONAL POLICIES INFLUENCING TRADE

In general, governments intervene substantially in the international markets for all major crops of importance to the United States, with the exception of soybeans. The effects of the various trade mechanisms on the level of U.S. agricultural trade are mixed. In some cases, protecting consumers from international price fluctuations has tended to expand the demand for imports. In other cases, however, where protection focuses on producers' interests, such policies discourage trade. (The most noteworthy case is the European Community, as discussed in the Appendix.)

Most importers and exporters of agricultural commodities use one or more mechanisms to protect domestic markets--that is, to insulate their own producers and/or consumers from fluctuations in international trade and Most such intervention, which can involve limits on imports or exports, or subsidization or taxation of exports, is undertaken as a consequence of domestic food and agricultural policies. For example, when a government intervenes in agricultural product markets to support prices, imports need to be restricted to minimize the public costs of domestic programs. Further, if production exceeds amounts that can be sold at an artificially established, or supported, price, then export subsidies are required to keep costly stocks from accumulating. A current example is the United States' dairy price support policy; this mechanism requires restrictions on dairy product imports to help contain the costs of domestic surpluses to the U.S. Treasury. Another example is the EC's Common Agricultural Policy (CAP) for several commodities, which entails both import levies and export subsidies.

Despite the large increase in the volume of world agricultural trade in the 1970s, the degree of government intervention or protectionism in international agricultural product markets has not lessened. 1/ Among commodities, however, there is wide variation as to the degree of government intervention.

Wheat. Among the basic crops the United States exports--wheat, feed grains, rice, cotton, and soybeans--wheat is the most heavily protected commodity in international trade. Nearly all major wheat importers, such as the Soviet Union and China, are "state traders"; this means that those nations' wheat purchases are contracted by state trading monopolies. On the exporter side, the large share of wheat trade from the United States (45 percent to 50 percent) has kept the world wheat market somewhat free. But virtually all the other exporters practice some form of market manipulation; Australia and Canada, for example, operate state trading monopolies. And the EC, which now commands about 17 percent of world wheat trade (as compared to about half that share a decade ago), protects high internal price support levels with variable import levies, and it directly subsidizes the export of surpluses.

Feed grains. World import trade in feed grains is appreciably freer than in wheat, but only about one-fourth of world corn imports are purchased by two relatively free traders--Japan and Taiwan. Because of the dominance of the United States, which accounts for 60 percent to 70 percent of world trade in feed grains, world export trade has less government intervention that affects wheat. In addition, Thailand operates as a free trader; Argentina, which has grown in importance as an exporter of feed grains, as well as wheat, vacillates between a relatively free trade stance and a state trading monopoly. Other exporters, such as Canada, Australia, and South Africa are state traders. In addition, the EC also employs variable import levies on corn and subsidizes the export of feed grains, mainly barley from France.

Cotton and Soybeans. In cotton, both import and export trade have become more restrictive over the last two decades. World cotton trade grew only about 15 percent from 1960 through 1980, and the United States, and a few smaller free traders, mainly Mexico and Turkey, generally lost market shares to state traders such as the Soviet Union and Pakistan. On the import side, the import share of major free traders—member nations of the EC, Japan, Korea, Taiwan, and Hong Kong—declined over the 1960-1980 period, while Eastern European countries continued to be large importers.

^{1.} Based on unpublished U. S. Department of Agriculture analysis by the International Economics Division of the Economic Research Service.

China became a large purchaser, but since 1980, China's cotton imports have fallen. As a result of these changes, both exports and imports in cotton are now roughly balanced between free and state traders.

Soybean trade remains relatively free because of the dominance of the United States as a supplier and the fact that Japan and the EC do not intervene in the market for soybeans and other oilseeds.

IMPLICATIONS FOR THE UNITED STATES

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The United States, because of its dominant role as the single largest supplier of wheat, feed grains, cotton, and soybeans, bears the brunt of adjustment to changes in global production, consumption, and trade. By muting most countries' responses to fluctuations in prices and quantities, most of the protectionist policies influencing international agricultural trade work to destabilize the world market. By and large, this means that the burden of adjustment to changes in trade falls on a few free trading nations, and mainly on the United States. For example, in response to excess supply, the United States alone typically makes reductions in acreage planted. This year, the United States is making the largest ever acreage reduction ever undertaken, while other grain-exporting nations are generally expanding acreage.

In terms of market shares, the United States, because of its production capacity and large stocks, is typically in a position to capture the largest share of expanding world markets. On the other hand, in contracting world markets, the United States has difficulty maintaining relative market shares; this is simply because other exporters, with much smaller market shares, compete vigorously to maintain and enhance their markets. Such competition comes in the form of explicit export subsidies to offset high internal prices; the prime example can be found in the EC. In the case of Canada, Australia, and other countries that produce specifically for export, competition is intense because state trading monopolies can compete in price and other terms of trade. In most cases, other grain exporters can and do sell most of their exportable surplus. As a result, the United States, as a residual supplier, is typically in a position of meeting the remaining market needs.

Adding to the problems the United States faces as a residual supplier has been a proliferation of long-term bilateral agreements between these competitors and importing nations. Under these agreements, an importer agrees to buy and an exporter agrees to sell a minimum quantity of a commodity over a specified period of years. An important effect of such agreements is the exclusion of the United States from a particular market and a reduction in the residual market. This can result in greater market instability.

SECTION III. EXPORT EXPANSION POLICIES

Although the United States encourages liberal trade for those crops for which it has a comparative advantage--grains, soybeans, and cotton--at the same time, it also pursues certain restrictive policies to protect domestic producers. In particular, the United States imposes import quotas and other means to limit the importation of beef, dairy products, and sugar. Also to further the interests of U. S. producers, the United States operates various agricultural export programs. Export subsidies--some already in effect and others now under consideration--would augment these efforts to assist U. S. growers.

CURRENT EXPORT PROGRAMS

The federal government operates a number of export expansion programs to help U.S. producers of such basic crops as grains. In these commodities, competition among the few supplying nations (Argentina, Australia, Canada, the European Community, and the United States) is especially keen. Government programs to expand exports include export credits and export credit guarantees, and concessional sales and donations under the Agricultural Trade Development and Assistance Act of 1954 (P. L. 480). Under the export credit guarantee programs, the Commodity Credit Corporation (CCC) guarantees that, in the event of nonpayment by a purchaser's bank, U. S. exporters or their assignees will receive payment. In addition, the CCC makes direct interest-free loans in combination with guaranteed loans under the so-called "blended credit program"--\$1 of interest-free loans for every \$4 of guaranteed loans. Before 1981, the CCC made direct short-term export credit loans at interest rates greater than the CCC's cost of borrowing from the Treasury or at a rate above the U.S. prime rate. In 1979, these direct loans were phased out in favor of guaranteed loans. In 1983, \$350 million in direct loans are programmed as a part of the blended credit program.

About 18 percent of total U. S. agricultural exports are financed under government programs (see Table 7). Nearly 90 percent of total government export financing is allocated to wheat, feed grains, soybeans (and meal and oil), cotton, and rice. The share of exports financed under government programs in 1983 is estimated to be about twice the average share financed over the 1976-1982 period.

Aside from food aid under P. L. 480, only about 5 percent of U. S. agricultural exports—those financed under the blended export credit program and the recent sale of flour to Egypt—have a direct subsidy component. Under the terms of the Egyptian flour sale effected in January 1983, U. S. milling firms will submit bids to the government on the number of bushels of wheat needed to deliver one metric ton of flour to Egypt at a price of \$155 per metric ton, with a total sale of one million metric tons. (At the time of the Egyptian flour sale agreement, French flour delivered to Egypt was selling at \$172 to \$175 per metric ton.) Successful bidders will be paid in government—owned wheat drawn from CCC—owned stocks.

The taxpayer cost of these direct export subsidies, though larger than at any time since the mid-1970s, is still quite small. For the blended credit program, the interest cost is about \$35 million, and the cost of the flour sale is estimated at \$185 million; thus, in 1983, the total taxpayer cost of direct export subsidies is about \$220 million. (In addition, the CCC would incur an additional \$30 million in interest costs over 1984 and 1985, because most of the blended credit loans are repaid over three years.)

This estimate of taxpayer cost should be qualified from at least two perspectives. First, if everything else remains constant, the additional exports induced by the blended export credit program might reduce CCC price support costs by about \$50 million in 1983, thereby reducing the direct subsidy cost. (If all the blended export credit loans were applied to wheat and feed grains, then the price support savings might nearly double.) From a budgetary viewpoint, assuming that loans are repaid, the blended export credit program offers the advantage of low subsidy costs relative to amounts of exports financed. In contrast, the direct CCC costs incurred under the Egyptian flour sale, after netting out the \$20 million in savings in wheat storage costs, are quite large compared to the actual export of wheat flour. Second, the outstanding export credit guarantee loans, estimated at \$6.6 billion at the end of this fiscal year, represent a potential cost to taxpayers in the event of default.

The implementation of direct export subsidies in 1983, though equal to less than 1 percent of the value of total agricultural exports, represents a substantial departure from U. S. export policy since the early 1970s. Now, however, there is Congressional interest in implementing additional measures to expand exports by means of some type of direct subsidy. The following discussion looks at export subsidies in general and examines some of their potential consequences.

EXPORT SUBSIDIES

In this paper, the term export subsidization means the provision of agricultural products to a foreign buyer at a net cost below what would otherwise be paid. The subsidy, paid by the U.S. taxpayer, can take the form of a reduced price for the product, a reduced price (lower interest rate) for export credit, a lower transportation cost, or reduced prices for other services. Such subsidies can be applied in one of two ways: uniformly to every unit of agricultural product exported, or targeted toward specific foreign buyers. At present, such subsidies -- represented by the Egyptian flour sale--are targeted, and they take the forms of interest-free export credits and reduced product prices. Under P. L. 480 concessional sales and overseas donations, export subsidies include reduced prices, low interest rates and long repayment terms, and reduced ocean transport costs. Furthermore, under P. L. 480, the United States bears the costs of processing certain raw agricultural products into foods. The main conclusion of this analysis is that targeted subsidies can be more cost effective than uniform subsidies.

Uniform Subsidy

Although not now used by the United States, uniform export subsidies were used until the early 1970s on a number of products--mainly wheat, upland cotton, rice, feed grains, and tobacco. These uniform subsidies were used because U. S. prices were too far above international prices, by and large, because of government price supports. In the mid-1960s, the United States began to reduce price support levels for grains and upland cotton to encourage exports. Wheat export subsidies, the last such uniform subsidies, were ended in 1972, when world trade and prices increased sharply.

In general, a uniform export subsidy for wheat is estimated to increase federal outlays, to benefit foreign consumers, but to yield relatively small benefits for U. S. wheat farmers. These conclusions derive from a recent analysis of a uniform subsidy applied to U. S. wheat exports, which helps to understand the possible economic consequences of this form of support. 1/ This study indicates that a subsidy that reduced the export price of wheat by about 10 percent would have a net taxpayer cost, after price support savings, of about \$650 million. Furthermore, the uniform subsidy would result in a transfer of U. S. income to wheat-importing countries of

^{1.} See Bob F. Jones and Jerry A. Sharples, "Production Controls and/or Export Subsidies," paper presented at Farm Science Days, Purdue University, West Lafayette, Indiana (January 11, 1983).

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more than \$600 million. Wheat farmers in the United States would benefit from larger exports and higher prices, but at roughly \$320 million--about half the net cost to taxpayers--their net income gain would be small.

Targeted Subsidy

For a targeted export subsidy to be effective, it must induce the importer to buy more of the subsidized product in total than would be the case without the subsidy. If the importer simply bought subsidized wheat and reduced its normal commercial purchases from the United States, the subsidy would have no impact on world market prices. The United States would not increase exports; it would merely transfer income equal to the value of the subsidy to the importing country.

Similarly, if the importer increased wheat purchases from the United States, but not total purchases including other products, then other exporters—competing sellers—to that importer would have reduced sales. In turn, these competitors would probably try to sell the displaced wheat in other countries. Competition would cause a shift in trade patterns, but the world price and the U. S. price probably would be unchanged. The U. S. gain in the targeted importing country would be offset by losses to competitors in other markets. In either case, the United States would pay a subsidy to the targeted importers but obtain little benefit.

If, in contrast, the importer increased its total wheat imports because of the subsidy, this would mean a small increase in the world import demand for wheat. This in turn would put a slight upward pressure on prices received by exporters. Even though competitors would respond to lost sales in the targeted country by increasing competition in other markets, these effects would be likely. As a result, the net gain to the United States would be less than the increase in its exports to the targeted country.

CONCLUSIONS

The net effects of U. S. export subsidies on agricultural exports simply cannot be predicted with certainty. This does not mean that targeted subsidies cannot increase exports nor at a minimum, maintain markets. Much of the uncertainty arises from the United States' being a major supplier of basic agricultural products, with the result that it can be affected in several markets by other nations' responses to U. S. actions. The main certain results of export subsidies are that they require federal outlays, and they transfer income from the United States to those countries importing subsidized commodities.

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Targeted export subsidies could be more cost effective than uniform subsidies in increasing U. S. agricultural exports. A targeted subsidy—if it increases the total quantity of world exports—puts upward pressures on the world price faced by nontargeted importers. This is the opposite effect of the uniform subsidy. The targeted subsidy would be paid only on wheat to the specific importer; all other U. S. wheat exports would be sold at the competitive world price. The latter should be marginally higher as a result of the subsidy, not lower, as is the case with the uniform subsidy.

To be effective, however, an export subsidy must increase total exports to targeted markets. But it is virtually impossible to assure such results. 2/ In most cases, the use of a targeted export subsidy has the potential to displace U.S. commercial sales and increase competition in other markets. And the risks of export subsidies go beyond possibly displacing commercial sales and increasing competition for the subsidized product.

First, exporters affected by U.S. subsidies could take steps to increase the competition in markets for other agricultural products important to the United States. Second, affected exporters could take steps to restrict their imports of U.S. agricultural products. (For example, the Economic Community could impose a quota and/or a levy on corn gluten feed imports, a variable levy on soybean imports, or a tax on vegetable oils.) Any of these possible actions would work against U.S. agricultural exports. Third, affected exporters could react by altering nonagricultural trade with the United States. And finally, affected exporters might respond in areas that go beyond trade.

^{2.} For example, "additionality"--as used here, the ability to add to total agricultural exports, rather than simply displace commercial transactions--is generally thought to be relatively small for export credit programs, perhaps \$30 to \$60 per \$100 of loans.



TABLE 7. U.S. AGRICULTURAL EXPORTS FINANCED UNDER GOVERNMENT PROGRAMS, FISCAL YEAR 1983

Source of Export Financing	Amount (In billions of dollars)	Percent of Total Agricultural Exports	
Blended Export Credit	1.75	4.9	
Guarantee Export Credit	3.40	9.6	
Egyptian Flour Sale	0.16	0.4	
Subtotal	(5.31)	(14.9)	
P. L. 480 <u>a/</u> Titles I-III Title II	0.75 0.41	2.1 1.2	
Subtotal	(1.16)	(3.3)	
Total	6.46	18.2	

SOURCE: United States Department of Agriculture.

NOTES: Parentheses denote subtotals. Details may not add to totals because of rounding.

a. Value of commodities shipped.

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APPENDIX. AGRICULTURAL POLICY IN THE EUROPEAN COMMUNITY

The European Community's internal price support levels for many domestically grown farm products are substantially above world price levels, with several effects. On the one hand, high price levels cause European consumers to pay more and eat less; a recent study indicates that the high prices maintained under the Common Agricultural Policy (CAP) cost EC consumers about \$30 billion a year, or \$107 per person. 1/2 On the other hand, high price supports encourage increased farm output. To help protect domestic producers and to keep national treasury costs from rising even faster, import levies are used to assure that lower-priced imported commodities compete on an equal price basis. In addition, to help dispose of surpluses and to prevent stocks from building, export refunds, or subsidies, are used to stimulate exports. These help the EC to follow a policy of low and stable stocks; the ratio of stocks to consumption for grains in the EC is much lower than in the United States.

Nearly half the EC's budget for agriculture (The European Agricultural Guidance and Guarantee Fund--EAGGF), about \$7 billion, goes for export refunds, mainly for dairy products, wheat and flour, barley, beef and veal, sugar, poultry, and pork. Expenditures under the EAGGF, about \$15 billion in 1982, have more than tripled since 1975, and today they account for about two-thirds of total EC budget spending. 2/ In addition to EC agriculture expenditures, total spending on agriculture by member nations was about \$21 billion in 1980. 3/

Cereal export refunds, mainly for wheat, have nearly quadrupled in five years, as high internal prices have encouraged growing surpluses. At present, the export refund for EC wheat is about \$2.20 per bushel,

^{1.} See Stephen L. Magiera, "The Consumer Cost of the CAP," in Selected Papers on the Common Agricultural Policy and US-EC Trade, U.S. Department of Agriculture, International Economics Division, Economic Research Service (April 1982).

^{2.} Data provided by the U.S. Department of Agriculture, International Economics Division, Economic Research Service.

^{3.} See Magiera, "The Consumer Cost of the CAP."

approximately 45 percent of the world price. $\frac{4}{}$ / For all EC agricultural exports, export refunds are equal to about \$20 for every \$100 in value of exports.

Export subsidies, as well as the effect of high internal prices and increasing production, have increased EC exports substantially. The EC's agricultural exports (measured in dollars) increased at a faster rate than world agricultural exports over the 1974-1982 period. As a result, EC exports to non-EC countries as a percent of world agricultural exports rose from nearly 10 percent in 1974 to about 13 percent in 1982. Between 1974 and 1981, the EC's share of world trade increased significantly for wheat, beef, and dairy products. In contrast, the U.S. share of total world agricultural exports remained fairly constant at 17 percent to 18 percent during the same period.

In terms of total grains, the EC is now a net exporter, a major reversal from being a net importer during most of the 1970s--mainly as a consequence of its protectionist agricultural policies. 5/ European grain production has grown, with both wheat and feed grain output expanding in the 1970s. In the case of wheat, the EC has been able to subsidize the export of its surplus and more than double its share of world wheat exports over the past decade to about 17 percent. For feed grains, the EC has substituted domestically produced feed grains for imported grains--mainly U.S. corn--to the degree that EC feed grain imports are now about half the level of the early 1970s.

Yet, not all EC policies work against the import of agricultural products. The CAP insulates grain production and markets from the influence of world markets and maintains high internal grain prices. As a result, feed manufacturers in the EC have replaced more expensive EC grains with large imports of nongrain feeds. These nongrain feeds—including milled grain byproducts, corn gluten feed and meal, oilseeds (including soybeans), and oilseed meals—are not to subject variable levies and are therefore available to feed manufacturers at world prices. With respect to nongrain feeds, these policies have encouraged U. S. exports to the EC of soybeans, soybean meal, and corn gluten products.

^{4.} Based on an export refund of \$80 per metric ton and a price of \$177.50 per metric ton of U.S. No. 2 hard red winter wheat delivered in Rotterdam.

^{5.} See Ulrich Koester, Policy Options for the Grain Economy of the European Community: Implications for Developing Countries, Research Report 35, International Food Policy Research Institute, Washington, D. C., (November 1982) p. 11.

The United States' agricultural trade with the EC reflects the effects of EC policies. The EC imported \$9.6 billion of U. S. farm products in 1980, as compared to \$1.9 billion in 1970; and in 1980, the EC had a \$8.2 billion agricultural trade deficit with the United States. In the 1970s, however, the EC's share of U. S. agricultural exports fell from 29 percent to 24 percent. In general, the decline in U. S. grain exports to the EC was more than made up by soybeans and other commodities not subject to the EC's variable import levies. Since 1980, however, U. S. agricultural exports to the EC have fallen, to about \$8 billion in 1983, or about 22 percent of total U. S. agricultural exports. Despite the fact that the EC had a \$6 billion agricultural trade deficit with the United States in 1982, the EC's policies make the EC a relatively stagnant market for agricultural products.