Exports in the 1980s

The United States and other grain-exporting nations--mainly Canada, Australia, Argentina, South Africa, and Thailand--will continue to face growing export demand in the 1980s. The expansion of U.S. grain exports, which began during the 1970s, is likely to continue into the 1980s, although at a somewhat slower pace. The trend is based on economic and demographic factors. World population may grow at a slightly slower rate in the 1980s, but close to a billion people will be added, mostly in the developing nations and China. This will add to the demand for wheat and rice. Higher per capita incomes in developed countries, the centrally-planned economies, and some faster growing nations such as South Korea, Mexico, and Brazil, should continue to increase the demand for animal products, feed grains, and soybeans. Higher levels of exports will also be required to supply the food-deficit countries of Western Europe, Japan, the centrally-planned economies, and parts of developing Asia and Africa. Developing countries with deficits in grain will grow increasingly dependent on imports, and their 1985 grain deficit may be nearly double the levels of 10 years earlier.

CHANGING FARM INCOMES

As agricultural exports increased during the 1970s, the per capita income of the farm population continued to improve relative to that of the nonfarm population, and in some years they were nearly equal (Table 3). Farm income is drawn almost equally from work on the farm and work off the farm. But as Figure 2 demonstrates, the portion of farm income earned on the farm is much more variable than that earned from nonfarm sources. Moreover, farm income during the 1970s was more variable from year to year than in the 1960s.

While aggregate figures conceal many differences among farm families, it is clear that the importance of income from nonfarm sources increases as farm size declines. This means that the farm population as a whole is more dependent on income from nonfarm sources than from farming. Table 4 demonstrates the relationship between farm size and income sources. In 1979, farms with gross sales of less than $20,000--about 57 percent of all U.S. farms--received only about 7 percent of farm cash receipts. The farm families residing on these farms gained most of their incomes from nonfarm sources. In 1978 an estimated 30 percent of these families had incomes below the poverty line. Even families residing on larger farms with sales of $20,000 to $39,999--about 14 percent of all farms--received only 8 percent of farm cash receipts and got about half their incomes from nonfarm sources. In sharp contrast, farms with annual sales of more than $40,000--about 30 percent of all farms--received

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TABLE 3. PER CAPITA PERSONAL INCOME OF THE FARM POPULATION, 1960-1980 (In dollars)

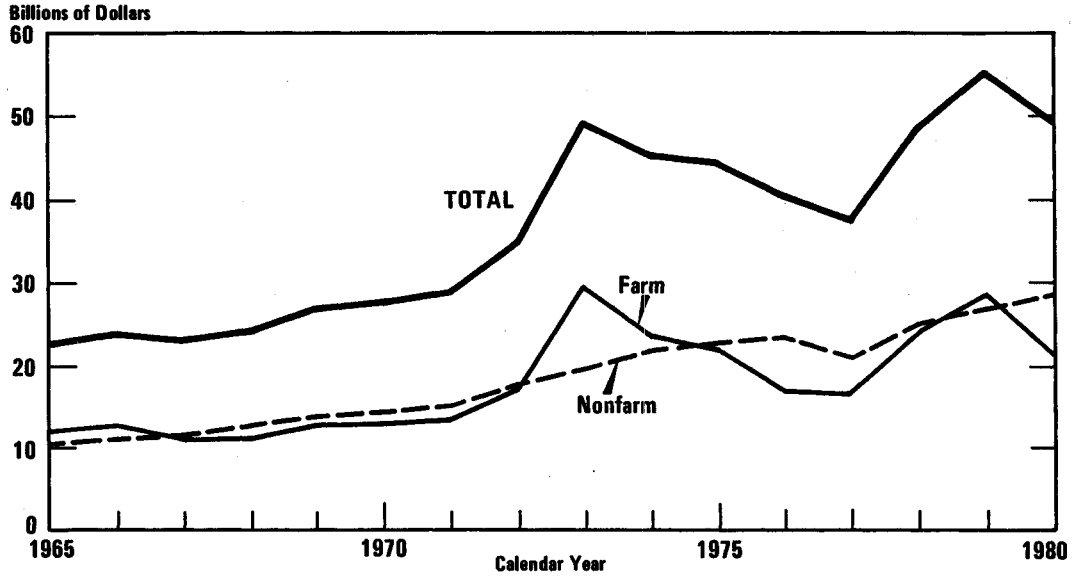
Year	From Farm Sources	From Nonfarm Sources	Total	Total a/ as Percentage of Per Capita Income of the Nonfarm Population
1960-1964	775	597	1,372	59
1965-1969	1,082	1,097	2,179	71
1970	1,339	1,490	2,829	74
1971	1,431	1,628	3,059	75
1972	1,754	1,847	3,601	84
1973	3,086	2,079	5,165	110
1974	2,521	2,353	4,874	94
1975	2,469	2,556	5,026	88
1976	2,031	2,847	4,881	78
1977	2,660	3,388	6,048	87
1978	3,656	3,810	7,467	96
1979	4,604	4,261	8,865	102
1980	3,528	4,684	8,212	84

SOURCE: United States Department of Agriculture, Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1979, Statistical Bulletin No. 650 (December 1980), p. 89, and unpublished estimate for 1980.

a/ Per capita disposable personal income.

85 percent of farm cash receipts. These farms produce most of the country's food and fiber; the families living on them depend on their farm income and are strongly affected by unstable prices. At the very top, about 10 percent of the farms have sales over $100,000, receive 60 percent of farm cash receipts, and had an average income per farm family of more than $60,000 in 1979.

Figure 2.
Personal Income of the Farm Population from Farm and Nonfarm Sources, 1965-1980



Source: U.S. Department of Agriculture, *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1979* (December 1980), Statistical Bulletin no. 650, p. 89.

HOW CURRENT POLICIES HAVE EVOLVED

Since the 1930s, farm legislation has pursued two objectives: to enhance farm incomes and to stabilize farm prices. This has been done through a variety of programs, changing over time to meet new conditions. An important transition began in the late 1950s. The system of high price supports and relatively ineffective limitations on supply had brought a growth in farm output exceeding the demands of the market. Government costs rose, and so did the inventories of the Commodity Credit Corporation, which purchases surplus grains and upland cotton. The recognition grew that price supports were too high, but efforts by the Eisenhower Administration to lower them were blocked by farm interests in the Congress.

TABLE 4. FARM INCOME IN THE UNITED STATES, BY ANNUAL GROSS SALES, 1979

Annual Gross Sales a/ (dollars)	Number of Farms b/ (thousands)	Percent of All Farms	Percent of Total Cash Receipts from Farming	Net Farm Income per Farm (dollars)	Average Income per Farm Family c/ (dollars)	Capital Gain on Physical Assets per Farm d/ (dollars)
200,000 or more	76	3.3	42.9	71,382		259,513
					61,255 e/	
100,000 to 199,999	150	6.4	17.5	35,893		117,327
40,000 to 99,999	459	19.7	24.8	19,553	28,200	68,174
20,000 to 39,999	327	14.0	8.3	10,489	20,281	40,923
10,000 to 19,999	274	11.7	3.5	5,398	18,572	27,741
5,000 to 9,999	250	10.7	1.6	3,012	20,049	20,312

(Continued)

TABLE 4. (Continued)

Annual Gross Sales a/ (dollars)	Number of Farms b/ (thousands)	Percent of All Farms	Percent of Total Cash Receipts from Farming	Net Farm Income per Farm (dollars)	Average Income per Farm Family c/ (dollars)	Capital Gain on Physical Assets per Farm d/ (dollars)
2,500 to 4,999	242	10.4	0.8	1,769	22,044	17,227
Less than 2,500	555	23.8	0.6	1,832	22,348	13,084
Total or All Farms	2,333	100.0	100.0	11,526	25,254	45,480

SOURCE: U.S. Department of Agriculture, Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1979, Statistical Bulletin No. 650 (December 1980).

a/ Includes total cash receipts from farming, government payments to farmers, and other farm income from sources such as recreation, machine hire, and custom work.

b/ A farm is any place that sells (or normally would sell) $1,000 or more of agricultural products.

c/ Net income from farming plus off-farm income of farm operator families divided by number of farms. For the purpose of these calculations, it is assumed that each farm has one resident farm operator family.

d/ Annual change in the current value of farm physical assets less the net investment in assets.

e/ Data for annual gross sales of $100,000 or more.

The Transition of the 1960s and 1970s

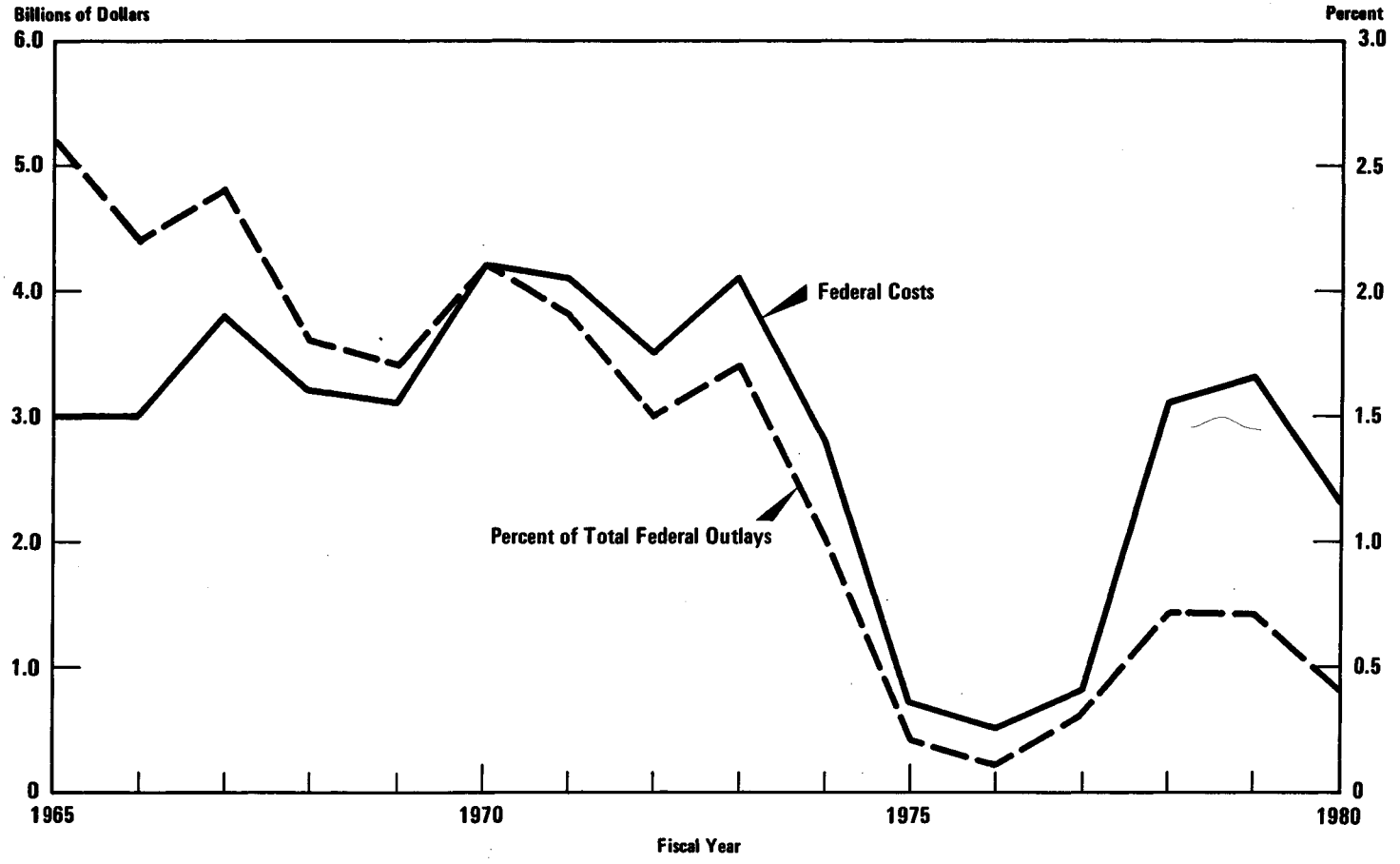
In the early 1960s, the Kennedy Administration proposed mandatory supply controls in an effort to reduce growing budget costs, but the Congress did not support them. An eventual compromise resulted in a gradual reduction in price supports to world price levels or below, and direct payments to farmers to encourage their participation in voluntary supply control programs. This approach, embodied in the Food and Agriculture Act of 1965, cut the link between price support and income support. In essence, price supports were reduced in order to provide a lower price floor and let market forces—particularly foreign demand--determine prices. The act's basic concepts—price supports that permit the market to allocate supplies; income support through direct payments; and voluntary methods of supply control--were contained in succeeding major farm acts in 1970, 1973, and 1977. The evolution of public policy enabled a movement away from rigid acreage allotments and marketing quotas toward provisions that give farmers greater flexibility to adjust their production plans to meet changing market conditions.

The transition in commodity policy was clearly evident in the 1965-1970 period. Average real loan rates for wheat, corn, and upland cotton were nearly 50 percent below those of 1955. The lowering of loan rates encouraged exports and permitted the eventual elimination of grain export subsidies. During the late 1960s, payments to crop farmers averaged about a third of their gross incomes. A significant proportion of acreage was being diverted to conservation uses--about 20 percent of total harvested cropland.

During the early 1970s, however, growing world demand resulted in an explosion in agricultural exports that dramatically reduced the importance of existing farm programs to crop farmers' incomes. Cropland diverted from production under commodity programs diminished rapidly in the 1970s. In the early 1970s, federal expenditures on price support loans, inventories, payments, and operating expenses for each $1.00 of cash receipts in these crops was $0.45 or about half the level of fiscal year 1960. During fiscal years 1975-1977, federal support declined to about $0.10 per $1.00 of crop cash receipts because commodity prices were substantially above support level needs. In fiscal years 1978 and 1979, the average level of federal support was only $0.20 per $1.00 of crop cash receipts. The taxpayer cost--as measured by CCC net realized losses for agricultural price support programs--declined from about 2 percent of federal budget outlays in fiscal year 1970 to less than 1 percent in fiscal year 1980 (see Figure 3).

Figure 3.

Federal Costs of Agricultural Price and Income Support Programs



Source: U.S. Department of Agriculture, Commodity Credit Corporation Net Realized Losses.

Current Commodity Programs

Commodity policy for wheat, feed grains, rice, soybeans, and upland cotton has been directed at two broad objectives: support of farm income and stabilization of farm prices. In recent years, as agricultural output, exports, and income from farming have grown, the emphasis has increasingly centered on stabilization. Current programs, as authorized by the Food and Agriculture Act of 1977, reflect the long-term transition toward greater dependence on market forces. Key elements of current policy are nonrecourse loans, the farmer-owned reserve, and deficiency payments. These are described briefly below. (In addition, the government helps farmers adjust to income instability from natural causes by providing subsidized federal crop insurance and emergency disaster credit.)

Nonrecourse Loans. If farmers find that market prices are low, or if they need working cash, they can put their crops in storage and use them as collateral for loans from the CCC. The CCC agrees to accept the commodity as full satisfaction for repayment of a loan if a farmer elects not to repay it in cash. A farmer may, however, choose to repay the loan with interest on or before its maturity date (usually nine months) and take over the storage and marketing of the commodity himself. In this way farmers are guaranteed cash for their crops at a minimum price—the loan rate—without losing the opportunity to gain from future price increases. Loan rates are set below expected average market prices to keep U.S. farm products competitive in the world market and to minimize the loan rates' influence on production. Thus, nonrecourse loans provide a relatively low level of price support.

Farmer-Owned Reserve. The 1977 act authorized a producer-owned grain reserve to enable farmers to extend the marketing period in times of surplus production. Under this program a farmer contracts with the government to store grain for a three-year period. A farmer may enter grain directly into the reserve, or transfer grain already in storage under a nonrecourse loan into the reserve. In either case, the farmer receives a loan equal to the reserve loan rate times the quantity entered into the reserve. 1/ To encourage reserve entry, farmers receive annual storage payments and interest-free loans. 2/ Financial penalties deter a farmer

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1/ P.L. 96-494 authorized loan rates for 1980 and 1981 crop grain that are higher than nonrecourse loan rates.

2/ Prior to P.L. 96-494, interest was charged only for the first year. This law authorized interest-free loans for the first year.

from repaying the loan before market prices reach a predetermined "release price." Storage payments terminate when the market price reaches the release price. At the release price or above, farmers can repay their loans, plus unearned storage payments, and sell the grain. At a higher "call price," loans and all charges must be repaid or the grain is forfeited to the CCC.

Deficiency Payments. When market prices are low, farmers participating in certain programs are guaranteed deficiency payments. Producers of wheat, feed grains, rice, and upland cotton who comply with all program provisions are eligible for deficiency payments if the national average market price for a crop for a specified period falls below a target price. Target prices are set by the Secretary of Agriculture based, in part, on a cost of production formula, but strongly influenced by Congressional directives. The payment rate is the difference between the target price and the average market price, or between the target price and loan rate, whichever is smaller.

FUTURE POLICY DIRECTIONS

As the Congress reviews current agricultural programs, it will evaluate whether or not they will continue to fit the needs of the future. In particular, the growing dependence on exports will create new sources of instability for the farm sector, which has long been characterized by price and income instability. Greater access to foreign markets makes farm prices and incomes very sensitive to weather fluctuations in other countries, to changes in U.S. trade and foreign policies, to changes in currency exchange rates, and to the farm, economic, and trade policies of other nations.

A particularly important role is played by the policies of other nations. For example, the European Economic Community, the USSR, Eastern Europe, and China--which account for more than half of world grain consumption and trade--pursue policies that insulate their producers and consumers from changes in world commodity prices. This means that some of the world's major consumers of grain do not make normal market adjustments to changes in prices, and much of the burden of adjustment is shifted to countries such as the United States that maintain relatively open markets.

Instability was apparent in the 1970s, when farm prices and incomes were far more variable than during the previous two decades in which large inventories, surplus production capacity, and relatively stable domestic

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economic conditions prevailed. A number of forces contributed to high and unstable farm prices in 1972-1975. The United States and other grain exporters had imposed production controls in the 1960s to reduce costly surpluses. World grain stocks in 1970 were about 15 percent of annual use as compared to 20 percent in the early 1960s (Table 5). With reduced stocks, prices were more sensitive to changes in production. In 1972 world grain production fell about 3 percent, partly because of adverse weather in some parts of the world, including the USSR, and partly because of continued production controls. The tightness in grain supplies was accentuated by a limited growth of protein feed supplies (soybeans, other vegetable oils, and fishmeal) at a time when demand was greatly expanding. In a major policy shift, the USSR unexpectedly entered world markets in mid-1972 to purchase 23 million metric tons of grain--about 60 percent of it from the United States. Ending stocks fell to 12 percent of annual use in 1972. Conditions stabilized somewhat in 1973, as increased consumption was nearly balanced by increased production. In 1974, however, a severe drought in the United States reduced corn production and contributed to a 4 percent decline in world grain production.

The rapid transition from surplus stocks to shortages caused grain and soybean prices to reach record levels (Table 5). But the steep rise in farm incomes benefited mainly crop producers. Highly volatile feed prices caused serious instability in the domestic livestock sector, which went through one of the most unprofitable periods in its history. The combination of higher farm prices and the contraction in livestock supplies was reflected in higher food prices, which increased nearly 15 percent in 1973 and 1974. Sharply rising food prices led to the imposition of export embargoes that strained long-standing trading relations. To help reduce the uncertainty associated with Soviet grain imports, the United States entered into a grain agreement with the USSR (covering fiscal years 1977-1981).

The upswing in crop prices in 1973-1975 was followed by a steep downturn in 1976 and 1977 as production improved and stocks increased (Table 5). At the same time, farm production expenses escalated. Income from farming in 1976-1977 fell sharply (Figure 2). Many farmers had made large capital investments in 1973-1975 to expand their production, with the expectation of permanently higher prices and incomes. Although income from farming increased in 1978 and 1979, it fell by 30 percent in 1980 as inflation-induced increases in farm production expenses cut into gross incomes.

Greater instability is likely in the 1980s, if the United States continues to maintain open-market access to its farm products. Many experts expect that growth in world food demand will more frequently tax U.S. production

TABLE 5: WORLD GRAIN SUPPLY AND U.S. FARM PRICES (1961-1979)

Year a/	World Grain Supply: Grain Production (millions of metric tons)	World Grain Supply: Ending Stocks as a Percent of Use	World Grain Supply: U.S. Share of World Stocks (percent)	U.S. Farm Prices: Average b/ and Variability c/: Average ($ per bushel): Wheat	Average ($ per bushel): Corn	Average ($ per bushel): Soybeans	Variability: Wheat	Variability: Corn	Variability: Soybeans
1961	824	20	60	1.83	1.10	2.28	9	15	21
1966	1,010	17	29	1.63	1.24	1.75	17	20	22
1970	1,104	15	33	1.38	1.35	2.89	16	24	18
1971	1,194	16	40	1.34	1.10	3.13	13	23	17
1972	1,161	12	34	1.90	1.65	5.79	56	90	119
1973	1,266	12	21	4.20	2.65	5.77	68	45	42
1974	1,213	11	20	4.12	2.92	6.16	26	27	53
1975	1,239	11	26	3.58	2.55	5.06	33	19	48
1976	1,354	15	32	2.68	2.11	7.12	44	35	49
1977	1,337	14	39	2.40	2.03	5.92	35	33	34
1978	1,454	15	33	2.97	2.27	6.82	15	23	13
1979	1,400	13	41	3.74	2.49	6.22	15	31	24

SOURCE: U.S. Department of Agriculture.

a/ Years beginning July 1 and ending June 30.

b/ Mid-month farm prices on a marketing year basis: wheat, June 1-May 31; corn, October 1-September 30; and soybeans, September 1-August 31.

c/ The larger the value, the greater the variability. Variability is calculated as follows:

$$\frac{\text{high monthly price minus low monthly price}}{\text{average monthly price}} \times 100$$

capacity. World grain stocks--now about 11 percent of annual use, a minimum level--are unlikely to improve beyond those of the late 1970s; this together with fuller use of production capacity will magnify the effects of flucuating global food production on prices and supplies. In the United States excess production capacity has vanished and there is no idle farmland that can be easily be brought into food and fiber production. Nevertheless, favorable worldwide weather may on occasion increase world crop supplies, causing U.S. short-term prices and incomes to fall. This will probably occur less frequently in the future than it has in the past.

U.S. consumers have a clear interest in preventing the shortages that lead to high and volatile farm and food prices, as occurred in 1973-1975. Such shortages also threaten the long-term steady growth of agricultural exports, since export control policies are likely to be used to ration available supplies. Although export controls serve to reduce short-run domestic price instability, they run counter to long-term export expansion.

Present farm policies were not designed to meet the needs of the increasingly international market of the 1980s. In the years ahead, U.S. producers and consumers will be exposed to an increasingly broad and unpredictable set of risks. Underlying them will be new supply factors: a more intensive use of the world resource base; smaller grain stocks relative to demand; and the domestic policies of other nations.

CHAPTER III. FOOD AND AGRICULTURE POLICY ALTERNATIVES

This chapter considers several alternatives to the existing commodity programs. Those programs have two objectives: to support producers' incomes and to stabilize commodity prices. The changes in export demand discussed in Chapter II have diminished the need for traditional measures of income support, while the greater exposure of U.S. agriculture to the vicissitudes of the world market has increased the difficulty of protecting farmers and consumers against large fluctuations in demand.

The chapter also explores ways of modifying current policies to adapt them to long-term needs.

AN INTERNATIONAL GRAIN RESERVE SYSTEM

Grain-producing and consuming nations have a common interest in stabilizing prices and supplies. An international system of coordinated national grain reserves could substantially increase world price stability. It has been estimated that a wheat and feed grain reserve of 15 million metric tons--about 8 percent of average world exports--would, in all but the most extreme cases, keep world grain prices within a price band of plus or minus 30 percent of an agreed-upon price level. 1/ A larger reserve, equivalent to 40 percent of world exports, would keep estimated price fluctuations within a plus or minus 10 percent of the agreed-upon level. Such a reserve system would acquire and release reserve stocks in accordance with agreed-upon rules and objectives. By reducing uncertainty about future prices, it would promote agricultural investment and the expansion of international trade. From the viewpoint of major exporters such as the United States, an international reserve system would be a means of distributing the costs of stockholding more equitably. It would spread among a large group of importing nations the costs that are now borne by a few exporting nations.

The United States has strongly supported the concept of international grain reserves since the early 1970s. Together with 66 other trading

1/ See Willard W. Cochrane and others, "Grain Reserve Policies in an Uncertain World," in Analyses of Food and Agricultural Policies for the Eighties (November 1980), North Central Regional Research Publication No. 271.

countries under the auspices of the International Wheat Council, it deliberated in 1978-1979 on the formation of an international system of coordinated national wheat reserves stocks. An agreement was not reached, however, because of substantive differences over the definition of reserve stocks, the target level of stabilization, rules for accumulation and release of stocks, and the procedure to assist developing nations to finance stockholding.

Although grain-trading nations have a common interest in achieving greater price and supply stability in the international grain market, only limited progress has been made toward establishing such a system, for two basic reasons. First, many importing nations have developed internal arrangements to stabilize grain prices and supplies--for example, the European Economic Community's variable import levy system, the grain monopoly marketing boards of Canada and Australia, and Japan's National Food Agency which has exclusive power to import foodstuffs. If an international reserve system is to function in periods of surplus as well as scarcity, all participating nations must cooperate in adjusting their domestic agricultural and trade policies. Second, many governments realize that the United States wants to be recognized as a reliable supplier to other nations and to contribute to stable international grain markets. Accordingly, they expect that the United States will continue to carry reserve stocks sufficient to moderate changes in world grain prices and supplies.

NATIONAL GRAIN RESERVES AND BILATERAL AGREEMENTS

Some critics of current policy think that the United States should use its dominant position in the international grain trade to negotiate bilateral supply agreements with grain-importing countries. 2/ Such an agreement would guarantee that an importing country could buy, under most circumstances, its historical quantity of grain plus some growth increment at a ceiling price perhaps no higher than the U.S. farmer-owned reserve call price. In return, the importing country would agree to establish its own grain reserve consistent with its needs. To enable the United States to meet the supply agreements, the farmer-owned reserve would be enlarged. Importing countries not having long-term supply agreements with the United States would receive lesser assurance. Although they could buy grain as long as prices were below the farmer-owned reserve call price, they would not be allowed to buy U.S. grain at the ceiling price or above.

2/ Cochrane and others, "Grain Reserve Policies in an Uncertain World."

This option--which runs counter to the long-standing U.S. position on liberalized trade--would discriminate against those importing countries that did not negotiate bilateral agreements with the United States, and it might possibly stimulate retaliation in other categories of trade. There is also the possibility that, in periods of tight supplies, bilateral agreements would increase instability in grain markets not covered by agreements. On balance, however, long-term agreements that would guarantee supplies at stable prices in periods of shortages should be attractive to many countries. If too many wished to participate in such agreements, the United States might be forced to choose among them in allocating its grain exports.

A series of bilateral agreements that would increase reserves in the United States and in importing countries could lead to greater stability in U.S. agriculture. And if the United States did not exploit its position by raising prices, its long-run exports would tend to be larger because of its increased ability to maintain exports in periods of production shortfalls.

INCOME INSURANCE FOR FARMERS

Another way of reducing instability would be to replace the traditional commodity programs with an actuarially sound income insurance program. 3/ This would be designed to cover the risk of income loss from fluctuations in supply and demand, thereby encouraging greater investment and output. Although private companies would provide the insurance, their premiums could be partially subsidized in order to transfer some of the risk inherent in agriculture to the rest of the economy. The insurance program could be an extension and expansion of the subsidized federal crop insurance program.

Income insurance would contribute to stability since it would improve the access of many producers to commercial credit and capital markets by making them better credit risks. This would be particularly true for many small and medium producers who are unable to take advantage of futures markets and forward contracting to reduce income variability. Substantial time and effort would be required to design the program and develop appropriate schedules for premiums, but it could be phased in gradually as commodity programs were phased out.

3/ This policy has been proposed by, among others, G. Edward Schuh, in "U.S. Agriculture in an Interdependent World Economy: Policy Alternatives for the 1980s," a paper presented at the American Enterprise Institute Conference on Food and Agricultural Policy, October 2-3, 1980, Washington, D.C.

CONTINUATION OF CURRENT POLICY

The broad options outlined above would represent a sharp departure from current policy, and none is likely be embraced in a single sweeping act. Rather, public policy will probably respond to changing needs in a series of gradual, incremental steps. Accordingly, it is appropriate to focus in greater detail on current policies and programs and then to examine how proposed changes in these programs might fit long-term needs.

This section describes the three key components of current policy and examines the major consequences of continuing them.

Nonrecourse Loans

Under current policy, nonrecourse loans provide a relatively low floor under market prices. Loan rates are set below expected average market-clearing prices, thereby keeping U.S. farm products competitive in world markets and minimizing the influence of loan rates on farmers' production decisions. Loan rates also govern release and call prices in the farmer-owned grain reserve. Loan rates for feed grains--grain sorghum, barley, and oats--are set in relationship to the corn loan rate based on relative livestock feeding values. In contrast, wheat and corn loan rates reflect market price differentials that tend to discourage the use of wheat as a livestock feed. Soybean loan rates are set in relation to the corn loan rate based on their competition for acreage in the Corn Belt. Projected minimum loan rates for 1982 through 1985 are shown in Table 6.

Deficiency Payments

Deficiency payments provide a minimum income floor to grain and upland cotton farmers to cover national average nonland production costs. If current unit production cost relationships continue, target prices for wheat, grain sorghum, and barley would be higher than the target price for corn relative to past market price relationships. Target prices established for 1982, the first crop year covered by new legislation, would reflect national average production costs including a 3 to 4 percent return on current land prices. However, subsequent year-to-year adjustments would be based on changes in a two-year moving average of nonland costs as

TABLE 6: PROJECTED LOAN RATES AND MINIMUM TARGET PRICES UNDER CONTINUATION OF CURRENT POLICY, 1982 TO 1985 CROP YEARS (In dollars per unit)

Commodity	Unit	1981	1982	1983	1984	1985
Loan Rates						
Wheat	Bu	3.20	3.57	3.74	3.95	4.12
Corn	Bu	2.40	2.60	2.75	2.90	3.05
Grain sorghum	Bu	2.28	2.49	2.54	2.68	2.87
Barley	Bu	1.94	2.12	2.26	2.87	3.08
Soybeans	Bu	5.60	5.80	6.15	6.50	6.80
Rice	Cwt	7.55	8.23	8.90	9.47	10.02
Upland cotton	Lb	0.525	0.525	0.525	0.525	0.525
Target Prices						
Wheat	Bu	3.85	4.20	4.40	4.65	4.85
Corn	Bu	2.50	2.72	2.87	3.02	3.17
Grain sorghum	Bu	2.65	2.89	2.95	3.12	3.34
Barley	Bu	2.70	2.94	3.14	3.34	3.54
Rice	Cwt	10.06	10.97	11.87	12.62	13.37
Upland cotton	Lb	0.720	0.720	0.720	0.761	0.826

SOURCE: Congressional Budget Office.

required by the cost-of-production procedure in the 1977 act. 4/ As demonstrated since 1978 by legislated higher target prices, the target prices determined by this procedure can be unacceptable to the Congress and Administration. Thus, the procedure would be used to establish minimum target prices. Projected minimum target prices for 1982 through 1985 are shown in Table 6. The Secretary of Agriculture would have authority to set target prices above the minimum levels.

4/ The procedure expressed as a formula, using 1980 as an example, is as follows:

1980 target price = 1979 target price plus or minus: the average of variable, machinery, and farm overhead costs in 1978 and 1979 minus average costs in 1977 and 1978.

Farmer-Owned Reserve

The precise impact of the farmer-owned reserve on total grain stocks and market prices cannot be estimated. The subsidized reserve has probably helped to remove grain from the market in periods of surplus, and to increase market supplies later when market prices were rising. From mid-1977 to the end of 1978, grain placed in the reserve eventually grew to about 20 percent of annual wheat use and 10 percent of annual corn use. In mid-1979, wheat and corn were released from the reserve as market prices were rising in expectation of a poor Soviet crop. In brief, it appears that the farmer-owned reserve helped to strengthen prices in periods of surplus, and to dampen price increases as reserve grain entered the market. Thus, it helped to even out supplies over time and to moderate grain price fluctuations. The reserve probably also reduced the amount of grain that would otherwise have ended up in government stocks. Annual government storage payments during fiscal years 1978 through 1980 averaged about $200 million.

After the suspension of grain sales to the USSR on January 4, 1980, the farmer-owned reserve was used to raise farm prices by encouraging farmers to place grain in the reserve rather than selling it. However, frequent changes in loan rates, release and call prices, and other operating rules in 1980 increased the uncertainty of market participants as to reserve objectives. Government reserve management in 1980 diminished the general support for a farmer-owned reserve.

If current policies are continued, the subsidized farmer-owned grain reserve would encourage private stockholding, and induce farmers to store grain when prices are low and sell grain when prices reach specified levels. Thus, the farmer-owned reserve would serve to even out supplies coming on the market and to moderate price fluctuations. Market prices would move within a range between the loan rate and the release price. The call price would tend to put a ceiling on grain prices.

Despite limitations on the farmer-owned reserve intended to moderate prices in periods of large gluts or extreme shortages, one objective would be to keep market prices at levels that would minimize deficiency payments. To do this, release prices would be set higher than target prices. At times, the farmer-owned reserve could be at full capacity relative to expected future utilization and budget costs. Under these circumstances, acreage controls could be implemented if expected future production was excessive relative to acceptable market prices, and if budget savings could be realized from reducing production.

Summary of Major Consequences

If current policy was continued during the 1982-1985 crop years, the expected consequences for farmers, consumers, and taxpayers would be as follows.

Consequences for Farmers. The policy would ensure relatively more stable prices than if there were no program. It would reduce producers' uncertainty and would encourage capital investment and a more efficient allocation of resources. To the extent that reduced uncertainty leads to greater output, crop prices would tend to be slightly lower than if there were no program. Except in cases of severe domestic or world production shortfalls, grain prices would usually be stabilized between the loan rate and call prices. Livestock, poultry, and dairy producers would pay more stable prices for feedstuffs, which could encourage relatively greater output.

Farm incomes for grain and upland cotton producers would be prevented by deficiency payments from falling below national average nonland production costs. Over a period of years, direct payments to these producers would continue to decline relative to their total gross income. Based on projected target prices and market prices, payments would probably be made with more frequency to rice, wheat, grain sorghum, and barley producers than to corn and upland cotton farmers. Deficiency payments would be allocated in direct proportion to volume of production. Therefore, despite current payment limitations, total dollar benefits would be concentrated among a small share of all producers.

Farm prices would be more stable than if there were no programs. But the programs would be less influential in determining prices and incomes than would population and income growth at home and abroad, supply response in other exporting countries, world weather conditions, U.S. economic and foreign policies, and the farm, economic, and trade policies of other governments. The farmer-owned reserve could help to improve the longer-run U.S. export position by providing exportable supplies in periods of modest production shortfalls. But the excessive use of administrative discretion to alter farm programs could increase the uncertainty of farmers and others about government policy.

Consequences for Consumers. Crop commodity programs would likely have less impact on retail food prices than would economic policies affecting wages and other costs in food processing and distribution, or U.S. foreign and trade polices. Crop prices would probably average slightly lower

than in the absence of farm programs, and would be more stable. Loan rates would be below expected average market prices, and supply restrictions would be used infrequently. The indirect effect of higher grain and soybean prices on consumers through animal product prices is estimated to be nearly six times larger than the direct consumer effects. 5/ Thus, to the extent that farm programs that stabilize feed prices tend to encourage greater livestock output, consumers would benefit.

Consequences for Taxpayers. The benefits to farmers and consumers from crop commodity programs impose substantial costs on taxpayers. Annual federal outlays for commodity programs for wheat, feed grains, rice, soybeans, and upland cotton could range from less than $1 billion to $5 billion over fiscal years 1983-1986, most likely averaging from $2 billion to $3 billion. Expenditures would shift away from direct payments for income and disaster assistance toward reserve storage payments, loans, interest subsidies, and premium subsidies for subsidized crop insurance.

MODIFICATIONS OF CURRENT POLICY

In addition to continuing current policy, the Congress may consider several modifications of it. The following adjustments to current policy represent the kinds of modifications that may be proposed.

Farmer-Owned Reserve

Producers and consumers have an interest in continuing the farmer-owned reserve, but the Congress will need to examine the reserve in light of recent experience. Certain changes seem necessary, in particular reducing the frequency of changes in operating rules and providing for a phased release of grain for more orderly marketing when call prices are reached. In addition, producers now receive interest-free loans and storage payments. These relatively high subsidy levels may be unnecessary to assure participation.

Full Cost-of-Production Income Protection

Some producers think that the level of income protection provided by the current system of target prices is too low. They argue that the federal

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5/ K.L. Robinson, "Unstable Farm Prices: Economic Consequences and Policy Options," American Journal of Agricultural Economics, vol. 57(1975), pps. 769-77.

government should provide income protection covering full production costs including land, and that target prices should be fully indexed to annual changes in production costs.

There are certain objections to using production costs to set and adjust price and income support levels. First, the cost of production varies from one farm to another, so that target prices fully covering national average production costs would result in windfall subsidies to the more efficient farmers. As these windfall subsidies were capitalized into land values, higher production costs for all farmers would result, making it more difficult for new producers to enter farming. Thus, indexing of target prices to full cost of production would result in an inflationary cost-price spiral with rising production costs inducing higher target prices, and so on.

Second, full cost-of-production target prices would require large federal expenditures. If target prices were set and adjusted on the basis of national average total cost of production, target prices for 1982 through 1985 could approximate those in Table 7. With no changes in other farm program provisions, higher deficiency payments to grain and upland cotton farmers would increase federal outlays by $3 billion annually over fiscal years 1983-1986 (Table 8).

TABLE 7. PROJECTED TARGET PRICES BASED ON TOTAL COST OF PRODUCTION, 1982 TO 1985 CROP YEARS (In dollars per unit)

Commodity	Unit	1982	1983	1984	1985
Wheat	Bu	5.29	5.56	5.91	6.24
Corn	Bu	3.15	3.30	3.49	3.66
Grain sorghum	Bu	3.67	3.74	4.03	4.33
Barley	Bu	4.30	4.60	4.94	5.28
Rice	Cwt	12.36	13.46	14.43	15.42
Upland cotton	Lb	1.040	1.063	1.123	1.203

NOTE: Land costs based on average acquisition values.

SOURCE: Congressional Budget Office.

TABLE 8. ESTIMATED BUDGETARY IMPACTS OF SELECTED POLICY ADJUSTMENTS, FISCAL YEARS 1983 TO 1986 (In millions of dollars)

Policy	Change in Outlays Relative to Continuation of Current Policy (Average annual change, 1983-1986)
Establishment of Cost-of-Production Target Prices in Wheat, Feed Grains, Rice, and Upland Cotton	+3,000
Reduction of Payment Limitations to:	
$20,000	-5
$10,000	-15
$5,000	-35
Elimination of Deficiency Payments	-130
Enactment of Soybean Deficiency Payments	0
Enactment of Soybean Farmer-Owned Reserve	+75
Inclusion of all Rice Acreage in Eligibility for Deficiency Payments	+80

SOURCE: Congressional Budget Office.

In brief, full cost-of-production indexing would represent a move away from long-run actions to increase farmers' economic reliance on markets. Furthermore, the benefits would be concentrated among a very small fraction of all participants—typically those individuals associated with the largest and most profitable farms. Even without such rapidly escalating income supports, incomes for crop farmers improved in the 1970s. The policy would also tend to escalate the prices of export crops, thereby making them less competitive in international markets.

Reductions in Payment Limitations

Critics of price and income support programs argue that large commercial farmers do not require federal payments, and that these payments have encouraged growth in farm size. They suggest that a reduction in the payment limitation would confine payments to those farmers most needing income assistance, thus reducing taxpayers' costs. Currently, an individual is limited to $50,000 in annual payments under the wheat, feed grain, rice, and upland cotton programs.

In crop year 1978, only a very small number of all farms participating in the wheat and feed grain programs were affected by the $40,000 payment limitation existing then. As shown in Table 9, only 0.2 percent of all payees received payments of $30,000 to $40,000. Since payments are made in direct proportion to production and most producers are not affected by payment limitations, deficiency payments have been highly concentrated among the largest producers. Nine percent of participating producers received 46 percent of all deficiency and acreage diversion payments under the wheat and feed grains program in 1978 (see Table 9). Payments to rice producers have been similarly concentrated. For most producers, however, deficiency payments are of small economic consequence: in 1978 about 37 percent of the participants in the wheat and feed grain programs received an average payment of $223 (Table 9).

Since most participants received payments substantially below the payment limitation, budgetary savings would be small unless the limitation was reduced sharply. For example, a reduction in the payment limitation from $40,000 to $20,000—assuming no change in program participation—would have reduced total 1978 payments by only 3 percent. Similarly, a reduction to $10,000 would have reduced total payments by about 10 percent. Cutting the limitation back to $5,000 would have yielded savings of about 25 percent in 1978.

Applying these percentage reductions to projected deficiency payments under a continuation of current policy, a $20,000, $10,000, or $5,000 payment limitation would reduce average annual outlays in 1983-1986 by $5 million, $15 million, or $35 million, respectively (Table 8). The budget savings from reducing the payment limitation would of course be greater the larger the amount of total deficiency payments. Tightening the payment limitation would be consistent with the aim of reducing government income support and targeting payments to smaller producers. Lower payment limitations might further diminish the effectiveness of acreage controls and the farmer-owned reserve by discouraging participation in commodity programs. This is not a significant shortcoming, however, as demonstrated

TABLE 9. DISTRIBUTION OF DEFICIENCY AND LAND DIVERSION PAYMENTS TO WHEAT, CORN, GRAIN SORGHUM, AND BARLEY PRODUCERS, BY SIZE OF PAYMENT, 1978

Size of Payment (dollars)	Payees			Payments			
	Number	Percentage Distribution	Cumulative Percentage Distribution	Total (millions of dollars)	Average Payment ($/payee)	Percentage Distribution	Cumulative Percentage Distribution
1-500	316,877	37.1	37.1	70.7	223	4.4	4.4
501-1,000	159,325	18.6	55.7	115.6	725	7.1	11.5
1,001-2,000	155,283	18.2	73.9	222.3	1,432	13.8	25.3
2,001-5,000	147,129	17.2	91.1	459.8	3,125	28.5	53.8
5,001-10,000	52,788	6.2	97.3	362.1	6,859	22.4	76.2
10,001-20,000	18,373	2.0	99.3	246.3	13,405	15.3	91.4
20,001-30,000	3,319	0.4	99.7	79.3	23,880	4.9	96.3
30,001-40,000	1,538	0.2	99.9	55.7	36,245	3.4	99.7
40,001-50,000 b/	16	-- a/	100.0	0.7	43,188	--	99.9
50,001-100,000	4	--	100.0	0.2	61,776	--	99.9
100,001 and over	3	--	100.0	1.2	411,248	0.1	100.0
Total	854,655	100.0		1,613.9	1,888	100.0	

SOURCE: U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service.

a/ Dashes indicate less than 0.1 percent.

b/ Payments in excess of the $40,000 limitation were made to state and local government institutions that were exempt from limitations.