

FOOD AND AGRICULTURE POLICY IN THE 1980s:

MAJOR CROPS AND MILK

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PREFACE

The Food and Agriculture Act of 1977, which authorizes price and income support programs for major crops and milk, expires in 1981. In the next few months the Congress must consider new legislation to modify, or reauthorize, the 1977 act.

This paper was prepared at the request of the Senate Committee on Agriculture, Forestry, and Nutrition. The study reassesses existing crop commodity programs and examines some broad alternatives toward which the Congress might direct policies in the 1980s. It also reevaluates the dairy price support program in light of rising federal outlays. In keeping with CBO's mandate to provide an objective and nonpartisan analysis of issues before the Congress, no recommendations are offered.

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SUMMARY

Price and income support programs for major crops and milk are currently authorized by the Food and Agriculture Act of 1977 which expires in 1981. In the next few months the Congress must consider new legislation to modify, or reauthorize, the 1977 act. In the current atmosphere of concern about a rising federal budget deficit and continuing inflation, the enactment of food and agriculture legislation will be one of the more important actions taken by the First Session of the 97th Congress. Two parts of this legislation--namely, crop commodity programs for wheat, feed grains, rice, soybeans, and upland cotton, and the dairy price support program--are examined here.

CROP COMMODITY POLICY

Since the 1930s, the Congress has authorized a series of farm programs to stabilize farm prices and enhance producers' incomes. In the mid-1960s, the Congress began reducing real levels of price support to make U.S. farm products more competitive in international markets. To cushion the impact on farm incomes, payments were made to farmers participating in voluntary supply control programs. Spurred by rising world population and income growth, and encouraged by farm policies that kept crop prices competitive in world markets, U.S. agricultural exports increased from \$7 billion in 1970 to \$41 billion in 1980. Exports now take the production from one of every three harvested acres in the United States. The net foreign exchange earnings from agricultural trade--which grew from \$2 billion in 1970 to \$24 billion in 1980--recoup a third of all U.S. expenditures on imported oil.

As American farmers have increased their sales to foreign markets, the importance of government income support has diminished. At the same time, domestic farm prices and incomes have become more volatile, exposed to a broad array of uncontrollable forces, including weather fluctuations in other countries, shifts in U.S. trade and foreign policies, changes in currency exchange rates, and the farm, economic, and trade policies of other nations. In the 1980s, greater price instability is to be expected as the United States further encourages agricultural exports. The instability will be felt both by consumers, through fluctuating prices, and by producers, through uncertain incomes.

Long-Run Policy Alternatives

In the 1980s, traditional commodity programs, which now typically provide less than 5 percent of crop farmers' gross incomes, will become increasingly less important to their incomes. Even with their diminished reliance on these programs, farm families, on average, have increased their incomes relative to those of nonfarm families during the last decade. Furthermore, in future years, current programs will become less and less able to curb the instability stemming from increased participation in world markets. For these reasons, the Congress may want to continue to move toward alternative policies that emphasize stability relative to income support, three of which are outlined in this paper.

International Grain Reserves. A coordinated, international system of grain reserves could increase world and U.S. price stability. Under such a system, individual nations would establish facilities and procedures to acquire and release reserve stocks. These actions would be coordinated in accordance with agreed-upon rules aimed at keeping world prices within a desired price range. The reserve system would reduce farmers' uncertainty about future world prices and therefore encourage investment in additional production capacity along with the continued expansion of international trade. Food-importing and food-exporting nations have a common interest in achieving greater price and supply stability in world markets. Although the United States has long favored international grain reserves, progress to date has been limited. Many governments are unwilling or unable to adjust their agricultural and trade policies. Others take it for granted that the United States will continue to carry sufficient reserves to moderate any upsurge in world prices.

U.S. Reserves and Bilateral Agreements. If the simultaneous cooperation of many nations cannot be achieved, the United States could still make some progress in this direction by negotiating agreements with importing countries guaranteeing them grain at or below a ceiling price--under most circumstances--in exchange for the importer's promise to establish its own national reserves. This alternative could reduce price instability, although it runs counter to the U.S. stand on liberalizing trade, and could stimulate other nations to erect retaliatory barriers to trade. This approach would increase U.S. exports and strengthen prices in years of crop surpluses as participating nations filled their reserves. Conversely, it would moderate domestic price increases in years of crop shortages as participating nations drew down their own reserves rather than unexpectedly increasing purchases of U.S. grains. In effect, this approach would shift more of the cost and administrative burden of maintaining grain reserves to the grain-importing nations.

Income Insurance for Farmers. Regardless of whether either of the above stabilization policies may be achieved, the Congress could protect the incomes of crop producers by gradually replacing current programs with government-supported income insurance. An insurance program would cover the risk of income loss from fluctuations in supply and demand, thereby encouraging greater investment and output. Such an income insurance program could be an extension and expansion of the federal crop insurance program with premiums subsidized in order to transfer some of the risk inherent in agriculture to the public sector.

Short-Run Policy Alternatives

While the three alternatives outlined above have merit in the long run, the legislation to be considered by the Congress during the coming year will probably focus mostly on incremental modifications of current programs, probably continuing the long-term transition to a greater dependence on market forces.

Federal outlays for crop commodity programs have averaged \$2.0 billion in recent years, about 75 percent of total outlays for all agricultural price support programs. Current crop programs support and stabilize prices through nonrecourse loans and the farmer-owned grain reserve, and support incomes through deficiency payments. Commodity loans provide relatively low levels of price support since loan rates are set below expected market prices to avoid interfering with exports. The subsidized, government-managed, farmer-owned grain reserve also helps to support farm prices, but in addition it acts to limit price increases. Storage payments and interest-free loans are used to encourage farmers to store grain when prices are low, and to sell grain when prices rise to specified levels. In this manner, the farmer-owned reserve helps to even out supplies coming on the market and to moderate price fluctuations. Deficiency payments are made to eligible grain and upland cotton producers if average market prices are below predetermined "target prices" which cover national average nonland production costs.

Continuation of Current Policy. Commodity programs have helped to stabilize prices, thereby reducing producers' uncertainty and encouraging production. Continuation of current programs would thus help to stabilize future crop prices, and perhaps keep crop prices slightly lower than they would be otherwise. But these effects would likely be small since, as in the 1970s, commodity programs would provide an ever-declining portion of farm income, and would play a decreasing role in stabilizing prices that are largely influenced by policies and events abroad.

Retail food prices would probably not be affected much by these programs--price supports would be below expected market prices, and acreage controls would be used infrequently. Federal outlays for crop programs, while representing a shrinking portion of the federal budget, would nonetheless be substantial--ranging from \$1 billion to \$5 billion annually over the next few years.

Reduction in Payment Limitations. By reducing the maximum allowable annual payments under the wheat, feed grain, rice, and upland cotton programs, federal expenditures could be lowered without affecting most participants or seriously impairing the effectiveness of commodity programs. Reducing the limitation from \$50,000 to \$5,000 per year would save about \$35 million a year during fiscal years 1983-1986--about one-quarter of total payments.

Elimination of Deficiency Payments. Under a continuation of current policy, deficiency payments are expected to be much smaller and far less frequent than in the past. These payments have largely fulfilled their purpose--to smooth the transition toward fuller participation in the world market. Given the demonstrated willingness of crop farmers to produce food and fiber at prevailing market prices, deficiency payments are no longer necessary. In their place, price support loans, the farmer-owned grain reserve, and--if necessary--acreage diversion payments, could be used to prevent sharp drops in crop farmers' incomes. Elimination of deficiency payments would save \$130 million annually over the next few years.

Full Cost-of-Production Target Prices. In contrast to the short-run alternatives examined above, which could help to continue the transition toward the market-oriented crop programs that have proved so effective in recent years, some farmers propose setting support prices so that these reflect all increases in production expenses, including land costs. In particular, they would change the method of calculating target prices, upon which government deficiency payments are based, so that target prices are fully indexed to annual changes in total production costs. Such full cost-of-production target prices would have serious inflationary and budgetary consequences, increasing federal outlays by about \$3 billion per year. Also, this policy would reverse the long-term policy transition toward greater reliance on the market, and would tend to escalate crop prices and thereby hinder export growth.

DAIRY PRICE SUPPORT POLICY

Federal spending to acquire and dispose of surplus dairy products climbed rapidly from \$0.3 billion in fiscal year 1979 to \$1.3 billion in fiscal

year 1980 and will reach \$1.9 billion this year. Retail dairy prices have risen in response to the high farm prices induced by milk pricing policy. The rapid rise in government spending and the associated inflationary impacts have generated widespread concern about the method and levels of price support.

In sharp contrast to its reforms of crop commodity policy, the Congress has long adhered to a milk pricing policy that does not distinguish between price stabilization and income support. This policy, in an effort to support farmers' incomes, frequently leads to surplus milk production, higher consumer prices, and federal purchases of manufactured dairy products far in excess of those needed for price stability. As the Congress considers dairy price support legislation, the key issue will be how to support prices so as to provide reasonable protection to the income of dairy farmers, without undue impacts on retail prices and the federal budget.

The dairy price support program--which originated in the Agricultural Act of 1949--requires the Secretary of Agriculture to fix a nationwide support price for milk so as to assure adequate supplies of milk. Under this law the Secretary's discretion in setting the support price is limited to a range between 75 and 90 percent of the "parity price." (The parity price of milk, in dollar-and-cents terms, is the price that a hundredweight of milk would have to sell for today to give dairy farmers the same purchasing power they received from the sale of a hundredweight of milk just prior to World War I. It does not measure the net income of dairy farmers, since changes in productivity and the quantities of inputs purchased and products sold are not taken into account.)

More recently, the Food and Agriculture Act of 1977 imposed two provisions that led to high dairy price supports. First, it (and Public Law 96-127) set the minimum support level at 80 percent of parity. Second, it required the Secretary of Agriculture to adjust the support level semi-annually to reflect changes in the index of prices paid by farmers. These provisions will expire on September 30, 1981, unless new legislation dictates otherwise.

Market-Oriented Price Supports

While much of the Congressional debate will focus on these two provisions--75 versus 80 percent of parity and semiannual adjustments--it is important to recognize that parity prices do not measure the cost of producing milk, nor the economic conditions of dairy farmers, nor do parity prices reflect changes in the demand for milk. Milk pricing policy must

respond to the forces of supply and demand if effective price stabilization is to be achieved at minimum cost to consumers and taxpayers. This could be done by giving the Secretary of Agriculture discretion to vary the level of price support in response to market conditions. In particular, the Secretary might be required to review average milk production costs and expected government purchases to determine the level of support. This would result in a milk pricing policy far more responsive to changing market conditions than the current parity price system.

Parity-Price-Based Supports

Alternative levels of parity price support have substantial consequences for the incomes of dairy farmers, retail dairy prices, and the federal budget. Relative to current policy (80 percent of parity with a semiannual adjustment), setting the support price at 75 percent of parity without a semiannual adjustment would, over the next three years:

- o Reduce the total cash receipts from the sale of milk by about 7 percent a year because of lower farm prices and reduced milk production;
- o Save consumers about 3 percent a year through lower prices for dairy products, even after allowing for a 1.2 percent increase in consumption; and
- o Save taxpayers about \$1.1 billion a year because of smaller government purchases and lower purchase prices.

Indeed, continuation of dairy price supports at 80 percent of parity would lead to even greater federal expenditures and dairy price increases than those already observed under this policy. In particular, under a continuation of current policy the net incomes of dairy farmers during the next three years would rise about 10 percent above the level of 1979-1980 after adjusting for inflation. Prices that consumers pay for dairy products would be about 5 percent higher in constant dollars. Government purchases would average 8 percent of annual milk production, costing taxpayers an average of \$2.6 billion per year. These large purchases and rapidly growing government stocks would provide little, if any, further price stability or insurance of adequate supply beyond that which could be achieved with much lower purchases and stocks.

On the other hand, if the support price is lowered to 75 percent of parity, dairy farmers' real incomes and retail prices will remain at about

1979-1980 levels. Federal outlays will average about \$1.5 billion per year, or \$400 million less than current levels. Annual government purchases--although declining--will still average 6 percent of milk production. Therefore, even 75 percent of parity results in government purchases substantially greater than the minimum level needed for stability.

CHAPTER I. INTRODUCTION

Over the decades since the 1930s the Congress has established a series of programs to enhance and stabilize farm prices and incomes. These farm programs were authorized mainly to provide price and income protection to farmers in order to assure adequate supplies of food and fiber. ^{1/} Historically, farm programs and policies have been directed at reducing price and income instability in the farm sector, improving the incomes of farm families, and reducing excess production capacity.

Major agricultural price support programs are currently authorized by the Food and Agriculture Act of 1977 which expires in 1981. ^{2/} During the next few months, the Congress will consider new legislation to modify, or reauthorize the 1977 act. Farm programs may directly influence farm income, the price and availability of food and fiber products, and federal outlays. The enactment of new food and agriculture legislation will therefore be one of the more important actions taken by the First Session of the 97th Congress. Among the major issues to be decided are: methods and levels of price and income support, and the operation of the domestic grain reserve.

The primary purpose of this study is to reassess current crop commodity programs in the light of recent developments, particularly the growth in agricultural exports, and to outline broad policy alternatives toward which the Congress might direct programs in the 1980s. This study covers the programs for wheat, feed grains (corn, grain sorghum, and barley), soybeans, upland cotton, rice, and the farmer-owned grain reserve. These crops provide about \$1 of every \$3 received by farmers from the sale of farm products and are grown on 80 percent of U.S. cropland. Federal outlays for these programs have averaged \$2 billion in recent years, about 75 percent of total outlays for all agricultural price support programs. The study also

^{1/} In this study the terms farm program, commodity program, and agricultural price support program are used interchangeably.

^{2/} Subsequent laws modified provisions of the 1977 act. If the Congress allows the 1977 act to expire without enacting new legislation, the authority for most commodity programs will revert to permanent law dating back to the 1930s.

reevaluates the dairy price support program in view of rising government expenditures--expected to reach \$1.9 billion in fiscal year 1981--for the purchase of surplus dairy products.

Much of the 1981 debate directly affecting crop farming will center around two questions:

- o What long-run actions can the federal government consider to assist in a steady growth of U.S. agricultural exports and to reduce price instability arising from unexpected changes in exports?
- o What changes in current programs are most consistent with these long-run actions?

Chapter II sketches the long-term evolution of crop commodity programs and the major changes that have occurred in the farm sector in recent years or that are expected in the coming decade. Chapter III explores alternative policies for stabilizing crop commodity prices in the years ahead, when exports will play an increasing role in the U.S. farm economy. It also examines some proposed changes in existing policies and programs in the light of long-run trends. Chapter IV deals with the separate topic of dairy price supports.

CHAPTER II. THE PERSPECTIVE OF THE 1980s

The U.S. farm sector is entering a new era in which traditional agricultural policies for major crops are becoming rapidly outdated. Fundamental changes have occurred in the farm sector. Agricultural exports have grown at an extraordinary rate--from \$7 billion in 1970 to \$41 billion in 1980. The public policy implications of this growth are dramatic. Over half of the wheat, rice, and upland cotton produced in the United States is now exported, as are 40 percent of the soybeans and 30 percent of the corn. This means that the traditional objectives of agricultural policy--domestic farm price stabilization and income support--take on a very different complexion. The government's long-standing commodity programs cannot, in the future, be expected to balance supply and demand as they have in the past, since too much of the market for food and fiber now depends on the policies of other nations. Likewise, traditional methods of income support are becoming less and less relevant to the concerns of American farmers. Growth in income from farming and from nonfarm sources has raised the per capita income of the farm population to equality with that of the nonfarm population.

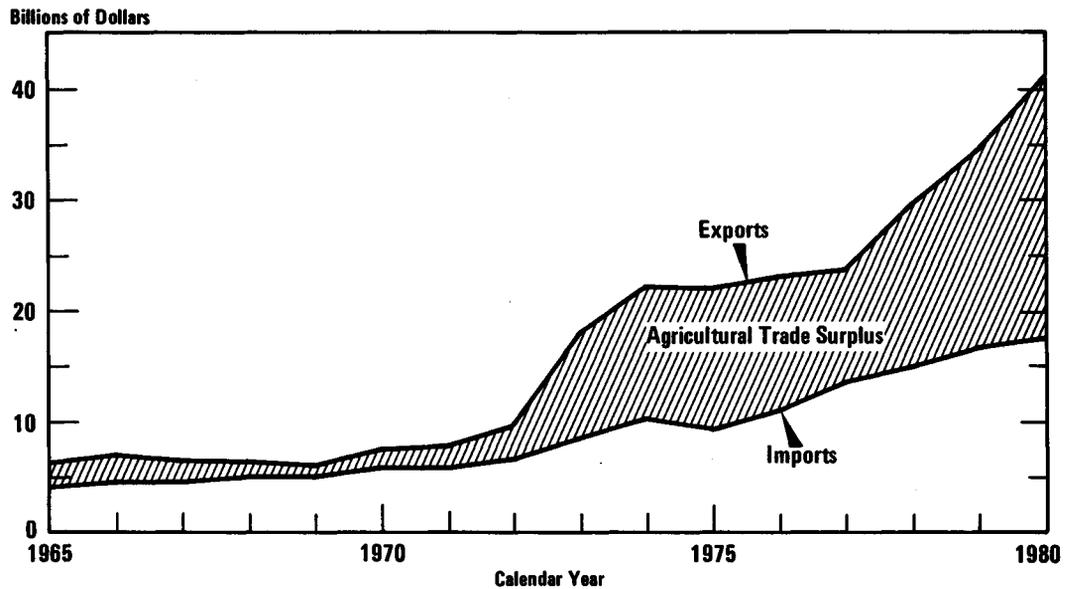
A new concern of many farmers is the price instability caused by changes in world food production and the policies of other nations. Stable prices in the international market are important not only to crop producers but to the U.S. economy as a whole. The U.S. agricultural trade surplus grew from \$2 billion in 1970 to \$24 billion in 1980--sufficient to recoup more than a third of the nation's expenditures on imported oil (see Figure 1).

THE GROWING EXPORT MARKET

During the 1970s five factors contributed to the increase in worldwide demand for U.S. farm products:

- o The world's population grew about 1.9 percent and real per capita incomes increased. As incomes increase above a certain level, the demand for animal products grows and is especially responsive to further increases in income.
- o Rising demand for animal products as incomes increased drove up the demand for feed grains (corn, grain sorghum and barley) and soybeans. In countries like the United States, Canada, the USSR,

Figure 1.
U.S. Agricultural Trade Surplus, 1965-1980



Source: U.S. Department of Agriculture.

and those in Western and Eastern Europe, half or more of all grain is consumed in the form of animal products. In contrast, in the low-income developing countries nearly all grain, principally wheat and rice, is consumed directly.

- o The USSR emerged as a major but sporadic grain importer in 1972, accounting for about 35 percent of the increase in world grain trade in the 1970s. Much of this increase resulted from a change in Soviet policy aimed at maintaining domestic livestock production despite grain production shortfalls. Before 1972, the USSR internally absorbed much of the shock associated with wide swings in its grain production by liquidating livestock herds and reducing consumption. During the 1970s, changes in Soviet grain imports were a major source of year-to-year variability in world grain trade.

- o The dollar was devalued in the early 1970s and a system of floating exchange rates was adopted. Before that time, overvaluation of the dollar relative to other currencies had effectively reduced the foreign demand for U.S. farm products.
- o The United States implemented commodity price and income support policies in the 1960s that encouraged exports.

Agricultural exports increased in the 1970s to all major areas. The relative share of U.S. exports going to developed countries declined, however, from about 65 to 55 percent, while the share going to developing countries held at about one-third. In contrast, exports to the centrally-planned economies of the USSR, Eastern Europe, and China increased from about 3 percent of U.S. farm product exports in 1970 to nearly 15 percent in 1979. The USSR, a major buyer, averaged about 7 percent of all U.S. agricultural exports during 1977-1979 and about 15 percent of U.S. grain exports.

Grains and soybeans accounted for most of the growth in agricultural exports in the 1970s (Table 1). Grain exports increased nearly six times in

TABLE 1. U.S. AGRICULTURAL EXPORTS: SELECTED COMMODITIES, CALENDAR YEARS 1970 AND 1979

Commodity	1970		1979	
	Value (billions of dollars)	Quantity (millions of metric tons)	Value (billions of dollars)	Quantity (millions of metric tons)
Grains and preparations	2.6	23.2	14.4	103.8
Oilseeds and products <u>a/</u>	1.9	16.7	8.9	30.7
Animal products and meat	0.9	1.4	3.8	2.1
Cotton, raw	0.4	0.6	2.2	1.5
Tobacco, unmanufactured	0.5	0.2	1.2	0.3
All other	1.0	21.3	4.3	8.9
Total	7.3	63.5	34.8	147.3

SOURCE: U.S. Department of Agriculture.

a/ Principally soybeans and soybean oil and meal.

value and now make up 40 percent of total U.S. agricultural exports. Exports of soybeans (and products) expanded about five times in value and now are about a quarter of farm product exports. Cotton exports--subject to different demand factors--also increased in the 1970s.

U.S. crop production has expanded to meet the rising export demand (Table 2). Harvested cropland increased in the 1970s, as government acreage controls were removed after 1973 and only used on a limited basis in 1978 and 1979. And crop production per acre improved, on average, in the 1970s. In 1979 the quantity of corn exported was nearly 8 times larger than in 1960, and soybean exports were 6 times larger (see Table 2).

TABLE 2. U.S. CROP INDEXES (1960=100)

Year	Cropland Harvested	Crop Production Per Acre	Crop Production	Volume Exported			
				Wheat	Corn	Rice	Soybeans
1955	105	83	88	52	41	57	49
1960	100	100	100	100	100	100	100
1965	92	112	107	132	225	147	175
1970	91	117	108	115	175	157	300
1975	104	126	130	178	538	193	375
1979	108	146	155	211	788	277	600

SOURCE: U.S. Department of Agriculture.

Total world grain exports increased by nearly 90 percent in the 1970s, and the United States was able to capture about 80 percent of the increase, expanding its share of the world grain trade from 40 to 60 percent. The U.S. share of the world soybean trade is about 80 percent, although other oilseeds produced elsewhere compete with soybeans. And, in recent years, the United States has exported about a third of all cotton in world markets. Crop exports take the production from one in every three acres harvested in the United States, which now exports 60 percent of its wheat, rice, and upland cotton, 40 percent of its soybeans, and 30 percent of its corn.