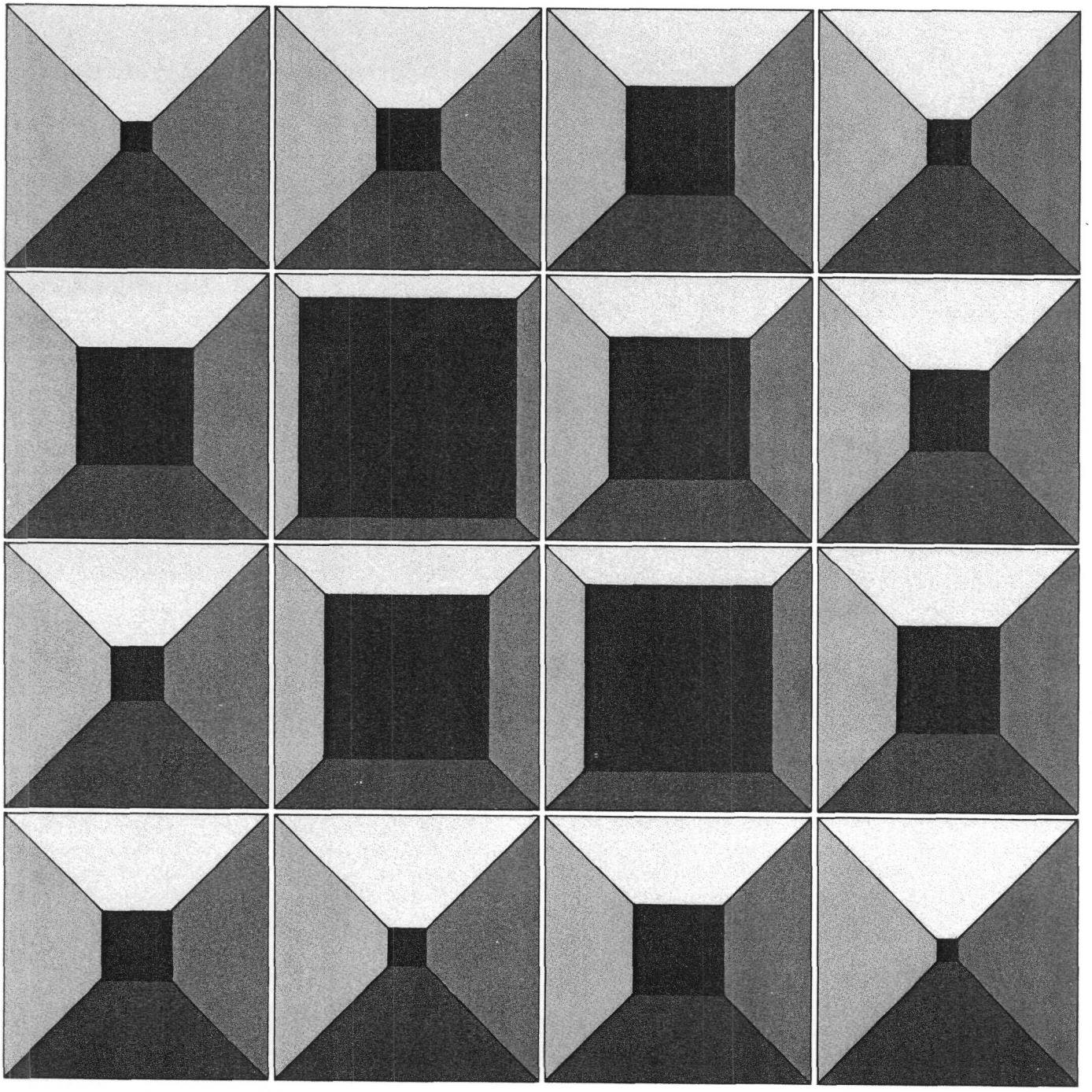
Food and Agriculture Policy in the 1980s: Major Crops and Milk

A CBO Study
March 1981

Congress of the United States
Congressional Budget Office



FOOD AND AGRICULTURE POLICY IN THE 1980s:

MAJOR CROPS AND MILK

The Congress of the United States
Congressional Budget Office

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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.

The principal author of this paper is James G. Vertrees. The paper was prepared in CBO's Natural Resources and Commerce Division under the direction of Deputy Assistant Director Damian J. Kulash. The author wishes to acknowledge the contribution of Peter M. Emerson who provided constructive comments and suggestions. Francis Pierce and Johanna Zacharias edited the manuscript, and Paula Mills prepared it for publication.

Alice M. Rivlin
Director

March 1981

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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:

- 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;

- 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

- 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.

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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

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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:

- 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?

- 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).

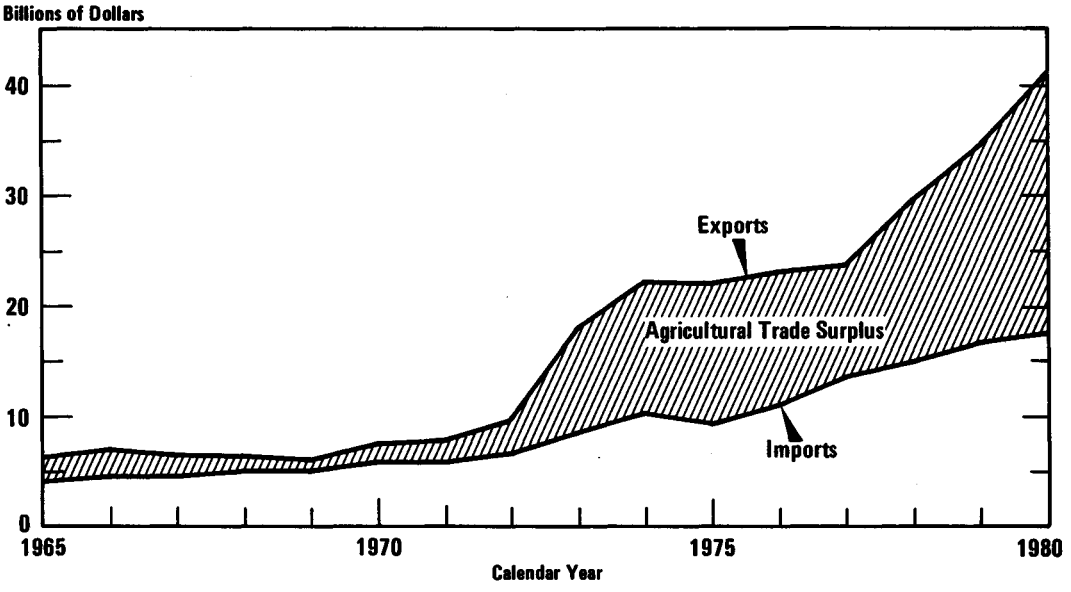
THE GROWING EXPORT MARKET

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

- 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.

- 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.

- 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.

- 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.

- 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 a/	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.

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)

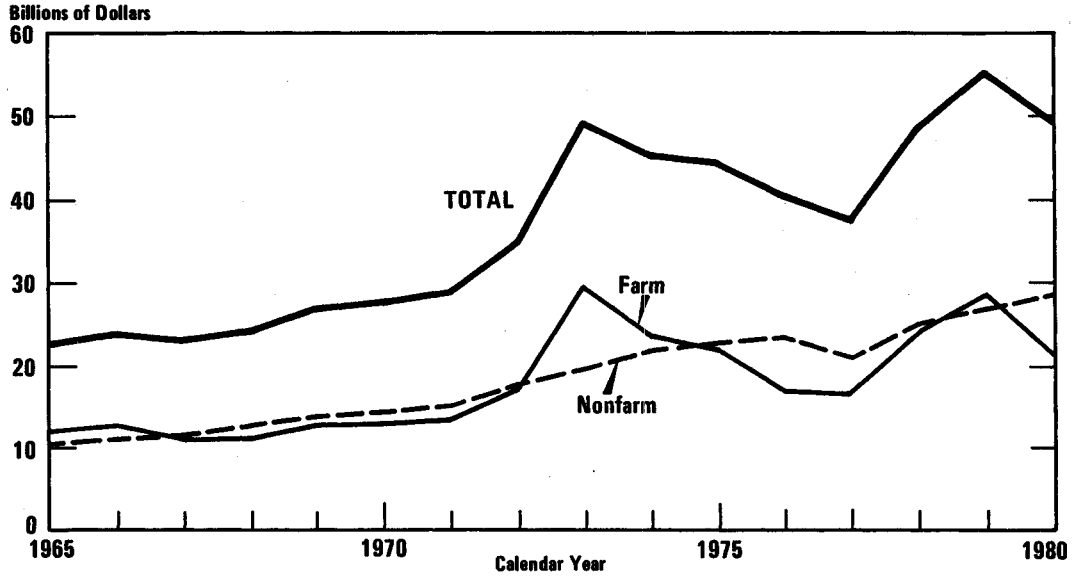
Year	From Farm Sources	From Nonfarm Sources	Total	Total a/ as Percentage of Per Capita Income of the Nonfarm Population
1960-1964	775	597	1,372	59
1965-1969	1,082	1,097	2,179	71
1970	1,339	1,490	2,829	74
1971	1,431	1,628	3,059	75
1972	1,754	1,847	3,601	84
1973	3,086	2,079	5,165	110
1974	2,521	2,353	4,874	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

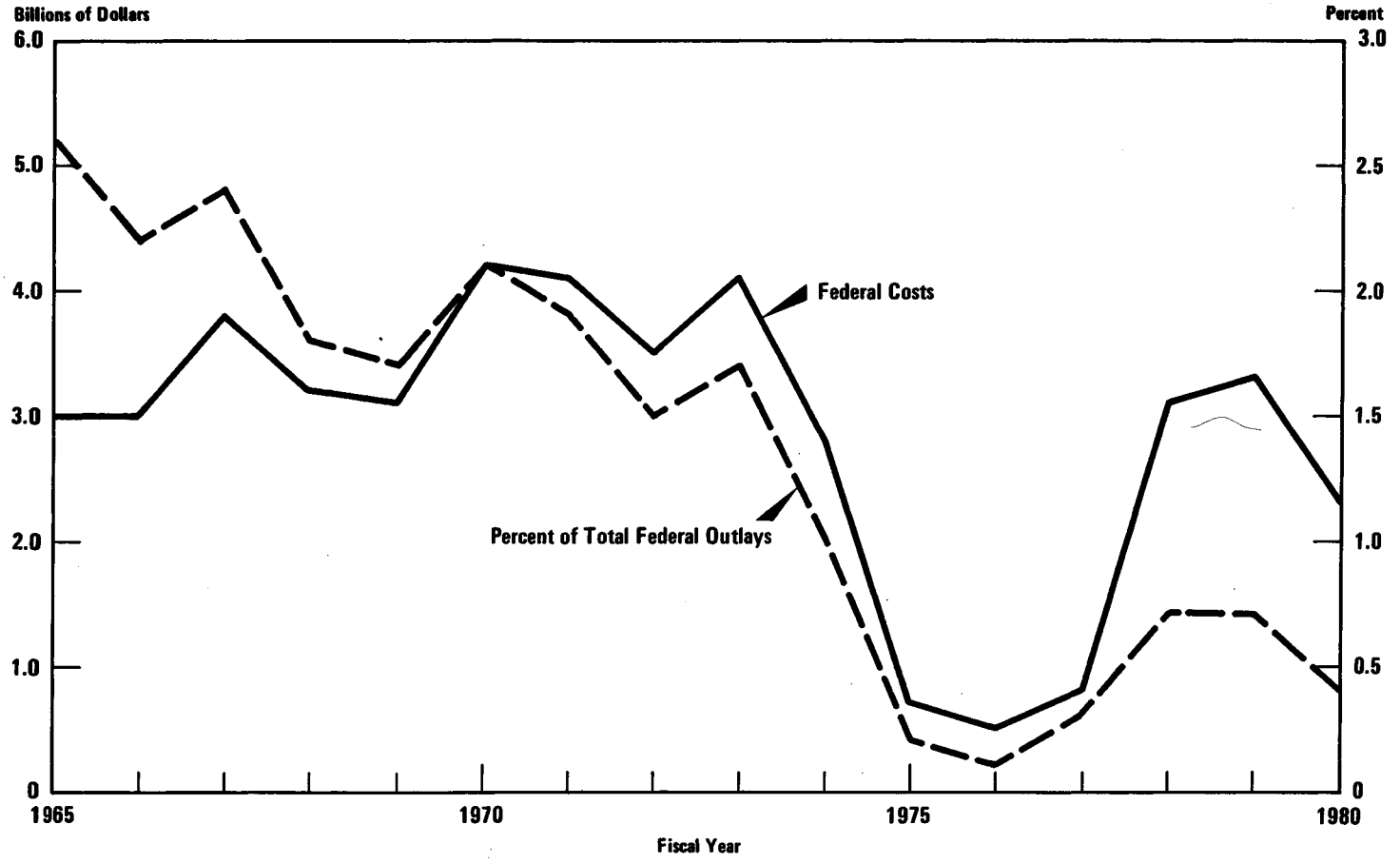
In the early 1960s, the Kennedy Administration proposed mandatory supply controls in an effort to reduce growing budget costs, but the Congress did not support them. An eventual compromise resulted in a gradual reduction in price supports to world price levels or below, and direct payments to farmers 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/ ($ per bushel): Wheat	Average ($ per bushel): Corn	Average ($ per bushel): Soybeans	Variability c/: 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.

when many farmers elected not to participate in 1978 and 1979 when acreage controls were used. In the future, as deficiency payments decline further in importance to farmers, reductions in the payment limitation should not have any detrimental effect on the effectiveness of commodity programs.

Elimination of Deficiency Payments

In the early 1960s, as described in Chapter II, U.S. policy began to shift away from high domestic price supports and rigid supply controls, allowing domestic commodity prices to adjust gradually to world price levels. Payments were made to grain and upland cotton producers to assist this adjustment. From the mid-1960s to the early 1970s, income payments--highly concentrated among the larger producers--averaged $3 billion annually and were an important part of crop producers' gross incomes. In crop year 1974, deficiency payments--based on differences between target prices and market prices—were authorized for wheat, feed grain, and upland cotton producers as a replacement for income payments not tied directly to market prices. Rice producers were authorized deficiency payments starting with the 1976 crop.

Since the 1974 crop year, deficiency payments have been made twice to wheat producers, once to corn producers, three times to other feed grain producers, and not at all to upland cotton producers. Rice producers received payments in crop years 1976 and 1978. Altogether, in crop years 1974 through 1980, about $2.5 billion of deficiency payments were made. And, as noted above, deficiency payments were highly concentrated and of small economic consequence to most producers. About two-thirds of the total went to wheat producers, one-quarter to feed grain producers, and one-tenth to rice producers.

In the 1980s, deficiency payments are projected to be smaller and less frequent than in the 1970s. Given the evolution of agricultural policy, deficiency payments have largely fulfilled their function, which was to achieve a smooth transition from an era of high income-support programs to one of competition in world markets. Farmers have demonstrated a willingness and ability to supply food and fiber at prevailing world prices, so that deficiency payments could now be eliminated without detriment to domestic agriculture. The farmer-owned reserve, crop loans, and acreage diversion payments could be used, if needed, to prevent large drops in crop farmers' incomes. It is estimated that elimination of deficiency payments would result in annual savings of $130 million in fiscal years 1983-1986 (Table 8).

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Target Prices and Farmer-Owned Reserve for Soybeans

Target price income protection and a farmer-owned reserve for soybeans have been proposed as a way to treat all producers of major crops more equitably. Although soybeans are the second largest U.S. cash crop, many producers have opposed commodity programs other than nonrecourse loans. As long as soybean target prices generally remained below market prices as projected for other crops, soybean deficiency payments would not be made. A soybean reserve program would cost about $75 million per year (Table 8).

Extension of Coverage of Deficiency Payments to Rice Producers

Similar equity arguments are made for extending the coverage of the existing rice program. Presently, only rice produced under allotments distributed before 1975 is eligible for price and income support programs. Since 1977, total rice acreage has increased to exceed the acreage allotment by nearly 70 percent. If all rice acreage was eligible for deficiency payments, price and income support would be afforded to all rice produced by farmers with allotments, and to new producers without historical allotments. This would increase the proportion of rice producers receiving price and income support and thereby encourage production increases. Additional federal costs would be about $80 million per year over the next several years (Table 8).

Conclusion: Selecting Current Policy Adjustments

In deciding upon modifications to current policy, the Congress will consider how each fits into the long-term trend toward a greater reliance on market forces and corresponds to changed circumstances in agriculture. Among the proposed options that best meet these considerations are adjustments in the farmer-owned reserve to reduce uncertainty arising from frequent changes in operating rules. With respect to income support, reductions in payment limitations would be consistent with policy directions for the 1980s, and the elimination of deficiency payments even more so. Clearly, full cost-of-production price and income supports would run counter to long-term trends; they would also increase taxpayer costs, add to inflationary pressures on farm production expenses, and hinder export growth.

CHAPTER IV. DAIRY PRICE SUPPORT ALTERNATIVES

Today's federal dairy price support system originated with the Agricultural Act of 1949, which aimed to ensure an adequate supply of milk for current and future U.S. consumers. Over the intervening decades, expenditures by the Commodity Credit Corporation (CCC) in supporting dairy prices have averaged $280 million a year. These taxpayer costs have been rising steeply in recent years, however, probably reaching $1.9 billion in fiscal year 1981. 1/ In fiscal year 1982 total expenditures for dairy price supports will reach an estimated $2.2 billion if current policy is continued.

The Food and Agriculture Act of 1977 (and Public Law 96-127) imposed a higher minimum level of price support than was authorized under the 1949 act. In addition, the 1977 act required the Secretary of Agriculture to adjust the support level semiannually. These two provisions--which have led to high price supports--expire on September 30, 1981, unless new legislation dicates otherwise. In this context, the key questions before this Congress are whether to lower dairy price supports or to adopt a different basis for setting such supports.

In deliberating about future dairy price support policy, the Congress will want to consider how effective the current policy has been in accomplishing its aims and whether the expenditures involved adequately and equitably benefit farmers, consumers, and taxpayers. Dairy price supports have been favored by their proponents as imparting a good measure of stability to farmers' incomes and to the prices consumers pay. On the other hand, such supports have been increasingly criticized as inflationary, inasmuch as they can raise dairy product prices to levels higher than they would be without regulation and, in so doing, can lead to surplus production.

To provide background for discussion of the dairy program, this chapter recapitulates past experience with dairy price supports and the mechanisms by which they have been administered. The middle section of

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1/ Taxpayer costs are estimated as net support outlays, that is, CCC purchases of manufactured dairy products and related costs, minus receipts from the sale of CCC-owned products. The CCC net support and related expenditures are equal to net support outlays minus transfers from the Food and Nutrition Service and P.L. 480 Title II programs. Over time, total federal expenditures, including those of the Food and Nutrition Service and P.L. 480 Title II programs, to acquire and dispose of surplus dairy products are similar to net support outlays.

the chapter briefly assesses the current situation and outlook. The closing portion of the chapter examines several alternative levels and methods of price support.

BACKGROUND--PROGRAM FUNCTIONS AND EFFECTS

Unlike the commodity programs discussed in earlier chapters, the dairy price support program combines the objectives of stabilizing product prices and supporting farmers' incomes. It pursues this dual aim by setting a floor, or minimum, under the market price of milk used in manufactured dairy products--that is, for butter, cheese, and the nonfat dry milk sold as such and used in various processed foods.

Under the original 1949 legislation, the Secretary of Agriculture was authorized to set a support price for milk at some level between 75 and 90 percent of its "parity price." (The parity price is the price, expressed in current dollars, that gives milk the same purchasing power per unit in terms of goods and services bought by farmers as prevailed in 1910-1914.) Current law sets the minimum support price for milk at 80 percent of the parity price at the beginning of the marketing year (October 1) and requires the Secretary to adjust the support price on April 1 to reflect changes in the Index of Prices Paid by Farmers. The government administers the law by supporting the price of milk used in manufactured dairy products--that is, the price of manufacturing-grade milk. When the support level for milk is at 80 percent, for example, the support price of manufacturing grade milk is set at 80 percent of its parity price equivalent. 2/ If the current law is

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2/ The parity price equivalent of manufacturing grade milk is calculated by multiplying the parity price of all milk by the parity equivalent factor. The parity price of all milk is computed as follows:

$$\frac{\text{Average price for all milk sold by farmers for the preceding 10 calendar years.}}{\text{Average index of prices received by farmers for all commodities for the preceding 10 calendar years, in relation to a 1910-1914 base period.}} \times \text{Index of prices paid by farmers for the previous month in relation to a 1910-1914 base period.}$$

The current parity price equivalent factor is 0.89. This figure was obtained by dividing the average price for manufacturing grade milk for the previous 10 calendar years by the average price for all milk sold for the previous 10 calendar years.

simply allowed to expire, the minimum level of price support will automatically revert to 75 percent of parity on October 1, 1981, in accordance with the 1949 law. The Reagan Administration's economic recovery plan, recently outlined, suggests a level of support at 75 percent of parity.

How Dairy Price Supports Involve Federal Expenditures

The support price for milk that is set by federal policy has a direct effect on federal expenditures, although it is a complex effect to trace. In particular, CCC purchases of manufactured dairy products, federal milk marketing orders, state milk control laws, and import regulations 3/ all interact in determining how federal expenditures will be driven by support prices, as sketched in the remainder of this section.

First, to support the price of manufacturing-grade milk, the CCC purchases butter, cheese, and nonfat dry milk. 4/ The CCC purchase prices relect the basic price support level plus an allowance for processing costs. The CCC disposes of its dairy products various in ways. Three-fourths go in the form of donations to domestic and foreign feeding programs. The remainder is divided among commercial sales at a level somewhat higher than the corporation's purchase prices, sales at competitive bid prices for restricted use, and noncommercial sales for restricted use. Commercial sales for unrestricted use are very small--less than 1 percent of total dispositions in recent years--and normally have little influence on commercial supplies and prices.

3/ Under the Trade Agreement Act of 1979, quota-free imports of "price break" cheese shipped to the United States were eliminated and cheese import quotas were expanded. Foreign nations are allowed to subsidize their cheese exports so long as the prices do not undercut prices of U.S.-produced cheese of similar types. Imported dairy products account for about 2 percent of U.S. consumption on a milk-equivalent basis.

4/ In any given year, the market price of manufacturing-grade milk may fall below the price support level, but on average it will equal or be higher than the support price. Temporary movements in the market price below the support price may occur in periods of surplus production if processors do not compete actively for milk supplies at CCC purchase prices.

In turn, the price of other dairy products is influenced by the price of manufacturing-grade milk. The price of milk designated for fluid consumption is set by federal milk marketing orders or state milk control laws. 5/ These are intended to assure consumers of adequate supplies of good-quality milk at reasonable prices, to improve incomes of dairy farmers, and to promote equality of bargaining between farmers and milk dealers. The price of fluid-grade milk sold under federal orders or state laws, and ultimately used in manufactured dairy products, is set at or slightly above the price of manufacturing-grade milk in Minnesota and Wisconsin. Since these two states produce more than one-half of the total U.S. production of manufacturing-grade milk, federal order prices for fluid-grade milk are heavily influenced by the CCC support price for manufacturing-grade milk.

Ultimately, federal expenditures for dairy programs are determined by the response of dairy farmers to prices for manufacturing-grade milk, which are supported directly by government policy, and to prices for fluid-grade milk, which depend on federal and state controls. Nevertheless, the dairy price support program directly influences the volume of CCC purchases and taxpayers' costs. For example, if the market price of manufacturing-grade milk is at the support level, an increase in the support price leads to a higher price for manufacturing-grade milk and to a higher price in federal order markets for fluid-grade milk. This causes dairy farmers to expand their milk output. But the higher price of milk and dairy products causes consumption to fall and leads to greater surpluses, larger CCC purchases, and higher federal outlays.

Historical Consequences of the Dairy Price Support Program

The dairy price support program has had three consequences for prices and incomes. First, it has raised prices at the farm level above what the long-run market equilibrium price would be without a support program. Second, the program has probably contributed to price stability. Third, it has brought about modest increases in retail dairy prices.

Enhanced Farm Prices. CCC purchases of manufactured dairy products have averaged 4 percent of annual milk production since 1949. A

5/ For further discussion of federal milk marketing orders and state milk control laws, see CBO, Consequences of Dairy Price Support Policy (March 1979).

study of the period 1950-1975 shows that milk prices paid to farmers would have averaged 7 percent less without a dairy price support program. 6/ This means that the program has probably increased the total net income of dairy farmers (at least temporarily), and that increases in net income were distributed among farms in proportion to cash receipts--the largest farms getting the most. More than likely, increases in net income have been capitalized into the value of farmland, providing a windfall benefit to landowners and ultimately causing the cost of producing milk to rise.

Price Stability. Under the dairy price support program, farmers have probably experienced less price and income variability than they would have without the program. Certainly, CCC purchases have prevented farm prices and incomes from dropping to extremely low levels in the spring and early summer months, leading to production shortfalls and high milk prices later on. Extremely wide price fluctuations tend over time to increase the degree of uncertainty in farmers' expectations. Uncertainty is not conducive to capital investment or the adoption of new production technology.

Taking all factors into consideration, it appears that a minimum level of CCC purchases--between 2 and 4 percent of annual milk production--may contribute to price stability. There is no evidence, however, that when CCC purchases rise above 4 percent of annual milk production, they result in greater price stability.

Retail Dairy Prices. One researcher has estimated that if there had been no dairy price supports in the 1950-1975 period, retail prices would have been 3 to 6 percent lower, and sales of dairy products 1 to 5 percent greater. 7/ Although they have faced slightly higher prices as a result of the dairy price support program, consumers have benefited from a fairly stable supply of dairy products.

PRICE SUPPORTS AND THE PRESENT DAIRY SITUATION

Dairy price supports appear to be leading to surpluses of dairy products. Running more than 5 percent above national average production costs, the supports have promoted expansion of dairy output. Favorable

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6/ James W. Gruebele, "Effects of Removing the Dairy Price-Support Program," Illinois Agricultural Economics (July 1978), p. 32. See also CBO, Consequences of Dairy Price Support Policy, pp. 17-20.

7/ Gruebele, "Effects of Removing the Dairy Price-Support Program," p. 35.

prices have encouraged farmers to enlarge their herds of dairy cows and to increase the average milk production per cow. In 1980, production rose more than 3 percent over that of the previous year. At the same time, however, consumption declined for a variety of reasons, chiefly the decline in consumers' disposable incomes, higher dairy product prices, and comparatively favorable prices for meat and poultry, which can be substituted for dairy foods. The result has been large and still-growing surpluses of dairy products.

CCC purchases, at a cost of $1.3 billion, equalled 7 percent of the nation's milk production last year; this was the highest level in nearly two decades. The CCC's current stocks of manufactured dairy products are more than two times expected dispositions.

Further rises in price support in fiscal year 1981 will cause this trend of overproduction and surplus to continue. Higher support prices may be slightly offset by increases in feed costs or higher market prices for "cull cows" (dairy cattle sold for slaughter), which may induce some dairy farmers to limit the size of their herds. But milk production for fiscal year 1981 is nonetheless projected to increase by another 3 percent or more. Even with increased consumption, CCC net support outlays will rise to $1.9 billion, and stocks will increase further.

POLICY ALTERNATIVES

Of the various approaches the Congress may consider in its deliberations about future levels and methods for dairy price supports, four are considered in this section:

- Continuation of current policy, with price supports at 80 percent of the parity price,
- Reversion to the 1949 statute, with supports at 75 percent of parity,
- Inverse indexation of a parity price support level to anticipated government purchases, and
- Market-oriented price supports.

The last of these four options represents the most radical departure from past and current practice, inasmuch as it would abandon the parity price concept as a mechanism for establishing support levels and would replace it with a technique more closely tied to actual market conditions.

Two Parity Price Support Options--Current Law and Reversion to 1949 Law

The two options for continuing to set support levels according to parity prices--at 80 percent (current law) and 75 percent (1949 law)--are essentially alike in the ways they would operate. The minimum support price would be set at the start of each marketing year, on October 1. Under current law, the price would still be adjusted six months later according to changes in the Index of Prices Paid by Farmers.

In some respects, the two options could have different effects on farmers, consumers, and the federal budget. They are therefore treated comparatively here, with data from the 1979-1980 period contrasted with projections for the 1981-1983 period (see Table 10). The past period was one of rapidly rising support prices, escalating dairy production, and unprecedentedly high federal outlays for government purchases. For the coming few years, similar circumstances are anticipated if current law is continued.

Effects on Producers. Under both options, the level of price supports would continue to rise in the near future. The results would be increased milk production, leading in turn to higher cash receipts for farmers. Total cash receipts would average $4.5 and $6.0 billion higher each year as compared to those of 1979-1980. If the 80 percent parity price support level were continued, annual net dairy farmers' income would rise by about 9 percent (in constant dollars); under a reversion to the 1949 legislation, it would remain at the 1979-1980 level.

Effects on Consumers. Higher farm prices for milk would lead to higher retail prices and higher consumer spending for dairy products in general. If current policy is retained, retail dairy prices would rise above the 1979-1980 level by about 30 percent; if price supports revert to the lower level, the rise in retail prices may not exceed 25 percent. Adjusted for inflation and compared to 1979-1980, retail prices would remain about the same under a reversion to the 1949 law and would rise about 5 percent under continuation of current policy. On a per capita basis, a continuation of current policy would cost consumers about $7 more annually than would a reversion to permanent law.

Effects on Taxpayers. If support levels reverted to 75 percent of parity, average CCC purchases—projected to total 6 percent of national milk production—would decline, but because purchase prices would still rise, net governmental support outlays would remain constant at their 1979-1980 level. By the end of 1983, however, CCC stocks might be nearly double the amount they were at the end of 1980 because of the amount by which

TABLE 10. COMPARISON OF CONTINUED DAIRY PRICE SUPPORT POLICY AND REVERSION TO 1949 LEGISLATION, 1979-1980 AND 1981-1983 (Annual average values)

	1979-1980	Projections for 1981-1983	
		Current Policy a/	Reversion to 1949 Law b/
Support Price (dollars per cwt.)	12.74	17.01	15.51
Effects on Farmers			
Milk Production (billions of lbs.)	128.90	134.70	132.10
Farm Price (dollars per cwt.)	13.38	17.37	16.58
Cash Receipts (billions of dollars)	17.00	23.00	21.50
Effects on Consumers			
Utilization (billions of lbs.)	120.00	123.20	124.70
Retail Dairy Product Prices c/	234.00	302.00	288.00
Consumer Expenditures (billions of dollars)	38.30	50.60	49.00
Effects on Taxpayers			
CCC Purchases (billions of lbs.)	9.10	11.70	7.40
Ending CCC Stocks (billions of lbs.)	11.00	28.30	21.40
Net Support Outlays (billions of dollars) c/	1.60	2.60	1.50

SOURCE: Congressional Budget Office projections based on simulations of the Wharton Dairy Model and discussions with Department of Agriculture and other analysts.

NOTE: For further details of this comparison, see Appendix A.

a/ This option assumes that the minimum support price for milk is set at 80 percent of its parity price on October 1, 1981, 1982, and 1983, and that the support price is adjusted six months later to reflect changes in prices paid by farmers.

b/ This option assumes that the minimum support price for milk is set at 75 percent of its parity price on October 1, 1981, 1982, and 1983.

c/ 1967=100

d/ Equal to CCC purchases and related costs less receipts from the sale of CCC-owned products.

purchases are expected to exceed dispositions. With supports held at 80 percent of parity, average net support outlays would increase by about $1 billion over 1979-1980 levels. Under a continuation of present policy, net support outlays would average $2.6 billion a year. Under a reversion to the old law, they would average $1.5 billion.

Policy Implications. Clearly, the choice between supporting dairy prices at either 80 or 75 percent of parity involves a variety of tradeoffs in the effects on farmers, consumers, and taxpayers. Maintaining the current level would benefit farmers, but at some considerable expense to consumers and taxpayers. Likewise, it would give further impetus to the upward momentum of rising dairy prices, overproduction, and excessive surpluses.

Conversely, reversion to the 75 percent of parity support level would improve the relative position of consumers and taxpayers, but at some cost to dairy producers. Costs to all taxpayers would decline by about $1.1 billion a year through 1983, and consumers would realize about a 3 percent saving. Furthermore, annual consumption (as measured by commercial disappearance) would rise by 1.2 percent. Farmers' cash receipts, however, would diminish by as much as 7 percent a year. Thus, the choice between these two options would depend on which of the objectives of dairy price support policy the Congress wished to foster for the future.

Market-Oriented Price Supports

One fundamental change the Congress could made to ensure an adequate supply of milk at minimum cost to taxpayers would be to move from parity pricing to price supports based on market supply and demand.

The parity price of milk is a purchasing-power concept. It does not measure the net income of dairy farmers, since the total values of inputs purchased and products sold are not taken into account. The total value of inputs and products sold changes over time as productivity changes, but increases in productivity are not fully reflected in calculating parity prices. In general, the parity price increases as the Index of Prices Paid by Farmers increases.

If the objective of government intervention is to stabilize milk supplies without excessive costs, then price supports could be substantially improved if they reflected productivity as well as prices. Although some conceptual and measurement problems arise, commodity-specific production costs are far more representative of actual costs and changes in productivity than is the Index of Prices Paid by Farmers used in calculating the

parity price. For example, in 1980, feed costs were 38 percent of the cost of producing milk. 8/ The relative importance of feed costs in the Index of Prices Paid by Farmers is only 10 percent.

One way of making price supports more responsive to the forces of supply and demand would be to give the Secretary of Agriculture discretion to set the level of price support in response to current 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 allow a reasonable level of price and supply stability while reducing the likelihood of excessive government purchases.

Inverse Indexation of the Level of Price Support to Government Purchases

Proposals have been made to tie the level of price support to expected government purchases, and to vary it inversely with the amounts of those purchases. For example, if expected CCC purchases in marketing year 1981 were, say, 5 billion pounds (milk-equivalent basis) or more, the price support might be set at 75 percent of parity. On the other hand, if purchases were projected to be less than 2.5 billion pounds, the price support might be set at 80 percent of parity. Various formulas have been suggested, such as tying milk price supports to absolute levels of purchases or to purchases as a percent of milk production or marketings.

As compared to the option of reverting to permanent law, such indexing schemes would limit the Secretary of Agriculture's discretion to set the support price of milk. These proposals would generally result in price supports at 75 percent of parity during 1981-1983.

Conclusion

To the extent that price supports tend to stabilize milk prices and farm incomes, dairy farmers and consumers probably benefit from them. Without a price support program, though, would dairy prices be less stable? As mentioned above, historical evidence shows that price variability has been low to moderate when annual CCC purchases ranged between 2 and 4 percent of annual milk production. When CCC purchases exceeded

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8/ U.S. Senate, Committee on Agriculture, Nutrition and Forestry, 96:2, Costs of Producing Milk in the United States (July 1980), p. 6.

4 percent of commercial milk production, variability did not decrease. Under either of the first two parity price options considered above, CCC purchases would be far in excess of 4 percent.

The continuation of current policy over the next three years would increase farm milk prices and incomes at the expense of consumers and taxpayers. Data from past years indicate that the benefits to consumers would not be any greater than those that could be achieved with supports set at 75 percent of parity.

In accordance with the 1949 legislation, the Secretary of Agriculture has discretion to set the price support for milk between 75 and 90 percent of parity without making semiannual adjustments. Setting the price support at 75 percent of parity without semiannual adjustment on October 1, 1981, and keeping it at that parity level through September 1984 would maintain the incomes of dairy farmers near 1979-1980 levels (in constant dollars). It would also keep retail prices of dairy products (adjusted for inflation) close to current levels. Taxpayer costs would decline relative to 1980 but would still average $1.5 billion annually—four times the average costs of the 1970s. In brief, reverting to permanent law would result in a more flexible dairy price support program but would still lead to government purchases greater than the minimum level needed for stability.

To achieve reasonable price stabilization at minimum government costs requires a pricing policy that responds to the forces of supply and demand. Parity pricing of milk has resulted in milk prices that encourage surplus milk production at the expense of consumers and at high cost to taxpayers. In comparison, milk price supports set in response to supply and demand as reflected by milk production costs and expected government purchases could achieve stability at lower cost.

APPENDIX. ANNUAL PROJECTED VALUES FOR CONTINUATION OF CURRENT POLICY AND FOR 75 PERCENT OF PARITY WITHOUT SEMIANNUAL ADJUSTMENTS

TABLE A-1. CONTINUATION OF CURRENT POLICY OPTION—SUPPORT PRICE, MILK PRODUCTION AND MARKETING, FARM PRICES, AND TOTAL CASH RECEIPTS FROM SALE OF MILK, 1981-1983

	Marketing Year			Three-Year Average
	1981	1982	1983	
Support Price (dollars per cwt.)				
October 1	14.68	16.44	18.41	16.51
April 1	15.56	17.42	19.51	17.50
Milk Production (billions of lbs.)	132.9	134.9	136.3	134.7
Milk Marketing (billions of lbs.)	130.6	132.7	134.2	132.5
Farm Price (dollars per cwt.)				
Manufacturing-grade milk	14.60	16.40	18.40	16.47
All milk	15.50	17.30	19.30	17.37
Total Cash Receipts (billions of dollars)	20.2	23.0	25.9	23.0

TABLE A-2. CONTINUATION OF CURRENT POLICY OPTION—COMMERCIAL SUPPLY AND DISAPPEARANCE, COMMODITY CREDIT CORPORATION PURCHASES, RETAIL PRICES, AND CONSUMER EXPENDITURES, 1981-1983

	Marketing Year			Three-Year Average
	1981	1982	1983	
Commercial Supply (billions of lbs.)				
Beginning stocks	6.0	6.0	6.0	6.0
Milk marketings	129.9	132.0	133.5	131.8
Imports	2.4	2.4	2.4	2.4
Total	138.3	140.4	141.9	140.2
Commercial Disappearance (billions of lbs.)	122.0	123.2	124.4	123.2
Market Residual (billions of lbs.)				
Ending stocks	6.0	6.0	6.0	6.0
CCC purchases	11.0	11.9	12.2	11.7
Retail Price Index for Dairy Products (1967=100)	272	300	332	302
Consumer Expenditures (billions of dollars)	45.1	50.5	56.6	50.6

TABLE A-3. CONTINUATION OF CURRENT POLICY OPTION—COMMODITY CREDIT CORPORATION PURCHASES, DISPOSITION, STOCKS, AND DOLLAR OUTLAYS, 1981-1983

	Marketing Year			Three-Year Average
	1981	1982	1983	
Government Supply (billions of lbs.)				
Beginning CCC stocks	14.0	20.3	27.5	20.6
CCC purchases	11.0	11.9	12.2	11.7
Total	25.0	32.2	39.7	32.3
Government Utilization (billions of lbs.)				
CCC disposition	4.0	4.0	4.0	4.0
Ending CCC stocks	21.0	28.2	35.7	28.3
Total	25.0	32.2	39.7	32.3
Net Support Outlays (millions of dollars) a/	2,175	2,650	3,040	2,622
Support and Related Expenditures (millions of dollars) b/	1,875	2,350	2,740	2,322

a/ Net support outlays are equal to CCC purchases of dairy products and related costs (processing packaging, transporting, and storing) less receipts from sale to buyers for domestic use and exports, military agencies, foreign governments, and Section 32 programs.

b/ Support and related expenditures are equal to net support outlays less transfers from the Food and Nutrition Service for products used in domestic feeding programs and from Title II of Public Law 480 for products donated abroad.

TABLE A-4. 75 PERCENT OF PARITY OPTION—SUPPORT PRICE, MILK PRODUCTION AND MARKETING, FARM PRICES, AND TOTAL CASH RECEIPTS FROM SALE OF MILK, 1981-1983

	Marketing Year			Three-Year Average
	1981	1982	1983	
Support Price (dollars per cwt.)	14.00	15.41	17.25	15.55
Milk Production (billions of lbs.)	131.4	132.1	132.7	132.1
Milk Marketing (billions of lbs.)	129.1	129.9	130.6	130.0
Farm Price (dollars per cwt.)				
Manufacturing-grade milk	13.95	15.60	17.50	15.68
All milk	14.85	16.50	18.40	16.58
Total Cash Receipts (billions of dollars)	19.2	21.4	24.0	21.5

TABLE A-5. 75 PERCENT OF PARITY OPTION—COMMERCIAL SUPPLY AND DISAPPEARANCE, COMMODITY CREDIT CORPORATION PURCHASES, RETAIL PRICES, AND CONSUMER EXPENDITURES, 1981-1983

	Marketing Year			Three-Year Average
	1981	1982	1983	
Commercial Supply (billions of lbs.)				
Beginning stocks	6.0	6.0	6.2	6.1
Milk marketings	129.1	129.9	130.6	130.0
Imports	2.4	2.4	2.4	2.4
Total	137.5	138.3	139.2	138.5
Commercial Disappearance (billions of lbs.)	123.2	124.8	126.2	124.7
Market Residual (billions of lbs.)				
Ending stocks	6.0	6.2	6.4	6.2
CCC purchases	8.3	7.3	6.6	7.4
Retail Price Index for Dairy Products (1967=100)	260	287	317	288
Consumer Expenditures (billions of dollars)	43.4	48.8	54.8	49.0

TABLE A-6. 75 PERCENT OF PARITY OPTION--COMMODITY CREDIT CORPORATION PURCHASES, DISPOSITION, STOCKS, AND DOLLAR OUTLAYS, 1981-1983

	Marketing Year			Three-Year Average
	1981	1982	1983	
Government Supply (billions of lbs.)				
Beginning CCC stocks	14.0	18.3	21.6	18.0
CCC purchases	8.3	7.3	6.6	7.4
Total	22.3	25.6	28.2	25.4
Government Utilization (billions of lbs.)				
CCC disposition	4.0	4.0	4.0	4.0
Ending CCC stocks	18.3	21.6	24.2	21.4
Total	22.3	25.6	28.2	25.4
Net Support Outlays (millions of dollars) a/	1,500	1,450	1,480	1,475
Support and Related Expenditures (millions of dollars) b/	1,200	1,150	1,180	1,175

a/ Net support outlays are equal to CCC purchases of dairy products and related costs (processing packaging, transporting, and storing) less receipts from sale to buyers for domestic use and exports, military agencies, foreign governments, and Section 32 programs.

b/ Support and related expenditures are equal to net support outlays less transfers from the Food and Nutrition Service for products used in domestic feeding programs and from Title II of Public Law 480 for products donated abroad.

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