

REVIEW OF FEDERAL FARM PROGRAMS

Staff Memorandum

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SECTION I. CURRENT POLICY AND THE ECONOMICS OF FARMING

Farm product prices and farmers' incomes are inherently unstable because of weather and biological processes. Production and market risks, inherent to the farm business, can do severe damage not only to farmers themselves but to the nation's supplies of food and fiber. The federal government therefore intervenes to bring a measure of stability to both farm prices and incomes, which, without such stabilization, would be subject to wider and more capricious year-to-year fluctuations than occur in most other economic sectors. The basic orientation of federal programs in agriculture, initiated during the Great Depression under the Agricultural Adjustment Act of 1933, has changed little over a half century. (These federal programs are interchangeably referred to as farm programs, commodity programs, and price support programs.)

As conceived, the federal effort in agriculture served a sector that interacted with the rest of the economy only in limited ways, with farmers supplying most of their own raw materials and labor and depending on the rest of the economy for sales, and hence, for income. Today, however, that self-sufficiency and insulation have ended, and agriculture is a complex industry largely integrated not only into the rest of the U. S. economy but also into the international trade market. As a result, the protection once sought by federal intervention can be of only limited effectiveness.

This overview of agricultural policy focuses on the federal price support programs for the major crops--wheat, feed grains, rice, soybeans, and upland cotton. These crops are planted on 80 percent of U. S. cropland and provide about \$1 of every \$3 that farmers receive from the sale of farm products. Most of the federal price support outlays are for these crops; much also goes for milk, which is also examined. This first section reviews the mechanics of the current programs and examines some of their consequences. The second section reviews the current, much changed, organization of U. S. agriculture. Section III identifies several commodity policy issues.

FEDERAL CROP AND MILK PROGRAMS--THE STATUS QUO

Federal outlays for all price support programs have jumped sharply in recent years. In fiscal year 1983, they stand at a record \$21 billion,

substantially higher than the long-term average of about \$3 billion from 1965 through 1981 (See Table 1). Further, budget projections estimate average outlays of \$9 billion over the next several fiscal years still much above historic levels. The taxpayer costs of price support programs, as well as the budgetary pressures now affecting the economy, have raised basic questions about those programs' objectives and consequences.

Though not explicitly defined by the Congress, four objectives have generally dominated federal commodity programs:

- o To provide a rate of return to farm assets comparable to returns on investment in other economic sectors;
- o To achieve a reasonable degree of stability in farm prices and incomes;
- o To improve the ability of U. S. agriculture to compete in international markets; and
- o To provide an adequate and stable supply of food and fiber for U. S. consumers at reasonable prices.

Grains and Upland Cotton Programs

The federal government's current price support programs have four key components. **Nonrecourse loans** are available to support prices. Farmers may put crops in storage and use them as collateral for nine- or ten-month government loans. If a borrowing farmer elects not to repay in cash, the government agrees to accept the commodity as full reimbursement. **The farmer-owned grain reserve** is also available to wheat and feed grain growers. Under the reserve program, a farmer contracts to store grain for a three-year period in exchange for government loan and annual storage payments. Grain in the reserve cannot be sold, except with a financial penalty, until the market price reaches a trigger release price, at which time storage payments cease and grain stocks can enter the market. **Deficiency payments** when national average market prices for a specified period fall below target prices are also available to support the incomes of grain and upland cotton farmers. **Reductions in planted acreage** from predetermined base levels may also be requested of grain and upland cotton farmers to qualify them for the program benefits above. Further, grain and upland cotton farmers may be offered land diversion payments in cash or payments in kind for additional acreage reduction.

TABLE 1. COMMODITY CREDIT CORPORATION PRICE SUPPORT AND RELATED EXPENDITURES, FISCAL YEARS 1961-1983 (In millions of dollars)

Year	Major Crops <u>a/</u>	Dairy	Other <u>b/</u>	Total
1961-1965 Average	1,546	236	437	2,219
1966-1970 Average	2,287	142	389	2,818
1971	1,576	217	1,029	2,822
1972	3,289	174	520	3,983
1973	2,114	117	1,324	3,555
1974	1,561	46	-603	1,004
1975	433	424	-282	575
1976	359	40	615	1,014
1977	2,812	469	528	3,809
1978	3,321	240	2,062	5,623
1979	1,647	24	1,901	3,572
1980	2,153	1,011	-447	2,717
1981	1,370	1,894	736	4,000
1982	8,989	2,300	309	11,598
1983 (Projection)	13,517	2,190	5,393	21,100

SOURCE: Congressional Budget Office from U. S. Department of Agriculture data.

NOTE: Minus signs indicate net receipts.

a. Wheat, feed grains, rice, and upland cotton.

b. Includes other commodity programs, interest, and administrative and nonadministrative expenses.

How These Programs Work to Influence Prices and Supplies. Since the mid-1960s, government policy has aimed at setting loan rates below expected market prices; nonrecourse loan rates set minimum, or floor, prices for grains, upland cotton, and soybeans. The farmer-owned reserve also has, since its inception in the 1970s, been a key component of grain policy, signaling the government's attempt to manage supplies to keep prices within a range bounded on the bottom by a reserve loan rate and on the top, by a reserve release price. The farmer-owned grain reserve permits eligible farmers to store grain, with government storage payments, while market prices are low, in anticipation of selling the grain at a higher price in the future. The reserve thus acts to support and stabilize grain prices. As grain moves into the reserve, available market supplies are reduced; this effectively raises prices. Then, when market prices reach the trigger release levels, reserve grain may enter market supplies, in turn, dampening prices.

In brief, both nonrecourse loans and the farmer-owned grain reserve support prices. Public policy also operates to stabilize grain prices within a range by reducing acreage when supplies build and releasing reserves when supplies are tight. Direct income support is provided in deficiency payments. Supply management through acreage reduction programs is used to increase incomes. Since participation in government programs is voluntary, farmers must be induced to reduce acreage; thus, incentive comes principally from payments to compensate for income foregone by allowing acreage to lie idle. In 1983, crop farmers are receiving payments in cash and in kind.

Policy Adjustment. Current crop price support programs are the product of a gradual evolution in policy that began in the late 1950s. The system of high price supports and relatively ineffective limits on supply had brought a growth in farm output exceeding the demands of the market. As a result, government costs and inventories increased, and recognition that price supports were too high grew.

Despite several unsuccessful efforts to change farm programs, an eventual political compromise was reached that resulted in a gradual reduction in price supports to world price levels or below, and in direct payments to farmers to encourage participation in voluntary supply control programs. This approach, embodied in the Food and Agriculture Act of 1965, cut the link between price stabilization and income support. The act's basic concepts, embodied in succeeding major farm acts in 1970, 1973, 1977, and 1981, were threefold:

- o Price supports that permit the market to allocate supplies;
- o Income support through direct payments; and

- o Voluntary methods of supply control.

Significantly, the transition in public policy enabled a movement away from rigid government controls on acreage and marketings and toward provisions that gave farmers greater flexibility to adjust their production plans to meet changing market conditions.

Thus, as real levels of price support declined (as revealed in Table 2) with the policy adjustments that occurred in the past two decades, grain and cotton farmers became more dependent on markets and acquired greater freedom to operate their businesses. Further, the emphasis of farm policy was increasingly on stabilizing price and less on raising incomes. It should be added, however, that this policy transition was accommodated by expanding export markets and higher prices and incomes in the 1970s.

Before and After 1970. Through the 1950s and 1960s, commodity programs raised prices and incomes in periods of excess supply above what they would have otherwise been. Further, prices and income were probably more stable because of these programs. And supplies of food and fiber were relatively stable and reasonably priced. With respect to exports, changes in commodity price support levels in the mid-1960s helped to make U. S. products more competitive in international markets. This suggests that farm programs before the 1970s were reasonably successful in accomplishing certain policy objectives. One persuasive view is that these commodity programs reduced farmers' risks and uncertainty, and thus they encouraged capital investment and adoption of new technologies. This in turn contributed to larger supplies, lower prices, and lower incomes for the sector than would have occurred without federal programs.

Although there is not a consensus about farm programs' performance relative to their objectives, two important consequences of farm programs are clear:

- o Farm program benefits are distributed in direct proportion to volume of production, and therefore are highly concentrated among a relatively small number of farmers; and
- o Farm program benefits are ultimately capitalized into farmland, and thus they drive farmland prices upward.

In the 1970s, farm programs had less influence on the level of farm prices and incomes than in the past. In part, this was because policy focused more on stabilizing prices than on increasing incomes. Even though prices and incomes were more volatile in the 1970s than in previous decades, commodity programs probably did somewhat even out farm prices and

TABLE 2. REAL NONRECOURSE LOAN RATES FOR MAJOR CROPS, CALENDAR YEARS 1956-1983 (In 1967 dollars per unit) ^{a/}

Crop Year	Wheat (Bushel)	Corn (Bushel)	Soybeans (Bushel)	Upland Cotton (Pound)
1956-1960 Average	2.20	1.51	2.35	0.394
1961-1965 Average	1.66	1.23	2.46	0.342
1966-1970 Average	1.19	0.99	2.24	0.194
1971	1.03	0.87	1.86	0.161
1972	1.00	0.84	1.80	0.156
1973	0.94	0.79	1.69	0.147
1974	0.93	0.74	1.52	0.171
1975	0.85	0.68	<u>b/</u>	0.213
1976	1.32	0.88	1.47	0.218
1977	1.24	1.10	1.93	0.235
1978	1.20	1.02	2.30	0.246
1979	1.08	0.92	2.07	0.231
1980	1.22	0.91	1.82	0.194
1981	1.17	0.88	1.84	0.193
1982	1.23	0.88	1.74	0.197
1983 (Projection)	1.23	0.89	1.69	0.184

SOURCE: Congressional Budget Office from U. S. Department of Agriculture.

- a. Loan rates deflated by CPI-U (1967 = 100).
- b. No loan program.

income. Aside from policy changes, however, commodity programs had less influence on prices and incomes than they might have, because U. S. farming had become more a part of the domestic and international economies (see Section II).

Taxpayer Costs. Because federal intervention generally has not had significant effects on average prices, taxpayers, not consumers, have borne the largest share of the costs of crop commodity programs. A review of price support outlays over time (illustrated in Table 1) suggests two important points:

- o First, crop price support outlays, although highly volatile from year to year, averaged about \$2 billion a year from the mid-1960s through fiscal year 1981. In real terms (after adjusting for inflation), outlays fell in the 1970s even as crop production increased. (Annual output in 1976-1980 averaged about 25 percent more than in 1967-1972.) This real decline in taxpayers' costs resulted from policy changes--in particular, the downward trend in real price support levels--and an expanding export demand that caused farm prices to remain generally above government price and income support levels.
- o Second, as demonstrated by the extraordinary increase in outlays in fiscal years 1982 and 1983, taxpayers are exposed to large costs when crop farmers produce without government constraint, and export markets contract, causing supplies to be excessive relative to demand at current price support levels.

Dairy Price Support

Despite having reformed crop price support policy, the Congress has long adhered to a milk pricing policy that does not distinguish between price stabilization and income support. The dairy price support program combines the dual objectives of stabilizing product prices and supporting farmers' incomes. It pursues this dual aim by setting a floor 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. In an effort to support dairy farmers' incomes, this policy often leads to surplus milk production, higher consumer prices, and federal purchases of manufactured dairy products far in excess of those needed for price stability.

The dairy price support program has raised farm milk prices at the expense of consumers and taxpayers, but it has also helped to stabilize the

dairy industry and provide an assured supply of milk and dairy products. In the past three years, however, milk price supports have been at a level that has contributed to a sharp expansion of milk production. Milk production in 1982 was nearly 10 percent greater than in 1979. The increase in milk production far exceeded the growth in consumption. As a result, in fiscal years 1981 and 1982, the commercial supply of milk exceeded commercial use by about 10 percent, with all the excess purchased by the federal government at an annual average cost of almost \$2 billion (see Table 2).

The 1982 Reconciliation Act authorized a slight reduction of dairy support prices for 1983 and 1984 and gave the Secretary of Agriculture the authority to impose assessments on milk marketings. These actions were intended to induce dairy farmers to decrease milk production and to help defray the government's cost of purchasing surplus dairy products. On May 9, 1983, for the second time in five months, however, the Department of Agriculture was subjected to a temporary federal district court restraint from collecting the 50 cents per hundredweight assessment; but a federal appeals court has stayed the restraining order.

If imposed, the federal assessment on dairy farmers would represent a tax on each hundredweight unit of milk sold, thus transferring income from dairy farmers to the government. Since neither the support price nor the pricing system would be directly affected by this tax, consumer prices would remain unchanged for at least the short term. Even though the net price received by dairy farmers would be reduced by the amount of the tax, this would not reduce milk production significantly. Large grain crops currently assure relatively low feed costs, and cattle prices are not high enough to encourage the culling of dairy cow herds for slaughter. This means that government surplus purchases would continue at high levels, and burdensome stocks would expand, even though assessment revenues would reduce price support outlays.

SECTION II. U. S. AGRICULTURE TODAY

When farm programs were initiated in the 1930s, nearly one-fourth of the nation's population lived on farms and depended heavily on income from farming. Farming then was characterized by a large number of small farms whose operations could be largely separate from the rest of the economy. Today's agriculture sector, accounting for just 3 percent of the population, is significantly and irreversibly different, and much of that change occurred in the last decade. This section highlights some important characteristics of current U. S. agriculture.

ORGANIZATION OF FARMING

Today, a relatively small number of farms produce most of the nation's food and fiber and earn most of the income from farming. As shown in Table 3, those farms with annual gross sales over \$100,000--12.2 percent of all farms--accounted for 67 percent of the total cash receipts from the sale of farm products in calendar year 1981. These approximately 300,000 farms had an average family income from all sources of nearly \$81,000. And in recent years, these farms have received about 90 percent of total net farm income. As shown in Table 4, these farms have approximately one-half of the total assets and debt in agriculture, and each has an average net worth of about \$1.2 million. The other group of about 400,000 farms that contribute substantially to farm output are those with annual gross sales of \$40,000 to \$99,999; they are 16.3 percent of all farms and account for 19.1 percent of farm cash receipts. In 1981, when the average income per farm family from all sources was \$12,356, nearly two-thirds of that income came from nonfarm employment. These farms, with annual sales of more than \$40,000, are mostly family owned and operated, and they are the main beneficiaries of farm programs. The remaining 72 percent of farms, about 1,742,000 in number, provide relatively small family incomes; for these, most of the farm family income also comes from nonfarm employment.

Integration of Farmers into the Economy

Farmers today are far more integrated with the domestic economy than they were in past decades. General prices and wages, and nonfarm employment opportunity, directly influence the economic status of agricul-

TABLE 3. FARM INCOME BY VALUE OF SALES CLASS, CALENDAR YEAR 1981

Annual Gross Sales (In dollars)	Number of Farms	Percent of All Farms	Percent of Total Cash Receipts from Farming	Net Farm Income Per Farm (In dollars)	Average Income Per Farm Family (In dollars)
500,000 and Over	25,000	1.0	30.4	518,635	
200,000 to 499,999	87,000	3.6	18.9	45,666	80,562 ^{a/}
100,000 to 199,999	186,000	7.6	19.1	15,867	
40,000 to 99,999	396,000	16.3	19.0	3,813	12,356
20,000 to 39,999	278,000	11.4	6.1	-880	9,285
10,000 to 19,999	286,000	11.7	3.2	-1,022	12,999
5,000 to 9,999	335,000	13.8	1.9	-988	17,430
Less than 5,000	<u>843,000</u>	<u>34.6</u>	<u>1.4</u>	<u>-1,142</u>	<u>21,137</u>
Total or All-Farm Average	2,436,000	100.0	100.0	8,042	24,187

SOURCE: Congressional Budget Office from U. S. Department of Agriculture, Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1981, ECIFS 1-1 (August 1982).

a. Average income per farm-operator family for all farms with more than \$100,000 in gross sales.

TABLE 4. FARM BALANCE SHEET BY VALUE-OF-SALES CLASS, JANUARY 1, 1982

Annual Gross Sales (In dollars)	Percent of			Debt-to- Asset Ratio (In percents)	Assets (In dollars)	Per Farm	
	All Farms	Total Assets	Total Liability			Liabilities (In dollars)	Proprietors' Equity
100,000 or more	12.2	44.9	51.5	21.2	1,486,442	314,566	1,171,877
40,000 to 99,999	16.3	24.3	22.9	17.3	606,679	105,173	501,506
20,000 to 39,999	11.4	10.1	9.1	16.5	359,721	59,286	300,435
10,000 to 19,999	11.7	6.6	5.6	15.7	226,783	35,550	191,234
5,000 to 9,999	13.8	5.2	4.2	14.9	153,411	22,927	130,484
Less than 5,000	<u>34.6</u>	<u>8.9</u>	<u>6.7</u>	<u>14.3</u>	<u>104,494</u>	<u>14,951</u>	<u>89,543</u>
Total or All- Farm Average	100.0	100.0	100.0	18.5	403,605	74,510	329,095

SOURCE: Congressional Budget Office from U. S. Department of Agriculture, Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1981, Table B31, p. 126, ECIFS 1-1 (August 1982).

ture. For example, the farm population earns nearly 60 percent of its income from nonfarm employment. Similarly, each year, U. S. farmers purchase about \$50 billion of production materials and equipment--seed, fertilizer, chemicals, equipment, and so forth--from nonfarm sources. In 1981, they paid interest expenses of \$20 billion on borrowings to finance current operating expenses and capital purchases. The interest rates that farmers pay are determined in a capital market that is no longer insulated from the national and international credit markets, and therefore it is a much broader and more competitive market.

Internationalization of U. S. Agriculture and the Resulting Instability

Agricultural exports, which grew at a rate of 20 percent per year in the 1970s, are now the single most important factor influencing crop farmers' incomes; exports take the production from about two of every five planted acres and provide nearly one-fourth of farm cash receipts (see Table 5). Today, the world's economies are more interdependent than ever before, linked by international capital markets. A system of flexible exchange rates quickly transmits changes in weather and nations' policies to U. S. agriculture. As a result of this internationalization, U. S. farmers have become susceptible to international events and conditions, exposed to greater risks and instability.

Incomes of the farm population have always been more variable from year to year than incomes of the nonfarm population, and in the 1970s, were even more so than in the past. With their prices and incomes so dependent on sales to overseas markets, farmers are susceptible to various influences that traditional farm programs cannot guard against.

Market Dependence. Crop farmers are now more dependent on markets for adequate prices and incomes than a decade ago. This has occurred in part because of policy changes that have reduced the amount of farming risk shared by the public sector, and in part because of the substantial increases in output in the 1970s for sale overseas. Virtually all the growth in crop production in the past ten years has been for export.

Production Capacity. In the past, the agriculture sector had substantial excess capacity. But long-term declines in the farm population combined with increases in cropland used for production to meet export requirements have brought the agricultural sector more nearly in resource balance. However, the agriculture sector still has the capacity to produce supplies that are excessive relative to domestic and export demand at government price support levels. In fact, as shown in Table 6, the current excess capacity in agriculture, by certain measures, is as large as at any time in the past 30 years.

TABLE 5. FARM CASH RECEIPTS BY SALES SOURCE, CALENDAR YEARS 1956-1982 (In billions of dollars)

Year	Domestic	Export	Total
1956-1960 Average	28	4	32
1961-1965 Average	33	4	37
1966-1970 Average	40	6	46
1971	45	7	52
1972	58	8	66
1973	72	15	87
1974	73	19	92
1975	70	19	89
1976	76	19	95
1977	76	20	96
1978	88	25	113
1979	104	29	133
1980	104	35	139
1981	104	37	141
1982	111	33	144

SOURCE: Congressional Budget Office from U. S. Department of Agriculture data.

TABLE 6. INDICATORS OF GOVERNMENT INTERVENTION IN AGRICULTURE,
FISCAL YEARS 1956-1983

Year	Commodity Loans and Inventory (In millions of dollars) <u>a/</u>	Price Support Outlays (In millions of dollars) <u>b/</u>	Acreage Idled Under Govern- ment Programs (In millions) <u>c/</u>	Income Return to Equity in Farm Assets (In millions of dollars) <u>d/</u>
1956-1960 Average	7,100	1,633	24	4,900
1961-1965 Average	6,900	2,219	52	5,712
1966-1970 Average	4,200	2,818	54	8,346
1971	4,600	2,822	38	9,096
1972	3,100	3,983	62	9,349
1973	3,400	3,555	20	14,518
1974	1,600	1,004	3	30,167
1975	600	575	2	21,394
1976	700	1,014	2	20,633
1977	1,100	3,809	--	13,995
1978	4,000	5,623	18	13,725
1979	5,300	3,572	12	21,715
1980	5,000	2,717	--	27,309
1981	7,900	4,000	--	15,144
1982	8,900	11,598	9	20,589
1983 (Projection)	16,900	21,100	82	13,257

SOURCE: U.S. Department of Agriculture and the Congressional Budget Office.

- a. Total of outstanding commodity loans and CCC-owned inventories at start of the fiscal year.
- b. CCC price support and related expenditures by fiscal year.
- c. Acreage idled in calendar year in which fiscal year ends.
- d. The income return to capital invested in agriculture less interest on borrowed funds. Return in the calendar year in which fiscal year starts. Provided by Emanuel Melichar, Senior Economist, Division of Research and Statistics, Board of Governors of the Federal Reserve System.

SECTION III. CONSIDERATIONS FOR REDIRECTING FARM POLICY

Review of farm policy suggests a number of general points:

- o Price support programs, despite the adjustment in policy that made crop farmers more dependent on markets, expose taxpayers to large outlays when supplies are excessive relative to demand at existing government price support levels.
- o Price support programs, despite the large taxpayer costs, have much less capacity than in the past to improve crop farmers' incomes significantly through supply management. This is attributable in part to changes in policy and to the fact that many farmers typically are unwilling to idle acreage unless compensation for foregone production is quite high. But programs are also less effective than in the past because prices and incomes are subject to the influence of policies and weather conditions in other nations.
- o Price support programs are not very effective in reducing price and income instability caused by international events and conditions. Prices and incomes were more unstable in the 1970s than in the 1950s and 1960s, as exports grew and farmers became more dependent upon uncertain international markets.
- o Price support programs can have a direct influence on production and consumption in other nations. First, if supply management raises U. S. prices, this may reduce consumption by importing countries and increase production in other producing nations. Second, U. S. price supports place floors under international prices; if price support levels are set too high, consumption is discouraged in importing countries and production is encouraged in other producing nations. As a result, the use of traditional policy tools may work to the long-term disadvantage of U. S. farmers and taxpayers.

Significantly, these observations about farm policy are supported by the current situation. Record large crops, weak domestic demand, and stagnant export markets have been the cause of economic distress for U. S. crop farmers in the 1980s. Attempting to increase farm incomes and

to reduce federal price support outlays, public policy has used supply management. These efforts have intensified, from no reduction program in crop year 1981, to a modest voluntary acreage reduction programs in 1982, and now, to the largest acreage reduction program in history in 1983. The combination of reduced acreage, cash payments for land diversion, and payments in kind for additional diversion will idle 82 million acres of cropland--nearly a third more acreage than has been idled in any past year (see Table 6).

Outlays for crop programs were \$9 billion in fiscal year 1982, and are projected at \$14 billion in fiscal year 1983. (Other farm programs, including the dairy price support, will account for another \$7 billion.) In addition, under the payments-in-kind program, the government will give farmers commodities valued at \$8 to \$9 billion. Despite these large taxpayer costs, there is general agreement that any substantive improvement in farm income awaits the further reduction of surpluses.

CONCLUDING OBSERVATIONS

In sum, the commodity programs of today, though having changed over time, are similar in principle to those of 50 years ago. In contrast, U. S. agriculture has changed dramatically in terms of organization and interdependence with the domestic and international economies. Farmers' prices and incomes are now influenced by a wide array of international events and conditions. This means that current programs have much less capacity either to increase farm prices and incomes or to reduce the instability arising from internationalization.

Yet these programs still expose U. S. taxpayers to large costs. Perhaps the most telling criticism of commodity policy is that it is used to offset the adverse consequences of other more powerful policies affecting farm income--mainly macroeconomic, trade, and foreign policies here and abroad. Future directions for federal farm policy need to be viewed from the perspective of the dramatic changes in U. S. agriculture and its place in a national and international economic picture.

