Cato Institute Policy Analysis No. 56: Government Crop Programs: High Cost and Few Gains

July 9, 1985

Clifton Luttrell

Clifton Luttrell is an economist recently retired from the Federal Reserve Bank of St. Louis.

Executive Summary

During the Great Depression of the 1930s the U.S. government embarked on a series of massive programs to increase the income of the nation's farmers. The effect was to remove the production of "basic" crops from the competitive market and, instead, to place the major economic decisions about crop production and marketing in the hands of the federal government.[1] Although these programs have varied over the years in response to new experience, political pressure from farm groups, and changes in the administration and Congress, their general features have remained virtually unchanged. They have shown remarkably little consistency, however, in their economic impact: some have increased crop supply, some have reduced supply, and still others have increased demand. In some instances, all three effects have operated at the same time.

While the social or real cost of the programs is extremely difficult to measure, estimates place it in excess of $9 billion annually at the 1983 level of government outlays.[2] Yet, despite their high cost, the programs have had few successes. Gains to families on smaller farms have been minimal, and farmer protests are as vociferous as ever. Indeed, journeys to Washington by groups of farmers to harangue Congress and the administration for special assistance are being made with increasing frequency.

This study traces the development of government crop programs from their beginnings, with the Agricultural Adjustment Act of 1933, to the present, with special reference to the programs for food grain (wheat and rice), feed grain (corn), and cotton. It outlines the attempts made to generate higher returns for farmers and explains why these efforts failed. Finally, it offers some recommendations for future disposition of the programs.

Three Techniques

Reducing Supply

The 1933 act stipulated acreage controls for specified crops, payments to farmers who agreed to limit the number of acres planted, and price supports for crops sold. The acreage controls and payments for limitations on planting were intended to reduce production and increase prices of specified crops. Price supports served as safety nets, allowing farmers to sell crops at the support prices if crop-size reductions did not cause market prices to rise as high as desired.

The Commodity Credit Corporation (CCC), a federal agency established in 1933, supported prices by making nonrecourse loans on stored crops. Farmers would deliver crops to warehouses or grain elevators; the CCC then provided loans, accepting the elevator or warehouse receipts as collateral. The farmer could either pay off his loan if market prices rose above the support levels or surrender his crop at the termination of the contract, thereby canceling his obligations to the CCC.
In the early 1930s the crop programs, with the exception of the cotton program, relied largely on production controls through acreage reductions and/or marketing quotas to achieve their price goals. The price-support loan rates, that is, the "prices" paid by the CCC for crops held as collateral, were relatively low. In the late 1930s, however, the CCC loan programs began to have more influence on prices than the acreage reductions. Under pressure from producers, Congress increased most loan rates above market-clearing levels, and accumulations of surplus stocks accelerated. During World War II these stocks were used up, but the support price was also increased to encourage further production.

High support prices were continued following the war, and surpluses soon reappeared. Once again they were used up--this time during the Korean War in the early 1950s--but surpluses appeared again following the war. Although price supports were reduced somewhat in the early 1950s under a more flexible support program and a massive export-subsidy program, stock accumulations of some crops began to exceed annual production by the mid-1950s. In the 1960s direct land-diversion payments were substituted for part of the price-support payments. As direct payments increased, price supports for most crops were reduced close to market-clearing levels. As a result, crops began to move more freely through market channels, and commercial exports increased.

More recently, target prices, which give farmers a guaranteed price for their crops through "direct deficiency payments," have been set. These payments are determined by the difference between the loan rate or the market price and the target price. Disaster payments and farmer-owned grain-storage programs have also been added. Disaster payments provide farmers protection against such natural hazards as unfavorable weather and floods, and the grain-storage programs provide subsidies to farmers for storing grain, which results in longer-than-normal holding periods and larger-than-normal stocks of grain.

Direct payments to farmers for all these purposes exceeded $9 billion in 1983, or more than half the net income of all farm operators. The change from high support prices to direct payments as the primary method of providing farm aid has reduced the inventories of surplus crops typical of the 1950s and early 1960s, increased exports, and reduced crop prices to domestic consumers.

Increasing Demand

Demand-increasing programs for crops received a major boost with the passage of the Foreign Aid Act in 1947, authorizing government subsidies for the export of CCC-owned stocks of surplus crops. Enacted in 1954, Public Law 480 (also know as the Food for Peace Act) made such subsidies a permanent feature of crop-aid programs. For a brief period, subsidized exports provided an outlet for much of the surplus crop purchased by the CCC.

Further contributing to increased crop demand in the post-World War II years have been a number of programs designed to increase domestic consumption, chief among them the Food Stamp and Child Nutrition programs. The cost of these distributions was relatively moderate until recent years, totaling only $300 million in 1965. Their cost jumped to $6.2 billion in 1975 and to $15.2 billion in 1982.

Increasing Supply

The major thrust of U.S. crop programs has been toward reducing supply or increasing demand in order to increase prices. Other programs, however, have sought to increase crop production while at the same time reducing prices. Initiatives sponsored through the Agricultural Research and Extension program and the Soil and Water Conservation program, both begun in the 1930s, are but two examples.

In addition, a sharp jump has occurred in the use of subsidized credit by crop producers. Such credit increases the total resources used for crop production, enabling farmers to acquire more fertilizer, better seed, and more equipment, and to undertake projects that improve land productivity. All of these tend to increase crop production and lower prices.

Early Experiments and Their Consequences: A Brief History

The early supply-management and price-support programs for crops suffered from major drawbacks that did not diminish over time. The artificially high crop prices that resulted from price-support programs had two prominent
effects on resource and crop markets here and abroad. First, they drew more farmers and non-land resources into the industry. The resultant increase in supply came just when American farmers were facing a decline in export demand due to a sharp rise in foreign production of a number of crops exported by the United States. Second, higher-than-market crop prices reduced domestic consumption, leading consumers to increase the use of substitutes for the specific crops affected.

**A Shrinking Cotton Market . . .**

The early programs had especially damaging effects on the market, since a large portion of the American cotton crop was grown for export and a number of close substitutes were available. Prior to the introduction of federal supports in 1933, U.S. exports of cotton totaled about 60 percent of annual U.S. production and about two-thirds of total world exports. But the demand for cotton is quite elastic. Wool, silk, and other vegetable fibers have competed with cotton for ages, and a new and vigorous rival--synthetic fibers--emerged to take an increasing portion of the domestic and world fiber markets after World War II. Due to this elasticity of demand for U.S. cotton, any action to increase American cotton prices provided great incentive to increase cotton production abroad and reduce consumption at home. Thus there was little likelihood that the government would aid cotton farmers successfully. Nevertheless, the government tried.

Rigid acreage controls and price supports were applied to cotton following an emergency plow-up program in 1933. Price supports (through the CCC loan rate) were immediately set at 10 cents per pound, well above the market price of about 7 cents for those who agreed to cut back on plantings. Most farmers cooperated with the program, and cotton acreage declined approximately 25 percent in 1934. Production was down around 30 percent, reflecting both the decline in acres planted and a severe drought. In spite of this, at the end of the marketing year a sizable portion of the crop was added to the loan and carryover stocks, which were already high as a result of stabilization operations by the Federal Farm Board, an agency created in 1929 to stabilize farm commodity prices. With the exception of two short wartime periods, the general pattern established in 1933 and 1934 continued into the mid-1960s.

At the end of 1944, the total carryover of cotton exceeded 11 million bales, or almost one year's production. Fortunately for the program, the 1945 and 1946 crops were poor, and the sharply increased demand for cotton after the war permitted liquidation of most of the surplus stocks by the end of 1946. Support prices were maintained at above-market levels, however, and by the late 1940s carryover stocks had reached about 7 million bales. These were liquidated during the Korean War, but with continuing high support prices, surplus stocks were soon on the upswing again. By the mid-1950s, the stock of surplus cotton had again reached one year's production.

Consequently, the cotton industry was being forced to contract as federal programs priced cotton out of both export and domestic markets. Cotton exports dropped from a pre-program average of 8.7 million bales per year in 1931-33 to 6.0 million in 1935-37 immediately following the introduction of federal aid. Table 1 indicates continued decline during the 1940s, a mild increase in the 1950s (as a result of a massive government subsidy program), and a decline in the 1960s to about one-half the pre-program level. The proportion of U.S. cotton production exported dropped from 60 percent prior to the programs to 32 percent in 1945-47.

<table>
<thead>
<tr>
<th>Three-Year Average</th>
<th>Acres Planted (Millions)</th>
<th>Production (Millions of Bales)</th>
<th>Exports</th>
<th>Production Exported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1931-33</td>
<td>38.6</td>
<td>14.4</td>
<td>8.7</td>
<td>60</td>
</tr>
<tr>
<td>1935-37</td>
<td>30.7</td>
<td>14.0</td>
<td>6.0</td>
<td>43</td>
</tr>
<tr>
<td>1945-47</td>
<td>19.5</td>
<td>9.8</td>
<td>3.1</td>
<td>32</td>
</tr>
<tr>
<td>1955-57</td>
<td>16.4</td>
<td>13.0</td>
<td>5.4</td>
<td>43</td>
</tr>
<tr>
<td>1965-67</td>
<td>11.3</td>
<td>10.6</td>
<td>4.1</td>
<td>38</td>
</tr>
<tr>
<td>1975-77</td>
<td>11.5</td>
<td>11.0</td>
<td>4.5</td>
<td>41</td>
</tr>
</tbody>
</table>
The decline in exports reflected the high support prices for U.S. cotton, not a decline in world demand. As evidence we have the fact that the U.S. share of world cotton exports dropped sharply only after the application of federal aid. In 1930-32, the United States supplied 68 percent of world cotton exports. The U.S. share declined to 45 percent in 1935-39 following introduction of the programs, held stable immediately following World War II, and then continued down into the late 1960s. As shown in Table 2, a recovery began in the early 1970s.

### Table

**United States and world Exports of Cotton (Annual Averages)**

<table>
<thead>
<tr>
<th>Selected Years</th>
<th>United States (Millions of Bales)</th>
<th>Principal Exporting Nations of World (Millions of Bales)</th>
<th>U.S. Export Share (% of World Exports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925-29</td>
<td>8.6</td>
<td>13.2</td>
<td>70</td>
</tr>
<tr>
<td>1930-32</td>
<td>8.2</td>
<td>12.1</td>
<td>68</td>
</tr>
<tr>
<td>1935-39</td>
<td>5.6</td>
<td>12.5</td>
<td>45</td>
</tr>
<tr>
<td>1945-49</td>
<td>4.1</td>
<td>9.0</td>
<td>46</td>
</tr>
<tr>
<td>1955-59</td>
<td>5.3</td>
<td>13.1</td>
<td>40</td>
</tr>
<tr>
<td>1967-69</td>
<td>3.4</td>
<td>14.2</td>
<td>24</td>
</tr>
<tr>
<td>1970-73</td>
<td>4.9</td>
<td>16.8</td>
<td>29</td>
</tr>
<tr>
<td>1980-81</td>
<td>7.5</td>
<td>16.1</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Agriculture, Agricultural Statistics.

Damage to the cotton industry occurred because, as expected, the acreage-control program reduced production during the first few years--despite farmer efforts to mitigate the supply effect of acreage controls by reducing plantings on the least fertile soil. By the end of World War II, cotton production was down to two-thirds of pre-program levels.

... But Little Impact on Other Crops

Until the end of the Korean War, the aid programs discussed here probably had little impact on either production or prices for crops other than cotton. Generally, individual producers were not subject to cross-compliance acreage restrictions, so when a specific crop was restricted, a producer often expanded plantings of another. Some declines occurred in production in the mid-1930s, but they were due largely to a severe drought rather than to acreage controls. Few stocks accumulated because price supports were held down to near market-clearing levels until the latter part of the decade. The small surpluses that did accumulate were liquidated during the early years of World War II at little cost to taxpayers.

With rising wartime demand all surplus wheat was eliminated by 1943, and during the next four years market prices for wheat were above the support levels. Allotments and marketing quotas were abandoned, and carryover stocks were about normal. Following the war, U.S. price supports remained high, at 90 percent of parity for most crops, and exports declined as war-torn nations recovered and moved toward normal levels of production. By 1949, the market price had dropped below the support level and surplus stocks returned. By mid-1950, the CCC owned or had under loan about one-fourth of the prior year's production. Surpluses were liquidated again during the Korean War, but they soon reappeared after hostilities ceased. Acreage controls were reinstituted in the early 1950s, with apparently little effect as production continued at high levels. Carryover stocks of wheat were in excess of a million bushels during 1954 and 1955, representing a full year's production.
Rice, although a minor crop relative to wheat, cotton, and corn, is important in Arkansas, Louisiana, Texas, and California, and was included in the price supports established by the 1933 act. Prior to World War II there was little control on rice production, and no CCC loans were used to support rice prices. From World War II until the mid-1950s, however, the aid program for rice was almost identical to that for wheat. Although high support prices were established, the market price for rice rose above its support level during each of the wars, and surplus rice stocks were liquidated. After hostilities in Korea ceased in the early 1950s, surplus rice stocks began to accumulate.

The corn, like the cotton, program began with price supports well above the market-clearing level. These supports were available to all producers who complied with the program's acreage-reduction provisions. Severe droughts in 1934 and 1936 and more moderate loans thereafter, not acreage reductions, were responsible for the liquidation of most of the surplus, however. Loan rates were raised above market prices in the late 1930s, and some surplus stocks accumulated. By 1943, the stocks had disappeared and the emphasis had shifted to increasing output. Government support prices were thus increased further to encourage production. In the late 1940s market prices dropped below the relatively high support price, and stock accumulations occurred, only to be liquidated during the Korean War and accumulate again in the early 1950s. Until the mid-1950s, therefore, corn followed the same pattern as wheat and rice.

Later Attempts to Achieve Goals

The Failure of Export Subsidies

By 1954, crop surpluses, caused by high support prices and the failure of acreage controls to reduce production sufficiently, were reaching alarming levels. Stocks of some crops exceeded a normal year's production, and storage problems were becoming unmanageable. This led to a number of programs designed to increase demand and relieve the crop "glut." Domestic donations to needy groups and child-nutrition programs were expanded, but they were overshadowed by the introduction of an export-subsidy program.

Crop donations had been made to friendly nations throughout World War II and the early recovery years. But the International Wheat Agreement of 1949, more by accident than by design, was apparently the nation's first formal export subsidy program. One major feature of the agreement was the setting of wheat export prices lower than the price-support levels, thus resulting in heavy export subsidies. These subsidies averaged about 62 cents per bushel, requiring government input of $546 million during the first four years of the treaty. Whether this agreement is viewed as a charitable donation from U.S. taxpayers to consumers in recipient countries or as a transfer of wealth from U.S. taxpayers to U.S. farmers, it was at the time deemed a success. Following its termination in 1953, a considerably more massive export-subsidy program was inaugurated with the passage in 1954 of Public Law 480, the Food for Peace Act.

Public Law 480 created permanent export subsidies for crops. It permitted crop sales to foreign countries in exchange for either convertible currencies or direct barter of other crops and authorized crop exports for relief purposes. Its impact on crop exports was significant. For example, in 1953-54, the two years prior to the subsidies, milled rice exports averaged 12.3 million hundredweight (cwt), or 36 percent of annual production. By contrast, the 1955-56 exports averaged 18.8 million cwt, or 59 percent of production. These programs were continued on a major scale through most of the 1960s.

The Food for Peace Act contributed little toward the actual betterment of recipient nations. Our export of surplus crops reduced world crop prices and led to reductions in the exports of other crop-producing countries, many of which were less-developed nations. The program clearly reduced incentives for farmers in recipient countries to produce and thus retarded the economic development of these nations. Fortunately, such shipments have been substantially curtailed in recent years.

The combination of export subsidies and greater compliance with acreage controls during this period slowed surplus accumulations for a few years. However, price supports remained high and farmers continued to increase their production of most crops. Thus, in the 1960s, another program was initiated in an attempt to achieve the high price and income goals of crop producers.

Direct Payments
By the early 1960s it had become apparent that the goals for farmers could not be achieved with the price supports, acreage controls, and export subsidies then in effect. The artificially high prices induced more production than could be offset by acreage controls, and, at the same time, they reduced exports by pricing U.S. crops out of competitive world markets. As a consequence, surpluses continued to mount despite major governmental efforts to liquidate them through subsidized export and domestic consumption programs.

In an attempt to relieve the surplus "problem," lower price supports were adopted for wheat, rice, and corn in the mid-1950s and for cotton in the early 1960s. Instead of being reduced to market-clearing levels immediately, however, price-support rates were reduced through a series of annual adjustments. For example, the support price for wheat was reduced from $2.24 per bushel in 1954 to $2.08 in 1955 and $2.00 in 1956, and ranged from $1.78 to $2.03 per bushel from 1957 until the 1970s.

But the effect of the loan-rate reductions on crop producers' incomes was largely offset by direct payments to those producers from the U.S. government. These payments, called "acreage rental payments," had been started on a small scale in the 1930s largely for soil conservation purposes. In most years they amounted to no more than 2 percent of net farm income to operators. When the soil bank was established in 1956, however, these payments were sharply increased, rising from an average of $281 million per year in 1950-52 to an average of $1.3 billion per year, or 11 percent of net operator income, in 1960-62 for farmers who diverted land to conservation and other uses. In 1970-72, with the addition of deficiency payments (the target price minus the loan rate or farm price) and disaster payments (to offset losses from such natural hazards as unfavorable weather and floods), they totaled $3.6 billion, or 22 percent of net farm income. By 1980-82 they were down to $2.2 billion, but they increased sharply with the payment-in-kind (PIK) program in 1983 to $9.3 billion, or more than half the total net income of farm operators. (See Table 3.) Since the 1960s, direct government payments to crop producers have been the major factor in all government crop programs.

<table>
<thead>
<tr>
<th>Selected Years</th>
<th>Conservation</th>
<th>Feed Grain</th>
<th>Wheat</th>
<th>Rice</th>
<th>Cotton</th>
<th>Wool</th>
<th>Misc.*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-52</td>
<td>245</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>37</td>
<td>281</td>
</tr>
<tr>
<td>1960-62</td>
<td>230</td>
<td>538</td>
<td>88</td>
<td>--</td>
<td>--</td>
<td>54</td>
<td>1,314</td>
<td></td>
</tr>
<tr>
<td>1970-72</td>
<td>139</td>
<td>1,468</td>
<td>868</td>
<td>--</td>
<td>851</td>
<td>76</td>
<td>3,608</td>
<td></td>
</tr>
<tr>
<td>1980-82</td>
<td>198</td>
<td>446</td>
<td>496</td>
<td>53</td>
<td>398</td>
<td>36</td>
<td>2,237</td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>188</td>
<td>1,097</td>
<td>864</td>
<td>278</td>
<td>662</td>
<td>84</td>
<td>5,837*</td>
<td>9,294</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Agriculture, Economic Indicators of the Farm Sector (1983), p. 54. *Through 1970, for soil bank only; in later years, for all programs. **Includes over $5.2 billion for payment-in-kind program.

As a result of expanding direct payments and reducing price supports to near market-clearing levels, most of the surpluses disappeared within a few years. Commercial exports accelerated as U.S. crops began to compete with crops of other exporting nations in the world market.

The CCC loan and acreage-control programs remain in place. Lending continues, but the rate is usually set low enough to prevent the major surplus accumulations typical of the 1950s and 1960s. The lower rates have contributed to rising exports and lower prices for domestic consumers.

With the more stringent acreage controls for non-cotton crops brought about by the cross-compliance requirements established in the early 1950s, the later cropland-idling or soil-bank programs, and the movement of resources out of cotton production, the various crop programs have had a different impact on crop production in recent years than in earlier years: recent programs have had no major impact on total cotton production, but they have marginally reduced production of other crops.
An Evaluation of the Crop Programs

Farmers should be viewed as rational businessmen, entrepreneurs who organize their resources and operate their farms with the objective of maximizing their wealth. Influenced by price and income expectations like any other businessman, each farmer will employ additional resources until net gains can no longer be made. If the expected price of corn, for example, is $2 per bushel and an additional bushel can be produced by adding fertilizer costing only $1.50, the farmer will use more fertilizer; indeed, he will continue to do so as long as he expects to realize a profit from it. The point is, farmers make continuous adjustments in their growing plans in response to expected price changes. The following section will summarize the response of farmers to the government crop-supply and demand-management programs, showing that it has conformed to the basic economic principles that describe rational human behavior.

The Early Programs

Except for short periods following World War II and the Korean War, in the early programs the support price for cotton exceeded market-clearing levels, and rigid production controls were used. When the moderate reduction in output achieved through acreage controls put upward pressure on cotton prices, cheaper fibers were substituted and foreign cotton became more competitive. The CCC loans and export subsidies, which removed a portion of U.S. production from commercial markets, had the same effect. Such noncompetitive pricing caused major cotton market losses both domestically and worldwide. On balance, net cotton revenues declined, consumers paid higher prices, and taxpayers were assessed the program's cost. Everyone--except competing fiber producers and foreign cotton producers--lost.

Wheat, rice, and feed grain, in contrast to cotton, were not much affected by government controls during this period. Farmers did receive some direct payments, largely land rentals, however, for which they gave little in return, and they received higher-than-market prices from the end of the Korean War until the early 1960s. Indigent domestic groups and schools benefited from quantities of giveaways. The short-run benefits of the subsidized export program--some additional food for recipient nations--were offset by lower prices for farmers in those nations, reduced incentives for them to produce, and as a result generated greater dependence on foreign subsidies.

The use of counterpart funds led to an increase in the stock of money in these nations, not to an increase in resources or production useful for development.[4] Domestically, the subsidized export program led to an increase in the price of grain to producers and in the price of food to consumers. U.S. farmers were provided incentives to further increase production.

In summary, taxpayers and consumers were the major losers from crop programs during the pre-1960 years. Consumers paid higher prices because of the higher-than-market price supports, and taxpayers lost the direct payments to producers and the value represented by the surplus food exports. In contrast, farmers gained from the higher-than-market prices.

Programs Since the 1960s

With some relaxation in production controls and a reduction in the loan rate to market-clearing levels, since the mid-1960s cotton farmers have recovered somewhat from the damage caused by earlier programs. They have regained part of their export losses and have become more competitive with other fiber producers in the domestic market.

On the other hand, greater cross-compliance requirements have reduced corn, wheat, and rice production 2-5 percent from what they otherwise would have been.[5] Economist Bruce Gardner estimates that the set-asides for feed grain and wheat caused a 4 percent reduction in output in 1978.[6] But the reduced output and higher prices for grain crops have not been of much benefit to U.S. farmers. Because export demand is elastic, a relatively small increase in price produces a relatively large reduction in quantity exported. Thus the programs that reduced output also reduced exports and lowered domestic consumption to some extent.

Consumers of crop products were clear losers as diminished production and subsidized exports, which continued at reduced rates, contributed to higher consumer prices. How much lower prices would have been in recent years without crop programs is a guess. Assuming, however, that farm prices were 4-6 percent higher with the programs, the average
family's food bill would have been in the range of 2-3 percent less without federal price supports.

**Direct Payments: A Gain to Producers, a Loss to Taxpayers**

Crop producers gained (and continue to gain) from direct payments, but their net gain is less than the net cost of the payments to the economy. For those payments to be possible, not only must taxpayers finance them, but farmers must divert land resources to conservation or other uses or let it lie fallow.

While the overall diversion and payments program has (and had) a negative impact on crop production, the payments themselves tend to increase production. They reduce price fluctuations and natural disaster risks to producers, thereby encouraging them to take more risks and to make production decisions different from those they would otherwise make. Furthermore, production-based deficiency payments have the same impact on resource use as an expected increase in commodity prices: they provide incentives to use additional yield-increasing resources, such as fertilizer and improved seeds, increasing both yield and marginal cost on net. In addition, deficiency payments doubtless provide an incentive for many farmers to remain in the crop production business who, without them, would have found more lucrative employment elsewhere.

Most taxpayers lost the full amount of these direct payments--unless, of course, they happened to be taxpaying farmers.

**Which Producers Benefit?**

There is little doubt that the current crop programs increase the well-being of crop producers, at least in the short run. The supply-management and price-support loan portion of the programs provided farmers with marginal gains. Price increases to producers more than offset their losses from reduced exports and the slight decline in domestic consumption since the 1960s. Furthermore, the direct payments--deficiency payments, compensation for natural hazards, and diversion payments--were also definite gains.

But an important question is, which producers benefit? Are they the "downtrodden farm workers" whom a large percentage of the nation's population regards with so much sympathy, or are they largely better-off farmers who can very well take care of themselves in a competitive economy without government assistance? An analysis of how resources flow in and out of U.S. agriculture provides some answers to these questions.

As a rational businessman, each producer has an incentive to increase his production of certain crops when expected returns to those crops are increased by government payments, acreage reductions, or subsidized exports. When the number of acres of a specific crop is limited by government controls, the farmer expands by other means. He can, for example, increase production by farming his allotment of acres more intensively: he can add fertilizer, improve seed quality, increase his use of weed and insect controls, employ additional labor, and so on. Because most of the resources for more intensive farming are relatively price-elastic, a relatively small increase in the offering price for these resources assures that a relatively large amount will be supplied.[7]

On the other hand, the quantity of cropland is inelastic with respect of price. Furthermore, because the number of acres that can be planted with controlled crops on any given tract is limited by the program, farmland prices are bid up sharply as anticipated returns to crops rise. This is in contrast to farm labor and other resources, which are diluted by additional inflows and which rise only moderately, staying generally competitive with returns to similar resources in the nonfarm economy. The rapid increase in the value of farmland from 1960 to 1980 confirms this view: it rose at an average rate of 9.2 percent, well above the rate of increase of producer prices, consumer prices, and personal income from farming during this period.

Evidence thus indicates that the increased returns on cotton, corn, wheat, or any other crop as a result of government farm programs over the span of five years or more flowed largely to the owners of farmland at the time the programs were initiated. Other resources, such as labor and operating capital, realized some immediate gains, but those gains soon disappeared as additional labor and capital flowed in from the rest of the economy to dilute returns. The payment-in-kind (PIK) program in 1983 is a clear example. PIK greatly increased direct payments and increased returns to non-land resources, thus providing incentive for an excessive amount of them to flow into agriculture. When
PIK was terminated, hardships were magnified as returns to all resources declined sharply. Within a few years, however, returns to non-land resources will again rise to competitive levels, as excess resources flow out of agriculture into more profitable uses.

**Welfare Aspects of Crop Programs**

While the welfare aspects of government crop programs are not emphasized today, the original programs were motivated by concern for farmer welfare. Proponents argued that farmers required immediate aid as a group, and it was thought that payments would flow from wealthier individuals to poorer farmers. It is no longer clear that this was an accurate statement of the condition of farmers at the time; it definitely does not apply to the farmers who produce most of our crops today.

A large portion of the gains from present programs goes to farmers who earn relatively high incomes. For example, during the 1981-83 period 45 percent of direct payments to farmers went to those with sales of farm products in excess of $100,000, and more than 20 percent was paid to those with sales of over $200,000. (See Table 4.) Net income during this period averaged about 16 percent of sales. Putting this together we find that a significant percentage of transfer payments was made to people whose annual net income from farming exceeded $32,000, and 45 percent of the payments went to farmers whose annual net income exceeded $16,000. Furthermore, since most direct payments eventually accrue to landowners, benefits from the programs are even more concentrated among upper-income farmers than the above data indicate, and thus only a relatively small amount of payments actually goes to lower-income farmers. In 1983, about 75 percent of all farmers had commodity sales of less than $40,000 and net incomes from farming of $6,000 or less. This group received only 22 percent of direct government payments to farmers.

Direct payments have been limited to $50,000 per farm operator in recent years, a restriction that would seem to hold these transfers in check. But unobserved transfers occurring through commodity pricing and land-value appreciation have not been restrained--and these are of much greater importance than direct payments. As Table 4 indicates, the larger farms sold most of the commodities. Farms with sales of $40,000 or more realized 87 percent of the wealth-transfer gains through the higher prices received as a result of the programs, and farms with sales of $100,000 or more realized 67 percent of the gains. Although gains from higher land values are more difficult to determine, because land ownership is associated with farm size it can be assumed that the major portion went to farmers with larger farms and greater commodity sales. In short, most of the gains realized from government crop programs accrue to farmers with above-average incomes and wealth.

<table>
<thead>
<tr>
<th>Sales Class ($ Thousands)</th>
<th>Total Payments ($ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 and over</td>
<td>6.8</td>
</tr>
<tr>
<td>200-499</td>
<td>14.9</td>
</tr>
<tr>
<td>100-199</td>
<td>22.4</td>
</tr>
<tr>
<td>40-99</td>
<td>33.5</td>
</tr>
<tr>
<td>39 and below</td>
<td>22.4</td>
</tr>
<tr>
<td>Total Farms (Thousands)</td>
<td>24</td>
</tr>
<tr>
<td>Distribution of Sales (%)</td>
<td>1,705</td>
</tr>
<tr>
<td>Total Value</td>
<td>2,370</td>
</tr>
<tr>
<td>$139 billion</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Department of Agriculture, Economic Indicators of the Farm Sector (1983).
Steps toward Reform

Federal farm programs, started as a relief measure for a depressed farm economy more than 50 years ago, have continued to expand. These programs were intended to generate price increases for crop producers by limiting production through acreage controls and by guaranteeing a minimum price through nonrecourse loans on stored commodities. The programs were not originally viewed as a permanent solution to the farm problem. Indeed, they have contributed to, rather than solved, agricultural difficulties.

As a result, farmer discontent is as great as ever. Because there is no way to prevent labor and other resources from moving into and out of crop production, more of these resources move into farming whenever expected returns to it rise. Hence the initial gains arising from higher support prices are soon diluted by increased inflows of additional resources.

Federal crop programs, therefore, have not contributed to the welfare of farmers by transferring income from more affluent urban consumers to lower-income farm families. Most of the gains to farmers are realized by those with incomes well above average. Rather than transferring income from the wealthy to the poor, the federal agricultural programs serve primarily to transfer income from lower-income consumers and taxpayers to relatively affluent farmers.

In addition to this reverse "Robin Hood" effect, government crop programs are a major handicap to the nation's overall economy. They lead to the overuse of resources in crop production, resources that could be better used in other, more productive ways. By continuing to pursue counterproductive farm policies, we incur a reduction in the value of the nation's output of all goods and services.

The best action that we as a nation could take with respect to government crop programs would be to dismantle them.

Certainly, taxpayers, consumers, and the disadvantaged should not be penalized in perpetuity for past errors in the government's approach to solving the farm problem. The following steps would substantially revise or liquidate our farm programs.

First, if the programs are to be continued, their welfare features should be separated from their commercial ones, and government aid should be channeled directly and explicitly toward welfare benefits alone.

Second, all new public capital inflows into farming should be stopped by limiting the activities of government credit agencies to the servicing and liquidation of existing debt.

Third, all remaining special crop programs should be dismantled over a five-year period. This could be done by dismantling the regulations and by reducing government outlays for each program by at least 20 percent of the 1984 cost each year for the next five years. Lending operations by the CCC could be dismantled immediately, thereby permitting the market to adjust to day-to-day fluctuations and normal seasonal patterns. Supply-control programs could be reduced over the five-year period through annual reductions in the number of acres idled and in payments for this purpose. Other programs, like price-guarantee payments, disaster payments, and so on, would be similarly reduced through reductions in price-guarantee (target price minus market price) payments. The price guarantee in the first year could be reduced to 80 percent of the base year, to 60 percent in the second year, and so on, until it reaches zero in the fifth.

FOOTNOTES

[1] The crops covered by the 1933 act were wheat, cotton, rice, and tobacco. Most other crops were soon added to the list.

[2] Bruce Gardner suggests that in 1978-79, when the budgetary costs of the programs were well below current levels, the social loss was about $6 billion. See Bruce L. Gardner, The Governing of Agriculture (Lawrence: Regents Press of Kansas, 1981), p. 84.


[7] See Johnson, chap. 5, for an excellent discussion of this topic.