Policy Analysis

# Cato Institute Policy Analysis No. 55: What Is the 1985 Farm Problem?

July 2, 1985

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**Executive Summary**

The 1985 Farm Bill is already one of the most widely discussed pieces of farm legislation in U.S. history, and yet debates over the form it should take are only beginning. These discussions are taking place in an environment of depressed agricultural export sales, widespread farm financial difficulties, and record government budget deficits. Each of these factors will have an impact on the nature of the new legislation, but often they provide conflicting signals. The high value of the dollar and consequent weak foreign demand accentuate the export sales problems caused by high Commodity Credit Corporation loan rates.[1] Thus there will be considerable pressure to lower loan rates and improve the competitive position of U.S. agricultural products in world markets. However, the financial problems of many farmers will generate efforts to increase loan rates and target prices. Meanwhile, budgetary pressures will likely place an upper limit of about $10 billion on expected government expenditures.

A wide range of alternative farm programs is being offered by a diverse set of interest groups. Each proposal is presented as the cure for what ails American agriculture, yet almost no one has stopped to define the farm "problem" that the proposed programs are supposed to address.

**The Problem Defined**

Numerous economic and political factors are cited as having an adverse impact on American agriculture. High interest rates, the high value of the dollar, trade embargoes, unfair trade practices by our competitors, declining farmland values, widely fluctuating commodity prices, and commodity prices "below the cost of production" have all been named. The inability of a larger than usual number of farmers to meet debt obligations is offered as evidence that the combination of these fac- tors and the U.S. government's "cheap food policy" is leading to the ruin of American agriculture. Surveys indicate that large numbers of farmers themselves perceive low commodity prices and hence low farm income as the problem, pointing to high interest rates and the high value of the dollar as important causes of it.

In fact, low commodity prices and low rates of return to management and capital in the agricultural sector are merely symptoms. Simply stated, the U.S. farm problem is one of an overinvestment of human and physical capital in the agricultural production sector. The symptoms of overinvestment in any sector of the economy are downward pressure on prices and lower rates of return to management and capital than in other sectors of the economy. High interest rates and the high value of the dollar compound the consequences (symptoms) of the farm problem--but they are not its cause.

The solution to the farm problem, difficult as it may seem, is to withdraw resources from agriculture until competitive rates of return are achieved. Many farmers and policymakers fail to accept the fact that agricultural production in the United States has evolved from a way of life to a high-technology, capital-intensive business. As a result, the economic signals to reduce investment in, and the output of, certain segments of the agricultural sector are viewed as a

threat to a revered lifestyle rather than as signals from market forces to alter the economic organization of the industry. Unfortunately, efforts to support commodity prices above market-clearing levels in order to maintain existing investments in agricultural production provide only partial and temporary symptomatic relief of the farm problem. Moreover, price-support programs seriously distort the clear signals for long-run adjustment being generated by the market.

It is often argued that if the family farms are not saved, corporate farms will take over and charge the American consumer exorbitant prices for food. But large corporations are simply not interested in high-risk investments that generate a 3-5 percent rate of return. Large corporations will be interested in agricultural investments only if they generate sustained rates of return in excess of other, less risky and less complex investment opportunities. Raising the issue of corporate takeover of U.S. agriculture is a red herring.

**The Same Programs, the Same Problems**

The farm programs were developed about 50 years ago in response to prolonged chronic farm-income problems. At the time, 25 percent of the population lived on farms, and the income of the typical farm family was less than half that of the urban family. Most farms were about the same size, used similar technology, and employed similar management skills. Family labor and home-produced inputs accounted for a large part of the resources used by farmers. In this environment, price-support programs provided a relatively simple and effective method of improving farm income.

Farm programs throughout their history have reflected the view that farm-income problems are caused by a temporary imbalance in supply and demand. Thus, there has been a succession of short-run government programs designed to deal with the economic conditions in agriculture at the time the legislation was written, not an integrated farm policy that would facilitate long-term adjustments to the forces of change generated by new technology and market conditions.

Today's basic agricultural programs are only slight modifications of the programs developed 50 years ago, and most of them have the dual objectives of price stability and income enhancement. In their simplest form, these programs have established minimum support prices through the use of crop loans, direct payments, and direct purchase of products, supplemented by various types of voluntary (subsidy-induced) or mandatory supply-reduction programs. Most supply-reduction programs have focused on reducing acreage planted.

In recent years, we have relied more heavily on voluntary supply-reduction programs. Voluntary programs have never been successful in reducing supplies over extended time periods, however, and they are never likely to be completely successful. Farmers quite understandably withdraw marginally productive land from production and expand their use of yield-increasing technology on the higher-quality land that remains in production. These programs also often provide strong incentives for the lowest-cost producers to expand output. Moreover, change in the agricultural sector has made it increasingly difficult and expensive to use voluntary supply-restriction programs to achieve income and price-support objectives.

**in the Agricultural Sector**

There has been a phenomenal amount of change in U.S. agriculture in the past half-century, even with the existence of farm programs that have generally supported prices above market-clearing levels. The percentage of the U.S. population engaged in farming has decreased from about 25 percent in 1935 to less than 2.5 percent in 1985. The number of farms has fallen by more than 60 percent over that period.

In spite of the dramatic migration of people away from U.S. farms, American agricultural output has increased more rapidly than the demand for agricultural products. The result has been a continual recurrence of the symptoms of overinvestment in agriculture: low returns to management and capital. Existing farm programs were designed to treat the symptoms of the problem via price supports, rather than deal with the overinvestment problem directly.

To their credit, farm programs have tended to soften the adjustment problems associated with moving human resources out of agriculture. The programs made it possible for most of the migration away from agriculture to occur through the retirement of farm operators, and their farmland was integrated into expanding farm operations. Younger members of

farm families often moved on to more promising economic opportunities long before their parents retired. Thus, people moved out of agricultural production as new technology made it possible and desirable to substitute capital for labor in the U.S. agricultural sector. The amount of land used for agricultural production declined less than 5 percent since 1935, however, while output per acre more than doubled. Claims that we are running out of prime farmland are simply untrue.

Much of the current discussion about the changing structure of American agriculture has centered on the future of the family farm and on the effects of government farm policy. The continued injection of new capital-intensive production technology into the agricultural sector has eroded the usefulness of traditional farm programs as a moderator of change there. Changes in the nature of these programs are required if they are to reflect present economic realities.

An equally important question concerns the implications of the present agricultural structure for the design and operation of effective government price-support programs.[2] Farm-family incomes are no longer significantly below nonfarm-family incomes, and farms differ markedly with respect to size and production costs. The design and operation of government programs must take these changes into account.

Table 1 summarizes the structural characteristics of U.S. agriculture that define and describe the challenge of developing effective agricultural price-support programs. During the 1980-82 period, farms with annual gross sales in excess of $500,000 accounted for only 1 percent of total farms. But these farms produced 30 percent of farm cash receipts and earned 59 percent of net farm income. About 28 percent of the farms, those with annual gross sales equal to or greater than $40,000, accounted for 86 percent of farm cash receipts and 99 percent of net farm income. In sharp contrast, the remaining 72 percent of the farms produced only 13 percent of the receipts and collectively shared an average annual net loss of $893 million. These data indicate that production costs are lowest for the largest farms and that farm prices were above production costs for only 40 percent of the farms. Thus prices were below the cost of production for the average farmer during the 1980-82 period.

**Table 1**
**Distribution of Farms, Sales, and Income by Sales Category, 1980-82 Average**

| Annual Sales ($ Thousands) | Farms(%) | Cash Receipts(%) | Net Farm Income(%) |
|---|---|---|---|
| 500 and above | 1.0 | 30.0 | 59.1 |
| 200-499 | 3.5 | 18.9 | 19.9 |
| 100-199 | 7.5 | 19.1 | 15.6 |
| 40-99 | 16.2 | 19.3 | 9.3 |
| 20-39 | 11.5 | 6.2 | 0.7 |
| 20 and below | 60.3 | 6.5 | -4.6 |

Source: United States Department of Agriculture, Economic In- dicators of the Farm Sector.

We get quite a different picture, however, when we look at the average cost of production for a unit of agricultural product. Since 93 percent of total farm products were produced by the 40 percent of the farms that had positive net incomes, farm prices must have been below the cost of production for only 7 percent of total farm production. Therefore, farm prices exceeded the cost of producing an average unit of product over the 1980-82 period. Thus we have a paradox: the average farmer loses money, but the average unit of agricultural product is produced at a profit.

Two conclusions about the effectiveness of existing price- support programs can be drawn from these data. First, farm programs using a support price based on "average farm" production cost will provide strong incentives to expansion for the 29 percent of farms that controls 88 percent of the productive capacity of U.S. agriculture. Thus, to be effective, price- support programs must be accompanied by strong supply-reduction programs or by large government purchases of agricultural products. Successful voluntary supply-reduction programs require substantial government expenditures and a continuing commitment to making these outlays.[3] Moreover, if they are to be effective in reducing output, these payments must be focused on the large-scale, lowest-cost producers--the very people who could provide food most efficiently to domestic and foreign markets.

Second, minimum support prices are an inefficient means of achieving income support for low-income farms. If the govern- ment wants to continue to pursue the dual policy objectives of providing price stability and supporting farm incomes, they can be pursued only by separate programs. The discrepancy between the production costs of large- and small-scale producers makes it impossible to achieve income-support objectives for small farmers without support prices that overly stimulate production by lower-cost, large-scale producers. If farm-income support for low-income farmers is the objective, it can be achieved most effectively through direct income payments to qualified farmers.

**Subsidized Losers: Are They Really "Farms"?**

But there is an additional economic reality in the agricultural sector that should be considered. The per capita dispos- able income of farm operators has averaged 88 percent of non-farm income over the past 10 years, in contrast to about 50 per- cent during the 1940s and 1950s, and 60 percent in the 1960s. Given the favorable tax treatment of farmers, there is no longer any basis for arguing that farm incomes need to be supported relative to nonfarm incomes.

A major reason for the more narrow income gap between farm and nonfarm families is the increased access of farm families to nonfarm sources of income. Over 60 percent of the personal disposable income of farm operators comes from off-farm sources. (See Table 2.) On average, farm operators selling less than

**Table 2**
**Sources of Income per Farm Operator by Sales Category, 1980-82**

| Annual Sales($ Thousands) | Farm Sources($) | Nonfarm Sources($) | Disposable Income($) | Farm Sources(%) |
|---|---|---|---|---|
| 2.5 and below | -551 | 20,400 | 19,849 | -0.3 |
| 2.5-5 | -685 | 18,605 | 17,920 | -0.4 |
| 5-9 | -875 | 18,776 | 17,901 | -0.5 |
| 10-19 | -592 | 16,847 | 16,255 | -0.4 |
| 20-39 | 673 | 12,584 | 13,257 | .05 |
| 40-99 | 5,921 | 10,326 | 16,247 | 36.44 |
| 100-199 | 20,964 | 10,700 | 31,664 | 66.20 |
| 200-499 | 56,845 | 13,107 | 69,952 | 81.26 |
| 500 and above | 586,097 | 25,400 | 611,497 | 95.59 |
| Average | 10,076 | 16,108 | 26,184 | 38.48 |

Source: United States Department of Agriculture, Economic In- dicators of the Farm Sector.

$20,000 per year obtained all their disposable income from off- farm sources. Only operators with over $100,000 in annual gross sales obtained more than half their disposable income from farm sources. Tables 1 and 2 indicate that off-farm income accounted for over 99 percent of farm-family income for 72 percent of the "farms" in the United States.

This leads to the conclusion that part of the current policy problem is definitional. For public policy purposes, what should be considered a "farm"? The census definition of a farm ($1,000 gross sales of agricultural commodities) would cause no problem if we used the numbers only to construct tables like those above. Numerous problems do arise, however, when the fact that farm prices are below the cost of production for 60 percent of U.S. farms is interpreted to mean that government should support agricultural income via some type of price-support program. The result is government programs that disrupt agricultural markets in order to support the income of farmers whose incomes do not need supporting. The programs' target group--small-scale, low-income farm operators--actually receives little, if any, direct benefits from the programs anyway. In short, the current definition of "farm" results in increasingly expensive and difficult-to-manage agricultural programs that are unjustifiable from a social-welfare point of view. The programs have the added drawback of stimulating further investment in the agricultural sector, rather than encouraging and

facilitating disinvestment.

From an economic perspective, overinvestment in the agricultural sector is concentrated in the 72 percent of the farms that produce only 13 percent of total agricultural products. These farms cannot make a profit at current prices. Thus, a major portion of the farm problem could be eliminated by changing the definition of "farm" to "an agricultural production unit selling at least $20,000 of agricultural products." The question is, should farm programs provide full-time incomes for underemployed farmers? Even farms producing $20,000 or more of farm products do not require full-time commitment from the farmer. Because families producing less than $20,000 annual sales receive all their disposable income from off-farm sources and about the same total incomes as nonfarm families, their inclusion in the farm population greatly distorts our view of economic conditions in the commercial agricultural sector.

Changing the definition of a farm would recognize that much of the human and physical capital investment in rural America is directed to "consuming" a rural way of life rather than earning a competitive rate of return on that investment. Policymakers should recognize and gratefully accept the subsidization of food production that investors are willing to provide the American consumer, rather than trying to guarantee a competitive rate of return on their "farming' operations. If some such families are judged to need welfare payments due to their low incomes, then their income maintenance will be achieved more efficiently through direct payments than through farm price-support programs. But why should people get welfare when they have consciously chosen a way of life that has high psychic income at the expense of low money income?

While redefining the farm would be a major improvement in the way we look at the U.S. agricultural sector, the solution to the farm problem is not as simple as changing a definition. Changes in the very nature of government farm programs are also required.

**The 1981 and 1985 Farm Problems Compared**

The nature of the farm problem has not changed since 1981. Its severity has intensified, however, partly because of the 1981 farm legislation. The high target and loan rates legislated in 1981, along with the provision that support levels would increase to keep pace with inflation, developed unrealistically high expectations about future agricultural commodity prices and created artificial incentives to expand agricultural investment. Agricultural producers enthusiastically responded to those incentives with heavy capital investment to expand output capacity.

The stage for the current farm problem was set by double- digit inflation throughout the latter half of the 1970s, which helped fuel a rapid increase in land values and generated negative real rates of interest. Negative real rates of interest expanded opportunities for profitable investment with borrowed capital, provided that capital gains were included in the investment analysis. These investments ultimately created cash-flow problems for farmers, however, since the cash returns generated were not adequate to meet the debt-service obligations resulting from high nominal interest rates.

Rapidly increasing land values provided collateral for the expanded borrowings, so that farmers debt increased at about the same rate as the value of their assets, primarily farmland. Thus the debt-asset ratio for the agricultural sector changed only slightly over the 1970-82 period. Federal Land Bank data indicate that less than half of the long-term debt expansion financed by that agency during the late 1970s went to finance land purchases. A large share of the funds borrowed against inflated land values were used for nonland capital investment in agriculture and, in some cases, for refinancing existing debts that could not be serviced from cash flow. Debt increased more rapidly than repayment capacity, from less than $3 per dollar of farm income in the early 1970s to about $10 in the early 1980s. Thus, today's excess-investment problem is compounded by the fact that too much investment is financed with borrowed capital. Many agricultural producers simply have more debt than can be repaid with farm income.

The sharp reduction in inflation and lower commodity prices in recent years have caused land prices to fall 25-30 percent (and more in some areas) from their peak values in 1981. This decline in land values has had two effects. First, it evaporated the increase in collateral values, eliminating the ability of many farmers to further expand their debt to cover cash- flow shortfalls. Second, it eroded the equity position of borrowers and hence the collateral security of lenders. For example, a loan equal to 70 percent of the value of a parcel of land in 1981 that has since declined in value by 30 percent leaves the borrower with zero equity and the lender providing 100 percent financing.

Capital losses have occurred in agriculture. The question facing policymakers is how these losses are to be distributed among lenders, borrowers, and taxpayers. Public policy will determine the mix of farm business failures and farm lender failures.

**The Solution**

A long-term solution to the farm problem requires separate programs to deal with excess-investment and excess-debt issues. The excess-debt problem is the most urgent and should be dealt with immediately.

**Excess Debt**

Excess debt is, by definition, more debt than can be repaid by the borrower from investment earnings. Delinquency rates in excess of 50 percent on Farmers Home Administration loans are strong evidence that more credit, even at subsidized interest rates, is not the solution to the financial problems of farmers with excess debt: it just makes matters worse. The harsh fact is, many farms have passed the point of no return as economically viable businesses. They can regain economic viability only through wealth transfers from lender to borrower in the form of loan writeoffs or through government debt payments on their behalf.

Issuing government loan guarantees for existing loans is one way of shifting the capital losses from lenders and borrowers to the government. But policymakers should keep in mind that government loan guarantees do not increase the repayment capacity of farmers with financial problems. A loan-guarantee program can be successful only if it requires that the borrower's excess-debt situation be corrected as a precondition for obtaining the loan guarantee. Failure to impose this requirement would simply mean that the unavoidable wealth losses required to correct the excess-debt problem will be transferred from borrowers and lenders to taxpayers (assuming that the government does not confiscate the assets of defaulting borrowers). Policymakers have to determine if this is an appropriate bill for taxpayers to pay.

**Direct Payments**

If direct payments to farmers are expected to correct the current farm crisis, they must focus on the source of the problem rather than the symptoms. Therefore, from an economic perspective, successful farm programs should have the following objectives.

They should facilitate the movement of human and physical capital out of agriculture. The ongoing development and adoption of new agricultural technology will continue to require fewer people in the production process. Because of the widespread view of farming as a preferred way of life, however, there is a resistance among many farm families to move out of agriculture. Farm programs should help ease the exit problems of these producers, rather than creating artificially favorable conditions for them to stay in farming.

They should remove artificial incentives to investment in agriculture. Farm programs that support commodity prices above market-clearing levels and tax policies that give preferential tax treatment to agricultural producers provide artificial incentives that are responsible for a sizable portion of agricultural overinvestment. The overinvestment problem involves land, as well as human and capital, resources. The Food and Agricultural Policy Research Institute (operated jointly by the University of Missouri and Iowa State University) estimates that 30 million acres need to be withdrawn from production of the basic agricultural commodities in order to bring production in line with projected domestic and export demand over the next several years.

The prospect of withdrawing 30 million acres of land from agricultural production presents some particularly challenging policy choices. Immediate cession of all farm price-support programs would cause chaotic adjustments in an already stressed land market as more and more land was placed on the market. As a result, the government would probably purchase some land to prevent a total disruption of the existing system of agricultural financing in cases where land accounts for 75 percent of the agricultural sector's assets and is the primary collateral for loans.

Programs providing for systematic long-term withdrawal of land from agricultural production would make a positive contribution toward solving the farm problem. Among these, a program allowing government purchases of cropping

rights on highly erosive lands deserves further consideration. Owners would be compensated for the restriction of their property rights by government purchase of an easement restricting the use of that land for certain (or all) types of cultivation.

They should provide institutions and mechanisms that help farmers deal with the risk associated with uncertainties caused by weather and unstable world markets. Price instability, often viewed as a primary problem in American agriculture, complicates the management of agricultural businesses. However, farm programs that artificially insulate farmers from that uncertainty provide the same artificial incentive to overinvestment as high price supports and special tax treatments.

The objectives of government policies regarding farm-income stabilization should be, first, to ensure that government programs do not introduce artificial instability into agricultural markets and, second, to encourage the development of information systems and institutions that would enable markets to deal as effectively as possible with the uncertainties of weather and the political and economic environments.

The provision of public information systems is an important service of government with respect to agricultural markets, since, as economist Kenneth Arrow points out, from a public perspective the private sector generally will not make an adequate investment in information systems.[4] Contrary to the views of many farmers and the current administration, public information systems regarding agricultural production and prices (like crop and livestock reports, market news, and price reporting) should be expanded rather than reduced.[5]

Markets for U.S. agricultural products have become increasingly complex. Demand has become more sensitive to price and to many other factors.[6] Consequently, there is likely to be increased variability in demand and hence more uncertainty about agricultural prices in the future. Increased uncertainty translates into more risk for agricultural producers and consumers. Government programs can help farmers manage that risk more effectively by, again, developing information systems and institutions that enable markets to realistically reflect economic conditions.

They should replace current price-stabilization programs with expanded futures markets. A recent Council for Agricultural Science and Technology report suggests that "a principal economic problem of food and agriculture is likely to be income instability."[7] However, variability of supply and demand per se is not a serious problem in U.S. agriculture, and increased variability in U.S. farm income is not caused by "market failure." Rather, problems are created by the naive way in which agricultural market signals are interpreted by farmers and policy- makers, who tend to treat price increases as a reflection of permanent expansion in markets for U.S. agricultural products, and price declines as caused by temporary weaknesses in demand that will soon disappear. This mentality, coupled with the distortion of market signals caused by price-support programs, tends to isolate U.S. agricultural producers from market reality.

If we had perfect information about the future, there would be no need for government programs to help stabilize prices. However, even with perfect information and perfectly functioning markets there would still be season-to-season variability in agricultural prices. Effective management of U.S. agricultural resources does not require perfectly stable farm prices and incomes--too much stability can be as costly as too much instability.

Current prices and year-to-year price variability can be put into perspective only by considering multiseason periods. That is, a sharp increase (decrease) in current prices can be interpreted as a market signal to expand (reduce) future production only if the conditions causing the price change are expected to continue into the future. Futures markets are an effective way of generating and transmitting information about expectations of future market conditions. However, the existence of large government stockpiles of grain and government price-support programs have made it unnecessary for producers and processors to look further than one year ahead in making production and storage decisions, and thus there has been no need for futures markets to deal with periods longer than one year. Agricultural policies and programs that fostered the development and effective operation of longer-term futures markets would make an important contribution to the agricultural sector's ability to manage the risk associated with increased uncertainty.

Price-support and stabilization programs operating in cash markets have, over the past 30 years, generally led to large and costly government commodity stockpiles. Price-stabilization programs that operated in futures markets would

provide a more economic alternative.

Economist H. S. Houthakker suggested one such program years ago when he proposed extending futures markets two or three years into the future.[8] According to his plan, a government trading agency would buy and sell futures contracts for selected distant delivery months in order to keep prices within a target range, thus providing producers and processors with a relatively stable environment in which to hedge production and storage decisions if they wished to do so. Because the program would operate through the purchase and sale of futures contracts, no government stockpile of products would accumulate unless the trading agency took delivery of large volumes of those contracts. Houthakker suggested that the agency maintain prices of selected target futures contracts in a range around the trend line established by the three- to five-year moving average price. An alternative would be to maintain target contract prices close to projected market-equilibrium, rather than arbitrarily selected, levels.

The system could be implemented in the wheat market, for example, by establishing four new contracts. In that case, contracts for July and December for each of the two years beyond the existing set of futures contracts would be offered.[9] The government trading agency would then (1) make an analysis of projected supply and demand conditions over the next three years, (2) determine the projected equilibrium price pattern over this period, and (3) announce the price band within which it would be prepared to buy or sell each December contract that was more than nine months into the future. The agency would buy or sell whatever number of contracts was required to keep the price of the target contracts within the defined price boundary (for example, plus or minus 25 cents from projected market-clearing prices in the two December periods). The agency would leave trading in July contracts to speculators, producers, and processors.

It should be stressed that even with an efficient futures market, the public-good nature of information and the fact that the private discount rate would probably be higher than the social discount rate mean that an extended futures market would probably not be viable without a public agency functioning as the base speculator.[10] At a minimum, the government would have to be the primary generator of baseline forecasts and information about future supplies and demands, in much the same way as it is now for existing markets. USDA projections, therefore, would need to be extended 2-3 years into the future. The agency would also likely have to take a nonprofit-motivated speculative position based on that information, creating a market in which forecasts could be systematically exposed to information from other sources to generate prices that (1) provide long-term signals to producers and consumers and (2) provide opportunities to manage various types of price risk associated with longer-run price uncertainty. The purpose of the trading agency, in short, would be to "make a market" based on the best information available about market-clearing prices in the future.

The major contribution of this type of program would be its provision of a mechanism for markets (buyers and sellers) to put current supply and demand conditions into perspective with expectations about the future. The agency would publish the information and analysis used to establish the price band on target futures contracts. Potential traders could then examine that material to see if they agreed with the agency's projections. If traders thought the projections too low, they would purchase the target contracts at the quoted upper bound price; if they thought them too high, they would sell the contracts at the quoted lower bound price. The volume of trading at these upper and lower bound prices would provide information about the extent of trader convictions that the price projections were incorrect. If traders agreed with the agency's projections, there would be no purchase or sale of contracts at the upper or lower bound prices other than for normal hedging purposes. This would be the normal situation if the agency developed an unbiased forecasting system. Normal market trading would ensure that the prices of all other contracts were aligned with current cash-market conditions and with the prices of the target contracts being traded by the agency.[11]

The role of the trading agency would be to generate information and to make a potential market for the target contract by putting its money where its mouth is regarding projected market-clearing prices. The agency would have no profit or contract sales-generation objective. In the absence of a profit motive, private traders are unlikely to be willing to take on the base-speculator role. They would, however, actively make a contribution to keeping the trading agency honest by taking counter positions when agency forecasts were perceived to be incorrect.

An important feature of the program would be the continual updating of the agency's projections to reflect new information as the delivery dates on the target contracts approached. The agency would update its projections quarterly

and alter the price band and hence its trading position accordingly. Agency trading on target contracts would cease nine months in advance of delivery date. The agency would liquidate its position on target contracts and take its gains or losses on them at that time.

The purpose of all this activity, of course, would be to provide mechanisms and liquidity for forward markets to function effectively, based on the best available information, not to keep prices at artificial levels. All else being equal, the agency's activity would reduce uncertainty, providing more stability to prices. Producers and processors would be able to eliminate price risk up to three years in advance.

They should aim at developing effective production-risk management. A program of the type described above would not stabilize agricultural prices completely, nor would it remove all price uncertainty. Risk management represents a continuing challenge to agricultural producers, for variability of weather and export demand cannot be eliminated by a stroke of the policymaker's pen.

Various forms of production-risk insurance have been available for a number of years, and some improvements in the scope and nature of that insurance have been made. However, there is a lot of room for further improvement. Development of effective production-risk insurance programs that can be used as risk-management tools could be a significant contribution to future agricultural policy. There is a tendency to think that any financial problem in agriculture can be solved by low-interest (subsidized) loans. But, in fact, a significant portion of current difficulties stems from government programs that provide disaster relief to farmers in the form of such loans. Borrowing or lending money is sound business practice only if the rate of return on the investment exceeds the interest rate. Loans to cover one year's production expenses that cannot be recovered due to crop failure yield a zero rate of return. This kind of "help to farmers" simply compounds their financial problems. The impacts of disasters are best dealt with by insurance indemnity payments. The development of an options markets for agricultural products would be an important addition to the risk-management tools available to agricultural producers, for they would provide an effective substitute for the price-stabilization features of current farm programs.

**Toward a Secure Agricultural Future**

The economic realities of today's agricultural sector are inconsistent with the assumptions and objectives of existing farm legislation. Consequently, price-support programs via voluntary supply-reduction schemes are increasingly expensive and frustrating to manage. Successful voluntary (subsidyinduced) supply-reduction programs require a continuing commitment to ever higher levels of government expenditure.

For the past 50 years it has been U.S. agricultural policy to develop programs that prevent agricultural markets from achieving equilibrium--and these programs have contributed to the problem of agricultural overinvestment. Future agricul . rural policy should facilitate a movement toward equilibrium ~n agricultural markets and develop programs that respond to the undesirable consequences of that adjustment. Successful farm

programs must separate income-support and price-stabilization . objectives; they must meet the goal of income support by direct income payments to qualified farmers; they must achieve pricestabilization objectives through the development of institutions that help producers and processors take a long-run view of market conditions.

To sum up, government programs have two major roles in the effective operation of agricultural markets: first, the generation and distribution of information about current and future supply and demand, and second, the development and operation of institutions that provide mechanisms for producers and processors to effectively manage the risk associated with agricultural production. Properly fulfillLng these roles would result in much less direct government involvement in cash markets and would enable the U.S. agricultural sector to take advantage of its comparative advantage in world trade.

**FOOTNOTES**

[1] The Commodity Credit Corporation, a federal agency established in 1933, supports agricultural prices by providing loans to farmers and accepting the warehouse receipts of specified crops as collateral. Farmers can pay off their loans if market prices rise above the loan rate (support price) provided by the CCC; or they may surrender their crops at the

termination of the contract, thus cancelling their debts to the CCC.

[2] An "effective" price-support program is defined as one that successfully supports prices at the target level without the accumulation of large surplus commodity stocks.

[3] In other words, voluntary reductions in output are achieved in response to participation incentives (subsidies) provided by the program--in effect, by paying farmers not to produce. Involuntary supply-reduction programs involve the assignment of production quotas to each producer.

[4] See K. S. Arrow, "Economic Welfare and the Allocation of Resources for Invention," in The Rate and Direction of Inventory Activity: Economic and Social Factors (Princeton: National Bureau of Economic Research, 1962), pp. 609-26. Public information systems involve information regarding the size of crop and livestock inventories, export sales, the supply and utilization of each commodity, and market news information about prices paid and quantities moving through the marketing system. Once this highly transferable information is released, it becomes essentially impossible to recapture, via information sales, the costs of developzng it. In the absence of such information, however, markets would be much less effective at generating appropriate market signals to guide resource allocation. Thus there is a public value to basic market information far in excess of the value that can be captured via its sale.

[5] See J. B. Bullock, D. Ray, and B. Thebet, "Valuation of Crop and Livestock Reports: Methodological Issues and Questions," Southern Journal of Agricultural Economics 1 (1982): 13-20.

[6] See Council for Agricultural Science and Technology, The Emerging Economics of Agriculture: Review and Policy Options, reprint no. 98 (Ames, Iowa, September 1983), p. 5.

[71 Ibid., p. 6.

[8] H. S. Houthakker, Economic Policy of the Farm Sector (Washington: American Enterprise Institute, 1967).

[9] Contracts for delivery of wheat in May, July, September, December, and March are currently trading up to one year into the future.

[10] If all types of government price-support and price-ceiling regulations were eliminated along with government storage programs, however, the system might function without a base-speculator agency.

[11] Strictly speaking, the entire set of cash and futures prices would be perfectly aligned only for storable commodities. However, the programwould be Just as effective at generatzng forward market information and hedging opportunities for nonstorage products as it would be for storable commodities.