

# A PRIMER ON AGRICULTURAL POLICY

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**A**gricultural policy is attracting a growing body of followers. As Senator Herman E. Talmadge, Chairman of the Senate Agricultural Committee, puts it, "Times have changed in the development of agricultural policy. It used to be that only farmers and the government were concerned over farm programs and little national attention was paid when we passed a farm bill. Today, agriculture touches everyone in America, and its importance is widely recognized. Our people have been reminded that milk does not come from plastic containers and that bread does not originate at the bakery."

However, the rationale for an agricultural policy is confusing to many people. Further, the expressed goals for policy are unclear and frequently conflicting and the terminology is often unfamiliar. Thus, to promote greater understanding of agricultural policy and its various goals, this article examines agriculture's role in the general economy and the unique characteristics of agricultural production. Moreover, because common understanding of policy issues and terminology is helpful, a glossary of frequently used terms is included to assist interested persons in discussing the issues. A future article will examine the evolution of U.S. farm policy and discuss policy goals.

## THE ROLE OF AGRICULTURE IN AN INDUSTRIAL SOCIETY

Over the years, agriculture has become increasingly integrated into many different

facets of the U.S. economy as both a supplier and user of goods and services. When those industries that supply inputs to farmers as well as those that process and market farm products are included in the picture, agriculture and its backward and forward linkages account for about one-sixth of GNP, about one-fifth of total employment, and about one-fourth of export earnings.<sup>2</sup> Because of this interdependence, agricultural policy must now be viewed in terms of this nation's goals for economic growth, employment, and price stability, and not necessarily in terms of what is beneficial solely to farmers.

## What Does Agriculture Produce?

In 1976, the U.S. Department of Agriculture (USDA) estimated that total output from the agricultural complex amounted to \$300 billion. Of this amount, cash receipts from farm marketings totaled about \$100 billion, while the remainder represented the cost of marketing: the added costs of processing, packaging, transporting, and merchandising the products between the farmer and the consumer. Clearly, a **\$300-billion** industry is capable of providing a large number of jobs and generating a substantial amount of income within the general economy. Furthermore, any new developments in an industry of this size are bound to have a significant rippling effect on other economic sectors.

During the past few years, rapidly rising food prices have caused great concern among

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<sup>2</sup>A New U.S. Farm Policy for Changing World Food Needs, Committee for Economic Development, New York, N.Y., October 1974, p. 29.

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<sup>1</sup> *Farmland News*, June 30, 1977, p. 5.

## A Primer on Agricultural Policy

policymakers and consumers alike. As a result, the public has learned more about food production and the costs of marketing. In **1975**, consumers spent about **\$185 billion** for food, and the figure for **1976** was probably around **\$200 billion**.<sup>3</sup> Since the farm value of these outlays was about **\$55 billion**, the bulk of consumer expenditures for food went toward defraying the costs of marketing—at least **\$100 billion** on the food items produced domestically. Labor costs are the largest component of the marketing bill, accounting for about one-half of the total. Thus, in **1975** and again in **1976**, approximately **\$50 billion** was paid to an estimated 6 million workers in the food processing and distribution system.

The sharp rise in agricultural exports has also added stimulus to the economy. A study by USDA indicated that the **\$22 billion** in foreign sales in fiscal **1975** probably generated an additional **\$21 billion** in business activity in transportation, manufacturing, food processing, and construction.<sup>4</sup> Thus, the multiplier effect was almost **2**. These shipments and the attendant increase in business activity were responsible for about **1.2 million** jobs. From this evidence, it should be clear that agricultural producers make many valuable contributions to the economy providing food and opportunities for additional employment as well.

### **What Does Agriculture Consume?**

Agriculture has undergone dramatic change during the past **40** years as farms have become fewer but larger. **One** manifestation of the technological revolution has been the substitution of capital items for labor, with the result that the ratio of purchased inputs to total inputs has risen sharply. Thus, modern farmers now depend heavily on other businesses to

supply them with the goods and services needed to produce food efficiently. Because of this increased dependence on outside suppliers, coupled with sharply higher prices since **1970**, production costs in agriculture have skyrocketed. In **1976**, these costs were about **\$81 billion** as compared with **\$44 billion** in **1970**. While this sharp expansion in production costs has impaired the net cash flow position of many **farm** operations in recent years, a considerable amount of additional business activity has been generated in the economy by these expenditures.

According to USDA, farmers spent **\$7 billion** for capital items in **1971**.<sup>5</sup> More recently, however, capital expenditures in agriculture have been exceeding **\$12 billion** annually. It was estimated that the **\$7 billion** spent for new capital items in **1971** produced an additional **\$8 billion** worth of business activity—the multiplier effect was more than **2**. To maintain this level of economic activity, nearly **650,000** workers were needed to produce and deliver farm capital items in **1971**.

Capital spending in farming is only the beginning. Farmers also spend substantial sums for fertilizer, feed, seed, fuel, labor, and interest. All of these outlays also have a multiplier effect in the economy. In **1976**, about **72 per cent**—or **\$58.7 billion**—of the production costs in agriculture were of nonfarm origin. Assuming a multiplier effect of **2.0**, these outlays produced perhaps an additional **\$60 billion** in business activity in the economy. Obviously, many jobs were associated with this additional business. Hence, in our modern economy, agriculture is no longer a self-sufficient industry offering a unique way of life to farm people. Rather, agriculture is an integral part of the economic system that accounts for a significant amount of economic activity in the United States.

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<sup>3</sup> *Agricultural Outlook*, U.S. Department of Agriculture, Economic Research Service, AO-19, March 1977, p. 9.

<sup>4</sup> *Agricultural Outlook*, U.S. Department of Agriculture, Economic Research Service, AO-4, September 1975, pp. 15-17.

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<sup>5</sup> *Agricultural Outlook*, U.S. Department of Agriculture, Economic Research Service, AO-7, January-February 1976, pp. 17-19.

## WHAT IS DIFFERENT ABOUT AGRICULTURE?

A special agricultural policy in this country is—in large part—premised on the assumption that agricultural producers face business management problems that are unique to their industry. Common wisdom among members of Congress and agricultural producers has generally supported this view. The result has been the enactment of a series of farm bills by congress over the past few decades.

Increasingly, however, questions are being asked and judgments—both private and public—rendered as to the uniqueness of agriculture and, hence, the need for a special agriculture policy apart from a national policy on food. Increasingly, questions are raised about who the recipients of agricultural policy benefits are, about the implications of such policy on the structure of agriculture, and about how well past and present agricultural policy has served producers and consumers. Although answers to these questions lie outside the scope of this article, it is helpful to have some understanding of the characteristics of agricultural production that tend to make it unique.

### Many Producers

The agricultural industry in the United States has historically been characterized as having many small producers—none of whom supply enough of the market to affect the price of the product. The wide dispersion of production decisionmaking has made it very difficult for farmers and ranchers to make group decisions on production or marketing. While this has generally been conceded by policymakers in the past, is it still true?

The U.S. farm population has been declining both absolutely and as a proportion of the total population, to 8.86 million persons and 4.2 per cent of the U.S. population in 1976. Nonetheless, there are still 2.8 million farms in the United States and most of them are

operated by full or part owners (87 per cent). Despite the fact that 36 per cent of all farms in 1975 had annual sales of more than \$20,000, and despite the growing importance of these commercial farms, U.S. farmers have not been very successful in **coordinating** planting and marketing decisions for their own benefit. For example, wheat acreage in the United States was reduced by only 7 per cent for the 1977-78 crop year and production hardly at all, although there was widespread agreement among wheat farmers last summer that another 2-billion-bushel wheat crop would add to the surplus and severely depress wheat prices. Thus, although the productive capacity of U.S. agriculture is being concentrated in progressively fewer hands, there are still too many producer decisionmakers to permit successful organization and control of production.

### Inelastic Demand

Food products generally face an inelastic demand by consumers, as is fairly typical for a basic commodity with few good substitutes. That is, for a given percentage change in the price of a farm product offered for sale, the quantity demanded changes by a smaller percentage in the opposite direction. A small shortfall in production below an equilibrium level tends to cause agricultural product prices to soar—an event welcomed by farmers and ranchers but dreaded by consumers. Conversely, a relatively small increase in output tends to cause agricultural product prices to plummet.

Total demand for agricultural products tends to grow about as fast as the population in a prosperous and adequately fed country such as the United States. Thus, during recent years, there has been an increased dependence on export markets to dispose of the abundant U.S. agricultural production. While this development has produced valuable foreign exchange earnings and has firmed domestic product prices, it has also added to the instability in the agricultural picture because

the long-term prospects for exports depend in large part on worldwide weather conditions and the policies of foreign governments.

Since farmers and ranchers have typically made next year's production plans based on this year's prices, there is a tendency for farm prices to fluctuate widely. High prices one production period will likely result in higher production and sharply lower prices the following period—followed by tendencies toward reduced production and higher prices in a future period. The generally inelastic demand for agricultural products has magnified the price instability resulting from this type of production planning. Thus, one of the goals of farm policy is to lend greater price stability to farm product markets.

### **Resources Fixed in Use**

Resources devoted to agricultural production are quite specialized and frequently are substantially less valuable in other productive uses. For example, rangeland used in the production of beef may have no other equally valuable use. Similarly, very expensive and highly specialized farm equipment—such as that used in producing sugar beets—may have relatively little use or value in the production of most other crops.

Thus, resources devoted to a type of agricultural production tend to be locked into that use in the short run, even though such a use may be unprofitable. In the short run, the losses resulting from shifts to other types of production may exceed the losses from continuation of previous production patterns.

### **Biological Production Processes**

Biological production processes are not amenable to quick and substantial shifts. It is typically not possible to stop a biological production process once it has started (a cow bred or a crop planted), without losing a substantial part of the variable costs of production. Consequently, production decisions and actions tend to be relatively irreversible.

The time required to produce a crop is determined by the maturity date of the crop and the time required to produce cattle of slaughter weight will depend on growth rates and feeding practices. In the case of cattle, for example, about 38 months (over 3 years) are required to increase beef production—that is from the time a heifer calf is born until that animal's first offspring can be sold as a **1,000-**pound slaughter animal.

Once a biological production process has been started, variability in final production levels is determined by factors over which the producer has limited control. Animal and plant diseases can sharply reduce output. Weather conditions also have marked effects on production levels. For example, harsh weather during the winter and spring of 1976-77 limited the U.S. December-May pig crop to a 2 per cent increase, despite a 5 per cent increase in the number of sows farrowing (female pigs giving birth). Lack of adequate moisture and excessive heat during the growing season can sharply reduce production levels from crops.

Farmers are right when they contend that certain aspects of agricultural production are unique. Despite the fact that farmers and farm businesses are becoming more like their city counterparts over time, **some** significant differences remain. The differences discussed here will continue to make it hard for farmers to adjust to rapidly changing market conditions.

### **A GLOSSARY OF TERMS**

The casual observer is frequently confused and frustrated by the use of specialized terms to describe various aspects of agricultural policy and programs. Further, the terms are often used incorrectly. A few of the more commonly used terms are described here to serve as a basis for better understanding of policy discussions.<sup>6</sup>

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<sup>6</sup> Definitions are based on current farm legislation. Legislation presently under consideration in Congress may change the more technical aspects of the definitions—not only for future years but in some instances for 1977 as well.

## Parity Price

The parity price for an agricultural commodity is that price (in current dollars) that will give the commodity the same purchasing power—in terms of goods and services bought by farmers and certain production costs—as the commodity had during the 1910-14 base period.<sup>7</sup> Although the actual calculations required to derive parity prices are rather complicated, the basic concept of parity is fairly straightforward. To use a simple example, if—in the base period—50 bushels of wheat could have been sold and the proceeds used to purchase a ton of fertilizer, then the parity price of wheat at any given moment in time is that price which would enable a farmer to purchase a ton of fertilizer with the proceeds from 50 bushels of wheat. As a practical matter, however, parity prices are predicated on the average change in prices of all goods and services rather than on individual items.

In the past, parity prices have been considered by many to represent "fair" product prices and have been used as a factor in determining Government price support levels and marketing order prices. However, when parity price standards are used as a measure to assure a specified net farm income, 100 per cent of parity prices may yield a farmer a higher real net income now than would have been true in 1910. This is true because the parity formula does not take into account increases in farm efficiency as measured by an average index of productivity. Thus, as

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<sup>7</sup> Actually, the parity price for a commodity is calculated using an "adjusted base price," which is derived by dividing the average price received by farmers for the commodity in the previous 10 calendar years by the average Index of Prices Received by Farmers (1910 - 14 = 100) for the same 10-year period. (Both the numerator and denominator are adjusted to allow for unredeemed government loans and other supplemental payments from price support operations). This "adjusted base price" is then multiplied by the most recent Index of Prices Paid by Farmers including Interest, Taxes, and Wage Rates (1910 - 14 = 100) to yield the current parity price for the commodity.

productivity increases, returns to resources used in production equivalent to 1910-14 can be obtained with lower parity levels.

## Acreage Allotments

During the 1920's, the U.S. Government—at the urging of **farmers—developed** programs for farmers that included reducing the acreage of certain major crops in order to limit production, and thus to raise farm prices. For example, a plan was proposed under which individual acreage allotments would be assigned to individual farmers based on their previous acreage, production, and sales records. Such a proposal, with some modifications, was first enacted into law with the Agricultural Adjustment Act of 1933. Acreage allotments in some form have been around ever since.

The chief objective of acreage allotments was to establish and maintain levels of production of certain agricultural commodities that the market could absorb at prices considered fair to producers. The Secretary of **Agriculture—**after determining the acreage necessary to supply domestic requirements, projected export sales, and normal carryover of a **crop—**announced a national acreage allotment for each crop covered by such legislation. Crops covered in 1977 are corn, grain sorghum, barley, wheat, cotton, peanuts, rice, and some kinds of tobacco. If the national allotment for a crop was changed, that change was allocated among states and ultimately among farms on a proportional basis. In recent years, producers of most crops with allotments have been able to grow more than their allotted acreage without incurring any penalty. Farm legislation currently being considered by Congress would do away with historic allotments for growers of wheat, feed grains, rice, and cotton, but not for growers of tobacco and peanuts. Future benefits of farm programs would be distributed on the basis of what a farmer had planted, not on the basis of allotments that currently reflect production patterns of the 1950's.

**Commodity Credit Corporation**

The Commodity Credit Corporation (CCC) is a U.S. agency under a permanent Federal charter, having been formed in 1933 under Delaware law as a corporation wholly owned by the Government. Its board of directors is composed of seven top USDA officials. The CCC has an authorized capital stock of \$100 million and authority to borrow up to \$14.5 billion.

A major function of the CCC is to support prices of agricultural commodities through loans, purchases, payments, and other operations. The CCC assumes ownership of defaulted nonrecourse commodity loans, and thus acquires ownership of commodities used for domestic and international food aid programs. It also purchases some commodities for use in these programs, and provides nonsubsidized intermediate-term (up to 3 years) credit to foreign buyers of U.S. agricultural products. CCC operating losses are borne by the U.S. taxpayers.

**Loan Rate**

The loan rate is the level at which the Government will support a commodity's price. The terms "support price," "price support," and "loan rate" are used interchangeably. Loans to farmers are granted by the CCC using the commodity as collateral. For example, wheat produced during 1977 is valued at \$2.25 per bushel at the farm for CCC loan purposes (Table 1).

If the price of the commodity rises above the loan rate during the term of the CCC loan, the farmer may sell the commodity, repay the CCC loan with interest, and capture the price advantage of timely marketing. If the price of the commodity does not rise above the loan rate, the farmer can default on the nonrecourse loan and turn the commodity over to the CCC

<sup>8</sup> In nonrecourse loans, the property used as collateral for the loan may be turned over to the lender as full settlement of the loan.

**Table 1  
LOAN RATES AND TARGET PRICES  
FOR 1977**

	Loan Rate	Target Price
	In Dollars	Per Bushel
Wheat	2.25	2.90†
Corn	2.00†	2.00†
Sorghum ‡	1.70	1.62
Barley ‡	1.50	1.39*
Oats ‡	1.00	*
Rye	1.50	*
Soybeans	3.50	
	In Cents	Per Pound
Upland cotton	42.58	47.80

\*These crops are not covered by present target price legislation.

†As proposed in the Agricultural Act of 1977.

+Loan rates and target prices (where applicable) for these crops may also be increased for 1977 since they are typically set by the secretary of agriculture at a level that is fair and reasonable in relation to corn loan and target price levels.

SOURCE: U.S. Department of Agriculture.

as full settlement of the loan. Thus, despite market price fluctuations, the loan rate becomes the floor or lowest price for the commodity that the farmer needs to accept.

**Target Prices**

Target prices are "fair" price levels set by Congressional action for wheat, feed grains, cotton, and rice. Provision is made for escalation in target price levels in future years based on increases in certain production costs. If the average price for one of these commodities during the first 5 months of the market year falls below the target price level, cooperating farmers receive a "deficiency payment" from the Government, providing the target price is above the CCC loan rate. Deficiency payments are transfer payments to cooperating farmers.

This payment is calculated as the difference between the target price and the higher of the average market price or the loan rate. If the 1977 market price for wheat were \$2.24 per bushel, the loan rate \$2.25, and the target price \$2.90, a farmer would receive a deficiency payment of 65 cents per bushel of wheat (**\$2.90** – \$2.25 = **65¢**). The quantity of wheat on which this deficiency payment could be collected would be calculated by multiplying the smaller of the farm's allotment acres or planted acres times its normal yield per **acre**.<sup>9</sup> Under current farm legislation no **farmer** can collect more than **\$20,000** per year in payments under the deficiency payment and disaster payment programs, except in the case of rice farmers where the limitation is \$55,000. However, legislation presently under consideration in Congress will likely raise the **payment** limitation levels—perhaps retroactively to cover the 1977 crop year.

### Marketing Orders

Authorized by the Agricultural Marketing Agreement Act of 1937, marketing orders are agreements between producers and Federal or state governments that either fix the wholesale price of farm products or support prices indirectly by controlling the supply of commodities reaching the consumer. Orders are now in effect for milk and for a **variety** of fruits and vegetables.

Marketing orders are established through a process including producer petitions, public hearings, and a referendum vote by producers. They are frequently used to bring stability to markets that are inherently chaotic because of the weak bargaining position of producers and the special characteristics of the commodities. Products that are very perishable, require a lot

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<sup>9</sup>This method of calculation is provided for 1977 in legislation currently being considered by Congress. Previously the farm's allotment acres were used in the calculation of the deficiency payment. In future years only planted acres will be used in the calculation.

of processing, and vary widely in quality and yield are potential candidates for marketing orders. Thus, marketing orders are designed to establish and maintain orderly market conditions and to assure reasonable profits to producers while providing adequate supplies at more stable prices to consumers. With milk, the orders establish minimum wholesale prices within a geographic market area called a **milkshed**; while for fruit and vegetables, the prices are influenced indirectly by the establishment of grade, size, and quality standards which effectively limit the quantities reaching the consumer. Once an order is established, all producers are bound by the regulations and all sales in the specified market must adhere to the pricing policy of the order. Marketing orders also have the practical effect of limiting competition in a market and excluding foreign products from a domestic market.

### Federal Crop Insurance Corporation

This organization provides all-risk insurance to farmers eligible for coverage. Approximately 25 different crops are insured in different parts of the country, primarily in the commercial producing areas. In 1975, the program was available in about one-half of the **3,000** or so counties in the continental United States.

By law, the crops cannot be insured for more than production costs. However, farmers may designate the extent to which they want protection, and the premiums are set accordingly. The program is designed so that indemnity payments amount to 90 per cent of the premiums (the remainder is held in reserve for unexpected costs), so farmers are essentially paying the full cost of the benefits. Congressional appropriations cover the administrative costs of the program. Since the insurance can be cancelled or denied to various areas or individual producers with a high loss history, many farmers must either rely on private insurance firms for protection or bear the risks themselves.

## Disaster Payments

Disaster payments represent a form of free **insurance—provided** by the Agricultural Act of 1973 and the 1975 Rice Act—to eligible wheat, feed grain, cotton, and rice producers. A continuation of these benefits is expected under farm legislation currently being considered by Congress. Basically, payments are made if farmers are prevented from planting their crops or if yields fall below specified levels because of natural hazards. Thus far, expenditures under these provisions have been running between \$280 million and \$550 million a year.

The disaster payments mechanism has several weaknesses, although the new legislation may correct most of them, at least for wheat and feed grains. For example, under the old program, if farmers exceeded their acreage allotments, it was possible to sustain a severe loss and not be eligible for disaster payments because total output still exceeded the trigger point which was tied directly to production from allotted acreage only. Obviously, those producers without allotments received no benefit at all. In addition, payments to eligible producers were not prorated in any way to reflect the timing of the loss, the productivity of the farm, and the costs of production. Hence, the key to benefitting from this program was to establish eligibility.

The new legislation being considered would provide for two kinds of disaster benefit calculations for wheat and feed grain producers. If a disaster **prevented planting** of the usual crop or any other nonconserving crop, a farmer could receive a payment equal to one-third of the target price on the smaller of 75 per cent of the projected (normal) production from the intended planting or 75 per cent of the production from last year's

planted acreage of the crop. On the other hand, if production of a **planted crop** were reduced below 60 per cent of its projected (normal) yield by disaster, a farmer could receive a payment equal to half the target price on the difference between actual production and 60 per cent of the projected production on the acreage planted for harvest.

## CONCLUSION

Agricultural policy formulation has long been hampered by the assumption that the problems affecting agricultural producers were transitory. This has led to a policymaking environment in which programs of short duration were developed to meet the needs at hand. Further, there have been sharp and frequent shifts in policy directions as policymakers responded to what they perceived to be basic changes in the policy environment. Nonetheless, it should be clear after more than 45 years of public debate and legislation that agriculture is faced with fundamental and continuing adjustment problems of a long-term nature.

Because of the growing complexities of agricultural production and its interrelatedness with the general well-being of Americans, a compelling case can be made for taking the long view in policy formulation. Producers and consumers both need to know the "rules of the game" well into the future, as do foreign customers. It is demonstrably true that producers and consumers will not be satisfied with a public policy of no government intervention in agriculture. Consequently, formulating a policy that addresses the sometimes conflicting goals of all interested parties in a balanced and objective manner is an important, but unfinished, public policy task.