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# Government Programs for Soybeans

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Soybeans have many uses. About 95 percent of U.S. soybean meal goes into poultry and livestock feed, with the remainder used largely for soy-based foods. Soybean oil accounts for roughly three-quarters of the fats and oils used in U.S. edible oil products.

Soybeans and their derivative products are used in a wide range of processed foods, among them cooking and salad oils, margarine, shortening, bakery goods, candies, desserts, beer, and Asian foods, such as tofu and miso (a high-protein food paste made from soybeans and grain). Industrial uses for soybean meal and oil include construction products (like wallboard and plywood), pharmaceuticals, yeast, soap, pesticides, and plasticizers that add flexibility to rubber agents.

The United States is the world's largest producer of these high-protein beans. The farm value of the U.S. crop equaled about \$11.4 billion in marketing year 1988/89, second only to corn. (The crop and marketing year for soybeans runs from September 1 to August 31.) Domestic production increased more than sixfold between 1950 and 1980 but has declined since soybean acreage and production peaked in 1979 (*figure 1*).

Rapid growth in U.S. soybean production and processing occurred largely because of rising world demand for the beans and their primary products—vegetable oil and protein meal. Soybeans are still our largest export crop, accounting for nearly \$4.6 billion in 1987/88 from soybeans and an additional \$1.8 billion from meal and oil.

In a typical year, between one-half and two-thirds of the U.S. soybean crop

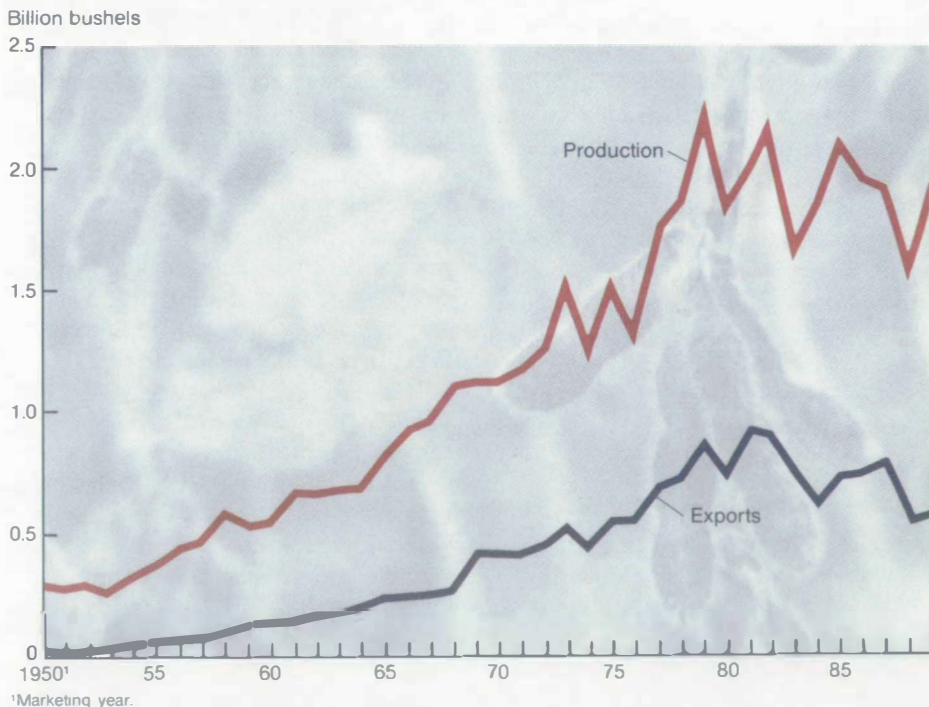
is crushed domestically—the process used to extract meal and oil (*table 1*). One-third or more of domestic soybean production is exported. Some whole beans are also used for feed and seed. Of the domestic crush, approximately three-quarters of the meal is sold in the United States. The remainder is exported. On the oil side, 80 to 90 percent is used domestically.

A number of structural and economic factors, both domestic and foreign, have affected the growth of U.S. soybean production. In recent years, world markets for oilseeds and oilseed products have grown significantly, spurred by rising real incomes and population growth in both industrial and developing nations. However, soybeans, oil, and meal have

all lost some of their market share in the world oilseed trade to rapeseed, cottonseed, and peanuts. This has translated into reduced U.S. exports of soybeans and soybean oil and fluctuating meal exports during the 1980's, despite falling U.S. prices prior to 1987 and the 1988 drought. For example, the nominal value of U.S. exports of soybeans, meal, and oil together fell from a peak of \$8.8 billion in 1980/81 to \$6.4 billion in 1987/88.

An important influence on our domestic soybean industry is U.S. Government policy. Federal programs affect industry structure, output, price, and trade, both directly and indirectly. The Federal soybean program supports prices received by farmers. By setting a floor for domestic prices of soybeans and competing

**Figure 1. U.S. Soybean Production Peaked in 1979**



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**Table 1. Between One-Half and Two-Thirds of the U.S. Soybean Crop Is Crushed**

| Item                     | Marketing year <sup>1</sup> |         |         |         |                      |
|--------------------------|-----------------------------|---------|---------|---------|----------------------|
|                          | 1984/85                     | 1985/86 | 1986/87 | 1987/88 | 1988/89 <sup>2</sup> |
|                          | <i>Million acres</i>        |         |         |         |                      |
| <b>Acreage</b>           |                             |         |         |         |                      |
| Total planted            | 67.8                        | 63.1    | 60.4    | 58.0    | 58.9                 |
| Harvested                | 66.1                        | 60.4    | 58.3    | 57.0    | 57.5                 |
|                          | <i>Bushels per acre</i>     |         |         |         |                      |
| <b>Yield</b>             | 28.1                        | 34.1    | 33.3    | 33.7    | 26.9                 |
|                          | <i>Dollars per bushel</i>   |         |         |         |                      |
| <b>Prices</b>            |                             |         |         |         |                      |
| Loan rate                | 5.02                        | 5.02    | 4.77    | 4.77    | 4.77                 |
| Average farm price       | 5.84                        | 5.05    | 4.78    | 5.88    | 7.35                 |
|                          | <i>Million bushels</i>      |         |         |         |                      |
| <b>Supply</b>            | 2,037                       | 2,415   | 2,476   | 2,359   | 1,850                |
| Beginning stocks         | 176                         | 316     | 536     | 436     | 302                  |
| Production               | 1,861                       | 2,099   | 1,940   | 1,923   | 1,548                |
| <b>Utilization</b>       | 1,721                       | 1,879   | 2,040   | 2,057   | 1,668                |
| Domestic                 | 1,123                       | 1,139   | 1,283   | 1,255   | 1,141                |
| Crush                    | 1,030                       | 1,053   | 1,179   | 1,174   | 1,058                |
| Seed, feed, and residual | 93                          | 86      | 104     | 81      | 83                   |
| Exports                  | 598                         | 740     | 757     | 802     | 527                  |
| <b>Ending stocks</b>     | 316                         | 536     | 436     | 302     | 182                  |
| Commercial               | 312                         | 405     | 187     | 295     | 182                  |
| CCC inventory            | 4                           | 131     | 249     | 7       | 0                    |

<sup>1</sup>The crop and marketing year for soybeans runs from September 1 to August 31. <sup>2</sup>Estimated.

crops, U.S. price support programs raise raw material costs for soybean processors and hence consumer prices.

### History of Soybean Program

Soybean price supports have been in effect since 1941, with the exception of 1975. This support is provided in the form of nonrecourse loans made by USDA's Commodity Credit Corporation (CCC), with all soybean farmers eligible. Farmers can place their beans under loan when they harvest them. The loan lasts

for 9 months with the crop serving as collateral. Farmers can repay their loans at any time with interest, which is generally somewhat lower than commercial lending rates. After the 9 months, producers must repay their loans or forfeit the crop.

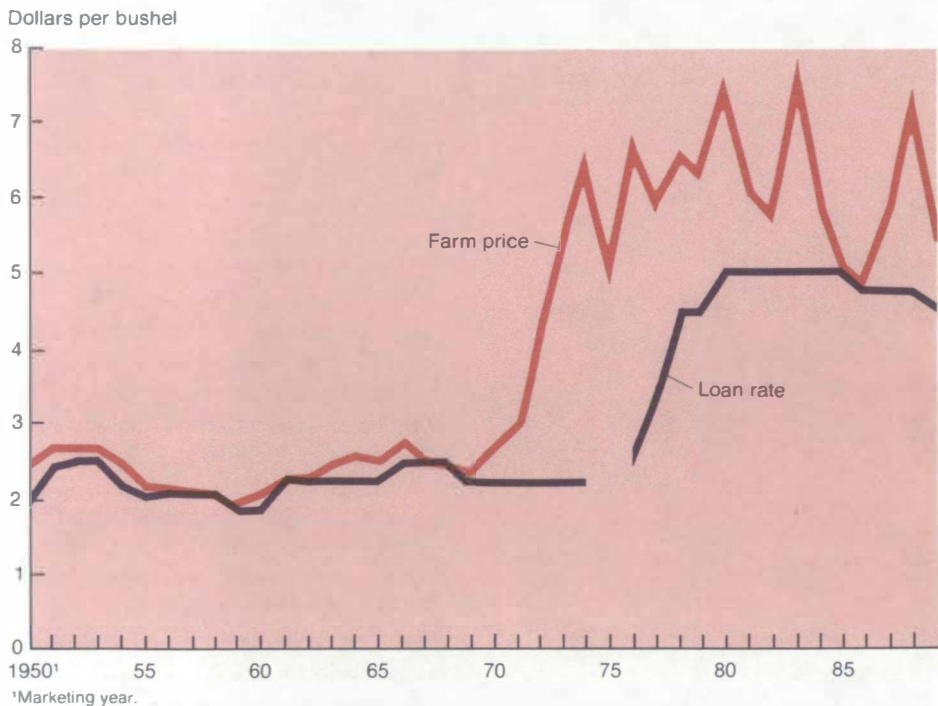
The loan program allows farmers to be more flexible in planning a marketing strategy. They can take the loan money at harvest and store the crop for marketing at any time during the loan's duration, instead of immediately selling their soybeans. By doing this, farmers have

the cash they need for production inputs. Taking out a loan also provides producers with a price floor under their crop to protect against unforeseen price declines.

During the last four decades, the season-average price of soybeans has met or exceeded the loan rate in all but a few years (*figure 2*). Years of high production and low prices have occasionally led farmers to place substantial quantities of soybeans under loan. CCC acquisitions of soybeans (from farmers forfeiting their crops) have generally been small, but a marked increase occurred in marketing years 1985/86 and 1986/87 when domestic market prices declined sharply.

Acreage restrictions and marketing quotas have never been used to control soybean production. However, supply control programs for wheat, feed grains, cotton, and rice have often prohibited producers from planting soybeans on acreage allocated to these crops. While such provisions may have restricted soybean acreage, the biggest influences on bean production have come from changes in program provisions for soybeans and competing crops. For example, to encourage soybean production, the feed grain programs were revised in 1966 to include price supports for program participants who voluntarily planted soybeans on feed grain acreage and an extended signup period in soybean producing areas. At the same time, the soybean loan rate was raised from \$2.25 to \$2.50 a bushel.

The Agricultural Act of 1970 and Agriculture and Consumer Protection Act of 1973 allowed farmers to plant soybeans on acreage normally planted to wheat, feed grains, cotton, and rice while still maintaining their crop acreage bases for those commodities. Coupled with rapidly rising domestic and foreign oilseed demand and sharply higher market

**Figure 2. Soybean Prices Have Usually Been Above the Loan Rate**

prices, this led to significantly greater soybean production. Because of high prices and continued expected strong demand for oilseeds, price support loans for soybeans were not provided in 1975. Loans, however, were reinstated in 1976.

The soybean price support program was legislatively mandated for the first time under the Food and Agriculture Act of 1977, and the loan rate for the 1978-81 crops was raised to \$5.02 per bushel. The Agriculture and Food Act of 1981 continued the \$5.02 loan rate for crop years 1982-85.

### The Food Security Act of 1985

Congress passed the Food Security Act of 1985 to revise Government programs for soybeans and other commodities that affect soybean acreage, including upland cotton, feed grains, and wheat. The Act covers crop years

1986-90. The legislation set the initial loan rates for the 1986 and 1987 soybean crops at \$5.02 per bushel. Loan rates in crop years 1988-90 are based on 75 percent of the average price received by producers in the preceding 5 marketing years, excluding the high and the low. Declines are limited to 5 percent per year, and a minimum support price is set at \$4.50 per bushel.

The 1985 Act granted the Secretary of Agriculture discretionary authority to reduce the loan rate by up to 5 percent per year to maintain U.S. soybeans' competitiveness in the world market. However, the minimum loan rate still applies. Using this discretionary authority, the Secretary announced a 1986 loan rate of \$4.77 per bushel. The effective loan rate was later reduced to \$4.56 by the Balanced Budget and Emergency Deficit Control Act of 1985 (also known as Gramm-Rudman-Hollings). The

Secretary again set the loan rate at \$4.77 in 1987 and 1988. The rate for 1989 was lowered by 5 percent to \$4.53 per bushel. In the last couple of years, the 1988 drought and significantly lower soybean supplies pushed domestic and world prices above those seen during most of the 1980's.

Indirect effects of the Food Security Act on soybeans flow from programs for other crops that are planting alternatives for soybean growers. Deficiency payments can be made to farmers participating in the wheat, rice, feed grain, and cotton programs. (*Program terms are explained in the Glossary.*) Soybean producers do not face acreage reduction requirements like those farmers, but the acreage controls affect soybeans because they cannot be planted on acres idled by the other programs.

Another effect of the 1985 Act has been the continuation of high target prices relative to loan rates for grains and cotton, thereby guaranteeing that returns to program participants are substantially greater than those of nonparticipants. By doing this during a period of relatively low market prices, the Government provided a strong incentive for program participation by farmers growing grains and cotton. Since these target prices were attractive relative to soybean market prices, farmers planted fewer soybeans.

The Conservation Reserve is another important program set up under provisions of the 1985 Act. Farmers agree to take highly erodible cropland out of production for 10 years in return for annual rental payments. (*See Federal Corn and Sorghum Programs for a full description of the Reserve.*) This and other provisions that increase prices of competing commodities and remove available cropland from production reduce potential soybean acreage and help maintain higher soybean prices.

The Disaster Assistance Act of 1988, brought about by the 1988 drought, gave

the Secretary discretionary authority to allow producers to plant soybeans and sunflowers on 10 to 25 percent of their 1989 wheat, feed grain, cotton, and rice permitted acreage. Farmers requested permission to plant over 3.5 million acres of soybeans under this provision in 1989. To maintain an average market price of \$5.49 per bushel, the Secretary announced that 80 percent of the requested acreage could be planted. However, less than half of this acreage was likely planted in soybeans. The provision may be extended to the 1990 crop if there is an insufficient supply of soybeans.

The Food Security Act also gives the Secretary discretionary authority to offer soybean marketing loans. If implemented, marketing loans would allow soybean producers to repay their nonrecourse loans at the world market price, when world prices are below the loan rate. This would encourage producers to redeem soybeans pledged as loan collateral and market them at prices near or below the loan rate rather than forfeit them to the CCC.

The Secretary did not implement the soybean marketing loan for the 1986-89 crops. A 1987 study conducted by ERS indicated that a soybean marketing loan would have had only a minimal impact on the 1987 soybean crop. The 1988 Disaster Assistance Act requires the Secretary to submit a statement to Congress giving the reasons for implementing, or not implementing, the soybean marketing loan for the 1989 and 1990 crops. The studies for these crops concluded that a marketing loan would likely have no effect because market prices were expected to substantially exceed loan rates. Program provisions for the 1990 crop, including the official decision on a marketing loan, will be announced by the beginning of the 1990/91 marketing year.

### Effects on Soybean Farmers

U.S. farm programs raise commodity prices and producers' incomes, and the

soybean program is no exception. Soybean farmers also grow corn, cotton, wheat, and other field crops that are affected by Government price supports, acreage reduction requirements, and export programs. Along with soybean loan rates, these programs prop up prices for substitute and complementary crops and therefore soybeans. Price supports and acreage reductions for other program crops also limit the acreage available for soybeans, thereby reducing supply and increasing prices.

Marketing loans for soybeans could result in more participation in the soybean program on the chance that producers could repay their nonrecourse loans at a lower world market price. The net results of the 1985 Act for soybean farmers are smaller crop returns relative to other program commodities and less land available for soybean production.

### Government Programs and Soybean Processors

Soybean processors buy and market soybeans and their products for domestic and export customers. Government policies affect the supply and demand of raw soybeans, oil, and meal, with the objective of equating supply and demand in soybean markets. However, natural phenomena, such as drought, can curb yields and supplies and result in higher prices and lower demand. Processors pay more for soybeans in years when plantings or yields fall short of what is expected. Processors either absorb these costs and narrow their profit margins or pass some or all of the additional cost on to consumers.

In recent years, U.S. programs have raised market prices for soybeans and other oilseeds relative to those for feed grains. High target prices for feed grains have expanded U.S. output and led to depressed grain market prices. This has encouraged soybean production among our chief export competitors, most notably Brazil and Argentina. Marketing loans could help processors and export-

ers purchase soybeans at or near world market prices if U.S. loan rates exceed world prices, increasing their profit margins and allowing them to better compete in export markets.

### Programs Affecting Soybean Exports

The Government influences the export of soybeans as well. USDA's export programs broaden the world market for soybean products. The Agricultural Trade Development and Assistance Act, commonly known as Public Law (P.L.) 480, is the most significant of these programs. P.L. 480 provides concessional sales and donations of oilseed products to enhance food supplies in developing countries. Soybean oil exports have been especially enhanced. In 1987/88 and 1988/89, over 85 percent of all U.S. soybean oil exports were shipped using either P.L. 480, the Export Enhancement Program, or export credit assistance.

However, Government policies that support soybean and other commodity prices above world market levels have negative effects on export competitiveness. Nevertheless, U.S. export and import restrictions on oilseeds are minimal. The only quantitative restrictions protecting domestic oilseed producers are those on imported butter, butter oil, cream, and peanuts. Soybean oil has an import tariff. Palm and coconut oil, which account for more than two-thirds of all oilseed product imports, enter the United States duty free.

### Effects of Government Programs on Consumers

The soybean program and programs that support competing crops, such as peanuts and cotton (the source of cottonseed), raise the price consumers pay at retail for oilseed products. However, the effects of Government programs on soybeans are small compared with those of other crops. As a low-cost protein



source, soybeans have contributed to the expansion of the poultry industry during the 1970's and 1980's.

Marketing loans have the potential to reduce the costs consumers pay for soybean products. If marketing loans are implemented in the future and loan rates exceed market prices, soybeans would be marketed at the world price rather than going into CCC stocks. This would mean lower soybean prices for domestic processors and lower prices of soybeans, meats, poultry, and other foods. Of course, taxpayers will make up the difference between the nonrecourse loan rate and the marketing loan repayment level. Thus, there is no net savings but rather an income transfer from taxpayers to soybean producers and consumers. ■

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