U.S. Cotton Programs

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Cotton is the single most important textile fiber in the world, accounting for about 50 percent of total fiber production. In recent years, the United States has produced about 20 percent of the world's cotton supply and consumed 10 percent. Americans used about 67 pounds of fibers per capita in 1988, which includes U.S. mill products and the raw fiber content of imported textiles. Cotton accounted for about 21 pounds, compared with 42 pounds of manmade fibers, 3 pounds of silk and flax, and 1 pound of wool.

Cotton is produced in 17 States from Virginia to California. Most of it is grown in the delta area of Mississippi, Arkansas, and Louisiana; the Texas plains; central Arizona; and California's San Joaquin Valley. Upland cotton, the type most commonly grown throughout the world, accounts for about 98 percent of the U.S. crop. Extra long staple (ELS) cotton, also known as American Pima, is grown mostly in limited areas of southwest Texas, New Mexico, Arizona, and California.

Since the turn of the century, U.S. cotton producers have frequently experienced excess production, high stocks, and low prices. The health of the U.S. cotton industry is highly dependent on the world economy. To maintain current levels of production, almost 50 percent of our output must be exported to foreign mills.

The forces affecting world cotton trade are complex. It can be traded as raw cotton, yarn, fabric, or finished apparel. The United States is usually a competitive exporter of raw cotton. But other countries, many of them also cotton producers, are more competitive as exporters of finished products. The demand for U.S. cotton exports depends heavily on foreign cotton production, the U.S. cotton price in relation to the prices of competing exporters, the price of cotton in relation to other natural and synthetic fibers, and economic growth in importing nations. For example, a 1-percent increase in real income of foreign importing countries is associated with about a 120,000-bale increase in U.S. cotton exports. If our major competitors raise their production by 1 million bales, U.S. exports might drop by about 600,000 bales.

As a result of these dynamic forces, U.S. cotton exports have varied greatly, causing supply and price instability in our domestic market *(table 1)*. Government programs have provided an income "safety net" since the early 1930's for producers of upland cotton and since the early 1940's for growers of ELS cotton.

Early Upland Cotton Programs

U.S. cotton programs have attempted to support prices and adjust acreage and production to market needs. During 1933-65, upland cotton programs frequently included price supports based on parity, marketing quotas, and acreage allotments. *(Program terms are explained in the Glossary.)*

Production control was the primary objective of the Agricultural Adjustment Act of 1933 and subsequent early legislation. The 1933 Act authorized benefit payments to farmers removing land from cotton production. The Act also established nonrecourse loans, which remain a key component of Government cotton programs. Up until the mid-1960's, the minimum support price for cotton was based on parity. This concept failed to reflect changing market conditions and technologies for cotton and was abandoned.

In 1934, marketing quotas were legislated to enhance participation in acreage control programs. The quotas restricted the quantity of cotton each producer could sell without paying a penalty. Used with acreage allotments, they were longstanding provisions of subsequent

Table 1. Upland Cotton Exports Have Varied Greatly During the Last 5 Years

Upland cotton	Marketing year[1]				
	1984/85	1985/86	1986/87	1987/88	1988/89
	Thousand bales[2]				
Supply	15,566	17,334	18,817	19,419	20,800
Beginning stocks	2,693	4,024	9,289	4,942	5,718
Production	12,852	13,277	9,525	14,475	15,077
Imports	21	33	3	2	5
Utilization	11,616	8,193	13,955	13,910	13,603
Domestic mill use	5,491	6,338	7,385	7,565	7,721
Exports	6,125	1,855	6,570	6,345	5,882
Ending stocks	4,024	9,289	4,942	5,718	7,027
Commercial	2,353	2,557	1,955	2,551	2,858
Outstanding loans[3]	1,548	5,965	2,914	3,164	4,119
CCC inventory	123	767	73	3	50

[1]The crop and marketing year for cotton runs from August 1 to July 31. [2]One bale equals 480 pounds. [3]Cotton used as collateral for price support loans.

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cotton programs aimed at keeping production in balance with market needs.

During the first 30 years of farm programs, acreage and production controls and high support prices were prominent features. In this period, relatively high parity-based support prices effectively established both U.S. farm and world market prices. Thus, while these programs provided price and income stability, they also furnished incentives for increased foreign cotton production and a loss of markets to manmade fibers. Support prices that exceeded market-clearing levels also encouraged overproduction in the United States, and excess stocks led to production controls.

The Food and Agriculture Act of 1965 was more market oriented, with cotton price supports set at levels below world market prices. Producers' incomes were maintained through payments based on participation in acreage reduction programs. Diversion payments were made to producers who placed cotton acreage into approved conservation uses. By the end of the 1970/71 marketing year, the acreage reduction programs met the objective of lowering or eliminating surpluses, and the high Government cotton surplus was gone. However, the reduction in stocks was accomplished at a substantial cost. Direct payments to cotton producers averaged $847 million annually during crop years 1966-70, about 40 percent of the total income from cotton. (The crop and marketing year for cotton runs from August 1 to July 31.)

Legislation in the early 1970's reflected a far different setting than previous farm acts. World demand for American farm products was high due to world crop shortages, devaluation of the dollar, and generally favorable world economic growth. Many agricultural interests felt the Government could minimize its role in providing price and income supports.

The target price concept, still in use today, was a major feature of the Agriculture and Consumer Protection Act of 1973. In recognition that agriculture can face extreme weather and market conditions, which at times result in low incomes, target prices provide producers with income support. Target prices were also designed so that this income protection should not affect market prices. Deficiency payments are made only when average market prices fall below target price levels. Loan rates were set to reflect the average price of American cotton in world markets. Target prices were based on the cost of production.

Despite cotton acreage increasing significantly in the late 1970's, stocks during the period were relatively low. Strong domestic mill use and export markets compensated for the expansion in production. The Food and Agriculture Act of 1977 changed the way a farmer's eligible crop acreage was determined. Producer benefits were based on current plantings rather than historically established acreage allotments. This change facilitated a shift in cotton production to the lower cost regions of the West and Southwest.

The cost-of-production adjustment formula for 1978-81 target prices was based on a historical moving average of per-acre costs and actual yields. Formula adjustments during this period of rising inflation failed to keep up with actual conditions. Therefore, in the Agriculture and Food Act of 1981, Congress mandated specific target price minimums for the 1982-85 crops. Target prices rose from 58.4 cents per pound in 1980 to 81 cents by 1984, despite increasing carryover stocks.

The 1981 Act continued to set cotton loan rates with a formula, using either domestic or world prices, whichever was lower. However, the minimum loan level was raised from 48 cents to 55 cents a pound. During the 1985/86 marketing year, world prices dropped below the U.S. loan rate. As a result, U.S. cotton exports declined to their lowest level in four decades and carryover stocks surged to a year's supply.

Current Upland Cotton Program

Current farm legislation was developed while the cotton market was characterized by falling cotton use by U.S. mills, lower export expectations, rising stocks, growing textile imports, and low farm prices. Contributing to the sluggish market for U.S. cotton was the record 1984/85 world crop of nearly 88 million bales. That crop exceeded use by about 18 million bales. World stocks reached a record 42 million bales, resulting in a sharp drop in world prices.

The Food Security Act of 1985 established farm policy for crop years 1986-90. Some major features for cotton contained in past farm acts—including target prices, nonrecourse loans, deficiency payments, and acreage reduction programs—were retained. However, the 1985 Act provides greater market orientation and more flexibility to improve market competitiveness.

The Act also specifies declining target price minimums through 1990. Cotton loan rates are tied to an average of past market prices. But new provisions allow nonrecourse loans to be repaid at levels below the loan rate if the formula-determined rate inhibits market competitiveness.

If the world price of cotton is below the loan rate, a loan repayment plan—popularly referred to as marketing loans—must be implemented. The Secretary of Agriculture can choose one of

two alternative "market enhancement" plans for repayment of loans. Under Plan A, the Secretary can lower the repayment rate by 20 percent from the announced loan level. If world prices are below the repayment rate, certificates redeemable for CCC cotton are issued to cotton buyers to make up the difference, allowing producers to redeem their crops and sell them at competitive prices. Under Plan B, repayment rates vary during the year to keep pace with world markets. Plan A was implemented for the 1986 crop, with a loan repayment rate equal to 80 percent of the loan rate for each quality of cotton. Plan B was selected for the 1987-89 crops.

The 1985 Act also specifies that, to the extent practical, the Secretary should implement acreage reduction programs for the 1986-90 crops if necessary to ensure that carryover stocks equal 4 million bales of upland cotton. To participate in the cotton program and be eligible for nonrecourse loans and deficiency payments, producers had to reduce the acreage of upland cotton they planted for harvest by at least 25 percent from their acreage base in crop years 1986 and 1987, and 12.5 percent in 1988. In 1989, a 25-percent acreage reduction program is in effect.

Impact on Producers

Farmers have benefited from participation in the upland cotton program directly through price supports and direct payments, and indirectly through higher market prices triggered by acreage reduction or other supply control measures. Nonparticipating producers have also benefited from the higher prices.

However, provisions in the Food Security Act have eliminated most cotton production outside the program. Prior to the advent of marketing loans, the nonrecourse loan rate effectively set a price floor in the domestic market. Therefore, producers not participating in the program could expect market prices to hover around the support rate. Marketing loans, however, let market prices fall to world levels. This greatly increased the risk of not enrolling in the cotton program. Participating producers receive deficiency payments and get to keep any gain realized from repaying a marketing loan at a level below the announced loan rate. Consequently, the total return to participants does not fall even if cotton prices drop to very low levels. Nonparticipants have to take their chances with world prices.

Deficiency payments have become a significant part of producers' income *(table 2)*. Substantial deficiency payments have been made since 1981, as target prices have exceeded average market prices. Total deficiency payments have ranged from a low of $431 million in 1983 to a high of $1.7 billion in 1986. Direct payments to participating producers averaged 22 percent of total cotton income during the 1987 and 1988 crop years.

Another benefit accruing to producers who own their own land is that the program has tended to support, if not enhance, land values. In addition, cotton producers have been able to increase their crop acreage base since 1986 by not participating in the program and planting more acreage. While this can be done only by producing outside the program (nonparticipation), the existence of both

Table 2. Deficiency Payments Have Become a Significant Part of Producers' Incomes

Upland cotton	Marketing year[1]				
	1984/85	1985/86	1986/87	1987/88	1988/89[2]
			Million acres		
Acreage					
National base	15.6	15.8	15.5	14.5	14.5
Acreage reduction	2.5	3.6	3.4	3.3	1.6
Paid land diversion	—	1.3	—	—	—
Conservation reserve	—	—	[2]	0.7	1.0
Total planted	11.1	10.6	9.9	10.3	12.3
Harvested	10.3	10.1	8.4	9.9	11.8
			Pounds per harvested acre		
Yield	529	628	547	702	616
			Cents per pound		
Prices					
Target price	81.0	81.0	81.0	79.4	75.9
Loan rate	55.0	57.3	55.0	52.25	51.8
Average farm price	57.5	56.1	51.5	63.7	55.6
Deficiency payment rate	18.6	23.7	26.0	17.3	19.4
			Million dollars		
Income	4,712	4,962	4,048	5,843	5,805
Market value of production	4,058	3,908	2,664	4,888	4,635
Government payments	654	1,054	1,384	955	1,170
Deficiency	654	858	1,384	955	1,170
Diversion	—	196	—	—	—

— = not applicable. [1]The crop and marketing year for cotton runs from August 1 to July 31. [2]50,000 acres.

new producers and some expanded operations suggests that farmers recognize the benefits of the program.

Effect on Consumers

Upland cotton programs have probably had little effect on retail prices of cotton textile products because of the wide farm-to-retail price spread—the difference between farm and retail prices—and the small amount of cotton used. In 1988, consumers used 21.4 pounds of cotton each. The farm value of this per capita quantity was only about $11.90. Furthermore, because the cotton programs of recent years have featured direct payments to support farm incomes, most of the program costs have been borne by taxpayers rather than by cotton consumers.

Price increases at the farm level may not be reflected as higher retail values because of the highly competitive nature of the cotton textile industry. The impact of raw cotton prices—the costs of cotton to mills—on retail values depends partly on the quantity of cotton contained in the finished product and the type and amount of processing required. For example, about three-fourths of a pound of raw cotton is required to produce a typical business shirt or a bath towel, compared with about 2 pounds in denim jeans. The cost of raw cotton as a share of the estimated 1987 retail value was only about 4 percent for a shirt, 8 percent for a bath towel, and about 10 percent for a pair of denim jeans. Thus, a 10-percent rise in the farm price could increase the retail price of a shirt by less than 1 percent and the price of bath towels and jeans about 1 percent.

Extra Long Staple Cotton

Extra long staple cotton has enjoyed a metamorphosis among American cotton producers in recent years, its status elevated from that of a "fall-back" crop to a much-in-demand star of U.S. agricultural exports. Distinguishable from upland cotton by its namesake attribute of a longer fiber length, this species of cotton is used for fine, strong yarns that impart a luster and a feel to ELS cotton products not as apparent in upland cotton items.

Enhanced ELS production is due largely to strong demand for the fiber's high-value uses, such as sewing thread and expensive apparel items, and the tight supply of the world's exportable stocks. In 1988, the United States accounted for about 7 percent of world production and 22 percent of world exports, with exports rising about 12 percent from a year earlier. At 265,000 bales, U.S. exports in 1988 were equivalent to 80 percent of that year's production. The strong export demand for ELS cotton has led to higher farm prices, averaging $1.15 per pound in 1988. It has also minimized the role of nonmarket forces in producers' production and marketing decisions. Larger production and exports are expected in 1989.

The history of ELS cotton production in the United States, dating from its 1912 introduction in the Salt River Valley of Arizona and the Imperial Valley of California, is relatively brief compared to that of upland cotton. The history of

Government programs affecting ELS cotton is likewise comparatively short.

In 1942, ELS cotton became a "basic" crop eligible for Government loans and price support, which had previously been extended only to upland varieties. Early on, ELS acreage was often related to upland cotton programs as producers planted ELS cotton as the next best crop on land taken out of production by upland cotton acreage allotments. From 1942 to 1950, ELS acreage varied directly with upland acreage allotments.

Legislation in 1952 provided for mandatory ELS acreage allotments, marketing quotas, and price supports. The price support level was initially based on 90 percent of parity, but by 1960, had dropped to 65 percent of parity. In 1968, the law was amended to provide for a combination of price support loans and direct payments. The ELS loan rate was tied to the upland cotton loan level, with direct payments to producers making up the difference between the loan rate and 65 percent of parity. From 1968 to 1976, direct payments ranged from a low of $453,000 in crop year 1976 to a high of $5 million in 1973.

In 1979, the ELS total support level was dropped to 55 percent of parity and loan rates were increased. The Agriculture and Food Act of 1981 eliminated direct payments and the tie to parity, and dropped loan levels slightly. Marketing quotas and acreage allotments were in effect through crop year 1983.

Current ELS Program

Current ELS provisions can be traced back to the Extra Long Staple Cotton Act of 1983. This Act, effective for the 1984 and subsequent crops:

- Eliminated marketing quotas and acreage allotments.
- Established a minimum loan level at 150 percent of the loan rate for the base quality, Strict Low Middling 1-1/16-inch upland cotton.
- Set target prices equal to 120 percent of the ELS loan rate.
- Provided for deficiency payments to ELS producers whenever the average price received by farmers during the first 8 months of the marketing year fell below the target price.
- Established a crop acreage base for each ELS producer.
- Authorized an acreage reduction program for any ELS crop for which USDA estimated the supply would be excessive.

The 1985 Food Security Act eliminated the connection between ELS and upland loan rates. Instead, ELS loan levels must equal 85 percent of the average price received by ELS producers during 3 years of the 5-year period ending July 31 of the year the loan level is announced. The years with the highest and lowest prices are excluded.

In 1988, the ELS program offered producers a loan rate of 80.92 cents per pound and a target price of 95.7 cents. To participate in the program, farmers had to reduce their ELS acreage by at least 10 percent. During the 1988/89 marketing year, the average market price received by farmers exceeded the target price, therefore no deficiency payments were required for the 1988 crop. (The crop and marketing year for ELS cotton is the same as that for upland cotton.)

Effects on Producers and Consumers

Since 1986, strong world demand and tight exportable stocks of ELS cotton have buoyed market prices to levels in excess of Government support prices. Planted acreage of ELS cotton has soared and producer participation in the ELS program has declined. For instance, in 1988, only about 10 percent of the ELS base acreage was enrolled, compared with about 45 percent in 1986. Indeed, during the last 10 crop years, market prices for ELS cotton have generally exceeded support levels, resulting in no Government payments in 7 of those years and only nominal outlays in the remaining 3 years. With market prices for ELS cotton well above Government support levels, market forces are the principal impetus behind ELS farmers' production and marketing decisions.

Since 1985, use of ELS cotton by U.S. mills, as a percentage of domestic ELS production, has declined to about 25 percent. Thus, there are ample supplies of ELS cotton for domestic uses. In terms of total cotton consumption by U.S. mills, ELS cotton's share is less than 1 percent. Therefore, even if there were significant program impacts on ELS production, marketing, or utilization, the total impact on consumers would be negligible.

In short, Government programs for ELS cotton are most notable for what they do not do—they do not significantly limit production, interfere with market forces, or cost taxpayers large amounts of money in the form of program outlays. ■

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